IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Shkedi, Roy	Art Unit	:	3688 *
Serial No.	:	14/___,___	Examiner	:	Champagne, Donald *
Filing Date	:	11/15/2013	** In parent application S.N. 13/631,244*		
Title	:	Providing collected profiles to media properties having specified interests			

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Filed via EFS – November 15, 2013

PRELIMINARY AMENDMENT

Dear Sir:

In this continuation application, applicant requests entry of the following amendments and consideration of the following remarks.

Amendment to the Specification is on page 2 of this paper.

Amendments to the Claims begin on page 3 of this paper.

Remarks are on page 6 of this paper.

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ABSTRACT

To improve monetization of electronic advertisement placement, a profile owner company operates an automatic system for identifying media properties that have interests in specific profiles or profiles of a specified category or kind. The profile owner recognizes a collected visitor profile as one that a media property has previously requested or one that is within a category that a media property has previously requested and arranges for the visitor to be tagged with a tag readable by the media property that requested such a profile. The media property can use the tag in displaying customized advertising to the visitor. Using information received from the media property, the profile owner company then records usage of the profile by the media property.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	14-PP-CON3
	Application Number	
Title of Invention	Providing collected profiles to media properties having specified interests	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
Mr.	Roy		Shkedi	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Forest Hills	State/Province	NY	Country of Residence i	US

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City	Forest Hills	State/Province	NY
Postal Code	11375	Country i	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	26362		
Email Address	Louis@valuablepatents.com	Add Email	Remove Email
Email Address	Donald@valuablepatents.com	Add Email	Remove Email
Email Address	Shaelyn@valuablepatents.com		Remove Email

Application Information:

Title of the Invention	Providing collected profiles to media properties having specified interests		
Attorney Docket Number	14-PP-CON3	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	2	Suggested Figure for Publication (if any)	2

EFS Web 2.2.8

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Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	26362		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

Prior Application Status	Patented			Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
	Continuation of	13/631244	2012-09-28	8589210	2013-11-19
Prior Application Status	Patented			Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13/631244	Continuation of	11/765433	2007-06-19	8280758	2012-10-02
Prior Application Status	Expired			Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
11/765433	non provisional of	60/805114	2006-06-19		

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	14-PP-CON3
	Application Number	
Title of Invention	Providing collected profiles to media properties having specified interests	

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX) [i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

Application Number	Country [i]	Filing Date (YYYY-MM-DD)	Access Code [i] (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Authorization to Permit Access:

☒ Authorization to Permit Access to the Instant Application by the Participating Offices

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If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1 Remove

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

(•) Assignee	( ) Legal Representative under 35 U.S.C. 117	( ) Joint Inventor
( ) Person to whom the inventor is obligated to assign.	( ) Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor :

If the Applicant is an Organization check here. [X]

Organization Name	DATONICS, LLC		
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Address 1	134 Spring Street, Suite 302		
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	14-PP-CON3
	Application Number	
Title of Invention	Providing collected profiles to media properties having specified interests	

Email Address	

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Assignee Information including Non-Applicant Assignee Information:

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Assignee 1

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Mailing Address Information:

Address 1	
Address 2	

City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

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Signature:

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Signature	/Louis J. Hoffman/			Date (YYYY-MM-DD)	2013-11-15
First Name	Louis	Last Name	Hoffman	Registration Number	38918

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This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

I claim:

1. A method for providing collected profiles comprising:

(a) responsive to receiving profile information about an electronic visitor to a profile supplier, automatically selecting a media property based on a comparison of the profile information received about the visitor with a previously received request for specific profiles or kinds of profiles of interest to the media property; and

(b) automatically arranging for electronic storage of a tag that is associated with the visitor and that is readable by the selected media property.

2. The method of claim 1 wherein part (a) comprises automatically selecting a plurality of media properties, based on a comparison of the profile information received about the visitor with each request of a set of requests, at least one of which requests was previously received from each of the media properties, each request being for specific profiles or kinds of profiles.

3. The method of claim 1 wherein performing part (a) responsive to receiving profile information about an electronic visitor to a profile supplier comprises performing part (a) responsive to receiving a redirect of a visitor along with the visitor's profile from the profile supplier.

4. The method of claim 1 wherein part (a) further comprises categorizing the profile information received about the visitor into a category of profiles.

5. The method of claim 1 further comprising recording a fee to the profile supplier in exchange for the profile information received from the profile supplier.

6. The method of claim 1 wherein the tag comprises personally identifiable information identifying the visitor.

7. The method of claim 1 wherein automatically arranging for electronic storage of the tag comprises arranging for electronic storage of the profile information in the tag.

8. The method of claim 1 wherein automatically arranging for electronic storage of the tag comprises arranging for electronic storage of the profile information in a database locatable through the tag.

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9. The method of claim 1 wherein automatically arranging for electronic storage of the tag comprises redirecting the visitor to the selected media property with a request to have the selected media property tag the visitor.

10. The method of claim 1 further comprising, after parts (a) and (b), electronically receiving a report from the selected media property containing information about usage of the profile in association with a visit by the profiled visitor to the selected media property.

11. The method of claim 10 further comprising, based on the report, recording an amount owed by the selected media property for profile usage.

12. The method of claim 11 further comprising calculating fees owed to a plurality of profile suppliers based on respective contributions of said profile suppliers to the profile identified in the report as having been used.

13. The method of claim 10 wherein the report contains information about usage of the profile in association with a profile-based advertisement delivered to the profiled visitor by the selected media property.

14. The method of claim 11 wherein the report comprises a redirection of the visitor from the selected media property when the selected media property utilizes the profile to deliver the advertisement.

15. The method of claim 14 wherein the redirection occurs by incorporating a redirection instruction into the advertisement.

16. The method of claim 1 wherein the profile supplier operates in a different media than the selected media property.

17. The method of claim 16 wherein the profile supplier operates in the Internet and the selected media property operates in a television media.

18. The method of claim 1 wherein part (a) comprises automatically selecting a media property based on a comparison of the profile information received about the visitor with a plurality of requests, previously received from the media property, each request being for a specific profile or kind of profiles.

19. The method of claim 18 further comprising, after parts (a) and (b), electronically receiving a report from the selected media property containing

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information about usage of the profile in association with a visit by the profiled visitor to the selected media property, and wherein the report further contains information identifying which profile or kind of profiles the selected media property used in connection with usage of the profile.

20. The method of claim 19 wherein the report comprises a redirection of the visitor from the selected media property when the selected media property utilizes the profile to deliver the advertisement, and wherein the information identifying which profile or kinds of profiles the selected media property used is contained in the URL to which the visitor is redirected.

21. The method of claim 1:

(i) wherein performing part (a) responsive to receiving profile information about an electronic visitor to a profile supplier comprises performing part (a) responsive to receiving a redirect of a visitor along with the visitor's profile from the profile supplier;

(ii) wherein part (a) further comprises categorizing the profile information received about the visitor into a category of profiles;

(iii) wherein part (a) comprises automatically selecting at least one of a plurality of media properties, based on a comparison of the profile information received about the visitor with each request of a set of requests, at least one of which requests was previously received from each of the media properties, each request being for specific profiles or kinds of profiles;

(iv) wherein automatically arranging for electronic storage of the tag comprises redirecting the visitor to the selected media property with a request to have the selected media property tag the visitor.

(v) further comprising, after parts (a) and (b), electronically receiving a report from the selected media property containing information about usage of the profile in association with a visit by the profiled visitor to the selected media property;

(vi) wherein the report contains information about usage of the profile in association with a profile-based advertisement delivered to the profiled visitor by the selected media property; and

(vii) further comprising, based on the report, recording (A) an amount owed by the selected media property for profile usage, and (B) a fee owed to the profile supplier for providing the profile information that was used by the selected media property.

22. A computer server programmed to implement a method for providing collected profiles comprising:

(a) responsive to receiving profile information about an electronic visitor to a profile supplier, automatically selecting a media property based on a comparison of the profile information received about the visitor with a previously received request for specific profiles or kinds of profiles of interest to the media property; and

(b) automatically arranging for electronic storage of a tag that is associated with the visitor and that is readable by the selected media property.

23. The computer server of claim 22 wherein the server is further programmed to implement a method for providing collected profiles:

(i) wherein performing part (a) responsive to receiving profile information about an electronic visitor to a profile supplier comprises performing part (a) responsive to receiving a redirect of a visitor along with the visitor's profile from the profile supplier;

(ii) wherein part (a) further comprises categorizing the profile information received about the visitor into a category of profiles;

(iii) wherein part (a) comprises automatically selecting at least one of a plurality of media properties, based on a comparison of the profile information received about the visitor with each request of a set of requests, at least one of which requests was previously received from each of the media properties, each request being for specific profiles or kinds of profiles;

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(iv) wherein automatically arranging for electronic storage of the tag comprises redirecting the visitor to the selected media property with a request to have the selected media property tag the visitor.

(v) further comprising, after parts (a) and (b), electronically receiving a report from the selected media property containing information about usage of the profile in association with a visit by the profiled visitor to the selected media property;

(vi) wherein the report contains information about usage of the profile in association with a profile-based advertisement delivered to the profiled visitor by the selected media property; and

(vii) further comprising, based on the report, recording (A) an amount owed by the selected media property for profile usage, and (B) a fee owed to the profile supplier for providing the profile information that was used by the selected media property.

24. A method for receiving collected profiles comprising:

(a) providing to a profile owner a request for specific profiles or kinds of profiles of interest along with a request for the profile owner to automatically arrange for electronic storage of a tag that is associated with visitors to a first media property having profile information matching the requested profiles or kinds of profiles; and

(b) later, automatically checking visitors to a second media property for the tag and, when found, automatically causing the delivery of a profile-dependent advertisement to the tagged visitors.

25. The method of claim 24 further comprising, after part (a) and before part (b), automatically tagging visitors redirected by the profile owner.

26. The method of claim 24 further comprising, after parts (a) and (b), electronically reporting to the profile owner information about delivery of the advertisement to the tagged visitors.

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27. The method of claim 26 wherein electronically reporting comprises automatically redirecting tagged visitors to the profile owner along with delivery of the advertisement.

28. The method of claim 27 wherein automatically redirecting comprises delivering an advertisement containing a redirection instruction.

29. The method of claim 26 wherein reporting further comprises automatically electronically identifying to the profile owner one of a plurality of profiles or kind of profiles used in association with delivery of the advertisement.

30. The method of claim 29 wherein electronically reporting comprises automatically redirecting tagged visitors to the profile owner along with delivery of the advertisement and identifying comprises redirecting tagged visitors to one of a plurality of URLs depending on which of the plurality of profiles or kinds of profiles was used in association with delivery of the advertisement.

31. The method of claim 24 further comprising, after parts (a) and (b), paying a fee to the profile owner as a result of delivery of the ad to the tagged visitors.

32. The method of claim 24 wherein the act of automatically causing delivery of a profile-dependent advertisement in part (b) is performed only when a price for delivery of the profile-dependent advertisement to the tagged visitor is higher than a price for delivery to the tagged visitor of an advertisement based on content adjacent to the ad space into which the advertisement is delivered.

33. The method of claim 32 further comprising:

(i) after part (a) and before part (b), automatically tagging visitors redirected by the profile owner;

(ii) after parts (a) and (b), automatically electronically reporting to the profile owner information about delivery of the advertisement to the tagged visitors, which information includes identifying to the profile owner one of a plurality of profiles or kind of profiles used in association with delivery of the advertisement; and

(iii) after parts (a) and (b), paying a fee to the profile owner as a result of delivery of the advertisement to the tagged visitors.

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IN THE CLAIMS:

Please amend the claims as follows:

1. (Original) A method for providing collected profiles comprising:

(a) responsive to receiving profile information about an electronic visitor to a profile supplier, automatically selecting a media property based on a comparison of the profile information received about the visitor with a previously received request for specific profiles or kinds of profiles of interest to the media property; and

(b) automatically arranging for electronic storage of a tag that is associated with the visitor and that is readable by the selected media property.

2. (Original) The method of claim 1 wherein part (a) comprises automatically selecting a plurality of media properties, based on a comparison of the profile information received about the visitor with each request of a set of requests, at least one of which requests was previously received from each of the media properties, each request being for specific profiles or kinds of profiles.

3. (Original) The method of claim 1 wherein performing part (a) responsive to receiving profile information about an electronic visitor to a profile supplier comprises performing part (a) responsive to receiving a redirect of a visitor along with the visitor's profile from the profile supplier.

4. (Original) The method of claim 1 wherein part (a) further comprises categorizing the profile information received about the visitor into a category of profiles.

5. (Original) The method of claim 1 further comprising recording a fee to the profile supplier in exchange for the profile information received from the profile supplier.

6. (Original) The method of claim 1 wherein the tag comprises personally identifiable information identifying the visitor.

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7. (Original) The method of claim 1 wherein automatically arranging for electronic storage of the tag comprises arranging for electronic storage of the profile information in the tag.

8. (Original) The method of claim 1 wherein automatically arranging for electronic storage of the tag comprises arranging for electronic storage of the profile information in a database locatable through the tag.

9. (Original) The method of claim 1 wherein automatically arranging for electronic storage of the tag comprises redirecting the visitor to the selected media property with a request to have the selected media property tag the visitor.

10. (Original) The method of claim 1 further comprising, after parts (a) and (b), electronically receiving a report from the selected media property containing information about usage of the profile in association with a visit by the profiled visitor to the selected media property.

11. (Original) The method of claim 10 further comprising, based on the report, recording an amount owed by the selected media property for profile usage.

12. (Original) The method of claim 11 further comprising calculating fees owed to a plurality of profile suppliers based on respective contributions of said profile suppliers to the profile identified in the report as having been used.

13. (Original) The method of claim 10 wherein the report contains information about usage of the profile in association with a profile-based advertisement delivered to the profiled visitor by the selected media property.

14. (Original) The method of claim 11 wherein the report comprises a redirection of the visitor from the selected media property when the selected media property utilizes the profile to deliver the advertisement.

15. (Original) The method of claim 14 wherein the redirection occurs by incorporating a redirection instruction into the advertisement.

16. (Original) The method of claim 1 wherein the profile supplier operates in a different media than the selected media property.

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17. (Original) The method of claim 16 wherein the profile supplier operates in the Internet and the selected media property operates in a television media.

18. (Original) The method of claim 1 wherein part (a) comprises automatically selecting a media property based on a comparison of the profile information received about the visitor with a plurality of requests, previously received from the media property, each request being for a specific profile or kind of profiles.

19. (Original) The method of claim 18 further comprising, after parts (a) and (b), electronically receiving a report from the selected media property containing information about usage of the profile in association with a visit by the profiled visitor to the selected media property, and wherein the report further contains information identifying which profile or kind of profiles the selected media property used in connection with usage of the profile.

20. (Original) The method of claim 19 wherein the report comprises a redirection of the visitor from the selected media property when the selected media property utilizes the profile to deliver the advertisement, and wherein the information identifying which profile or kinds of profiles the selected media property used is contained in the URL to which the visitor is redirected.

21.-33. (Canceled)

Amazon/AlmondNet
Exhibit 1006
Page 18

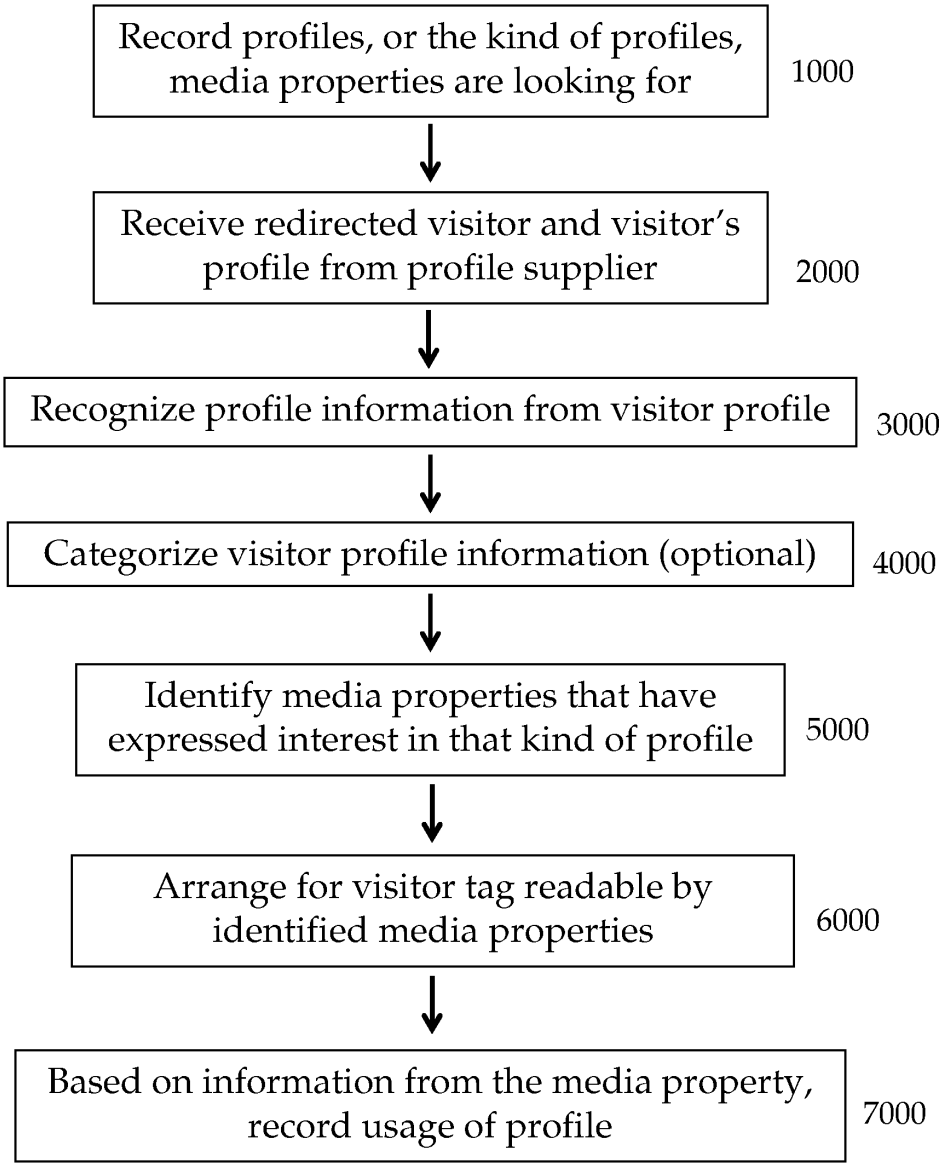

Record profiles, or the kind of profiles, media properties are looking for
1000
Receive redirected visitor and visitor's profile from profile supplier
2000
Recognize profile information from visitor profile
3000
Categorize visitor profile information (optional)
4000
Identify media properties that have expressed interest in that kind of profile
5000
Arrange for visitor tag readable by identified media properties
6000
Based on information from the media property, record usage of profile
7000

FIG. 1

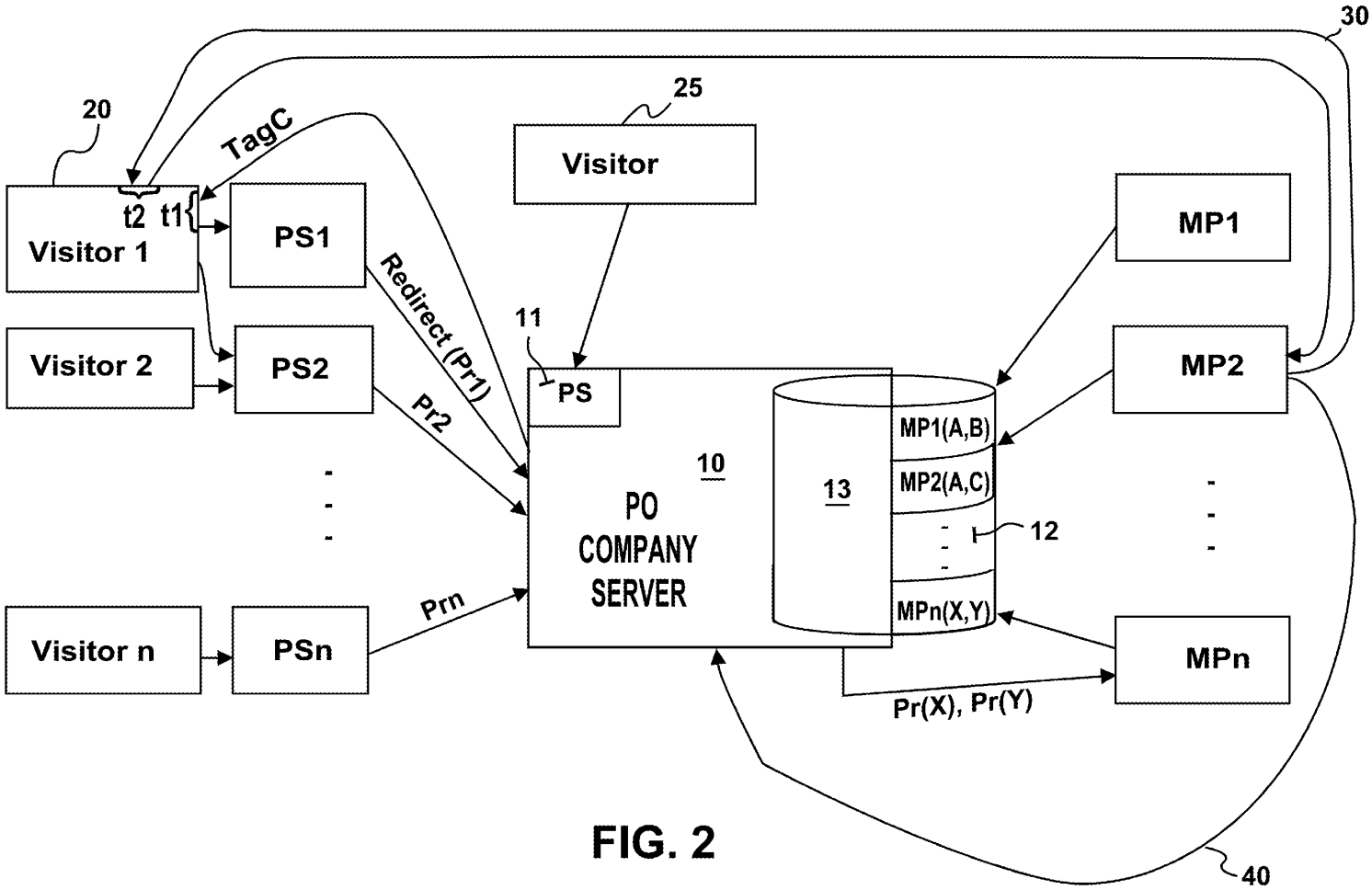

30
20
25
TagC
t2 t1
Visitor 1
Visitor 2
Visitor n
PS1
PS2
PSn
Visitor
Redirect (Pr1)
Pr2
Prn
11
PS
10
PO
COMPANY
SERVER
13
MP1(A,B)
MP2(A,C)
MPn(X,Y)
12
MP1
MP2
MPn
Pr(X), Pr(Y)
40

FIG. 2

Form PTO-1449 (Modified)
List of Patents and Publications For Information Disclosure Statement

Serial No.: 14/080,999
Applicant: Shkedi Roy
Filed: 11/15/2013
Art Unit: 3688 (in parent)
Examiner: Champagne, D. (in parent)
Conf. No.: 9158

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Publication Date MM-DD-YYY	Name of Patentee or Applicant
	1	5710884	01/20/1998	Dedrick
	2	5717923	02/10/1998	Dedrick
	3	5724521	03/03/1998	Dedrick
	4	5752238	05/12/1998	Dedrick
	5	5794210	08/11/1998	Goldhaber et al.
	6	5855008	12/29/1998	Goldhaber et al.
	7	5918014	06/29/1999	Robinson
	8	5948061	09/07/1999	Merriman et al.
	9	6026368	02/15/2000	Brown et al.
	10	6044376	03/28/2000	Kurtzman II
	11	6055513	04/25/2000	Katz et al.
	12	6073241	06/06/2000	Rosenberg et al.
	13	6141010	10/31/2000	Hoyle
	14	6216129	04/10/2001	Eldering
	15	6285987	09/04/2001	Roth
	16	6324519	11/27/2001	Eldering
	17	6327574	12/04/2001	Kramer et al.
	18	6366298	04/02/2002	Haitsuka et al.
	19	6385592	05/07/2002	Angles et al.
	20	6446261	09/03/2002	Rosser
	21	6484492	11/26/2002	Meholic et al.
	22	6487538	11/26/2002	Gupta et al.
	23	6615247	09/02/2003	Murphy
	24	6839680	01/04/2005	Liu et al.
	25	6868392	03/15/2005	Ogasawara
	26	6983379	01/03/2006	Spalink et al.
	27	7003792	02/21/2006	Yuen
	28	7013290	03/14/2006	Ananian
	29	7039594	05/02/2006	Gersting
	30	7043531	05/09/2006	Seibel, et al.

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Serial No.: 14/080,999
Applicant: Shkedi Roy
Filed: 11/15/2013
Art Unit: 3688 (in parent)
Examiner: Champagne, D. (in parent)
Conf. No.: 9158

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Publication Date MM-DD-YYY	Name of Patentee or Applicant
	31	7051351	05/23/2006	Goldman et al.
	32	7058593	06/06/2006	Merritt
	33	7065550	06/20/2006	Raghunandan
	34	7155508	12/26/2006	Sankuratripati et al.
	35	7181438	02/20/2007	Szabo
	36	7188076	03/06/2007	Bensemana
	37	7194424	03/20/2007	Greer et al.
	38	7343354	03/11/2008	Hennessey
	39	7346615	03/18/2008	Bem
	40	7360251	04/15/2008	Spalink et al.
	41	7373599	05/13/2008	McElfresh et al.
	42	7546249	06/09/2009	Main
	43	7558795	07/07/2009	Malik
	44	7698422	04/13/2010	Vanderhook et al.
	45	7725944	05/25/2010	Spalink et al.
	46	7756744	07/13/2010	Schiff et al.
	47	7937383	05/03/2011	Hintze et al.
	48	7966647	06/21/2011	Igoe et al.
	49	8036929	10/11/2011	Reisman
	50	8086491	12/27/2011	Matz et al.
	51	20010020242	09/06/2001	Gupta et al.
	52	20010039515	11/08/2001	Mayadas
	53	20010044743	11/22/2001	McKinley, et al.
	54	20020002541	01/03/2002	Williams
	55	20020029267	03/07/2002	Sankuratripati
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	58	20020072965	06/13/2002	Merriman et al
	59	20020072965	06/13/2002	Merriman et al.
	60	20020072971	06/13/2002	DeBusk et al.

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U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Publication Date MM-DD-YYY	Name of Patentee or Applicant
	61	20020082910	06/27/2002	Kontogouris
	62	20020082923	06/27/2002	Merriman et al.
	63	20020091568	07/11/2002	Kraft, et al.
	64	20020099603	07/25/2002	Bandura
	65	20020112013	08/15/2002	Walsh
	66	20020123928	09/05/2002	Eldering, et al.
	67	20020143632	10/03/2002	Walter, et al.
	68	20020161636	10/31/2002	Takahashi
	69	20020194058	12/19/2002	Eldering
	70	20020194589	12/19/2002	Cristofalo et al.
	71	20030036944	02/20/2003	Lesandrini, et al.
	72	20030046156	03/06/2003	Cromer et al.
	73	20030065558	04/03/2003	Shaw, et al.
	74	20030083938	05/01/2003	Smith, et al.
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	79	20030220837	11/27/2003	Asayama
	80	20040024632	02/05/2004	Perry
	81	20040059632	03/25/2004	Kang et al.
	82	20040068436	04/08/2004	Boubek
	83	20040117322	06/17/2004	Bjorksten, et al.
	84	20040260605	12/23/2004	McIntyre, et al.
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	90	20050120091	06/02/2005	Casais

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Conf. No.: 9158

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Examiner Initials	Cite No.	Document Number	Publication Date MM-DD-YYY	Name of Patentee or Applicant
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	92	20050131762	06/16/2005	Bharat, et al.
	93	20050165644	07/28/2005	Beyda, et al.
	94	20050216336	09/29/2005	Roberts, et al.
	95	20050216823	09/29/2005	Petersen
	96	20050222905	10/06/2005	Wills
	97	20050278443	12/15/2005	Winner et al.
	98	20060020508	01/26/2006	Gorti, et al.
	99	20060020510	01/26/2006	Vest
	100	20060053047	03/09/2006	Garcia, et al.
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	106	20060106710	05/18/2006	Meek et al.
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	120	20100299431	11/25/2010	Vanderhook et al.

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U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Publication Date MM-DD-YYY	Name of Patentee or Applicant
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	122	20110258049	10/20/2011	Ramer et al.
	123	6832207	12/14/2004	Shkedi
	124	6925440	08/02/2005	Shkedi
	125	6973436	12/06/2005	Shkedi
	126	7072853	07/04/2006	Shkedi
	127	7428493	09/23/2008	Shkedi
	128	7454364	11/18/2008	Shkedi
	129	7747745	06/29/2010	Shkedi
	130	7822637	10/26/2010	Shkedi
	131	7822639	10/26/2010	Shkedi
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	133	7890609	02/15/2011	Shkedi
	134	7979307	07/12/2011	Shkedi
	135	8051444	11/01/2011	Shkedi
	136	8200822	06/12/2012	Shkedi
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	141	8244583	08/14/2012	Shkedi
	142	8244586	08/14/2012	Shkedi
	143	8281336	10/02/2012	Shkedi
	144	8341247	12/25/2012	Shkedi
	145	8494904	07/23/2013	Shkedi
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	147	8595069	11/26/2013	Shkedi
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	149	20110040607	02/17/2011	Shkedi
	150	20090172723	07/02/2009	Shkedi et al.

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Art Unit:	3688 (in parent)
Examiner:	Champagne, D. (in parent)
Conf. No.:	9158

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Publication Date MM-DD-YYY	Name of Patentee or Applicant
_____	151	20090049468	02/19/2009	Shkedi

FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Pub. Date MM/DD/YYY	Name of Patentee	Translation Yes / No
_____	152	KR20010096343	11/07/2001	MyOne Card Corp.	Yes
_____	153	WO2005/046237	05/19/2005	Gutta et al.	No
_____	154	WO2004084109A	09/30/2004	NHN Corporation	Yes
_____	155	KR2004099222A	11/26/2004	Echo Marketing Co., Ltd.	Yes
_____	156	KR20040026167	03/30/2004	IBM Corporation	Yes

OTHER ART

Examiner Initials	Cite No.	Author Title Date Pertinent Pages Etc.
_____	157	KERWIN; "NY Times Web Site Lets Advertisers Get Personal: Profile Info From Users Allows Ads to be Highly Targeted;" Advertising Age; July 14, 1997.
_____	158	Engage Technologies, Inc.; Form S-1A; filed with the SEC; pp. 36-50; July 19, 1999.
_____	159	"The e-Marketing Report"; Morgan Stanley Dean Witter; May, 2000; portions.
_____	160	New York Times Reference Dictionary definition of "computer," downloaded April 7, 2010.

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Electronic Acknowledgement Receipt	
EFS ID:	17412605
Application Number:	14080999
International Application Number:	
Confirmation Number:	9158
Title of Invention:	Providing collected profiles to media properties having specified interests
First Named Inventor/Applicant Name:	Roy Shkedi
Customer Number:	26362
Filer:	Louis J. Hoffman/Donald Hertz
Filer Authorized By:	Louis J. Hoffman
Attorney Docket Number:	14-PP-CON3
Receipt Date:	15-NOV-2013
Filing Date:	
Time Stamp:	12:22:48
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$1600
RAM confirmation Number	10098
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1	Transmittal of New Application	13-11-15-Datonics-PP-CON3-App_Trans.pdf	222283 9d1e472297a2afa451686ad768d53a26b0ec9b0e	no	1
Warnings:					
Information:					
2		ProvidingProfiles-Spec-FINAL.pdf	117922 cffa2df0701885ee36b8dd4961e8ca1e391da6c7	yes	29
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Specification		1	22	
	Claims		23	28	
	Abstract		29	29	
Warnings:					
Information:					
3	Drawings-only black and white line drawings	ProvidingProfiles-drawings-FINAL.pdf	524588 415d8ef013f10777a8e3df43dd59feaab08a68f8	no	2
Warnings:					
Information:					
4	Oath or Declaration filed	13-11-13-Datonics-PP-CON3-Declaration_signed.pdf	156290 816f76bbe0b569b32483b222b45a731ae856c55a	no	1
Warnings:					
Information:					
5	Application Data Sheet	13-11-15-Datonics-PP-CON3-ADS.pdf	1505724 b5c36652317aba3b4860d17e4c7b990cc8747945	no	7
Warnings:					
Information:					
6	Preliminary Amendment	13-11-15-Datonics-PP-CON3-Prelim_Amend.pdf	60337 1e7e65a13fd128328ea6031d58bb66844beb2f1c	no	6
Warnings:					
Information:					
7	Fee Worksheet (SB06)	fee-info.pdf	32717 a571d9c9469d4c2d1a941428cad97d2f3ddbd0ce	no	2
Warnings:					
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If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

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Electronic Acknowledgement Receipt	
EFS ID:	17412971
Application Number:	14080999
International Application Number:	
Confirmation Number:	9158
Title of Invention:	Providing collected profiles to media properties having specified interests
First Named Inventor/Applicant Name:	Roy Shkedi
Customer Number:	26362
Filer:	Louis J. Hoffman/Donald Hertz
Filer Authorized By:	Louis J. Hoffman
Attorney Docket Number:	14-PP-CON3
Receipt Date:	15-NOV-2013
Filing Date:	
Time Stamp:	12:42:40
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	13-11-15-Datonics-PP-CON3-POA.pdf	2166410 2e13051cab19e711e725eaf9434fe8cb16636836	no	2
Warnings:					
Information:					

2	Transmittal Letter	13-11-15-Datonics-PP-CON3-IDS_Cover.pdf	93408 53bd8fd3edb18b60e7ce3b651e742f213d5db10c	no	2
Warnings:					
Information:					
3	Information Disclosure Statement (IDS) Form (SB08)	13-11-15-Datonics-PP-CON3-Form_1449.pdf	110175 d86827c70a0e7649a205f859420725f31e5a94ec	no	6
Warnings:					
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New International Application Filed with the USPTO as a Receiving Office
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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	Providing collected profiles to media properties having specified interests

As the below named inventor, I hereby declare that:

This declaration is directed to:

- [x] The attached application, or
- [ ] United States application or PCT international application number _____

filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Roy Shkedi Roy Shkedi Date (Optional): 11/13/2013

Signature: _____

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

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Application Number	14/080,999
Filing Date	11/15/2013
First Named Inventor	Shkedi, Roy
Title	Providing collected profiles to media properties having specified interests
Art Unit	3681 (in parent app.)
Examiner Name	Champagne, Donald (in parent app.)
Attorney Docket Number	14-PP-CON3

SIGNATURE of Applicant or Patent Practitioner

Signature	/Louis J. Hoffman/	Date (Optional)	11/15/2013
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Applicant Name (if Applicant is a juristic entity)			

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SIGNATURE of Applicant for Patent

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Remarks

Assignee cancels all but twenty claims from the parent application to avoid excess claims fees and plans to file a Supplemental Preliminary Amendment as soon as possible to present new claims for prosecution in this application.

Please feel free to telephone the undersigned if it would in any way advance prosecution of this application.

Respectfully submitted,

DATONICS, LLC

by its attorney

Dated: November 15, 2013

/Louis J. Hoffman/
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PROVIDING COLLECTED PROFILES TO MEDIA PROPERTIES HAVING SPECIFIED INTERESTS

CROSS REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of provisional application Serial No. 60/805,114, filed June 19, 2006, which is incorporated herein by reference.

FIELD OF THE INVENTION

The present invention generally relates to profile-based behavioral targeting advertisement placement services. More specifically, the present invention relates to improving monetization of electronic advertisement placement.

BACKGROUND OF THE INVENTION

DoubleClick's "Boomerang" is a service for advertisers that places a cookie on computers of visitors to an advertiser's site for the purpose of finding those visitors on other sites where DoubleClick is the ad server ("ad" is short for advertisement). When the same visitors are found on those other sites, additional advertiser's ads are served to them by the DoubleClick ad sever or by the advertiser's ad server following a redirect from the DoubleClick ad server.

The only server that can read a cookie on a user's computer is a server operating under the same domain as the server that placed the cookie on a user's computer to begin with. In other words, a cookie placed by a server operating under one domain cannot be read by another server working under a separate domain. That is why the advertiser cannot expect to place a cookie of its own (e.g., ford.com cookie) on a visitor to its site and then later expect the DoubleClick ad server (doubleclick.com) to be able to recognize the visitor when that visitor is visiting sites where DoubleClick serves ads by reading the ford.com cookies. Only a server operating under the DoubleClick domain can read a cookie placed by a server operating under the DoubleClick domain. So, DoubleClick needs to place a doubleclick.com cookie on visitors to the ford.com site for

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DoubleClick to later find those visitors within other sites, i.e., where the DoubleClick ad server is used to serve ads.

For a site to have its ad served by an ASP-hosted ad server, such as the one operated by DoubleClick, the site needs to redirect visitors from the site to the DoubleClick ad server, to fetch the ad from the server. Following the redirect from the site, the visitor accesses the DoubleClick ad server. Because the DoubleClick server is operating under the DoubleClick domain, it can read the DoubleClick cookie or cookies and then recognize that it encountered the same visitor in the past. In this example, the DoubleClick ad server recognizes the visitor as someone who visited the ford.com site.

AlmondNet, Tacoda, RevenueScience, and other companies (herein "BT companies"; "BT" stands for behavioral targeting) specialize in targeting ads based on observed behavior of sites' visitors. To record a visitor's observed behavior, a BT company places a cookie (or cookies) on the computers of visitors to specific sections of a publisher's website or on the computers of visitors of the publisher who conducted a specific action such as search, click content, click an ad, make a phone call, request information, acquire a product, etc.

The placement of cookies allows those publishers or the BT company itself to sell ads to advertisers. Those ads will be presented to the profiled visitors when they are found later on the same site or on other sites. Such sites can be either a site where the BT company's software is used or a site where the BT company has bought media. The BT company may buy the media on behalf of itself or on behalf of the publisher, who is interested in delivering ads to its audience outside the publisher's site.

Although a BT company (AlmondNet, Tacoda, RevenueScience, etc.) acts as an agent that places cookies on the computers of publisher's visitors for the purpose of delivering targeted ads to the publisher's visitors on other sites, the publisher can work without an agent and place cookies or tags on the computers of the publisher's own visitors for the purpose of delivering ads to those visitors on other sites where the publisher buys ad space. Such a publisher, acting without an agent, is also included in the definition of a BT company.

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A publisher may also be referred to as a "profile supplier" when it transfers profile information, such as behavioral information, demographic information, etc., to a BT company. Therefore, a publisher that is a BT company may also be its own profile supplier. Furthermore, although the name "BT company" implies the targeting of ads is based on collected behavioral profiles, a BT company may also collect other kinds of profile information, such as demographic information or user-provided information, and target ads to those visitors wherever found based on the collected profile information.

Another kind of a BT company is a company that has software installed on a person's computer, such as toolbar software, desktop search software, weather software, or any kind of software that is used by the computer's user. Such software also monitors the computer user's visits to different publishers' sites and media properties and collects profile information about the computer user for the purpose of delivering ads to the user within ad space of sites and media properties that the user visits based on the collected profiles.

A BT company using software installed on a user's computer does not need the cooperation of a visited media property to collect information about the visitor's visit because that software monitors whatever the user is doing on his or her computer. A BT company that has software installed on a user's computer is therefore its own profile supplier. Such software can place a cookie or another kind of tag on the user's computer. Because the software is installed on the user's computer, it can write cookies readable by any domain. That means that the BT company can place a tag or cookie of a second media property, if the BT company would like the second media property to recognize the visitor when the visitor visits that second media property site, by simply having the software place a cookie operating under the domain of the second property on the visitor's computer. The software may also report the collected profiles to a central server of the BT company.

The central server may also tag the visitor or arrange for the visitor to be tagged by operators of other media properties. A BT company can place a cookie on a site's section when a visitor's computer visits that section, if a code of the company was

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integrated into the page of that section by the site that owns the page. The code (e.g., HTML or Java) redirects to the BT company's server all visitors to the page. Also, in the case that the BT company is the publisher itself, the publisher will simply "cookie" (by itself) all visitors that either read a specific content, search, click, ask for information, make a phone call, etc.

The BT company's server, which either gave the site a unique code for a page, received from the page its URL, or received access to the page's content that could be analyzed by the BT company's server, etc., identifies the content read by the page's visitor, the keyword searched for by the user, an ad clicked on the page, a content item clicked on the page, a phone call that was made that was initiated from the page, information that was requested, or a product was acquired, etc. The content read by the page visitor could be identified by the BT company's server whether the content was reported by the site or whether the content was identified following the analysis of the page. The server then places a cookie on the user's computer indicating what content was read by the visitor on the page, what keyword was searched for by the user, or what ad was clicked on the page, etc. The placed cookie indicates that information (1) in the cookie per se, (2) in a central database operated by the server where the cookie ID is used as a record finder, or (3) both in the cookie and in the database.

Although the above description relates to cookies, a cookie is only one example of a possible tag. A tag generally is a unique identifier used to mark a person electronically visiting a media property, such as a web site, TV channel, radio show, or the like, using a computer, a mobile device, a TV set, a TV set top box, or any other device.

The tag is used for the purpose of delivering additional ads to a visitor to one media property when that visitor is found later on other media properties, based on the visitor's profile collected on the first media property. The profile could be the observed behavior of the visitor on the media property, demographic information collected on the media property, profile information provided by the visitor to the media property, etc. The profile could be made available to the other media properties.

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Because the purpose of the tag is to enable the delivery of additional ads on other media properties visited by the visitor, and because the delivery of an ad requires only control of the ad space and not necessarily control of the entire media property visited by the visitor, a media property (in the present context) can also be defined as any equipment that controls an ad space viewed by a visitor, including a web site, an ad network's site (where the ad network represents the ad space of different sites), a TV program, some of the ad space within TV programs or TV channels (represented by a cable company), a TV network, or any ad space for which an entity is allowed to sell an advertisement and deliver it within the ad space; whether the ad space is owned by that entity, or whether the entity pays the owner of the ad space when using its ad space to deliver an ad sold by the entity. Ad space can be on a web site, in a TV program, in a text message, in a radio show, in any broadcasted material, in any streaming video or audio, etc. An ad space can be a fixed position on a page, or the ad space can be made available by a web site to an ad network (for example) only when the web site did not sell all of the site's ad inventory and therefore wishes to make some of the inventory available to the ad network.

In the case of a media property controlling an ad space viewed by a visitor, a specific ad space on a page might be controlled only temporarily. For example, in the case of the web site that did not sell all the ad impressions available to be delivered within an ad space on a page and therefore makes the unsold ad space available to the ad network to fill, the ad network will have temporary control of the ad space, i.e., when that ad space is given to it by the web site. Once the site redirects the ad space on the page to the ad network (so the ad network could fill the ad space with an ad sold by the ad network), the ad network controls the ad space and has access to the visitor viewing the ad space that was redirected to the ad network by the site, and therefore the ad network's equipment is considered a media property, as it controls an ad space viewed by a visitor.

The tag can be placed on the device used by the user to access the first media property where the user's profile was collected (in case of observed behavior, that behavior can be reading a specific content, searching, clicking an ad or content, making

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a phone call, asking for product information, acquiring a product, or taking any other kind of action). A tag placed on the device (1) could be read only by a server operating under the same domain as the server that placed the tag on the device to begin with as in the case of a cookie for example, (2) could be placed on the device when the user visited the first media property, and then the tag can be read by any second media property visited by the visitor, or (3) could be encrypted and, while accessed by any second media property visited by the visitor, the tag could be deciphered only by second media property computers that received the deciphering code from the first media property. In case of a tag placed by software installed on a user's computer, the tag could be whatever the software wants it to be, including a cookie of any domain.

A tag does not have to be placed on the user's device. A tag can also be used in a central database of a BT company or a central database of any second media property visited by the visitor, where the tag could be a unique identifier either of the device or of the user. In the case where the tag identifies the device, the tag might denote an IP address, a phone number, a device's manufacturer serial number, etc. A cookie placed on the device can also uniquely identify the device and the cookie therefore can be used as a tag in a central database. In the case where the tag identifies the user, the tag might denote the username and password used to access a media property, a user's name and address, a user's e-mail, a user's social security number, or any other personal identifiable information.

As already mentioned, the observed behavior of a visitor to a first media property is referred to as profile information about a specific visitor. A visitor's profile might be enhanced by the visitors' observed behavior on other media properties or by other profile information collected on other media properties.

A visitor's profile can be represented by a unique tag, or the profile can be stored with the tag, whether the tag is placed on the device, on a central database, or both. For example, the profile can be stored within a cookie (tag) on a visitor's device, or the profile can be stored in a central database where the tag connected to the profile is used as a unique identifier of the visitor's device or of the visitor personally. The profile can also be saved on both the device and a central database.

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Some 50% to 80% of the ad space on the Internet is considered difficult to monetize, as it is located next to content that tends to be more generalized, such as general news, web based e-mails, instant messages, music or files downloading sites, and software. Advertisers are not willing to pay a high price for delivering an ad to visitors of such sites, as they do not know how many of those sites' visitors are potential clients for their products and services. By contrast, advertisers prefer the placement of ads on dedicated content sites, such as a travel site. For example, an airline is willing to pay a high price per ad on a travel site, as it knows that the ad will be delivered to people who are currently searching for flying tickets. The same is true for TV, where a significant proportion of the ad space is within TV programs where the audience is heterogeneous. It is also true for radio shows and other kind of media.

Using profiles for the delivery of targeted ads within the above-described low-value ad space can turn the low-value ad space into high-value ad space by delivering ads to users that are based on previously collected profiles of the users, rather than ads that are related to the content on the page they are viewing. For example, a "car insurance" related ad, delivered to a person who yesterday searched for "car insurance" within the ad space of a general news page the person is currently reading, will be much more relevant to the person than an ad related to the general news he or she is reading.

The BT companies are described above as collecting profiles and later delivering ads to the profiled visitors when found on other sites. The ads delivered by the BT company to the profiled visitors are either sold by the BT company, which pays royalties to the profile suppliers that provided it with profiles whenever ads presented to their audience generate revenues, or paid for by a publisher that is interested in delivering ads to its own audience outside its site and is paying the BT company to find its audience on other sites. As described, the publisher might be the BT company itself.

In addition, where the collected profiles are mainly used to deliver targeted ads within low-value ad space that is acquired from low-value ad space owners, and the ads are delivered by the BT company, there is also the opportunity to make the collected profiles available to low-value ad space owners, because, instead of selling

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their low-value ad space to the profile owners, such ad space owners would prefer to monetize their low-value ad space better by themselves, by using the collected profiles to sell targeted ads, delivered to the profiled visitors when found within such low-value ad space.

A low-value ad space owner could be any media property owner, whether it owns a web site, a TV program, a radio show, or any other media property. Also, "low-value" ad space is a relative term. Because ad space prices are usually a function of the content next to the ad space, if a profile-based ad garners a higher price for the ad space owner than an ad based on the adjacent content, then the ad space value is considered "low value" (i.e., in relative terms, relative to the price the ad space will garner if used for delivery of a profile-based ad).

As described, for example, in commonly owned U.S. Patent 6,925,440, (A) profile owners (i.e., who either own the profiles or have the right to resell the profiles on behalf of another profile owner) can provide a databank with access to visitors and their profiles, and (B) either (i) the databank enhances its existing profile on a visitor with a profile owner's profile information about the visitor or (ii) a profile owner enhances the profile it has on a visitor with the databank's profile information about the visitor, where the profile information is given in return for royalties paid for every later usage of the profile information for the delivery of targeted ads to the visitor based on the profile (for example).

Although the invention of the '440 Patent provides a media property with additional information about its visitors, several possible challenges arise:

1. If a media property (if acting as a profile owner) wants to enhance the profiles available to it about its visitors and thus contacts a databank and provides it with access to the profiles, the media property might be wasting resources: First, the databank might have no profiles about the media property's visitors. For example, if the databank has no profile about a visitor, the media property would have provided the databank access to the visitor merely to learn that fact. Second, the profiles that the databank does have might be of no use to the media property because its sales force does not sell ads in the category in which the profiles belong. For example, if the

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databank has a profile about the visitor and it is a health-related profile, but the media property's sales force does not sell ads in the health category, the profile available from the databank about that visitor is of no use to the media property.

2. The media property (if acting as a databank) may be given access by a profile owner to many visitors to that profile owner's site for whose profiles the media property has no need, because the media property has no way of monetizing profiles of those kinds. For example, if a media property's sales force specializes in selling ads in the travel and financial services categories, there is no use in providing them with health, auto, and shopping-related profiles. In cases where a large profile owner makes profiles available to a media property, unless the media property has a very large sales force that specializes in selling ads in many different advertising categories, there is a significant probability that the media property will have no use for most of the profiles received.

3. A media property that receives profiles under the system of the '440 Patent described here is committing itself to pay for every usage of a received profile. Because many of the ads (or, depending on the way the profile is transferred, all of the ads) are delivered by the media property after receipt of the profile, it is a challenge for the media property to track usage of the profiles. First, it is not clear which of the visitors (for whom the media owner received profiles) actually visited the media property later on their own accord as opposed to visiting via a redirect, for example from a databank or a profile owner to the media property without the visitor asking for such visit or being aware of it. In the case of a redirect from a databank's server or a profile owner's server, a visitor's browser would simply fetch a 1x1 transparent pixel from the media property's server following the redirect. Second, because it is not clear how many of the profiled visitors will appear later within the ad space of the media property, some tracking of the usage of the profiles by the media property must be established. The problem becomes even more complex when the media property receives the profiles from a databank, because the databank itself aggregates profiles from other profile owners and makes those profiles available to media properties, and it is not clear which of the delivered profiled visitors will visit the media property on their

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own accord (whether for the first time or not). In that circumstance, it is not clear how the databank will know which profile suppliers to compensate for usage of their profiles. The problem is especially complex when the databank has several profile suppliers providing it with profiles in the same category (for example, the databank may have 20 different travel sites, all allowing the databank to tag their visitors as "travel" visitors) and the databank gives to a media property all of the profiles from those profile suppliers within that category.

Although BT companies can collect profiles and deliver ads to the profiled visitors within low-value ad space that they buy from media properties, there remains the need, therefore, to provide collected profiles to media properties that will better monetize their low-value ad space by selling ads based on the profiles and delivering the ads within their ad space to the profiled visitors when those visitors visit the media properties and making a payment for the profiles to the profile owners who provided the profiles.

What is needed generally is a more efficient method of profile-based behavioral targeting advertisement placement services, particularly for improving monetization of electronic advertisement placement.

SUMMARY OF THE INVENTION

Generally, various aspects of the disclosed embodiments relate to systems and methods for providing collected profiles to media properties, for improved monetization of electronic advertisement placement. The methods have particular importance to media properties that have interests in specific profiles or profiles of a specified category or kind.

The disclosure more specifically relates to an automatic system operated by a profile owner company ("PO company") for identifying media properties interested in having a collected profile made available to them. The automatic system makes the identification by recognizing a collected profile as one that a media property has previously requested or one that is within a category that a media property has

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previously requested. Thereafter, the PO company arranges for the visitor to be tagged with a tag readable by the media property that requested such a profile.

Using information received from the media property, the PO company then records usage of the profile by the media property. When the PO company also acts as a databank, the PO company determines which profile supplier will be credited for the media property's usage of the profile (i.e., the one that provided the databank with the profile that was used) and records the credit.

In one implementation, when a media property uses a profile, the media property transfers the visitor, along with the profile it is using, to the PO company's system, to let the PO company know which kind of profile was used. The media property might transfer the profile along with the visitor only when the media property receives from the PO company more than one kind of profile, because it is unnecessary if the media property receives only one kind of profile.

Because BT companies collect profiles, any BT company (defined above) could act as a PO company and make profiles available to media properties, whether the PO company owns profiles directly or acts as a databank representing other profile owners. Such other profile owners provide the databank with their profiles in return for (i) royalties paid to them whenever the profiles are used, or (ii) a payment. Any profile supplier (defined above) can also be a PO company.

The above summary does not include an exhaustive list of all aspects of the present invention. Indeed, the inventor contemplates that the invention may include all systems and methods that can be practices from all suitable combinations of the various aspects summarized above, as well as those disclosed in the detailed description below and particularly pointed out in the claims. Such combinations have particular advantages not specifically recited in the above summary.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a flow diagram of an exemplary embodiment of a method for transferring collected profiles to media properties having specified interests.

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Figure 2 is a schematic of an exemplary embodiment of entities and associated data flow useful with a method of transferring collected profiles to media properties having specified interests.

DESCRIPTION OF PREFERRED EXEMPLARY EMBODIMENTS

In disclosed embodiments, collected profiles are made available by accepting information about desired profiles or profile categories from a media property, identifying an electronic visitor as fitting into the profile category, and arranging for that visitor to be tagged. Preferred additional aspects of disclosed embodiments include automatically electronically recording electronic visits by tagged visitors to a media property, determining which profile supplier will be credited for the recorded electronic visit, and crediting that profile supplier.

The method includes the following basic steps:

1. A PO company's database 12 records (Fig. 1, 1000) the profiles, or the kind of profiles, a media property (e.g., Fig. 2, MP1) is looking for. The profile could be a behavioral profile, a demographic profile, or any other possible profile. For example, a media property (MP1) could ask for visitors who have searched for "car insurance" on a search engine, visitors who were interested in "travel" (MP1(A)), or visitors who were interested in "autos" (MP1(B)), etc. A media property can communicate to the PO company the profiles for which it is looking via e-mail, electronically, via mail, over the phone, or in any other way.

2. A profile supplier (e.g., Fig. 2, PS1) redirects (Fig. 1, 2000) a visitor 20 to a PO company 10 along with the visitor's profile (Pr1). In case the profile supplier is also the PO company (see visitor 25), this step either does not take place or takes place internally, for example via an internal redirect from one server (see 11) to another server 10 operating under the same domain that belongs to the publisher/PO Company. In case the PO company has software on a user's computer that enables it to monitor the user's visits to media properties without the cooperation of the media properties, this step either does not take place or takes place internally, e.g., by the software on the

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user's computer communicating the collected profile to the PO company's central server.

3. The PO company's server 10 recognizes (3000) the content read by the user, the category to which the content read by the user belongs, the keyword searched for by the user, an ad clicked by the user, or any other action conducted on the page/site by the user (such as click on an item of content or an ad, purchase of a product, request for more information, etc.) during the site visit. The recognizing might be as simple as pulling a keyword for which the visitor searched from a URL used by the profile supplier to redirect the visitor 10 to the PO company, for example. Alternatively, the recognizing might be as simple as recognizing the kind of content read by the visitor by recognizing the URL used by the profile supplier to redirect the visitor to the PO company because the URL is one that the PO company identified to the profile supplier for use when redirecting visitors who read a specific kind of content. Recognizing of content may also be done through a semantic analysis of content of a page read by the visitor.

4. The PO company's server 10 optionally can categorize (4000) specific content read by the user or an action conducted by a user. In some implementations, this step will not take place. An example action might be a search for a keyword. To illustrate, suppose a person searched for an airline ticket to Florida on a travel site. When the PO company receives that information, in addition to recording the search for the flight to Florida in the visitor's profile (whether the profile is stored in the cookie or tag, the PO company's central database 13, or both of those places), the PO company's server 10 may further categorize the person under the "Travel" category and in the "Search for Flights" subcategory of "Travel." In another example, a visitor would be categorized as "searching for an airline ticket" by virtue of having searched for an airline ticket at least three different times within a week, on one media property or several media properties. In that example, if the visitor were to have searched for an airline ticket fewer than three times within a week, the PO company's server 10 will not categorize the visitor as "searching for an airline ticket," because the visitor would be

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considered as less serious about the purchase according to the definition in use by the PO company.

5. The PO company's server 10 identifies (5000) the media properties (e.g., MP1 and MP2) that have asked to receive a visitor having a profile such as the one recognized in step 3 or categorized in step 4 (e.g., a profile of kind "A" in Fig. 2). Thereafter, the PO company arranges (6000) for the visitor (e.g., 20) to be tagged with a tag readable by the identified media property (e.g., MP1 or MP2), which can use the tag to recognize the visitor's profile.

6. Using information 40 received from the media property, the PO company then records (7000) usage of the profile (e.g., Pr(A)) by the media property (e.g., MP2). When the PO company also acts as a databank, the PO company determines which profile supplier (PS1, PS2, … PSn) will be credited for the media property's (e.g., MP2's) usage of the profile and records the credit (e.g., in data store 13).

The PO company's arranging placement of the tag (see step 5 above) can be achieved in different ways:

A. The PO company can redirect (e.g., Pr(X), Pr(Y) in Fig. 2, in cases where media property MPn has expressed interest in those profiles) a visitor to the identified media property with a request to have the identified media property tag the visitor with the media property's own tag, which obviously is readable by the selected media property (such a tag could be a cookie on the visitor's storage device). The tag in this case could be placed by the identified media property following a redirect by the PO company to a specific URL given to the PO company by the media property. The media property would have given the PO company, in this example, different URLs for different kind of profiles, and the PO company would choose the URL for redirecting the visitor to the media property based on the kind of profile recognized.

B. The PO company can itself place a tag (e.g., TagC denoting profile "C" in Fig. 2) that will be readable by the identified media property.

C. The PO company can place an encoded tag that, although accessible by any media property, can be read only by a selected media property to which the PO company gave a deciphering code.

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D. In cases when the PO company has software installed on a user's computer, the BT company can arrange for the software to place a tag readable by the identified media property (such a tag could be a cookie operating under the selected media property domain).

E. The PO company can arrange for the identified media property to place a tag in the identified media property's central database, in which case the tag can uniquely identify (1) the device that the visitor will use to access the identified media (IP address, set-top box ID, mobile phone number, manufacturer serial number, cookie readable by the identified media property, etc.), or (2) the user as a person (personal identifiable information).

The identified media property can use its tag to recognize the profile of the visitor either (1) by virtue of each profile having a unique tag (e.g., TagC denoting profile "C" in Fig. 2), or (2) by virtue of the profile that was received from the PO company having been stored (a) with the tag, (b) in the tag (which can occur with a cookie), (c) in a central database (where the tag is used as the link between the visitor and profile), or (d) in all of those places.

In another possible implementation (not shown), aside from the PO company arranging placement of the tag readable by the identified media property, the PO company sends the profile and a copy of the tag separately to the identified media property, which will store the tag and the profile in its central database, and when the identified media property recognizes the tag on a visitor's computer, for example, it pulls the visitor's profile from its database.

The PO company can make a profile available to a media property using the same methods that profile suppliers use to give their profiles to PO companies.

When an identified media property (e.g., MP2 in Fig. 2) recognizes (at time t2) a tagged visitor (tagged previously, at time t1) within its ad space, the media property will serve an ad 30 to the visitor (e.g., visitor 20) based on the profile provided by the PO company 10. Usually, a profile-based ad will be delivered by the media property when it will generate a higher price for the ad space than other ads available to the media property for placement within the ad space.

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The media properties (a profile supplier and an identified media property) can be of the same kind of media (e.g., two web sites on the Internet) or of different media (e.g., first media property, where the profile is collected, can be a web site on the Internet, and the second media property, to which the profile is given by the PO company, can be a TV channel on TV or a text message system on a mobile phone, etc.). In the case where the second media property operates within a different media than the first media property, the tagging of the visitor with a tag readable by the second media property (which is arranged by the PO company) might include finding the device used by the visitor to access the second media property (the identified media property) by using personal identifiable information about the visitor. As there may be no connection between the device used by the visitor to access the first media property (computer, for example) and the device used by the visitor to access the second (identified) media property (TV, for example) besides the commonality of the user (visitor), personally identifiable information about the visitor could be used to allow the second media property to learn which device the visitor uses to access the second media property and tag the visitor. The second media property could tag the device used by the visitor to access the second media property by placing a tag on the device itself or in a central database of the second media property, for example.

The process of the PO company enabling an identified media property to place a cookie on a visitor's computer for the purpose of finding the visitor later within the ad space of the identified media property is similar to the way DoubleClick's Boomerang system places cookies on visitors to an advertiser site for the purpose of finding those visitors later on other sites where Doubleclick serves ads. That process – where identified media properties place cookies on visitors' computers redirected to them by PO companies – is sometimes referred to as "cookie matching."

For example, following a redirect (not shown) from a server 10 of a PO company #1, weather.com might place a weather.com cookie on a visitor's computer 20 marking the visitor as interested in "travel" (profile category "A") and indicating that the profile originated with PO company #1. Later, if and when the weather.com ad server (MP2) recognizes that the same visitor 20 had happened to visit weather.com's site

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(weather.com can recognize the visitor by reading its own weather.com cookie), the weather.com ad server (MP2) can choose to deliver a travel-related ad 30 to the visitor 20 within the weather.com ad space. The weather.com ad server's decision whether or not to deliver the travel-related ad will usually depend on the price the ad is expected to bring when compared with the price for other ads available for weather.com to display within the same weather.com ad space.

In step 6, the information received by the PO company might be received from the media property electronically 40, via e-mail, in a file on a CD sent by mail, or in any other form. That said, because the goal is to make profiles available to media properties on a large scale, it would be beneficial to demand the least complex approach from media properties. After all, the more complex the tracking system that the media properties must implement to track their usage of profiles, the more difficult it will be for them to use profiles that they do not own.

One implementation – where the media property is required to give only minimal effort to track its usage of profiles – is merely asking a media property to provide the PO company server 10, every time that the media property (MP2) serves an ad based on a profile from the PO company, with access to the visitor 20 viewing an ad 30 based on the PO company's profile (e.g., in TagC). Such access, in that implementation, could be achieved by simply having the media property integrate into every profile-based ad it delivers a 1x1 pixel that will redirect (also denoted by 40 in Fig. 2) the visitor 20, when viewing the ad 30 (at time t2), to the PO company server 10. Such a 1x1 pixel can point to a URL given to the media property by the PO company that is unique to a certain kind or category of profiles (so the PO company could recognize not only the fact that the media property used a profile but also the kind of profile used). The advantage of this implementation is that the PO company is the one that records the profile usage, and the media property does not have to do anything further to keep or transfer records.

In the same implementation, in cases where the PO company has transferred more than one kind of profiles to a media property (for example, profiles "A" indicating interest in travel and profiles "B" indicating interest in autos), the media property can

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send the PO company, along with the access to the visitor viewing an ad, an indication of which profile the media property used to deliver the ad currently being viewed by the visitor. In that implementation, a travel profile will be indicated by the media property's use of a first URL to redirect the visitor to the PO company server, an auto profile will be indicated by the media property's use of a second URL to redirect the visitor to the PO company server, etc. (The different URLs for different kind of profiles would be ones given to the media property by the PO company.)

Because different kind of profiles might have different rates (a travel profile might fetch $2 CPM, auto profiles might fetch $5 CPM, etc.), it is important to know which of the profiles the media property used. Also, if the PO company is acting as a databank, it might have different ways in which it compensates profile suppliers for their collected profiles.

Based on its profile collection and compensation policy, the PO company can decide which profile suppliers to credit for the delivery of a profile-based ad by a media property. For example, the PO company might decide that, for behavioral profiles, time is important, so only the last profile supplier to report a behavioral profile of a visitor (before an ad based on that profile is served to the visitor) will be compensated but any other profile suppliers that provided the same kind of profile information about the same visitor earlier will not be compensated.

The following example illustrates the above-described embodiment. Suppose a visitor 20 searches for airline tickets on three different sites (PS1, PS2, and PSn), and all three sites delivered the visitor 20 to the PO company server 10 along with the information that the visitor searched for an airline ticket. Suppose further that the PO company has recognized that the Yahoo! site (MP2 is Yahoo! this time) is interested in receiving travel ("A") profiles and therefore has redirected (not shown) the visitor 20 to Yahoo! on three different occasions along with the information that the visitor searched for an airline ticket; that is, each time the PO company server 10 itself received access to the visitor 20 following a redirect from a profile supplier (PS1, PS2, or PSn), it immediately redirected the visitor to Yahoo!, because it recognized the visitor 20 as

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interested in "travel" (in this example, according to a definition that recognizes a visitor as interested in "travel" after only one search for an airline ticket).

Later (time t2), when the visitor 20 chooses to visit yahoo.com (MP2) on his or her own accord, Yahoo! recognizes the profiled visitor 20 and delivers a travel-related ad 30 to the visitor 20; however, Yahoo! has that opportunity only after Yahoo! has received the profile about the visitor 20 from the PO company three times. If Yahoo! has integrated into the travel ad 30 delivered to the visitor 20 a 1x1 pixel redirecting the visitor 20 to the PO company, the visitor's browser, when fetching the ad from the Yahoo! ad server (MP2), also approaches the PO company server 10. The PO company server 10 learns, from the URL that the visitor's browser is using to access it, that Yahoo! (MP2) has served a travel-related ad 30 to the visitor 20.

Based on that information, the PO company records (in data store 13) a charge of two tenths of a cent to Yahoo! (in this example, $2 CPM, or $2 per 1,000, is the rate the PO company charges for travel-related ("A") ads delivered based on travel profiles provided by the PO company to a media property).

The PO company stores, as part of the visitor's profile, data indicating which profile suppliers provided profiles about the visitor and the date and time the profiles were supplied. The PO company stores the profile (1) in the tag (a cookie, for example), (2) along the tag, (3) in a central database (e.g., 13), in which case the tag is used as a link between the visitor's computer and the profile information in the database, or (4) in all of those places.

Note that the PO company's tag is different from the identified media property's tag. The PO company's tag is used to uniquely identify a visitor about which the PO company has a profile, where the profile itself includes the profile suppliers that provided the profile, the dates and times they have done so, and possibly other information, all part of the visitor's profile definition. The identified media property's tag is used by the media property to recognize the profile of the visitor.

The PO company uses its own tag to access the visitor profile and learn which profile supplier (PS1, PS2, or PSn) was the last one to supply the travel-related ("A") profile (the visitor's search for airline tickets), which Yahoo! (MP2) used to deliver the

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ad. The PO company then records (also, e.g., in 13) a credit of one tenth of a cent (half of the charge to Yahoo!) to that profile supplier. In this example, a revenue share of 50%-50% between the profile supplier and the PO company is used. If the PO company had agreed with the profile supplier on a 40% revenue share, the profile supplier would have been given a credit of eight hundredths of a cent ($2/1000*40%), or if the profile supplier was promised $0.001 for every use of its profile, the PO company would have recorded a credit of $0.001 to the profile supplier.

In a second illustration, the PO company might decide that a visitor should be considered interested in "travel" only if the visitor searches for airline tickets three different times within a week, on the same site or different sites. In that case, only when the visitor is recognized as interested in "travel" according to that definition will the PO company make the visitor's "travel" profile available to media properties (MP2) interested in "travel" ("A") profiles. In this example, if a first profile supplier PS1 delivers the visitor 20 and the information (Pr1) that the visitor 20 is searching for airline tickets on Sunday, a second profile supplier PS2 delivers the visitor 20 to the PO company 10 on Monday along with the information (Pr2) that the visitor 20 is searching for airline tickets, and the first profile supplier PS1 again delivers the visitor 20 to the PO company 10 on Wednesday along with the information (not shown) that the visitor 20 is searching for airline tickets, then only at that time on Wednesday will the PO company's server 10 recognize the visitor 20 as a "travel" ("A") visitor and redirect (not shown) the visitor's computer 20 to Yahoo! (MP2).

In that second illustration, when Yahoo! (MP2) serves a travel-related ad 30 to the visitor 20 and redirects (40) the visitor 20 to the PO company 10, the PO company might credit (in 13) the first profile supplier PS1 with two thirtieths of a cent ($2/1000*50%*2/3) and the second profile supplier PS2 with one thirtieth of a cent ($2/1000*50%*1/3). In other words, in that illustration, (a) Yahoo! agreed to pay $2 for every thousand travel-related ads delivered based on profiles provided by the PO company, (b) the PO company promised to give profile suppliers half of the revenues the PO company generates from ads delivered by media properties based on the profiles it makes available to them, and (c) the visitor was recognized as interested in

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"travel" thanks to two visits (out of the three visits to travel sites that defined the visitor as interested in "travel") made to the first profile supplier's site and one visit to the second profile supplier's site. Therefore, the first profile supplier is entitled to two thirds of the amount due to the profile suppliers altogether, and the one visit made by the visitor to the second profile supplier's site entitles the second profile supplier to one third of the amount due to the profile suppliers altogether.

Alternatively, the PO company – when making a profile available to a media property by arranging for placement of a tag readable by the identified media property – can add a unique ID to the profile (or to the tag in cases where the tag is used by the media property to recognize the visitor's profile) and ask the media property to report the ID back to the PO company whenever the media property uses the transferred profile. The PO company can use the unique ID to record in its database the profile suppliers that will be entitled to a credit when the media property delivers ads based on the transferred profile. The media property could report 40 to the PO company (at the end of the month, for example) the number of ads it has served, for each unique ID. Because each unique ID represents a kind of profile, the PO company will know what rate it should charge the media property for usage of the profile, and because the unique ID also tells the PO company which profile suppliers should be entitled to a credit for the usage of a profile, the PO company can also credit the deserving profile suppliers.

The media property might pay the PO company for every ad impression delivered based on the received profile or only when an action takes place that is connected to the ad (perhaps occurring on the advertiser's site immediately following a click on the ad or perhaps occurring a few days after viewing the ad or clicking the ad), such as a click on the ad, a registration on the advertiser's site, a request for information, a product acquisition, or the making of a phone call.

Different implementations might be chosen depending on the relative sizes of a profile owner (in terms of number of profiled visitors; note that the profile owner may also be a databank) and a media property (in terms of number of visitors). In cases where the media property has many visitors and is considered to have an extensive

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reach ("reach" is a figure used to express the percentage of the population using a media that visits the media property; for example, Valueclick, a web-based ad network of sites reaches 80% of the US web population), a profile owner might transfer to the media property all visitors within the categories requested by the media property, because the probability of finding a profiled visitor within the media property's ad space is high (in the case of Valueclick, the probability is 80%).

In cases where the media property's reach is not very significant, but the profile owner has a relatively large number of profiles, the media property may choose to make its visitors accessible to the profile owner to check whether the profile owner can enhance the profiles of some of its visitors, in the ad categories of interest to the media property, instead of having the profile owner send all of its visitors in the categories of interest, because, as a result of the media property's low reach, only a small percentage of visitors sent to the media property by the profile owner will later choose to visit the low-reach media property.

PUBLIC NOTICE REGARDING THE SCOPE OF THE INVENTION AND CLAIMS

The inventor considers various elements of the aspects and methods recited in the claims filed with the application as advantageous, perhaps even critical to certain implementations of the invention. However, the inventor regards no particular element as being "essential," except as set forth expressly in any particular claim.

Although the invention has been described in terms of preferred embodiments and generally associated methods, the inventor contemplates that alterations and permutations of the preferred embodiments and methods will become apparent to those skilled in the art upon a reading of the specification and a study of the drawings.

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Amendments

IN THE CROSS REFERENCE TO RELATED APPLICATIONS SECTION:

Please amend the paragraph after the header as follows:

This application is a continuation of application Serial No. 13/631,244, filed September 28, 2012, now U.S. Patent 8,589,210, which is a continuation of application Serial No. 11/765,433, filed June 19, 2007, now U.S. Patent 8,280,758, which claims the benefit of provisional application Serial No. 60/805,114, filed June 19, 2006, which is incorporated herein by reference.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Shkedi, Roy	Art Unit	:	3688 *
Serial No.	:	14/080,999	Examiner	:	Champagne, Donald *
Filing Date	:	11/15/2013	** In parent application S.N. 13/631,244*		
Title	:	Providing collected profiles to media properties having specified interests			

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Filed via EFS – November 15, 2013

INFORMATION DISCLOSURE STATEMENT

Dear Sir:

Assignee discloses the reference listed on form PTO-1449 attached to this document. All foreign and non-patent references listed were previously cited in parent application Serial No. 13/631,244, therefore copies of those references are not included here.

Assignee also directs the Examiner to the following applications, which share the same first inventor, as well as the references cited therein:

Serial No.	Filing Date	Earliest Parent Filing Date
12/131,798	06/02/2008	
12/536,451	08/05/2009	
12/906,007	10/15/2010	
12/912,726	10/26/2010	12/28/1999
13/097,885	04/29/2011	04/17/2007
13/167,605	06/23/2011	04/17/2007
13/243,314	09/23/2011	06/02/2008
13/274,242	10/14/2011	10/15/2010 (prov.)
13/491,454	06/07/2012	06/16/2006 (prov.)
13/566,881	08/03/2012	08/03/2011 (prov.)
13/585,765	08/14/2012	11/28/2000
13/725,309	12/21/2012	01/15/2009 (prov.)
13/754,639	01/30/2013	
13/906,211	05/30/2013	06/05/2012 (prov.)
13/948,661	07/23/2013	06/14/2000

If the Office has any questions, please feel free to contact assignee's undersigned attorney of record.

Respectfully submitted,

DATONICS, LLC

by its attorney

Dated: November 15, 2013

/Louis J. Hoffman/
Louis J. Hoffman
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PTO/AIA/15 (03-13)
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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	14-PP-CON3
First Named Inventor	Shkedi, Roy
Title	Providing collected profiles to media properties having specified interests
Express Mail Label No.	n/a - filed via EFS

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☐ **Fee Transmittal Form** (PTO/SB/17 or equivalent)
2. ☐ **Applicant asserts small entity status.** See 37 CFR 1.27
3. ☐ **Applicant certifies micro entity status.** See 37 CFR 1.29. Applicant must attach form PTO/SB/15A or B or equivalent.
4. ☑ **Specification** [*Total Pages* 29] Both the claims and abstract must start on a new page. *(See MPEP § 608.01(a) for information on the preferred arrangement)*
5. ☑ **Drawing(s)** (35 U.S.C. 113) [*Total Sheets* 2]
6. **Inventor's Oath or Declaration** [*Total Pages* 1] *(including substitute statements under 37 CFR 1.64 and assignments serving as an oath or declaration under 37 CFR 1.63(e))*
   a. ☑ Newly executed (original or copy)
   b. ☐ A copy from a prior application (37 CFR 1.63(d))
7. ☑ **Application Data Sheet** ** See note below.* See 37 CFR 1.76 (PTO/AIA/14 or equivalent)
8. **CD-ROM or CD-R** in duplicate, large table, or Computer Program (*Appendix*)
   ☐ Landscape Table on CD
9. **Nucleotide and/or Amino Acid Sequence Submission** (*if applicable, items a. – c. are required*)
   a. ☐ Computer Readable Form (CRF)
   b. ☐ Specification Sequence Listing on:
      i. ☐ CD-ROM or CD-R (2 copies); or
      ii. ☐ Paper
   c. ☐ Statements verifying identity of above copies

ADDRESS TO: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450**

ACCOMPANYING APPLICATION PAPERS

10. ☐ **Assignment Papers** (cover sheet & document(s)) Name of Assignee Datonics, LLC
11. ☐ **37 CFR 3.73(c) Statement** (*when there is an assignee*) ☑ **Power of Attorney**
12. ☐ **English Translation Document** (*if applicable*)
13. ☑ **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
    ☐ Copies of citations attached
14. ☑ **Preliminary Amendment**
15. ☐ **Return Receipt Postcard** (*MPEP § 503*) (*Should be specifically itemized*)
16. ☐ **Certified Copy of Priority Document(s)** (*if foreign priority is claimed*)
17. ☐ **Nonpublication Request** Under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.
18. ☐ **Other:**

***Note**: (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 **must** be included in an Application Data Sheet (ADS).
(2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).

19. CORRESPONDENCE ADDRESS

☑ The address associated with Customer Number: 26362 **OR** ☐ Correspondence address below

Name					
Address					
City		State		Zip Code	
Country		Telephone		Email	

Signature	/Louis J. Hoffman/	Date	11/15/2013
Name (Print/Type)	Louis J. Hoffman	Registration No. (Attorney/Agent)	38918

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Patent Application Fee Transmittal	
Application Number:	
Filing Date:	
Title of Invention:	Providing collected profiles to media properties having specified interests
First Named Inventor/Applicant Name:	Roy Shkedi
Filer:	Louis J. Hoffman/Donald Hertz
Attorney Docket Number:	14-PP-CON3
Filed as Large Entity	

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility application filing	1011	1	280	280
Utility Search Fee	1111	1	600	600
Utility Examination Fee	1311	1	720	720
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**1600**

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
14/080,999	11/15/2013	2447	1600	14-PP-CON3	20	1

CONFIRMATION NO. 9158

26362
LOUIS J. HOFFMAN, P.C.
14301 North 87th Street, Suite 312
Scottsdale, AZ 85260

FILING RECEIPT

OC000000065260251

Date Mailed: 12/05/2013

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)
Roy Shkedi, Forest Hills, NY;

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Assignment For Published Patent Application
DATONICS, LLC, New York, NY

Power of Attorney: The patent practitioners associated with Customer Number 26362

Domestic Priority data as claimed by applicant
This application is a CON of 13/631,244 09/28/2012 PAT 8589210
which is a CON of 11/765,433 06/19/2007 PAT 8280758
which claims benefit of 60/805,114 06/19/2006

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

If Required, Foreign Filing License Granted: 11/27/2013
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/080,999**
Projected Publication Date: 03/13/2014

Non-Publication Request: No

Early Publication Request: No

Title

Providing collected profiles to media properties having specified interests

Preliminary Class

709

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/080,999	11/15/2013	Roy Shkedi	14-PP-CON3

CONFIRMATION NO. 9158

POA ACCEPTANCE LETTER

26362
LOUIS J. HOFFMAN, P.C.
14301 North 87th Street, Suite 312
Scottsdale, AZ 85260

OC000000065260273

Date Mailed: 12/05/2013

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 11/15/2013.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/ddinh/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 14/080,999

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	280
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	600
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	720
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*			OR	x 80 =	0.00
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 =	*				x 420 =	0.00
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	1600

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/080,999	11/15/2013	Roy Shkedi	14-PP-CON3

CONFIRMATION NO. 9158

26362
LOUIS J. HOFFMAN, P.C.
14301 North 87th Street, Suite 312
Scottsdale, AZ 85260

PUBLICATION NOTICE

OC000000067139814

Title: Providing collected profiles to media properties having specified interests

Publication No.US-2014-0074607-A1
Publication Date:03/13/2014

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor	:	Shkedi, Roy	Art Unit	:	3681
Serial No.	:	14/080,999	Examiner	:	Champagne, Donald
Filing Date	:	11/15/2013	Conf. No.	:	9158
Title	:	Providing collected profiles to media properties having specified interests			

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Filed via EFS – April 21, 2014

PRELIMINARY AMENDMENT

Dear Sir:

Assignee requests entry of the following amendments and consideration of the following remarks.

Amendments to the Claims begin on page 2 of this paper.

Remarks begin on page 9 of this paper.

Amendments

IN THE CLAIMS:

Please amend the claims as follows:

1.-33. (Canceled)

34. (New) A method of causing delivery of electronic advertisements based on provided profiles comprising:

(a) with a computer system automatically arranging storage of a tag associated with a visitor device following receipt from a profile owner computer of indicia of a profile associated with the visitor, for a profile of the visitor matching a profile or kind of profiles desired by an entity controlling the computer system;

(b) wherein the profile owner computer is programmed:

(i) to automatically select an electronic-advertising-space-controlling entity based on a comparison of (A) profile information about a visitor who electronically accessed electronic apparatus of a profile supplier with (B) a plurality of stored requests from different entities, each stored request being for requested profiles or kinds of profiles, which plurality of stored requests includes the desired profile or kind of profiles, and

(ii) to automatically arrange for electronic storage of a tag that is associated with the visitor and that is readable by an electronic-advertising-space-controlling equipment controlled by the selected entity, which equipment is part of the computer system of part (a) when the selected entity is the entity controlling the computer system; and

(c) later, when the visitor device is available to receive an advertisement, with the computer system, using the tag to automatically cause

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delivery of an electronic advertisement to the visitor device, wherein the electronic advertisement is dependent on the profile associated with the visitor.

35. (New) The method of claim 34 wherein the profile associated with the visitor is derived from the visitor's activity using a first device, and wherein the visitor device that is available to receive an advertisement is a second device of the visitor.

36. (New) The method of claim 35 wherein the first device is a computer of the visitor and the second device is a mobile phone of the visitor.

37. (New) The method of claim 36 wherein the tag identifies the mobile phone.

38. (New) The method of claim 36 wherein the profile owner computer is programmed to automatically select an electronic-advertising-space-controlling entity using profile information about the visitor that was derived from the visitor's activity using the computer of the visitor, which profile information was received by the profile-owner computer as a result of URL redirection from a website that is served by the electronic apparatus of the profile supplier, which website is accessed by the computer of the visitor.

39. (New) The method of claim 35 wherein the second device is a computer and further comprising, after parts (a) and (c), with the computer system electronically reporting information about delivery of the advertisement to the second device, which report is provided to the profile owner company.

40. (New) The method of claim 39 wherein electronically reporting comprises automatically placing the second device in communication with computer equipment controlled by the profile owner, via URL redirection from the computer system, when the computer system utilizes the tag to cause delivery of the advertisement.

41. (New) The method of claim 34 further comprising, after parts (a) and (c), with the computer system electronically reporting information about delivery of the advertisement to the visitor device that is available to receive an advertisement, which report is provided to the profile owner company.

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42. (New) The method of claim 41 wherein reporting further comprises automatically electronically identifying to the profile owner company one of a plurality of profiles or kind of profiles used in association with delivery of the advertisement.

43. (New) The method of claim 34 wherein the profile owner computer is programmed to automatically select an electronic-advertising-space-controlling entity using profile information about the visitor that was derived from the visitor's activity using the visitor device.

44. (New) The method of claim 43 wherein the profile information was received by the profile-owner computer as a result of URL redirection from a website that is served by the electronic apparatus of the profile supplier, which website is accessed by the visitor device.

45. (New) The method of claim 34 further comprising, after parts (a) and (c), with the computer system automatically creating electronic data used to identify a payment amount due to the profile owner company as a result of delivery of the electronic advertisement to the visitor device that is available to receive an advertisement.

46. (New) The method of claim 34 wherein the tag comprises personally identifiable information identifying the visitor.

47. (New) The method of claim 34 wherein automatically arranging storage of the tag comprises arranging for electronic storage of the profile information in the tag.

48. (New) The method of claim 34 wherein automatically arranging storage of the tag comprises arranging for electronic storage of the profile information in a database locatable through the tag.

49. (New) The method of claim 34 wherein automatically arranging storage of the tag comprises automatic redirection to the URL provided by the selected entity to place the visitor device in communication with computer equipment controlled by the selected entity to enable storage of the tag in association with the visitor device.

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50. (New) The method of claim 34 wherein the equipment of the profile supplier operates in the Internet and the equipment of the selected entity utilizes the profile data to cause delivery of the electronic advertisements on a television of the visitor.

51. (New) A computer system comprising one or more computers, wherein the one or more computers are programmed and connected:

(a) to automatically arrange storage of a tag associated with a visitor device following receipt from a profile owner computer of indicia of a profile associated with the visitor, for a profile of the visitor matching a profile or kind of profiles desired by an entity controlling the computer system;

(b) wherein the profile owner computer is programmed:

(i) to automatically select an electronic-advertising-space-controlling entity based on a comparison of (A) profile information about a visitor who electronically accessed electronic apparatus of a profile supplier with (B) a plurality of stored requests from different entities, each stored request being for requested profiles or kinds of profiles, which plurality of stored requests includes the desired profile or kind of profiles, and

(ii) to automatically arrange for electronic storage of a tag that is associated with the visitor and that is readable by an electronic-advertising-space-controlling equipment controlled by the selected entity, which equipment is part of the computer system of part (a) when the selected entity is the entity controlling the computer system; and

(c) later, when the visitor device is available to receive an advertisement, with the computer system, to use the tag to automatically cause delivery of an electronic advertisement to the visitor device, wherein the electronic advertisement is dependent on the profile associated with the visitor.

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52. (New) The computer system of claim 51 wherein the profile associated with the visitor is derived from the visitor's activity using a first device, and wherein the visitor device that is available to receive an advertisement is a second device of the visitor.

53. (New) The computer system of claim 52 wherein the first device is a computer of the visitor and the second device is a mobile phone of the visitor.

54. (New) The computer system of claim 53 wherein the tag identifies the mobile phone.

55. (New) The computer system of claim 53 wherein the profile owner computer is programmed to automatically select an electronic-advertising-space-controlling entity using profile information about the visitor that was derived from the visitor's activity using the computer of the visitor, which profile information was received by the profile-owner computer as a result of URL redirection from a website that is served by the electronic apparatus of the profile supplier, which website is accessed by the computer of the visitor.

56. (New) The computer system of claim 52 wherein the second device is a computer and wherein the computer system is further programmed to, after parts (a) and (c), electronically report information about delivery of the advertisement to the second device, which report is provided to the profile owner company.

57. (New) The computer system of claim 51 wherein the one or more computers are further programmed to, after parts (a) and (c), electronically report information about delivery of the advertisement to the visitor device that is available to receive an advertisement, which report is provided to the profile owner company.

58. (New) The computer system of claim 57 wherein the one or more computers are programmed to electronically report by further automatically electronically identify to the profile owner company one of a plurality of profiles or kind of profiles used in association with delivery of the advertisement.

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59. (New) The computer system of claim 51 wherein the profile owner computer is programmed to automatically select an electronic-advertising-space-controlling entity using profile information about the visitor that was derived from the visitor's activity using the visitor device.

60. (New) The computer system of claim 59 wherein the profile information was received by the profile-owner computer as a result of URL redirection from a website that is served by the electronic apparatus of the profile supplier, which website is accessed by the visitor device.

61. (New) The computer system of claim 51 wherein the one or more computers are further programmed to, after parts (a) and (c), automatically create electronic data used to identify a payment amount due to the profile owner company as a result of delivery of the electronic advertisement to the visitor device that is available to receive an advertisement.

62. (New) The computer system of claim 51 wherein the tag comprises personally identifiable information identifying the visitor.

63. (New) The computer system of claim 51 wherein the one or more computers are programmed to automatically arrange storage of the tag by arranging for electronic storage of the profile information in the tag.

64. (New) The computer system of claim 51 wherein the one or more computers are programmed to automatically arrange storage of the tag by arranging for electronic storage of the profile information in a database locatable through the tag.

65. (New) The computer system of claim 51 wherein the equipment of the profile supplier operates in the Internet and the equipment of the selected entity utilizes the profile data to cause delivery of the electronic advertisements on a television of the visitor.

66. (New) An article comprising a non-transitory tangible medium encoding computer-readable instructions that, when applied to a computer system comprising

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one or more computers, instruct the computer system to perform a method of causing delivery of electronic advertisements based on provided profiles comprising:

(a) automatically arranging storage of a tag associated with a visitor device following receipt from a profile owner computer of indicia of a profile associated with the visitor, for a profile of the visitor matching a profile or kind of profiles desired by an entity controlling the computer system;

(b) wherein the profile owner computer is programmed:

(i) to automatically select an electronic-advertising-space-controlling entity based on a comparison of (A) profile information about a visitor who electronically accessed electronic apparatus of a profile supplier with (B) a plurality of stored requests from different entities, each stored request being for requested profiles or kinds of profiles, which plurality of stored requests includes the desired profile or kind of profiles, and

(ii) to automatically arrange for electronic storage of a tag that is associated with the visitor and that is readable by an electronic-advertising-space-controlling equipment controlled by the selected entity, which equipment is part of the computer system of part (a) when the selected entity is the entity controlling the computer system; and

(c) later, when the visitor device is available to receive an advertisement, using the tag to automatically cause delivery of an electronic advertisement to the visitor device, wherein the electronic advertisement is dependent on the profile associated with the visitor.

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Electronic Acknowledgement Receipt

EFS ID:	18820359
Application Number:	14080999
International Application Number:	
Confirmation Number:	9158
Title of Invention:	Providing collected profiles to media properties having specified interests
First Named Inventor/Applicant Name:	Roy Shkedi
Customer Number:	26362
Filer:	Louis J. Hoffman/Donald Hertz
Filer Authorized By:	Louis J. Hoffman
Attorney Docket Number:	14-PP-CON3
Receipt Date:	21-APR-2014
Filing Date:	15-NOV-2013
Time Stamp:	19:50:27
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$1040
RAM confirmation Number	5774
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1	Preliminary Amendment	14-04-21-Datonics-PP_CON3-Supp_Prelim_Amend.pdf	109854 472af1695db396203bf503c011865d6d1f16ee77	no	12
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	29963 ce2bf473114b4d04d651ce8bea8416152bfc2a92	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	139817		

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New International Application Filed with the USPTO as a Receiving Office
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Remarks

For the examiner's ease in examining these claims, applicant advises that new independent claim 34 of this application is a variant of independent claim 1 issued in related U.S. Patent 8,244,574. The following is a comparison, in redlined form, of independent claim 1 of the '574 related patent and independent claim 34 pending now, with underlining indicating matter added to issued claim 1 and strikeouts showing deletions therefrom.

[1] 34. A method of causing delivery of electronic advertisements based on provided profiles comprising:

(a) with a computer system automatically arranging storage of a tag[[ging]] associated with a ~~device of a~~ visitor device following receipt from a profile owner computer of indicia of a profile associated with the visitor, for a profile[[s]] of the visitor matching a profile or kind of profiles desired by an entity controlling the computer system;

(b) wherein the profile owner computer is programmed:

(i) to automatically select an electronic-advertising-space-controlling entity based on a comparison of (A) profile information about a visitor who electronically accessed electronic apparatus of a profile supplier with (B) a plurality of stored requests from different entities, each stored request being for requested profiles or kinds of profiles, which plurality of stored requests includes the desired profile or kind of profiles, and

(ii) to automatically arrange for electronic storage of a tag that is associated with the visitor and that is readable by an electronic-advertising-space-controlling equipment controlled by the selected entity, which equipment is part of the computer system of part (a) when the selected entity is the entity controlling the computer system; and

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(c) later, when the visitor device is available to receive an advertisement, with the computer system, ~~automatically checking electronic devices of a multitude of visitors accessing the computer system for~~ using the tag ~~readable by the computer system and, when found,~~ to automatically ~~causing~~ cause delivery of ~~a profile-dependent~~ an electronic advertisement to the ~~tagged~~ visitor device[[s]], wherein the electronic advertisement is dependent on the profile associated with the visitor.

In part (a), claim 34 allows for various types of tag storage, in view of the fact that tags can be in different locations, as explained for example on pages 5-6 of the specification.

In part (c), the new version makes changes to refer to "using the tag" to cause delivery of the advertisement to a visitor device that is available to receive an advertisement. The tags can be used in several different ways to cause ad delivery, including any of the applicable techniques identified for example on pages 5-6 and 14-16 of the specification (or others within the scope of the claim language). Under the new language, there is no requirement that the computer system itself perform a specific check to determine whether the device is "available to receive an advertisement."

Also the new version clarifies, at the end of part (c), more specifically that the advertisement depends on the profile and that the profile is associated with the visitor. This elaborates on "profile-dependent" found in the patented claim. Support is found on pages 4-5 of the specification. There is a similar minor change in part (a) related to the visitor profile.

As with the patented claim, the computer system (see part (a)) is preferably operated by a "media property" (see pages 5-6 of the spec), which arranges for storage of the tag following receipt from the PO company (see part (a)). The content of part (b) of the present claim is unchanged from the patented claim, so the reasons for allowance ought to be similar.

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New dependent claim 35 applies to a situation where there are two user devices, a "first device" through which the visitor creates (or adds to) a profile, and a "second device" with which the tag is associated. An example of a two-device arrangement is found in the specification at the bottom of page 16. The specification explicitly supports a web site accessed by a user computer, and the "second media property" being accessed via "mobile phone," and dependent claim 35 addresses this specific scenario. Dependent claim 36 refers to the tag identifying the mobile phone, see specification para. E on page 15.

The rest of the dependent claims are for the most part variants of previously allowed dependent claims with language customized to match independent claim 34 and in some cases improved for clarity. Comparison with specific previous claims is not being attempted, but if the examiner has any questions, please feel free to ask.

Independent claim 51 is a "computer system" counterpart of claim 34, structured as in claim 11 of the '574 Patent, and independent claim 66 is an "article/tangible medium" claim structured as in claim 18 of the '574 Patent. Dependent claims 52-65 depend on claim 51 and are counterparts of most of the dependent claims depending on claim 34, and they for the most part parallel dependent claims 12-17 of the '574 Patent.

In view of the above explanations, the claims should be in condition for allowance. If the Office believes that a terminal disclaimer is required, please feel free to telephone the undersigned for fastest allowance.

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Please feel free to telephone the undersigned on any other subject thought helpful to advance prosecution of this application.

Respectfully submitted,

DATONICS, LLC

by its attorney

Dated: April 21, 2014

/Louis J. Hoffman/
Louis J. Hoffman
Reg. No. 38,918

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Suite 312
Scottsdale, Arizona 85260
(480) 948-3295

Amazon/AlmondNet
Exhibit 1006
Page 83

Electronic Patent Application Fee Transmittal

Application Number:	14080999
Filing Date:	15-Nov-2013
Title of Invention:	Providing collected profiles to media properties having specified interests
First Named Inventor/Applicant Name:	Roy Shkedi
Filer:	Louis J. Hoffman/Donald Hertz
Attorney Docket Number:	14-PP-CON3

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Claims in Excess of 20	1202	13	80	1040
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
		Total in USD ($)		**1040**

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 14/080,999	Filing Date 11/15/2013	☐ To be Mailed

ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)		
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	04/21/2014	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 33	Minus	** 20	= 13	X $80 =	1040
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X $420 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	**1040**

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/MARGARET BYARS/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/08a (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	14/080,999
Filing Date	11/15/2013
First Named Inventor	Shkedi, Roy
Art Unit	3681
Examiner Name	Champagne, D.
Attorney Docket Number	14-PP-CON3

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US- 20030028871	02-06-2003	Wang et al.	
		US-			
		US-			
		US-			
		US-			
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		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]–Number[4]–Kind Code[5] (*if known*)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	20503020
Application Number:	14080999
International Application Number:	
Confirmation Number:	9158
Title of Invention:	Providing collected profiles to media properties having specified interests
First Named Inventor/Applicant Name:	Roy Shkedi
Customer Number:	26362
Filer:	Louis J. Hoffman/Donald Hertz
Filer Authorized By:	Louis J. Hoffman
Attorney Docket Number:	14-PP-CON3
Receipt Date:	23-OCT-2014
Filing Date:	15-NOV-2013
Time Stamp:	17:37:09
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	14-10-23-Datonics-PP_CON3-Supp_IDS.pdf	172563 9369cc23f459c25769342bdf84ca57e13ab86cd7	no	1
Warnings:					
Information:					

This is not an USPTO supplied IDS fillable form	
Total Files Size (in bytes):	172563

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Form PTO-1449 (Modified)
List of Patents and Publications For Information Disclosure Statement

Page 1 of 1

Serial No.:	14/080,999
Applicant:	Shkedi Roy
Filed:	11/15/2013
Art Unit:	3622
Examiner:	Sittner, Michael J.
Conf. No.:	9158

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant
_____	1	20050131762	06/16/2005	Bharat et al.

Examiner: _____ Date Considered: _____

EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance *and* not considered. Include copy of this form with next communication to applicant.

Electronic Acknowledgement Receipt	
EFS ID:	23306454
Application Number:	14080999
International Application Number:	
Confirmation Number:	9158
Title of Invention:	Providing collected profiles to media properties having specified interests
First Named Inventor/Applicant Name:	Roy Shkedi
Customer Number:	26362
Filer:	Louis J. Hoffman/Donald Hertz
Filer Authorized By:	Louis J. Hoffman
Attorney Docket Number:	14-PP-CON3
Receipt Date:	25-AUG-2015
Filing Date:	15-NOV-2013
Time Stamp:	15:45:37
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	15-08-25-Datonics-PP-CON3-Supp_IDS_Cover.pdf	52792 e516a7bdfa335b38c0c0f51d100539c54ea5ad5e	no	2

Warnings:
Information:

2	Information Disclosure Statement (IDS) Form (SB08)	15-08-25-Datonics-PP-CON3-Form_1449.pdf	69370 e4d038e17a51236cf97f8dff05f740f48ea5c0e4	no	1

Warnings:	
Information:	
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Total Files Size (in bytes):	122162

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New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
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New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor	:	Shkedi, Roy	Art Unit	:	3622
Serial No.	:	14/080,999	Examiner	:	Sittner, Michael J.
Filing Date	:	11/15/2013	Conf. No.	:	9158
Title	:	Providing collected profiles to media properties having specified interests			

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Filed via EFS – August 25, 2015

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Dear Sir:

Applicant discloses the reference listed on form PTO-1449 attached to this document.

Applicant continues to direct the Examiner to the applications listed in the table below (which share the same first inventor) as well as the references cited therein:

Serial No.	Filing Date	Earliest Parent Filing Date
12/536,451	08/05/2009	
12/912,726	10/26/2010	12/28/1999
13/274,242	10/14/2011	
14/089,645	11/25/2013	12/31/2007
14/091,285	11/26/2013	11/28/2000
14/101,156	12/09/2013	06/02/2008
14/204,958	03/11/2014	06/14/2010
14/246,525	04/07/2014	04/17/2007
14/620,502	02/12/2015	06/16/2006 (prov.)
14/751,672	06/26/2015	06/05/2012 (prov.)
14/763,963	07/28/2015	01/30,2013
14/790,370	07/02/2015	08/03/2011 (prov.)
14/796,269	07/10/2015	06/02/2008

If the Office has any questions, please feel free to contact assignee's undersigned attorney of record.

Respectfully submitted,

DATONICS, LLC

by its attorney

Dated: August 25, 2015

/Louis J. Hoffman/
Louis J. Hoffman
Reg. No. 38,918

LOUIS J. HOFFMAN, P.C.
14301 North 87th Street
Suite 312
Scottsdale, Arizona 85260
(480) 948-3295

PTO/SB/08a (03-15)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	14080999
	Filing Date	2013-11-15
	First Named Inventor	Shkedi, Roy
	Art Unit	3622
	Examiner Name	Sittner, Michael J.
	Attorney Docket Number	14-PP-CON3

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7805332	B2	2010-09-28	Wilson	
	2	9117217	B2	2015-08-25	Wilson et al.	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button Add

NON-PATENT LITERATURE DOCUMENTS Remove

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	14080999
	Filing Date	2013-11-15
	First Named Inventor	Shkedi, Roy
	Art Unit	3622
	Examiner Name	Sittner, Michael J.
	Attorney Docket Number	14-PP-CON3

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1		☐

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	14080999
	Filing Date	2013-11-15
	First Named Inventor	Shkedi, Roy
	Art Unit	3622
	Examiner Name	Sittner, Michael J.
	Attorney Docket Number	14-PP-CON3

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Louis J. Hoffman/	Date (YYYY-MM-DD)	2015-10-16
Name/Print	Louis J. Hoffman	Registration Number	38918

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	23814152
Application Number:	14080999
International Application Number:	
Confirmation Number:	9158
Title of Invention:	Providing collected profiles to media properties having specified interests
First Named Inventor/Applicant Name:	Roy Shkedi
Customer Number:	26362
Filer:	Louis J. Hoffman/Donald Hertz
Filer Authorized By:	Louis J. Hoffman
Attorney Docket Number:	14-PP-CON3
Receipt Date:	16-OCT-2015
Filing Date:	15-NOV-2013
Time Stamp:	19:41:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	15-10-16-Datonics-PP-CON3-Supp_IDS.pdf	1035201 2350bb946651bc3918796a01c725ef375476048e	no	4
Warnings:					
Information:					

Total Files Size (in bytes):	1035201

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
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New International Application Filed with the USPTO as a Receiving Office
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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	14080999
Filing Date	2013-11-15
First Named Inventor	Shkedi, Roy
Art Unit	3622
Examiner Name	Sittner, Michael J.
Attorney Docket Number	14-PP-CON3

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5948061		1999-09-07	Merriman et al.	
	2	7386599		2008-06-10	Piersol et al.	
	3	7580855		2009-08-25	Fernandes	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030023481	A1	2003-01-30	Calvert et al.	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	14080999
	Filing Date	2013-11-15
	First Named Inventor	Shkedi, Roy
	Art Unit	3622
	Examiner Name	Sittner, Michael J.
	Attorney Docket Number	14-PP-CON3

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Signature	/Louis J. Hoffman/	Date (YYYY-MM-DD)	2015-12-08
Name/Print	Louis J. Hoffman	Registration Number	38918

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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Electronic Acknowledgement Receipt

EFS ID:	24294051
Application Number:	14080999
International Application Number:	
Confirmation Number:	9158
Title of Invention:	Providing collected profiles to media properties having specified interests
First Named Inventor/Applicant Name:	Roy Shkedi
Customer Number:	26362
Filer:	Louis J. Hoffman/Donald Hertz
Filer Authorized By:	Louis J. Hoffman
Attorney Docket Number:	14-PP-CON3
Receipt Date:	08-DEC-2015
Filing Date:	15-NOV-2013
Time Stamp:	13:48:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	15-12-08-Datonics-PP_CON3-Supp_IDS.pdf	1035235 6e55ae075fd7878187bed58b59d70762e4de5f87	no	4
Warnings:					
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Notice of References Cited	Application/Control No. 14/080,999	Applicant(s)/Patent Under Reexamination SHKEDI, ROY	
	Examiner Michael J. Sittner	Art Unit 3622	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
	A	US-				
*	B	US-2003/0083938 A1	05-2003	Smith, Tucker L.	G06Q30/02	705/14.66
	C	US-				
*	D	US-2005/0097204 A1	05-2005	Horowitz, Russell C.	G06Q30/02	705/14.69
*	E	US-2007/0130005 A1	06-2007	Jaschke; Michael	G06Q30/02	705/14.66
*	F	US-7,356,711 B1	04-2008	Calinov; Iulian D.	H04L9/3226	713/180
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	I	US-				
	J	US-				
	K	US-				
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	M	US-				

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Receipt date: 12/08/2015 14080999 - GAU: 3622

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	14080999
Filing Date	2013-11-15
First Named Inventor	Shkedi, Roy
Art Unit	3622
Examiner Name	Sittner, Michael J.
Attorney Docket Number	14-PP-CON3

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Receipt date: 12/08/2015	Application Number	14080999	14080999 - GAU: 3622
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	First Named Inventor	Shkedi, Roy	
	Art Unit	3622	
	Examiner Name	Sittner, Michael J.	
	Attorney Docket Number	14-PP-CON3	

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
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Signature	/Louis J. Hoffman/	Date (YYYY-MM-DD)	2015-12-08
Name/Print	Louis J. Hoffman	Registration Number	38918

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/M.S./	1	7805332	B2	2010-09-28	Wilson	
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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
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Page 112

Receipt date: 10/16/2015	Application Number	14080999 14080999 - GAU: 3622
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**	Filing Date	2013-11-15
	First Named Inventor	Shkedi, Roy
	Art Unit	3622
	Examiner Name	Sittner, Michael J.
	Attorney Docket Number	14-PP-CON3

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
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Signature	/Louis J. Hoffman/	Date (YYYY-MM-DD)	2015-10-16
Name/Print	Louis J. Hoffman	Registration Number	38918

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PTO/SB/08a (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	14/080,999
Filing Date	11/15/2013
First Named Inventor	Shkedi, Roy
Art Unit	3681
Examiner Name	Champagne, D.
Attorney Docket Number	14-PP-CON3

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/M.S./		US- 20030028871	02-06-2003	Wang et al.	
		US-			
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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]–Number[4]–Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]

Examiner Signature	/Michael Sittner/	Date Considered	08/29/2016

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Form PTO-1449 (Modified)
List of Patents and Publications For Information Disclosure Statement

Serial No.: 14/080,999
Applicant: Shkedi Roy
Filed: 11/15/2013
Art Unit: 3688 (in parent)
Examiner: Champagne, D. (in parent)
Conf. No.: 9158

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Publication Date MM-DD-YYY	Name of Patentee or Applicant
/M.S./	1	5710884	01/20/1998	Dedrick
	2	5717923	02/10/1998	Dedrick
	3	5724521	03/03/1998	Dedrick
	4	5752238	05/12/1998	Dedrick
	5	5794210	08/11/1998	Goldhaber et al.
	6	5855008	12/29/1998	Goldhaber et al.
	7	5918014	06/29/1999	Robinson
	8	5948061	09/07/1999	Merriman et al.
	9	6026368	02/15/2000	Brown et al.
	10	6044376	03/28/2000	Kurtzman II
	11	6055513	04/25/2000	Katz et al.
	12	6073241	06/06/2000	Rosenberg et al.
	13	6141010	10/31/2000	Hoyle
	14	6216129	04/10/2001	Eldering
	15	6285987	09/04/2001	Roth
	16	6324519	11/27/2001	Eldering
	17	6327574	12/04/2001	Kramer et al.
	18	6366298	04/02/2002	Haitsuka et al.
	19	6385592	05/07/2002	Angles et al.
	20	6446261	09/03/2002	Rosser
	21	6484492	11/26/2002	Meholic et al.
	22	6487538	11/26/2002	Gupta et al.
	23	6615247	09/02/2003	Murphy
	24	6839680	01/04/2005	Liu et al.
	25	6868392	03/15/2005	Ogasawara
	26	6983379	01/03/2006	Spalink et al.
	27	7003792	02/21/2006	Yuen
	28	7013290	03/14/2006	Ananian
	29	7039594	05/02/2006	Gersting
	30	7043531	05/09/2006	Seibel, et al.

Examiner: /Michael Sittner/ Date Considered: 08/29/2016

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U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Publication Date MM-DD-YYY	Name of Patentee or Applicant
/M.S./	31	7051351	05/23/2006	Goldman et al.
	32	7058593	06/06/2006	Merritt
	33	7065550	06/20/2006	Raghunandan
	34	7155508	12/26/2006	Sankuratripati et al.
	35	7181438	02/20/2007	Szabo
	36	7188076	03/06/2007	Bensemana
	37	7194424	03/20/2007	Greer et al.
	38	7343354	03/11/2008	Hennessey
	39	7346615	03/18/2008	Bem
	40	7360251	04/15/2008	Spalink et al.
	41	7373599	05/13/2008	McElfresh et al.
	42	7546249	06/09/2009	Main
	43	7558795	07/07/2009	Malik
	44	7698422	04/13/2010	Vanderhook et al.
	45	7725944	05/25/2010	Spalink et al.
	46	7756744	07/13/2010	Schiff et al.
	47	7937383	05/03/2011	Hintze et al.
	48	7966647	06/21/2011	Igoe et al.
	49	8036929	10/11/2011	Reisman
	50	8086491	12/27/2011	Matz et al.
	51	20010020242	09/06/2001	Gupta et al.
	52	20010039515	11/08/2001	Mayadas
	53	20010044743	11/22/2001	McKinley, et al.
	54	20020002541	01/03/2002	Williams
	55	20020029267	03/07/2002	Sankuratripati
	56	20020046105	04/18/2002	Gardenswartz et al.
	57	20020056109	05/09/2002	Tomsen
	58	20020072965	06/13/2002	Merriman et al
	59	20020072965	06/13/2002	Merriman et al.
	60	20020072971	06/13/2002	DeBusk et al.

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List of Patents and Publications For Information Disclosure Statement

Serial No.:	14/080,999
Applicant:	Shkedi Roy
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Examiner:	Champagne, D. (in parent)
Conf. No.:	9158

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Publication Date MM-DD-YYY	Name of Patentee or Applicant
/M.S./	61	20020082910	06/27/2002	Kontogouris
	62	20020082923	06/27/2002	Merriman et al.
	63	20020091568	07/11/2002	Kraft, et al.
	64	20020099603	07/25/2002	Bandura
	65	20020112013	08/15/2002	Walsh
	66	20020123928	09/05/2002	Eldering, et al.
	67	20020143632	10/03/2002	Walter, et al.
	68	20020161636	10/31/2002	Takahashi
	69	20020194058	12/19/2002	Eldering
	70	20020194589	12/19/2002	Cristofalo et al.
	71	20030036944	02/20/2003	Lesandrini, et al.
	72	20030046156	03/06/2003	Cromer et al.
	73	20030065558	04/03/2003	Shaw, et al.
	74	20030083938	05/01/2003	Smith, et al.
	75	20030110497	06/12/2003	Yassin et al.
	76	20030135413	07/17/2003	Nishi et al.
	77	20030154126	08/14/2003	Gehlot, et al.
	78	20030171990	09/11/2003	Rao et al.
	79	20030220837	11/27/2003	Asayama
	80	20040024632	02/05/2004	Perry
	81	20040059632	03/25/2004	Kang et al.
	82	20040068436	04/08/2004	Boubek
	83	20040117322	06/17/2004	Bjorksten, et al.
	84	20040260605	12/23/2004	McIntyre, et al.
	85	20050010472	01/13/2005	Quatse, et al.
	86	20050021397	01/27/2005	Cui et al.
	87	20050028188	02/03/2005	Latona et al.
	88	20050038698	02/17/2005	Lukose, et al.
	89	20050038702	02/17/2005	Merriman, et al.
	90	20050120091	06/02/2005	Casais

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List of Patents and Publications For Information Disclosure Statement

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Applicant:	Shkedi Roy
Filed:	11/15/2013
Art Unit:	3688 (in parent)
Examiner:	Champagne, D. (in parent)
Conf. No.:	9158

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Publication Date MM-DD-YYY	Name of Patentee or Applicant
/M.S./	91	20050125289	06/09/2005	Beyda et al.
	92	20050131762	06/16/2005	Bharat, et al.
	93	20050165644	07/28/2005	Beyda, et al.
	94	20050216336	09/29/2005	Roberts, et al.
	95	20050216823	09/29/2005	Petersen
	96	20050222905	10/06/2005	Wills
	97	20050278443	12/15/2005	Winner et al.
	98	20060020508	01/26/2006	Gorti, et al.
	99	20060020510	01/26/2006	Vest
	100	20060053047	03/09/2006	Garcia, et al.
	101	20060064351	03/23/2006	Hamor et al
	102	20060069614	03/30/2006	Agarwal et al.
	103	20060070117	03/30/2006	Spalink et al.
	104	20060085263	04/20/2006	Greer, et al.
	105	20060095322	05/04/2006	Dierks
	106	20060106710	05/18/2006	Meek et al.
	107	20060116924	06/01/2006	Angles et al.
	108	20060122879	06/28/2006	O'Kelley
	109	20060161553	07/20/2006	Woo
	110	20070121843	05/31/2007	Atazky et al.
	111	20070283384	12/06/2007	Haeuser et al.
	112	20080133342	06/05/2008	Criou et al.
	113	20080183561	07/31/2008	Zohar et al.
	114	20090049469	02/19/2009	Small et al.
	115	20090106100	04/23/2009	Mashinsky
	116	20090129377	05/21/2009	Chamberlain et al.
	117	20090132559	05/21/2009	Chamberlain et al.
	118	20100198705	08/05/2010	Spalink et al.
	119	20100293057	11/18/2010	Haveliwala et al.
	120	20100299431	11/25/2010	Vanderhook et al.

Examiner: /Michael Sittner/ Date Considered: 08/29/2016

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Form PTO-1449 (Modified)
List of Patents and Publications For Information Disclosure Statement

Serial No.: 14/080,999
Applicant: Shkedi Roy
Filed: 11/15/2013
Art Unit: 3688 (in parent)
Examiner: Champagne, D. (in parent)
Conf. No.: 9158

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Publication Date MM-DD-YYY	Name of Patentee or Applicant
/M.S./	121	20110167043	07/07/2011	Hintze et al.
	122	20110258049	10/20/2011	Ramer et al.
	123	6832207	12/14/2004	Shkedi
	124	6925440	08/02/2005	Shkedi
	125	6973436	12/06/2005	Shkedi
	126	7072853	07/04/2006	Shkedi
	127	7428493	09/23/2008	Shkedi
	128	7454364	11/18/2008	Shkedi
	129	7747745	06/29/2010	Shkedi
	130	7822637	10/26/2010	Shkedi
	131	7822639	10/26/2010	Shkedi
	132	7861260	12/28/2010	Shkedi
	133	7890609	02/15/2011	Shkedi
	134	7979307	07/12/2011	Shkedi
	135	8051444	11/01/2011	Shkedi
	136	8200822	06/12/2012	Shkedi
	137	8204783	06/19/2012	Shkedi
	138	8204965	06/19/2012	Shkedi
	139	8239264	08/07/2012	Shkedi
	140	8244582	08/14/2012	Shkedi
	141	8244583	08/14/2012	Shkedi
	142	8244586	08/14/2012	Shkedi
	143	8281336	10/02/2012	Shkedi
	144	8341247	12/25/2012	Shkedi
	145	8494904	07/23/2013	Shkedi
	146	8566164	10/22/2013	Shkedi
	147	8595069	11/26/2013	Shkedi
	148	20050086112	04/21/2005	Shkedi
	149	20110040607	02/17/2011	Shkedi
	150	20090172723	07/02/2009	Shkedi et al.

Examiner: /Michael Sittner/ Date Considered: 08/29/2016

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Form PTO-1449 (Modified)
List of Patents and Publications For Information Disclosure Statement

Page 6 of 6

Serial No.:	14/080,999
Applicant:	Shkedi Roy
Filed:	11/15/2013
Art Unit:	3688 (in parent)
Examiner:	Champagne, D. (in parent)
Conf. No.:	9158

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Publication Date MM-DD-YYY	Name of Patentee or Applicant
/M.S./	151	20090049468	02/19/2009	Shkedi

FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Pub. Date MM/DD/YYY	Name of Patentee	Translation Yes / No
/M.S./	152	KR20010096343	11/07/2001	MyOne Card Corp.	Yes
	153	WO2005/046237	05/19/2005	Gutta et al.	No
	154	WO2004084109A	09/30/2004	NHN Corporation	Yes
	155	KR2004099222A	11/26/2004	Echo Marketing Co., Ltd.	Yes
	156	KR20040026167	03/30/2004	IBM Corporation	Yes

OTHER ART

Examiner Initials	Cite No.	Author Title Date Pertinent Pages Etc.
/M.S./	157	KERWIN; "NY Times Web Site Lets Advertisers Get Personal: Profile Info From Users Allows Ads to be Highly Targeted;" Advertising Age; July 14, 1997.
/M.S./	158	Engage Technologies, Inc.; Form S-1A; filed with the SEC; pp. 36-50; July 19, 1999.
/M.S./	159	"The e-Marketing Report"; Morgan Stanley Dean Witter; May, 2000; portions.
/M.S./	160	New York Times Reference Dictionary definition of "computer," downloaded April 7, 2010.

Examiner: /Michael Sittner/ Date Considered: 08/29/2016

EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance *and* not considered. Include copy of this form with next communication to applicant.

Form PTO-1449 (Modified)
List of Patents and Publications For Information Disclosure Statement

Page 1 of 1

Serial No.:	14/080,999
Applicant:	Shkedi Roy
Filed:	11/15/2013
Art Unit:	3622
Examiner:	Sittner, Michael J.
Conf. No.:	9158

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant
/M.S./	1	20050131762	06/16/2005	Bharat et al.

Examiner: /Michael Sittner/ Date Considered: 08/29/2016

EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance *and* not considered. Include copy of this form with next communication to applicant.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/080,999	11/15/2013	Roy Shkedi	14-PP-CON3	9158

26362 7590 09/15/2016

LOUIS J. HOFFMAN, P.C.
7689 East Paradise Lane
Suite 2
Scottsdale, AZ 85260

EXAMINER
SITTNER, MICHAEL J

ART UNIT	PAPER NUMBER
3622	

NOTIFICATION DATE	DELIVERY MODE
09/15/2016	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Louis@valuablepatents.com
donald@valuablepatents.com

Office Action Summary	Application No. 14/080,999	Applicant(s) SHKEDI, ROY	
	Examiner Michael J. Sittner	Art Unit 3622	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/15/2013*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) *34-66* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *34-66* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date *12/8/2015, 10/16/2015, 8/25/2015, 10/23/2014, and 11/15/2013*.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. The present application is being examined under the pre-AIA first to invent provisions.

2. This action is in reply to the Continuation application filed 11/15/2013.

3. Claims 1-33 have been canceled by preliminary amendment.

4. Claims 34-66 are new.

5. Claims 34-66 have been examined and are pending.

Continuation

6. This application is a **continuation application** of U.S. Application Serial No. 13/631,244, filed September 28, 2012, now U.S. Patent 8,589,210, which is a continuation of application Serial No. 11/765,433, filed June 19, 2007 ('Parent Application'), now U.S. Patent 8,280,758, which claims the benefit of provisional application Serial No. 60/805,114, filed **June 19, 2006**. See MPEP §201.07. In accordance with MPEP §609.02 A.2 and MPEP §2001.06(b) (last paragraph), the Examiner has reviewed and considered the prior art cited in the Parent Application. Also in accordance with MPEP §2001.06(b) (last paragraph), all documents cited or considered 'of record' in the Parent Application are now considered cited or 'of record' in this application. Additionally, Applicant(s) are reminded that a listing of the information cited or 'of record' in the Parent Application need not be resubmitted in this application unless Applicants desire the information to be printed on a patent issuing from this application. See MPEP §609.02 A.2. Finally, Applicants are reminded that the prosecution history of the Parent Application is relevant in this application. See e.g., Microsoft Corp. v. Multi-Tech Sys., Inc., 357 F.3d 1340, 1350, 69 USPQ2d 1815, 1823 (Fed. Cir. 2004) (holding that statements made in prosecution of one patent are relevant to the scope of all sibling patents).

Information Disclosure Statement (IDS)

7. Acknowledgement is hereby made of receipt of Information Disclosure Statements filed by applicant on 12/8/2015, 10/16/2015, 8/25/2015, 10/23/2014, and 11/15/2013.

8. Additionally, due to the volume of disclosed Information (especially in the 11/15/2013 disclosure), the documents submitted have only received a cursory review. Based on the volume or size of the IDSs submitted in total, consideration has been given only to the extent that the relevance of the reference(s) has been established.

9. MPEP 609.04(c) states: "Although a concise explanation of the relevance of the information is not required for English language information, applicants are encouraged to provide a concise explanation of why the English-language information is being submitted and how it is understood to be relevant. Concise explanations (especially those which point out the relevant pages and lines) are helpful to the Office, particularly where documents are lengthy and complex and applicant is aware of a section that is highly relevant to patentability or where a large number of documents are submitted and applicant is aware that one or more are highly relevant to patentability."

10. Applicant is hereby requested to provide a representative document(s)/section(s) of each reference submitted in the 11/15/2013 disclosure that is/are particularly relevant to applicant's claimed invention which applicant would like for the examiner to consider. Accompanying the representative document(s)/section(s) should be a disclosure addressing why applicant believes each document(s)/section(s) is important to understanding applicant's invention.

Interpretation of Claim Language

11. **Note**: Per MPEP § 2106.II.C, unless a term is given an "explicit" and "clear" definition in the specification the examiner is obligated to give a claim term its broadest reasonable interpretation, in light of the specification as it would be interpreted by one of ordinary skilled in the art (MPEP § 2111). This means that the words of a claim must be given their "plain meaning" unless the plain meaning is inconsistent with the specification (MPEP § 2111.01.I and 2111.01.III). An explicit

and clear definition must establish the metes and bounds of the terms. A clear definition must unambiguously establish what is and what is not included. A clear definition is indicated by a section labeled definitions, or by the use of phrases such as "by xxx we mean"; "xxx is defined as". An example of a term does not constitute a "clear definition" beyond the scope of the example. An applicant may define specific terms used to describe the invention, but must do so "with reasonable clarity, deliberateness, and precision" and, if done, must "'set out his uncommon definition in some manner within the patent disclosure' so as to give one of ordinary skill in the art notice of the change" in meaning (MPEP § 2111.01.IV and 2173.05(a)).

12. **A tag** is not given an "explicit" and "clear" definition in the specification. Per Spec [4:20-25], a tag is only generally described as *any unique identifier used to mark a person electronically visiting a media property, such as a web site, TV channel, or the like using any device*. According to spec [6:10-11], *"the tag could be whatever the software wants it to be, including a cookie of any domain"*; the tag is therefore seen as being contemplated as not being limited to any form. According to at least [6:11-15], the tag is also not limited to a specific function nor implementation: *"A tag does not have to be placed on the user's device. A tag can also be used in a central database of a BT company or a central database of any second media property visited by the visitor, where the tag could be a unique identifier either of the device or of the user. In the case where the tag identifies the device, the tag might denote an IP address, a phone number, a device's manufacturer serial number, etc. A cookie placed on the device can also uniquely identify the device and the cookie therefore can be used as a tag in a central database*"; see also Spec [19:20-30].

13. **Profile information** is interpreted as any information characterizing a visitor/user of content/ads distributed through any media distribution channel per spec at least at [3:1-10].

14. **Profile owner** is not given an "explicit" and "clear" definition in the specification. Profile owner is interpreted as any entity that gathers and/or uses and/or transmits profile information. Note that Spec [8:13-15] states, "…*profile owners (i.e., who either own the profiles or have the right to resell the profiles on behalf of another profile owner)…"*; and [11:15-20], *"the Profile Owner*

company owns profiles directly or acts as a databank representing other profile owners. Such other profile owners provide the databank with their profiles in return for (i) royalties paid to them whenever the profiles are used, or (ii) a payment. Any profile supplier (defined above) can also be a PO profile owner company."

15. **Profile supplier** is not given an "explicit" and "clear" definition in the specification. Profile supplier, as noted above at Spec [11:15-20] may be a profile owner and is interpreted as any entity that gathers and/or uses and/or transmits profile information. Note that at Spec [3:3-4] any entity (e.g. a publisher that is a BT company) may also be its own profile supplier.

16. **Electronic-advertising-space-controlling-entity** is not recited nor discussed anywhere in the entire specification and is not given an "explicit" and "clear" definition anywhere in the specification. The term *"Electronic-advertising-space-controlling-entity"* is interpreted to include any entity which has any manner of control (including contractual and/or physical ownership and/or control) of advertising space and therefore may be more than one entity at any given time. Such entities may include but is not limited to a publisher who has ad space available to present advertisements as well as an advertiser who has been given a publisher's ad space and/or a third-party broker who has purchased or received some type of contractual control of an ad space but who may transfer physical and/or contractual control in part or whole of such ad space to another entity. Therefore, under a broadest reasonable interpretation, the "entity" includes advertisers, publishers, and brokers, amongst others, as well as combinations of such entities, who have any type of control over ad space.

Claim Rejections - 35 USC § 101

17. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

18. Claims 34-66 are rejected under 35 U.S.C. 101 as the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more.

Claims 34-66 is/are directed to a combination of ideas, which are similar to judicially recognized abstract ideas, as exemplified in the following limitations: *select an electronic-advertising-space controlling-entity based on a comparison of (A) profile information with (B) a plurality of stored requests from different entities; using a tag to automatically cause delivery of an electronic advertisement.*

That is, the claims describe the concept of *comparing new information [profile information] and stored information [stored requests from different entities] and using rules [undisclosed algorithms] to identify options [select an electronic-advertising-space controlling-entity] which may be a contractual relationship (i.e. "controlling" meaning contractually/legally/ownership, etc…); and using a tag, which may take any form per the specification, in an undisclosed manner for the purpose of human activity relating to commercial practices [cause delivery of an electronic advertisement].*

These concepts are similar to the following concepts: *comparing new and stored information and using rules to identify options* (SmartGene[1]: see Section IV.B.4.) to *create a contractual relationship (buySAFE[2]: see Section IV.C.3.);* for the purpose of *human activity relating to commercial practices* (*e.g.,* hedging in Bilski[3]) which have all been found by the courts to be abstract ideas.

The claim(s) do not include additional elements that are sufficient to amount to significantly more than the judicial exception because these elements (such as: *automatically arranging storage of a tag, etc…* without reciting nor claiming any specific method for automating such routine activities such as storage; descriptions of the visitor profile associated with the visitor being "derived", but without disclosing any method of derivation from the visitor's activity, which may include any activity; description that the activity may occur through use of a first generic device; and reciting the intended use is to target advertisements to a second generic device of

[1] SmartGene, Inc. v. Advanced Biological Labs., SA, 555 Fed. Appx. 950 (Fed. Cir. 2014) (nonprecedential).
[2] buySAFE, Inc. v. Google, Inc., ___ F.3d ___, 112 USPQ2d 1093 (Fed. Cir. 2014).
[3] Bilski v. Kappos, 561 U.S. 593 (2010)

the visitor, etc…), all either further describe the abstract idea but do not make it less abstract or are merely insignificant extra-solution activity because such activity is necessary and routine in implementing the aforementioned abstract concepts.

If allowed, the claims seek to monopolize all implementations of the aforementioned abstract concepts.

In viewing the claims as a whole, including the limitations of the dependent claims, the claims simply instruct the practitioner to implement the abstract concepts through the use of routine and conventional activity only disclosed at a high level of generality and with no specific examples of the algorithms themselves which achieve the functionalities claimed. Therefore, when viewed either as individual limitations or as an ordered combination, the claim(s) as a whole do not add significantly more to the abstract idea(s).

Please see the 2014 Interim Guidance on Patent Subject Matter Eligibility (79 FR 74618) in view of the Supreme Court Decision in Alice Corporation Pty. Ltd. V. CLS Bank International, et. al. (found at http://www.uspto.gov/patent/laws-and-regulations/examination-policy/examination-guidance-and-training-materials).

Claim Rejections - 35 USC § 112

19. The following is a quotation of 35 U.S.C. 112(b):

> (B) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

20. Claims 39, 40-42, 45, 49, and 56, 57-58, 61 are rejected under 35 U.S.C. 112(b) or (for pre-AIA) 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor, a joint inventor, or (for pre-AIA) the applicant regards as the invention.

Dependent claims 41 and 57 each recite*, "…the visitor device …".* However, the parent

claims discuss multiple different visitor devices. Therefore it is not clear to which specific device the term "the visitor device" now refers. For this reason, the claim limitation is indefinite.

Dependent claims 42 and 58 inherit the deficiencies of their parent claim and are also rejected under 35 U.S.C. 112(b) or (for pre-AIA) 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor, a joint inventor, or (for pre-AIA) the applicant regards as the invention.

Dependent claim 49 recites*, "…the URL…"*. However, this limitation lacks an antecedent basis. The term "the" is a definite article. As such, this term must refer to a definite previous recitation of the noun which it modifies. However, no previous recitation of "URL…" has been provided. Therefore, this limitation lacks an antecedent basis for the claimed step. Because this limitation lacks an antecedent basis, the claim limitation is indefinite.

Dependent claims 39, 41, 45, 56, 57, and 61 each recite*, "…the profile owner company…"*. However, this limitation lacks an antecedent basis. The term "the" is a definite article. As such, this term must refer to a definite previous recitation of the noun which it modifies. However, no previous recitation of such a "company" has been provided. Therefore, this limitation lacks an antecedent basis for the claimed step. Because this limitation lacks an antecedent basis, the claim limitation is indefinite.

Dependent claims 40, 42, and 58 inherit the deficiencies of their parent claim and are also rejected under 35 U.S.C. 112(b) or (for pre-AIA) 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor, a joint inventor, or (for pre-AIA) the applicant regards as the invention.

Claim Rejections - 35 USC § 103 (pre-AIA)

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole

would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

22. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

23. Claims 34-46, 49-62, 65-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jaschke** et al. (U.S. 2007/0130005 A1; hereinafter, "Jaschke") in view of **Horowitz** (U.S. 2005/0097204 A1; hereinafter, "Horowitz").

Claims 34, 51, 66: (New)

Pertaining to the below limitations, Jaschke teaches the following:

(a) with a computer system automatically arranging storage of a tag associated with a visitor device following receipt from a profile owner computer of indicia of a profile associated with the visitor, for a profile of the visitor matching a profile or kind of profiles desired by an entity controlling the computer system (Jaschke, see at least [0029]-[0030], [0064], and [0076]: Jaschke's system sends and receives information indicating availability to place an advertisement; inherently requires storage by the entity receiving such information; the information sent and received is associated with a user's device, such as cookie, SIM card, fixed IP addresses, cable or TV identifiers, or "any other means of uniquely identifying a user", etc… applicant's claim and spec [4:20-25] read directly on Jaschke's teachings; examiner notes applicant fails to recite or stipulate any specific embodiment for what constitutes "arranging" and what is encompassed by the term "tag" and therefore these are completely open to interpretation; see notes on claim interpretation given above.)***;***

(b) wherein the profile owner computer is programmed:

(i) to automatically select an electronic-advertising-space controlling entity based on a comparison of (A) profile information about a visitor who electronically accessed electronic apparatus of a profile supplier with (B) a plurality of stored requests from different entities, each stored request being for requested profiles or kinds of profiles, which plurality of stored requests includes the desired profile or kind of profiles (Jaschke, see at least [0030]-[0031], teaching: "The consumer information broker determines which advertiser will be permitted to utilize the advertisement opportunity by using a mathematical calculation…"; the consumer information broker selects an advertiser [entity to control ad space] to whom control of advertising opportunity will be transferred. This occurs after receiving notification of an advertising opportunity [visitor who accessed apparatus]. After receiving such notification, the consumer information broker requests the target profile [profile info of visitor] from one or more target profile processor(s) [profile suppliers] and correlates [compares] the target profile to the associated description [stored requests for profiles] of each advertiser [different entities] participating in the bidding process; the bidding is dynamically calculated based on a correlation between the associated description defined by the advertiser and the target profile; see also at least [0065]-[0069].)***,***

and

[…]

(c) later, when the visitor device is available to receive an advertisement, with the computer system, using the tag to automatically cause delivery of an electronic advertisement to the visitor device, wherein the electronic advertisement is dependent on the profile associated with the visitor (Jaschke, see at least [0029]-[0032] and [0073]-[0074], teaching: the consumer information broker may select an appropriate advertisement from the winning advertiser's reference to marketing materials. After the advertisement has been selected, it is conveyed to the targeted visitor (i.e. when

> available to receive such targeted advertising). The winning advertiser is selected dynamically based on a correlation between the associated description defined by the advertiser and the target profile retrieved through use of the information identifying the target visitor such as a cookie, etc…, the correlation is then multiplied by an advertiser's submitted bid price. In this way, the winning advertiser is permitted to exploit the advertisement opportunity.)

Although Jaschke teaches the above limitations and Jaschke teaches ***(ii)…a tag that is associated with the visitor and that is readable by an electronic-advertising-space-controlling equipment controlled by the selected entity, which equipment is part of the computer system of part (a) when the selected entity is the entity controlling the computer system*** (Jaschke, see at least 0029]-[030], [0064], and [0076]: Jaschke stores information associated with a user's device such as cookie, SIM card, fixed IP addresses, cable or TV identifiers, or "any other means of uniquely identifying a user", is readable by Jaschke's system [*the computer system of part (a) when the selected entity is the entity controlling the computer system*]), Jaschke may not explicitly teach the nuances of automatically arranging for storage of such information. However, concerning such storage,

> ***automatically arrange for electronic storage of a tag*** (Horowitz, see at least [0047] and [0081]-[0082] teaching: a Click Server 522 can encrypt and place information in a Uniform Resource Locator (URL), can give [automatically arrange for storage] a browser of the End User 110 a cookie [a tag] that can be used to identify the click for matching with subsequent conversions, and can redirect to the URL of the listing (e.g., an Advertiser Site 106). Additionally, a Conversion/Pixel Server 524 can be configured to handle conversion-related requests that allow tracking of conversions, and the like. For example, a mechanism in the HTML may cause the browser of the End User 110 to make a request for and store a tracking pixel [another type of tag], and the like; the request may be sent to the Conversion Server 524. The Conversion Server 524 then can take the cookie set by the Click Server 522 and extract information from the request URL,

which identifies the listing, and log such information to the Log Processor 510. Etc…; as applicant fails to stipulate an embodiment of his "tag" and fails to stipulate what is meant by "automatically arranging" for storage; these are open to interpretation)***; and***

Therefore, the Examiner understands that automatically arranging to store cookies and/or tracking pixels [both of which are types of tags] is merely applying a known technique (techniques of Horowitz) to a known device, method or product (device/method of Jaschke) to yield predictable results. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the techniques of Horowitz with the device/method of Jaschke to realize that Jaschke's cookies may be automatically arranged for storage as taught by Horowitz because both Jaschke and Horowitz are analogous art in the same field of endeavor (at least G06Q30/02) and because according to MPEP 2143(I) (C) and/or (D), the use of known technique to improve a known device, methods, or products in the same way (or which is ready for improvement) is obvious.

Claims 35, 52: (New)

The combination Jaschke/Horowitz teaches the limitations upon which these claims depends. Furthermore, pertaining to the below limitations, Jaschke teaches the following:

wherein the profile associated with the visitor is derived from the visitor's activity using a first device, and wherein the visitor device that is available to receive an advertisement is a second device of the visitor (Jaschke, see at least [0052], [0064]-[0065] and [0074], A profiler 100 can be a profiler collecting target user profiles by tracking user usage behavior on various devices but targeted advertisements may be delivered and customized to the technical capabilities of the current device on which there is an opportunity to target an advertisements and the two devices may be different devices.)

Claims 36, 53: (New)

The combination Jaschke/Horowitz teaches the limitations upon which these claims depends. Furthermore, pertaining to the below limitations, Jaschke teaches the following:

wherein the first device is a computer of the visitor and the second device is a mobile phone of the visitor (Jaschke, see at least Fig. 1 and [0063], the first device may be computer PC 172 and the second device may be mobile telephone 170.)

Claims 37, 54: (New)

The combination Jaschke/Horowitz teaches the limitations upon which these claims depends. Furthermore, pertaining to the below limitations, Jaschke teaches the following:

wherein the tag identifies the mobile phone (Jaschke, see at least [0029]-[030], [0064], and [0076]: memory based identifiers (e.g. Subscriber Identity Module); this implies the (IMSI) number and its related key, which are used to identify and authenticate subscribers on mobile telephony devices, is what Jaschke sends and receives as an identifier and these are identifiers of a mobile phone and user of the phone.)

Claims 38, 55: (New)

The combination Jaschke/Horowitz teaches the limitations upon which these claims depends. Furthermore, pertaining to the below limitations, Jaschke teaches the following:

wherein the profile owner computer is programmed to automatically select an electronic-advertising-space-controlling entity using profile information about the visitor that was derived from the visitor's activity using the computer of the visitor (Jaschke, see at least [0030]-[0031], teaching: "The consumer information broker [one type of profile owner] determines which advertiser will be permitted to utilize the advertisement opportunity by using a mathematical calculation…"; the consumer information broker selects an advertiser [entity to control ad space] to whom control of advertising opportunity will be transferred. This occurs after receiving notification of an advertising opportunity [visitor who accessed apparatus]. After receiving such notification,

the consumer information broker requests the target profile [profile info of visitor] which, per at least [0030], the target profile is a data representation of the target. The information is collected through (1) the active data input of the target into databases of target profile processors, (2) the tracking of the usage behavior of targets which is collected in the databases of target profile processors, (3) the tracking of usage behavior of the target which is stored in digital memory (e.g. smart cards, (SIM) cards, computer memory, etc.) or cookies residing on the targets' premise equipment, and (4) the active data input of third parties concerning that particular target into databases of target profile processors; see also at least [0065]-[0069]),

Although Jaschke teaches the above limitations, Jaschke may not explicitly teach collection of such profile information is as a result of a URL redirect. However, pertaining to this technique for collection, Horowitz does teach the following:

which profile information was received by the profile owner computer as a result of URL redirection from a website that is served by the electronic apparatus of the profile supplier, which website is accessed by the computer of the visitor.

(Horowitz, see at least Fig. 4 - #412, and [0045]]-[0048] and [0061] teaching URL redirection; for example, "…the system can use a cookie-based tracking system and can include all features included in the tracking system, including (1) a cookie that can be dropped on a user's browser before redirecting to the user's destination; and (2) a pixel image on the destination site's acquisition page that can register a conversion for the system… the system also can be configured to utilize a back channel, and the like, for the advertiser to share information and to maintain security of purchasing and other information for the advertiser…")

Therefore, the Examiner understands that URL redirection and sharing user information such as profile information as a result of URL redirection is merely applying a known technique (techniques of Horowitz) to a known device, method or product (device/method of Jaschke) to yield predictable results. Therefore it would have been obvious to one of ordinary skill in the art at

the time of the invention to combine the techniques of Horowitz with the device/method of Jaschke to realize that the profile information which Jaschke teaches is collected and compiled by target profile processor 131 and brokered by consumer information broker 130, could have been the result a *URL redirection from a website that is served by the electronic apparatus of the profile supplier,* both Jaschke and Horowitz are analogous art in the same field of endeavor (at least G06Q30/02) and because according to MPEP 2143(I) (C) and/or (D), the use of known technique to improve a known device, methods, or products in the same way (or which is ready for improvement) is obvious.

Claims 39, 56: (New)

The combination Jaschke/Horowitz teaches the limitations upon which these claims depends. Furthermore, pertaining to the below limitations, Jaschke teaches the following:

wherein the second device is a computer (Jaschke, see at least Fig. 1 and [0063], the second device may be computer PC 172) ***and wherein the computer system is further programmed to, after parts (a) and (c), electronically report, to the profile owner company, information about delivery of the advertisement to the second device*** (Note the 112, 2nd rejection given above. Jaschke, see at least [0059]-[0060], teaching: The consumer information broker 130 may send or make accessible a report to advertisers as well as convey the selected marketing materials to the target 190, charge the advertiser's account and credit the accounts of the target 190, the advertisement platform provider 120 and/or the profiler 100; Examiner notes: as applicant fails to stipulate what "information" is reported about/concerning delivery of ads, this is open to interpretation and at least a "credit" [information] which is provided to the profiler [a profile owner] which supplied the profile used in the transaction is information about such ad delivery. Also, the information broker who is also a profile owner inherently has the information and therefore this has been made available [reported] in some manner to the broker.)

Claim 40: (New)

Although Jaschke teaches the above limitations, Jaschke may not explicitly teach a technique of URL redirection when Jaschke's system utilizes a cookie for the purpose of delivering targeted advertising. However, pertaining to this technique, Horowitz does teach the following:

> ***…automatically placing the second device in communication with computer equipment controlled by the profile owner, via URL redirection from the computer system, when the computer system utilizes the tag to cause delivery of the advertisement*** (Horowitz, see at least Fig. 4 - #412, and [0045]]-[0048] and [0061] teaching URL redirection; for example, "…the system can use a cookie-based tracking system and can include all features included in the tracking system, including (1) a cookie that can be dropped on a user's browser before redirecting to the user's destination [*cause delivery of the advertisement*]; and (2) a pixel image on the destination site's acquisition page that can register a conversion for the system… the system also can be configured to utilize a back channel, and the like, for the advertiser to share information and to maintain security of purchasing and other information for the advertiser…")

Therefore, the Examiner understands that URL redirection and sharing and/or reporting information as a result of URL redirection is merely applying a known technique (techniques of Horowitz) to a known device, method or product (device/method of Jaschke) to yield predictable results. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the techniques of Horowitz with the device/method of Jaschke to realize that the profile information which Jaschke teaches is collected and compiled by target profile processor 131 and brokered by consumer information broker 130, could have been reported as the result a URL redirection from the computer system, when Jaschke's computer system utilizes the cookie to cause delivery of the advertisement, because both Jaschke and Horowitz are analogous art in the same field of endeavor (at least G06Q30/02) and because according to

MPEP 2143(I) (C) and/or (D), the use of known technique to improve a known device, methods, or products in the same way (or which is ready for improvement) is obvious.

Claims 41, 57: (New)

The combination Jaschke/Horowitz teaches the limitations upon which these claims depends. Furthermore, pertaining to the below limitations, Jaschke teaches the following:

> ***… wherein the computer system is further programmed to, after parts (a) and (c), electronically report, to the profile owner company, information about (i.e. concerning) delivery of the advertisement to the visitor device*** (Note the 112, 2nd rejection given above. Nonetheless, Jaschke see at least [0060], teaches: The consumer information broker 130 [one type of profile owner] may send or make accessible a report to advertisers as well as convey the selected marketing materials to the target 190, charge the advertiser's account and credit the accounts of the target 190, the advertisement platform provider 120 [yet another type of profile owner] and/or the profiler 100 [another type of profile owner]; Examiner notes: as applicant fails to stipulate what "information" is reported about/concerning delivery of ads, this is open to interpretation and at least a "credit" [information] which is provided by and to a type of profile owner concerning the profile information used in the transaction of the advertisement is information about delivery of the advertisement. Also, the information broker who is a profile owner inherently has the information and therefore this has been made available [reported] in some manner.)

Claims 42, 58: (New)

The combination Jaschke/Horowitz teaches the limitations upon which these claims depends. Furthermore, pertaining to the below limitations, Jaschke teaches the following:

> ***… wherein reporting further comprises automatically electronically identifying to the profile owner company one of a plurality of profiles or kind of profiles used in***

association with delivery of the advertisement (Note the 112, 2nd rejection given above. Jaschke, see at least [0099] profiles used in association with delivering ads are provided to profilers, information brokers, and advertisers.)

Claims 43, 59: (New)

The combination Jaschke/Horowitz teaches the limitations upon which these claims depends. Furthermore, pertaining to the below limitations, Jaschke teaches the following:

… wherein the profile owner computer is programmed to automatically select an electronic-advertising-space-controlling entity using profile information about the visitor that was derived from the visitor's activity using the visitor device (Jaschke, see at least [0063]-[0073] and [0077] the advertiser is selected using profile information; the profile information may have been derived from visitor's activity using a device such as a mobile phone.)

Claims 44, 60: (New)

Although Jaschke teaches the above limitations, Jaschke may not explicitly teach a technique of URL redirection to a website where user profile information is gathered. However, pertaining to this technique, Horowitz does teach the following:

… wherein the profile information was received by the profile-owner computer as a result of URL redirection from a website that is served by the electronic apparatus of the profile supplier, which website is accessed by the visitor device (Horowitz, see at least Fig. 4 - #412, and [0045]-[0048] and [0061] teaching URL redirection; for example, "…the system can use a cookie-based tracking system and can include all features included in the tracking system, including (1) a cookie that can be dropped on a user's browser before redirecting to the user's destination [*cause delivery of the advertisement*]; and (2) a pixel image on the destination site's acquisition page that can register a conversion for the system… the system also can be configured to utilize a back

channel, and the like, for the advertiser to share information and to maintain security of purchasing and other information for the advertiser…")

Therefore, the Examiner understands that URL redirection and sharing and/or reporting information as a result of URL redirection is merely applying a known technique (techniques of Horowitz) to a known device, method or product (device/method of Jaschke) to yield predictable results. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the techniques of Horowitz with the device/method of Jaschke to realize that the profile information which Jaschke teaches is collected and compiled by target profile processor 131 and brokered by consumer information broker 130, could have been reported or gathered as the result a URL redirection from the computer system, when Jaschke's computer system utilizes the cookie to cause delivery of the advertisement, because both Jaschke and Horowitz are analogous art in the same field of endeavor (at least G06Q30/02) and because according to MPEP 2143(I) (C) and/or (D), the use of known technique to improve a known device, methods, or products in the same way (or which is ready for improvement) is obvious.

Claims 45, 61: (New)

The combination Jaschke/Horowitz teaches the limitations upon which these claims depends. Furthermore, pertaining to the below limitations, Jaschke teaches the following:

… the computer system automatically creating electronic data used to identify a payment amount due to the profile owner company as a result of delivery of the electronic advertisement to the visitor device that is available to receive an advertisement (Jaschke, see at [0037], [0059], and [0095] The consumer information broker utilizes the winning bid to credit the account(s) of the target, the advertisement platform provider and/or the profiler. The consumer information broker may keep a percentage of the bid as a brokerage fee or charge a fixed amount to the advertisement platform provider, the target and/or the advertiser; accounts of targets 190 and/or profilers 100 and/or platform providers may be credited as a result of delivery of the

electronic ad to a visitor device which is able to receive such an ad.)

Claims 46, 62: (New)

The combination Jaschke/Horowitz teaches the limitations upon which these claims depends. Furthermore, pertaining to the below limitations, Jaschke teaches the following:

… wherein the tag comprises personally identifiable information identifying the visitor (Jashcke, see at least [0029]-[0030], [0064], and [0076]: "identifiers" which may be any means of "uniquely identifying a user"; applicant fails to stipulate what is encompassed by "personally identifiable information" and therefore this is open to interpretation)

Claim 49: (New)

Although Jaschke teaches the above limitations, Jaschke may not explicitly teach a technique of URL redirection to a website which subsequently enables the advertiser to store the cookie [tag] which may be contained in the redirect URL. However, pertaining to this technique, Horowitz does teach the following:

… wherein automatically arranging storage of the tag comprises automatic redirection to the URL provided by the selected entity to place the visitor device in communication with computer equipment controlled by the selected entity to enable storage of the tag in association with the visitor device (Horowitz, see at least [0045]-[0048] specifically [0046] teaching: At step 416, tracking of the End User 110 can be performed. The Production Site 104, and/or the Advertiser 102 perform tracking of the End User 100 by assigning a unique identifier [tag] (e.g. a cookie) to the End User 110 and identifying actions performed by the End User 110. In an exemplary embodiment, if the End User 110 is a new user on the Advertiser Site 106, then when the Advertiser 102 assigns the End User 110 the unique identifier, the Web browser of the End User 110 can be redirected to the Advertisement Server 126 of the Production Site

> 104. The Advertiser Site 106 can submit a request to the Advertisement Server 126 of the Production Site 104. The redirect or request can include the unique identifier [tag] (e.g. cookie) of the End User 110 for the Advertiser Site 106, an originating advertisement query, click information, and the like.)

Therefore, the Examiner understands that URL redirection which may enable the advertiser to store the cookie is merely applying a known technique (techniques of Horowitz) to a known device, method or product (device/method of Jaschke) to yield predictable results. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the techniques of Horowitz with the device/method of Jaschke to realize Jaschke may employ the well-known technique of a URL redirection, as taught by Horowitz, to cause delivery of the advertisement by redirecting the user to the advertiser's URL along with a cookie in the URL redirect, because both Jaschke and Horowitz are analogous art in the same field of endeavor (at least G06Q30/02) and because according to MPEP 2143(I) (C) and/or (D), the use of known technique to improve a known device, methods, or products in the same way (or which is ready for improvement) is obvious.

Claims 50, 65: (New)

The combination Jaschke/Horowitz teaches the limitations upon which these claims depends. Furthermore, pertaining to the below limitations, Jaschke teaches the following:

> ***… wherein the equipment of the profile supplier operates in the Internet and the equipment of the selected entity utilizes the profile data to cause delivery of the electronic advertisements on a television of the visitor*** (Jashcke, see at least [0063]-[0064] and Fig. 1 Public Internet 142, TV 176 which may receive electronic ads, Profile Processor 131, Advertiser 110, Platform Provider 120, Consumer Information Broker 130 all operate through the Public Internet 142 to reach Satellite Network 158 and Cable Network 156 to send ads to TV 176.

24. Claims 47 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jaschke** et al. (U.S. 2007/0130005 A1; hereinafter, "Jaschke") in view of **Horowitz** (U.S. 2005/0097204 A1; hereinafter, "Horowitz").

Claims 47, 63: (New)

Although the combination Jaschke/Horowitz teach the limitations upon which these claims depend, neither may explicitly teach that profile information may be stored in a cookie [tag]. However, Pertaining to the below limitations, Calinov teaches the following:

> ***… arranging for electronic storage of the profile information in the tag*** (Calinov, see at least [7:1-17], teaching: "The authentication server 24 uses this information to create encrypted cookies… The cookies may include a Ticket cookie (including the PUID and a time stamp), a Profile cookie (storing the profile information), and a Visited Sites cookie (storing a list of sites where the user has signed in). After authentication server 24 creates the cookies, it uses the encryption key and site ID to encrypt the ticket and profile data. This encrypted data is then added as query string parameters to the return URL provided in the authentication request and authentication server 24 presents this URL to the user's browser. The user's browser then creates the cookies in the authsite.com domain on the user's client computer 12.")

Therefore, the Examiner understands that storing profile information in a cookie is merely applying a known technique (techniques of Calinov) to a known device, method or product (device/method of Jaschke) to yield predictable results. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the techniques of Calinov with the device/method of Jaschke to realize that Jaschke who stores cookies and profile information may store his profile information in a cookie as taught by Calinov for the reasons taught by Calinov and because according to MPEP 2143(I) (C) and/or (D), the use of known technique to improve a known device, methods, or products in the same way (or which is ready for improvement) is obvious.

25. Claims 48 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jaschke** et al. (U.S. 2007/0130005 A1; hereinafter, "Jaschke") in view of **Horowitz** (U.S. 2005/0097204 A1; hereinafter, "Horowitz") further in view of **Smith** (U.S. 2005/0097204 A1; hereinafter, "Horowitz").

Claims 48, 64: (New)

Although the combination Jaschke/Horowitz teach the limitations upon which these claims depend, neither may explicitly teach that profile information is locatable through a cookie [tag]. However, Pertaining to the below limitations, Smith teaches the following:

> ***… arranging for electronic storage of the profile information in a database locatable through the tag*** (Smith, see at least [0038], teaching that a computer identifier such as cookie data or an IP address are used to locate various user profiles.

Therefore, the Examiner understands that using a cookie to locate profile information stored in a database is merely applying a known technique (techniques of Smith) to a known device, method or product (device/method of Jaschke) to yield predictable results. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the techniques of Smith with the device/method of Jaschke to realize that Jaschke who stores cookies and profile information may use the cookie to locate stored profile information as taught by Smith for the reasons taught by Smith and because according to MPEP 2143(I) (C) and/or (D), the use of known technique to improve a known device, methods, or products in the same way (or which is ready for improvement) is obvious.

Conclusion

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Sittner whose telephone number is (571) 270-3984. The examiner can normally be reached 7:30 AM - 5:00 PM (Mon. -Thur.), and every other Friday. If attempts to

reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan C Uber can be reached at (571) 270-3923.

27. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Sittner/

Examiner, Art Unit 3622

/ARTHUR DURAN/

Primary Examiner, Art Unit 3622

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14080999	SHKEDI, ROY
	Examiner	Art Unit
	MICHAEL J SITTNER	3622

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	08/31/2016								
	34	✓								
	35	✓								
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	66	✓								

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14080999	SHKEDI, ROY
	Examiner	Art Unit
	MICHAEL J SITTNER	3622

CPC- SEARCHED		
Symbol	Date	Examiner
G06Q30/02 all with text	8/29/2016	MJS
G06F7/04 all with text	8/29/2016	MJS
H04L 9/32 all with text	8/29/2016	MJS

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
705	14 all with text		

SEARCH NOTES		
Search Notes	Date	Examiner
See East Search History	8/29/2016	MJS
Assignee Search	8/29/2016	MJS
Inventor Search	8/29/2016	MJS
Review of Parent Applications and related Art	8/29/2016	MJS

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	4	(("6839680") or ("6446261")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/08/25 11:31
S2	36	@ad<"20060619" and (collect$6 with profil$6 with (buy$6 or purchas$6) with (sell or selling or sales or vend or vend$6))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/25 11:43

8/25/2016 2:07:51 PM
C:\Users\msitter\Documents\EAST\Workspaces\14080999 - Shkedi - collection and selling of profile information.wsp

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	0	@ad<"20060619" and (cookie near3 profile near3 locat$6 near3 database)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/31 12:38
L3	23	@ad<"20060619" and (cookie profile locat$6 database)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2016/08/31 12:38
L4	0	@ad<"20060619" and (cookie profile locat$6 database)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	NEAR	ON	2016/08/31 12:38
L5	2	("20070130005").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/08/31 13:25
S1	4	(("6839680") or ("6446261")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/08/25 11:31
S2	36	@ad<"20060619" and (collect$6 with profil$6 with (buy$6 or purchas$6) with (sell or selling or sales or vend or vend$6))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/25 11:43
S3	2	("20110314092").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/08/30 16:10
S4	0	@ad<"20060619" and (tracking adj pixel) and (1x1)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 16:10
S5	137	@ad<"20060619" and (tracking adj pixel)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 16:11
S6	0	@ad<"20060619" and (tracking adj pixel) and (S3 adj x adj S3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 16:11

S7	0	@ad<"20060619" and (S3 adj x adj S3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 16:11
S8	7504	@ad<"20060619" and ("1 x 1")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 16:11
S9	0	@ad<"20060619" and (tracking adj pixel) and (URL adj redirect)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 16:31
S10	2	@ad<"20060619" and (tracking adj pixel) and (URL near4 redirect)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 16:31
S11	425010	@ad<"20060619" and ((profile adj owner) with report$6 or compensation)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 19:44
S12	13	@ad<"20060619" and ((profile adj owner) with (report$6 or compensation))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 19:45
S13	13	@ad<"20060619" and ((profile adj owner) with (report$6 or compensation))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 20:59
S14	12396	@ad<"20060619" and ((profile) with (report$6 or compensation)) not S13	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 20:59
S15	4096	@ad<"20060619" and ((profile) near3 (report$6 or compensation)) not S13	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 21:00
S17	258	@ad<"20060619" and ((profile) near3 (report$6 or compensation) with (type or category)) not S13	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 21:01
S18	0	@ad<"20060619" and (profile with report$6 with compensation with (type or category)) not S13	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 21:01
S19	165	@ad<"20060619" and (profile with compensation with (type or category)) not S13	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 21:02

S20	486	@ad<"20060619" and (profile with report with (type or category)) not S13	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 21:02
S21	65	@ad<"20060619" and (profile near3 compensation with (type or category)) not S13	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 21:02
S22	148	@ad<"20060619" and (profile near3 report with (type or category)) not S13	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 21:02
S23	71	@ad<"20060619" and (report$6 near3 profile near3 (type or category)) not S13	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 21:03
S24	106	@ad<"20060619" and (cookie near3 profile near3 information)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/30 22:25

8/31/2016 1:26:26 PM
C:\Users\msitter\Documents\EAST\Workspaces\14080999 - Shkedi - collection and selling of profile information.wsp

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	14080999
	Filing Date	2013-11-15
	First Named Inventor	Shkedi, Roy
	Art Unit	3622
	Examiner Name	Sittner, Michael J.
	Attorney Docket Number	14-PP-CON3

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	Examiner Name	Sittner, Michael J.
	Attorney Docket Number	14-PP-CON3

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Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	14080999
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	First Named Inventor	Shkedi, Roy
	Art Unit	3622
	Examiner Name	Sittner, Michael J.
	Attorney Docket Number	14-PP-CON3

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Louis J. Hoffman/	Date (YYYY-MM-DD)	2016-10-19
Name/Print	Louis J. Hoffman	Registration Number	38918

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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Electronic Acknowledgement Receipt	
EFS ID:	27267255
Application Number:	14080999
International Application Number:	
Confirmation Number:	9158
Title of Invention:	Providing collected profiles to media properties having specified interests
First Named Inventor/Applicant Name:	Roy Shkedi
Customer Number:	26362
Filer:	Louis J. Hoffman/Donald Hertz
Filer Authorized By:	Louis J. Hoffman
Attorney Docket Number:	14-PP-CON3
Receipt Date:	19-OCT-2016
Filing Date:	15-NOV-2013
Time Stamp:	20:00:28
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	16-10-19-Datonics-PP-CON3-Supp_IDS_Cover.pdf	54242 252fde9d469414b06830ca529a7e799226c4c2b9	no	2

Warnings:

Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	16-10-19-Datonics-PP_CON3-Supp_IDS.pdf	1035173 8e7c871fc6a9a3436fd9614240bbc7eced32b4db	no	4
Warnings:					
Information:					
			Total Files Size (in bytes):	1089415	

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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor	:	Shkedi, Roy	Art Unit	:	3622
Serial No.	:	14/080,999	Examiner	:	Sittner, Michael J.
Filing Date	:	11/15/2013	Conf. No.	:	9158
Title	:	Providing collected profiles to media properties having specified interests			

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Filed via EFS-Web – October 19, 2016

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Dear Sir:

Applicant discloses the references listed on form PTO/SB/08 attached to this document.

Applicant also wishes to direct Examiner to the applications listed in the table below, which share the same first inventor, as well as the references cited therein:

Serial No.	Filing Date	Earliest Parent Filing Date
12/536,451	08/05/2009	
12/912,726	10/26/2010	12/28/1999
14/089,645	11/25/2013	12/31/2007
14/091,285	11/26/2013	11/28/2000
14/204,958	03/11/2014	06/14/2000
14/763,963	07/28/2015	01/30/2013
14/796,269	07/10/2015	06/02/2008
14/946,623	11/19/2015	06/02/2008
14/960,237	12/04/2015	06/16/2006 (prov.)
15/047,386	02/18/2016	08/03/2011 (prov.)
15/161,794	05/23/2016	06/05/2012 (prov.)
15/179,356	06/10/2016	04/17/2007

If the Office has any questions, please feel free to contact applicant's undersigned attorney of record.

Respectfully submitted,

DATONICS, LLC

by its attorney

Dated: October 19, 2016

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PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : G06F 151/00, 153/00	A1	(11) International Publication Number: WO 97/21183
		(43) International Publication Date: 12 June 1997 (12.06.97)

(21) International Application Number: PCT/US96/19509

(22) International Filing Date: 6 December 1996 (06.12.96)

(30) Priority Data:
08/569,639 8 December 1995 (08.12.95) US

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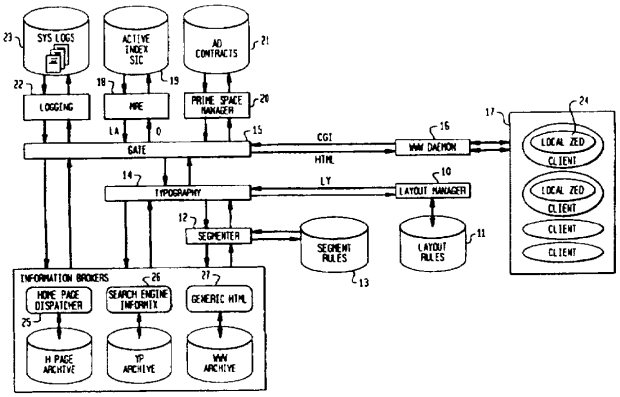
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(81) Designated States: CA, JP, KR, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
With international search report.

(54) Title: METHOD AND SYSTEM FOR PLACING ADVERTISEMENTS IN A COMPUTER NETWORK



(57) Abstract

A method and system for placing advertisements in a computer network. A server containing a collection of advertisements is placed in electronic communication with the computer network. The advertisements on the server are not tied to any particular page containing information on the network, but rather, are retrieved in response to a query entered by the user (17) and dynamically mixed with the content of the pages returned in response to the query (16). The present invention displays the content pages with focused, targeted advertisements as a part of the page, in accordance with a particular layout. The advertisements can be made to satisfy a set of constraints (19) requested by the advertiser, as well as the constraints of the publisher of the page. The system uses contracts (21) to specify the marketing rules (18) that link ads with specific queries, to permit advertisers to target a specific audience, and to guarantee a certain amount of exposure of the advertisement in prime advertising space. Algorithms are used to check for contract consistency to ensure that all contracts that are accepted can be properly satisfied. The present invention also provides a download delay-time advertising feature.

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METHOD AND SYSTEM FOR PLACING ADVERTISEMENTS IN A COMPUTER NETWORK

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BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates generally to advertising and, in particular, to a method and system for placing advertisements in a computer network, such as a wide area network or a metropolitan area network.

Description of the Prior Art

A number of information services are currently offered on wide area public networks, such as the Internet. The basic model of these services is that a query is processed and a set of answers is returned. For example, a number of yellow page searchable directories have been developed in which users can query categories of products or services (e.g., new car dealers) and the system returns a set of vendors satisfying the query.

One problem with these services is determining who should subsidize the end user's cost of using the services. One way of providing such a subsidy is through the use of

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advertisements. Public networks, such as the Internet, are starting to see random use of advertisements. For example, some search engines used in public networks are sponsored by a single vendor or company. The sponsoring vendor or company will often have an advertisement displayed on a user's computer screen during use of the search engine. Other search engines display randomly selected advertisements from a fixed set of advertisements.

As one example, a number of services on the World Wide Web ("WWW") are currently using ad hoc means of advertising. That is, when a user uses certain search engines for conducting a search, the user will be shown advertisements while doing the searching. These advertisements are sometimes referred to as "banner" advertisements because they simulate a banner that the user sees as the user is traveling down a "road" on the computer network. These advertisements are typically tied to a particular search page that the user encounters during the search.

The current state of the art is such that when the user uses a search engine, a randomly selected advertisement is shown as if it is part of the search page. For example, the user may enter a search request to see a home page on cooking and, as a part of that page, the existing systems might display an advertisement about cars. This is a problem, of course, because there is no connection made between the content of the advertisements or the message of the advertisements and what the user is actually searching. Another problem with the current state of the art is that there is no guarantee associated with the advertisements that they will be shown a certain number of times or in a certain place on the page with

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respect to the other pieces of data on that page. For these reasons, the existing systems for placing advertisements on computer networks, such as the Internet, fail to take full advantage of the interactive/demand driven environment of the online medium.

SUMMARY OF THE INVENTION

It is thus an object of the present invention to provide an improved method and system for advertising on a computer network, particularly a wide area or metropolitan area network, which overcomes the above described problems of existing advertising systems.

It is a further object of the present invention to provide an effective advertising medium that anyone with a personal computer can use to advertise on computer networks.

It is a further object of the present invention to provide a method and system for advertising in which advertisements are more informative and provide a direct link to additional information about the advertised product or service or about the advertiser.

It is a further object of the present invention to provide a method and system for advertising on a computer network in which advertisements are more focused and targeted, for example, by user queries and user profiles, including the past history of the user's interactions with the system.

It is a further object of the present invention to provide a method and system for advertising in which new online publishers can be created with little effort.

It is a further object of the present invention to provide a method and system for advertising in which

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advertisers can be guaranteed that their advertisements will be displayed a certain number of times or in a particular manner or under particular circumstances.

Additional objects, advantages and novel features of the invention will be set forth in the description which follows, and will become apparent to those skilled in the art upon reading this description or practicing the invention. The objects and advantages of the invention may be realized and attained by the appended claims.

The present invention provides a new process and system for online advertising. This new process will be referred to throughout this application as query-based advertising ("QBA"). In the QBA process, advertisements are primarily triggered by user queries. User queries, as used herein, refer to requests from an information consumer for one or more pages of information from a computer network. As a result of a query, a user is exposed to advertisements with the present invention, i.e., the query triggers advertisements.

In accordance with the present invention, a server containing a collection of advertisements is placed in electronic communication with a computer network. The computer network is preferably a wide area network, such as the Internet, or a metropolitan area network. As used in this application, the phrase "computer network" refers to any public or private data communications network.

The advertisements on the server are not tied to any particular page containing information on the computer network. Rather, the advertisements are contained on the server, distinct from the pages that may or may not later carry the advertisements. The pages by themselves have no

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advertisements. Thus, the pages are analogous to a newspaper or magazine devoid of any advertisements.

When the user requests a certain page or a certain topic of information, the relevant pages are retrieved from the computer network and shown to the user. The present invention, upon receiving the user's request, retrieves advertisements that are related to the user's action, dynamically mixes the advertisements with the content of the pages according to a particular layout, and displays the pages with focused, targeted advertisements as a part of the page. The advertisements can be made to satisfy a set of constraints requested by the advertiser, as well as the constraints of the publisher of the page, as further discussed below.

The advertisement triggering mechanism of the present invention is not random or coincidental, but rather, is prespecified in advance. This specification will be referred to in this application as a contract. A contract specifies the marketing rules that link advertisements with specific queries. For example, a diet soft drink advertisement may be shown when a user asks for a page about exercising equipment. These rules are specified by advertisers implementing the concept of "focus" or "relevance" of advertisements and help the advertisers to target a specific audience. Owners of pages specify the focus content of their pages through special tags within a page. These tags are not displayed to the information consumer; the tags are used to decide what advertisement can be shown when the page is requested by a consumer.

The notion of a contract, however, goes well beyond just marketing rules. First of all, the advertising space on the online medium, although technically unlimited, is

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severely restricted by the user's attention span. Placing advertisements on the first page which constitutes the answer to a query gives the advertisements much higher probability to be seen than on later pages of the answer. This is analogous to a certain extent, to newspaper advertising where advertising on the first page of the newspaper is more expensive than on the last page of the newspaper. Thus, the present invention introduces the concept of prime space as a part of the QBA.

Prime space will be used in this application to refer to limited advertising space on the first page of the answer to a query. Prime space is, in principle, as attractive as prime time television. Prime space, like prime time, is limited so it may be impossible to show all the relevant advertisements in prime space.

As a solution to the prime space limitations, the present invention provides guarantees to advertisers through the use of contracts. The contracts provide tools to specify such guarantees and to enforce them. Specifically, the present invention provides the following types of guarantees (or "contracts") to advertisers:

1. Ratio-based: The ad will be shown in prime space no less than a certain percentage of the times a relevant query is made by a searcher.
2. Exclusive or Competitive: Ad A is never to be shown in prime space when ad B is shown.
3. Dependent: Ad A is to be shown with a predetermined probability when ad B is shown in prime space.
4. Story: An ad consisting of several sub-ads will be shown in prime space in sequence to a consumer.

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5. Frequency-based: The ad will be shown in prime space a certain number of times in a given time period (e.g., 100 times per month).

Additionally, the contracts may also specify the type of layout used to mix ads together with the data. This may include the layout types, and so forth.

The present invention also provides means for determining whether there are any contracts that cannot be satisfied. For example, if the prime space is sufficient to hold only two ads, it is impossible to guarantee 100% ratio for more than two ads. Similarly, if ad A is never to be shown when ad B is shown and if both ad A and ad B are equally relevant according to focus matching, then it is impossible to guarantee ratios above 50% for both ads A and B.

The present invention uses algorithms to check for contract consistency to ensure that all contracts that are accepted can be properly satisfied. An advertiser can ask for a certain contract (e.g., 5% relative coverage in prime space) and the present invention will determine whether that contract can be satisfied. If not, the system suggests what coverage it can provide. After the contract is determined to be consistent, the present invention will enforce the contract by displaying advertisements in accordance with the contract.

A consequence of QBA is that ads cannot be placed on pages a priori because it is the query that determines what ads are to be placed on a page. This is referred to as dynamic advertising. The query asks for a page that has a focus. Ads that are resident in the system are checked to determine which ads can potentially be placed on the page in question. This decision is based on matching the focus

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of a page with the focus of the ad. When not all matching ads can be placed on a page because of space limitations, the contract enforcement feature of the present invention ensures that the ads that are placed on the page are consistent with the contracts signed by the system with the advertiser.

Another consequence of QBA is that it must be determined where to place an advertisement on a page. Currently, pages on the WWW have a fixed a priori agreed upon area on a page for advertising. The present invention, however, dynamically determines where an advertisement should be placed. The present invention permits owners of pages to be free to organize the layouts of their pages. The page owner makes the final determination of where an advertisement should or should not be placed. Once the page is organized, the page owner can specify where an advertisement can be placed by placing a special tag ("ad space") on their page. Like the focus tag, this ad space tag is not visible to the consumer. It is a directive to the advertising system that the tag denotes space available for advertising, i.e., the tag can be thought of as a billboard stating "this space available for advertising."

The present invention also provides a download delay-time advertising feature. Most consumers on computer networks, such as the Internet, experience a delay from the moment they ask for a page to the time the page is downloaded to their browser. This delay may be caused, for example, by traffic congestion on the WWW. This delay time will be referred to as download delay-time.

The present invention uses the download delay-time to display ads to the consumer. This will be referred to as

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down-load delay time advertising. The time that the consumer would have waited for a page to be downloaded is utilized to expose the consumer to ads. Once a page (or a subpart of the page) has been downloaded to the consumer's browser and is available to be displayed, the ads are replaced by the page content. The consumer does not experience a delay due to advertising by the present invention. Only the preexisting delay time is utilized by the advertising system.

In summary, the present invention provides a system and method for advertising on a computer network, comprising a server containing a plurality of advertisements, means for electronically connecting the server to a computer network, and means for selecting and retrieving an advertisement from the server in response to a query entered on the network. The selecting means comprises means for ensuring that a selected advertisement is relevant to the query. A mixer means is provided for combining a retrieved advertisement with a content page returned by the computer network in response to the query.

The mixer means comprises a layout manager means for computing an optimum layout of a combined page containing the retrieved advertisement and the content page. The mixer means also comprises a typography manager means for detecting special tags and HTML rules in the content page and for determining which part of the content page the selected advertisement can be displayed on. The content page is provided by a home page dispatcher, a search engine, or a generic HTML content provider in response to the query.

A transaction means is provided for permitting a user to make a transaction with the advertiser by interacting

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with the displayed advertisement. A prime space manager means is provided for controlling when the advertisements contained on the server are selected by the selecting means, the control being based upon respective advertiser contracts associated with each of the advertisements.

An ad placement means is provided for placing new advertisements on the server, the ad placement means having means for entering an advertiser contract for each advertisement placed on the server and means for checking a new advertiser contract for consistency with existing advertiser contracts. A local client means is provided for displaying a retrieved advertisement only during a download delay time period in which a user is waiting for a content page to be downloaded in response to the query. A means for refreshing a displayed advertisement after a predetermined time period of inactivity by the user, and a means for replacing a displayed advertisement with a downloaded content page as soon as the content page is received by the client are also provided. The system includes means for calculating a search time estimation for the query, and means for combining a page containing the search time estimation and a retrieved advertisement. The system also includes means for determining a geographic location of a user, and means for selecting an advertisement based upon the user's geographic location.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will become more clearly appreciated as the disclosure of the present invention is made with reference to the accompanying drawings, wherein:

Fig. 1 is a schematic diagram providing a general overview of the main components of the present invention.

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Fig. 2 is a flow chart showing a process of placing advertisements on content pages provided by yellow page publishers of a computer network.

Figs. 3A-3D are screen prints showing page views displayed during various steps in the process of Fig. 2.

Fig. 4 is a flow chart showing the process performed by the layout manager of the present invention.

Fig. 5 is a flow chart showing the process performed by the parser of the present invention.

Fig. 6 is a flow chart showing the process performed by the mixer and ad selector of the present invention.

Fig. 7 is a flow chart showing a process of placing targeted advertisements in online pages provided by a home page publisher of a computer network.

Figs. 8A-8C are screen prints showing page views displayed during various steps in the process shown in Fig. 7.

Figs. 9A and 9B are flow charts showing a billing system process according to the present invention.

Fig. 10 is a flow chart showing the steps of an ad placement process according to the present invention.

Fig. 11 is a flow chart showing the steps of a page placement process according to the present invention.

Fig. 12 is a schematic showing the architecture of a transaction system according to the present invention.

Figs. 13A and 13B are screen prints showing page views displayed during various steps in a transaction process of the present invention.

Fig. 14 is a flow chart showing the steps of the transaction process according to the present invention.

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Fig. 15 is a diagram chart showing the process performed by the prime space manager component of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Reference will now be made in detail to a preferred embodiment of the invention, an example of which is illustrated in the accompanying drawings.

Fig. 1 provides a general overview or space architecture of the main components of the present invention. The layout manager 10 is primarily responsible for the computation of the layout of a page to be displayed to a client. Other modules of the system compute the necessary data that is to be displayed, as described below. The layout manager 10 then accepts this data from the other modules and computes the optimum layout for the display.

The layout manager 10 uses two sub-components to determine the optimum layout; a rule base and a layout data base within the layout manager (collectively shown as the layout rules component 11 in Fig. 1). The layout data base contains a collection of templates that have been predefined and stored in the layout data base. The rule base contains a collection of rules defined by the user or by the placer of the layout manager to ascertain which layout templates are best under what set of conditions. When the layout manager 10 receives the data to display, it invokes various rules in the layout rules to figure out which rule to trigger and, hence, decides on one layout as being the best under the present set of conditions.

The variables used in the rules are the amount of data that is to be displayed, the kind of data that is to be

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displayed, the amount of text, the amount of advertising material, and the size of the various maps and multi-media icons that are to be displayed. Based on these variables, the rules are checked and one or more rules are picked as delineating the best layout that can be found. The layout manager 10 then arbitrarily picks one of the rules that it thinks are the best and picks that layout, inserts the data given to it in the layout template, and gives the final product to the client to be displayed.

The variables that are expressed in the rules are based on a number of parameters including the size of the text, the amount of text, the size of the maps, the size of the images, and the size of the advertisement. In principle, there is no limit as to the number of parameters that one can achieve using the layout manager 10. The rules are preferably expressed in a programming language general enough to take any other parameters that one may desire to furnish.

The layout rules are constructed based on various parameters. The layout rules are then checked and used to pinpoint the exact template to be used for a certain kind of data situation. The template is then filled in by the layout manager 10 to provide a display to the client.

Next, the segmenter 12 will be described. The segmenter 12 is responsible for analyzing an HTML page and for extracting the relevant data from the HTML page. The purpose of the segmenter 12 is that, if the system is given a page constructed by another component or by some other content provider, the segmenter 12 will try to find reasonable places within that page where a certain advertisement could be inserted dynamically.

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The segmenter 12 uses various rules for finding advertising space within a page, and for preventing the essential layout of the page from being disturbed. In particular, the segmenter 12 looks for certain special tags inserted by the designer of the HTML page and replaces those special tags with advertisements or other types of information that it has been given. The segmenter 12 then looks at the page, decides where to insert ads, and provides that information to the layout manager 10.

In most instances, the typography manager 14 is the main input device to the layout manager 10. One exception to this will be described later. The typography manager 14's role is to "render" the page. By rendering the page it is meant that the typography manager 14 takes various kinds of input that has to go on a page and decides which part of the information has to go on the page and which part of the information could in fact be deleted. Thus, the typography manager 14 is similar in function to a typographer in a traditional publishing situation.

The typography manager 14 has the final say in what data gets sent to the layout manager 10. The typography manager 14 also detects special tags and special HTML rules that tell it where the markups of the HTML page are supposed to happen. Ultimately, the layout manager 10 and the typography manager 14 collaborate on coming up with a page. This page in its final form is then passed to the gate 15.

The gate 15 transfers a page from the system of the present invention to the client. The gate 15, therefore, provides the gate between the client and the server. The gate 15 gives the page that it wants to display to the WWW

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Daemon 16 and the Daemon interacts in turn with the client 17 on the user's side.

The above description has explained how the layout manager 10, the segmenter 12, the typography manager 14, and the gate 15 operate. Before describing in detail the remaining components of the system, an example flow of a request through the system will be explained.

Initially, a user requests a particular piece of information through one of the clients 17. The user's request is given to the WWW Daemon 16, which passes the information to the gate 15. The gate 15 at this point decides what piece of information is being requested by the user and finds other relevant pieces of information that can be commingled with what the user has asked. The user, for example, might ask the system to see certain car dealers, to find a phone number of a car dealer, or to get a page of a particular magazine.

The gate 15 at this point gives the request to the matching rule engine 18 ("MRE"). The purpose of the MRE 18 is to look at the content of the user's query and to find a category within its active index SIC 19 that matches the same type. If the user has asked for car dealers, the MRE 18 invokes its rules to determine that car dealers are part of a class of things relating to transportation. Based on the classification determined by the MRE 18, the system now knows that the user is asking about cars or about transportation or about whatever else that the user might be interested in.

The MRE 18 at this point then returns to the gate 15 the category index of the user's query. If the user had asked about cars or about family sedans or about sports cars, at this point the MRE 18 would have figured out that

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the user's interest falls into a certain category. Based on the user's interest category, the system then retrieves the advertisements that are relevant to that category. Thus, the purpose of the MRE 18 is to figure out what the user requested, to place the user's request in a category of a classification system (i.e., the active index SIC 19) and, based on that classification, to retrieve relevant advertisements. At this point there may be several hundred related advertisements retrieved from the category containing the user's request. This creates a problem in that there will be many more advertisements related to the user's request than can possibly be shown to the user on the first page of information. At this point, the prime space manager 20 comes into play. The purpose of the prime space manager 20 is to prioritize the advertisements that are to be shown to the user.

For example, if there is only room for five advertisements and the MRE 18 returns a list of 500 possible advertisements to show, the system must determine which five of the ads to show. The operation of the prime space manager 20 is based on a set of contracts that were accepted when the advertisers placed their advertisements with the system. The system supports the following five basic types of contracts:

1. Ratio-based: The ad will be shown in prime space no less than a certain percentage of the times a relevant query is made by a searcher.
2. Dependent: Ad A is to be shown with a predetermined probability when ad B is shown in prime space.
3. Exclusive or Competitive: Ad A is never to be shown in prime space when ad B is shown.

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4. Story: An ad consisting of several sub-ads will be shown in prime space in a particular sequence to a consumer.

5. Frequency-based: The ad will be shown in prime space a certain number of times in a given time period (e.g., 100 times per month).

Additionally, the contracts may also specify the type of the layout used to mix ads together with the data. This includes the layout types, and so forth. The various contracts used by the system will now be discussed in more detail.

The ratio-based contracts are used where an advertiser wants the advertisement to be displayed a certain percentage of the time in prime space. In other words, when a query is received that is related to the business of the advertiser, the advertiser is guaranteed that its advertisement will be on the first screen of information displayed to the user a certain percentage of the time (e.g., 15% of the time). This percentage is called the coverage guarantee. The ratio-based contract provides a coverage guarantee to the advertiser that its advertisement will be displayed X% of the time for every relevant query. This guarantee is probablistic in nature, so that over the long run of the system, the probability will converge to the percentage that the advertiser has requested.

The second kind of contract that the system supports is referred to as a dependent contract. The dependent contract guarantees that one advertiser's ad can be shown in conjunction with another advertiser's ad on the same screen. For example, a travel destination advertisement (e.g., "Come to the Bahamas") can be shown on the first screen of information together with a credit card

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advertisement (e.g., "Pay for your ticket through VISA"). With this type of contract, the system can support contracts that satisfy the needs of two or more advertisers at the same time.

The third type of contact supported by the system is called an exclusive or competitive contract. This type of contract can be used to guarantee that an advertiser's ad is not shown at the same time or on the same page as a competitor's advertisement. For example, a beverage manufacturer (e.g., Coca-Cola) can prevent a competing beverage manufacturer's (e.g., Pepsi's) ads to be shown at the same time as its own ads and vice versa.

The fourth kind of contract is called a story contract. This type of contract is used to guarantee an advertising package in which a sequence of two or more ads are shown together. The ads can be displayed so that the user sees a first part of the advertisement, then sees a second part of the ad, and then sees a third part of the ad and so on. For example, an advertisement for coffee might consist of a picture on a first page showing somebody drinking a cup of coffee; a picture on a second page showing them putting the coffee cup away; and a picture on a third page identifying the name of the advertiser's product (e.g., "Maxwell House makes a good cup of coffee").

Thus, the story contract guarantees that an advertiser's ads will be shown in the form of a story. The story contract is desirable where a group of ads must be shown together in a particular order to make sense.

The fifth kind of contract is the frequency-based contract. This contract is used where the advertiser wants to guarantee that its advertisement will be shown a certain

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number of times over a given time period (e.g., 100 times per week).

Several different combinations of the above-described types of contracts can also be used. For example, an advertiser can enter a story contract which also guarantees that its advertisement will not be shown at the same time as its competitors ads are shown, that its advertisement will be shown at the same time that a related advertisement is shown, and that its advertisement will be shown in prime space a certain percentage of the time.

The prime space manager 20 has the responsibility of determining all the possible advertisements that can be shown in conjunction with the information requested by the user. The prime space manager 20 then decides which ads to show based on the particular contracts that have been signed. If a contract has already been entered with an advertiser's competitor, the prime space manager 20 will make sure that it can in fact satisfy the new contract with the advertiser. Thus, the prime space manager 20 dynamically makes a decision of which advertisements to show given the amount and the number of advertisements that it can possibly show. The end result of the prime space manager 20's computation is that the system knows exactly which advertisements can and will be shown to the user.

These advertisements are then given to the gate 15. The gate 15 at this point gives the ads to the typography manager 14, and the typography manager 14 determines how best to display the information. The page information then comes back to the gate 15 and is forwarded to the client 17. In the above description of the present invention, the advertisement contracts, the active index SIC 19, the layout rules 11, the segmenter 12, the segment

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rules 13, the layout manager 10, and the typography manager 14 have been explained.

During the computation of the advertisements and all the other computations that the system of the present invention performs, a logging module 22 of the system performs extensive logging of what the user has asked, what advertisements were shown, how long the advertisements were shown, and which advertisements were shown to which user. The logging module 22 then stores these logs in a SYS logs database 23. Various scanned reports can be produced and defined using the information in the SYS logs database 23.

A local client 24 of the present invention provides a download delay-time advertising feature. Download delay time refers to the delay experienced by most users of computer networks from the moment a page is requested to the time the page is downloaded to their browser. The download delay-time advertising feature utilizes the time that the consumer would have waited for a page to be downloaded to expose the consumer to ads. Once a page (or a subpart of the page) has been downloaded to the consumer's browser and is available to be displayed, the ads are replaced by the page content.

In most cases, when a user asks for a page there is a considerable download delay time. The user must wait for the page after the request for a few seconds or, in certain cases, a few minutes before the page is finally downloaded by the network. The present invention uses this delay time to show advertisements, while taking care that the delay time of the user is not increased by showing the ad. Thus, the only time an advertisement is displayed is the time that the user would have had to wait anyway. While the

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user waits for the page, the user can view the advertisements on the local client 24.

The information brokers or content providers shown in Fig. 1 include a home page dispatcher 25, a search engine INFORMIX 26, and a generic HTML 27. For purposes of the present invention, it is assumed that there are three broad classes of publishers that can utilize the advertising features of the present invention. A "publisher" can include virtually anyone that provides content to the network. For example, anyone who is a home page owner is a publisher in the category shown as Generic HTML 27. A second kind of publisher is the search engine publisher 26, which includes phone company yellow page providers, such as NYNEX. And a third kind of publisher is the so-called home page dispatchers, which include traditional magazines and newspapers, such as Business Week.

The present invention distinguishes between these three types of publishers. If the publisher is a home page dispatcher 25, the publisher provides its own content and intersperses the content with certain special tags indicating where ads can and cannot be placed and indicating where the focus of the content is about certain topics. These special tags are then used to trigger certain actions in the system of the present invention relating to the type of content contained on the page and the kinds of advertisements that can be placed on the page.

The second kind of publisher that the present invention is used with is the search engine publisher 26. Currently, there are many companies on the WWW that permit users to query their database and then return a set of answers from the database to the user. For example, a telephone company may have a site that allows a user to

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obtain a set of phone numbers and business names for a particular type of business (i.e., a yellow page directory).

For purposes of the present invention, the search engine publisher 26 is distinguished from the home page dispatcher 25 in the sense that the content returned by the search engine publisher 26 does not contain any special tags or meta comments put in by the publisher to define the layout of the content and the ads. In this case, the layout manager 10 of the present invention computes the optimum layout based upon the rules and layout templates, as described above. The final result, therefore, is that output is taken from the search engine publisher 26, adorned with certain relevant advertisements, and then shown to the users.

The third kind of publisher, the generic HTML publisher 27, includes those publishers that the present invention assumes are people who have designed their own home page, perhaps taking great care to provide a desired appearance. These publishers will probably not have inserted any special tags or meta comments into their home page to guide the advertising system of the present invention. In this case, the system of the present invention can either try to find a space in the home page that it thinks is reasonable without violating the desired appearance of the page, or it can insert the advertisement before or after the page. That is, if the segmenter 12 cannot find a suitable place within the page that the generic HTML publisher 27 has already designed, it will place the advertisement on the proceeding or the following page. This is more likely to occur if the owner of the page has not provided any special tags or meta comments, or

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if copyright concerns prevent the insertion of a certain advertisement within the page.

In summary, the present invention partitions the publishers (i.e, the information brokers) into three categories: the home page dispatchers 25, the search engine publishers 26, and the generic HTML home page providers 27. The distinction between the three is that the home page dispatchers 25 intersperse their content with special tags or meta comments which helps the present invention in determining where to place the advertisements and what kind of advertisements to place, the search engine kind of publishers 26 return unadorned results of queries and the present invention is free to reformat and relay out the set of answers, and the generic HTML home page publishers 27 are publishers that have meticulously crafted their home pages, usually without special tags or meta comments, so that no guidance is provided to determine an appropriate space for placing an ad.

The segmenter 12, which is the module of the present invention whose responsibility is to find a place somewhere on a generic HTML page to place an advertisement, may not succeed in finding a space on a generic HTML home page. In this case, it will either place the advertisement on a proceeding or a following page. Most, if not all, of the publishers on the WWW will fall into one or more of these three categories.

In Fig. 1, the acronym LA refers to List of Ads, Q refers to the user's query, CGI is a standard WWW abbreviation for "common gateway interface," HTML is a standard abbreviation for hypertext markup language, and Ly is the list from the layout manager 10 to the typography

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manager 14 that indicates a list of pages that have to be displayed.

Referring to Fig. 2, a flow chart is provided that describes the main flow of the process of placing ads on content pages provided by yellow page publishers, in accordance with the present invention. The process begins at START 30 when the client provides a query to the system. For purposes of illustration, the query depicted is a yellow page query in which a user requests some item of interest, and the publisher is a yellow page publisher (please refer to the previous discussion for a description of the three kinds of publishers).

For example, the user may submit a query form asking for a listing of all car dealers in Morristown, New Jersey. This query form is evaluated by the box 31 entitled YP QUERY FORM. The purpose of this evaluation is to determine the type of the query (e.g., is the user interested in cars, a particular geographic region, etc.).

In using a yellow page publisher there are two broad distinctions for a query. A client may be asking for a certain category of listings, or the client may be asking for a particular vendor. For example, the user could ask for car dealers in Morristown, NJ (i.e., a category of listings), or the user could ask for Morristown BMW located on South Street in Morristown, NJ (i.e., a particular vendor). The system determines which of the two types of queries or searches the user has made, as illustrated by box 32 in Fig. 2. If the query is for a certain category, the process will go to the left hand side of the flow chart of Fig. 2, and if the query is for a certain vendor, the process will go to the right hand side of the flow chart of

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Fig. 2. The left hand side of the flow chart will be explained first.

After determining the type of query, the category search engine 33 next determines which category best fits the user's request. The user may have asked for "car," but the category in the yellow page provider's index may in fact say "automobile." Or, the user may have asked for "spectacles," and the category in the yellow page provider may be called "optician." The matching of these variations of terms is performed by the category search engine 33.

Once it has been determined which category the user's request falls into, the advertisement selection process comes into play with the ad selector 34. The ad selector 34 determines what advertisements are best suited to be mixed in with what the user has requested. The content from the category search engine 33 and the ad(s) from the ad selector 34 are then given to a mixer 35. The mixer 35 functions to mix the content coming from the search engine with the ad(s) selected by the ad selector 34. The result is the creation of a page that is of interest to the user.

If the user's category was about cars, at this point the ad selector 34 would have presumably found advertisements related to cars and displayed these ads at step 36 to the user. The user at this point can select one or more of the listed or advertised car dealers. This again results in more advertisements being selected by the ad selector 34, as well as the accessing of a vendor search engine 37 provided by the yellow page publisher, and a new page being shown to the user.

Referring to the right hand side of Fig. 2, if the user requests a particular vendor, the system will first do a search time estimation 38 to figure how long it will take

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to find the piece of information requested by the user. At the same time, the ad selector 34 will perform a search for the advertisements that are to be shown to the user. As soon as the relevant ads are found by the ad selector 34, the ads are mixed with the search time estimation information and both are displayed to the user. At this point 40 in the process, the user is asked for a confirmation of whether to continue with the requested search given the estimated search time. Upon receiving confirmation from the user, the ad selector 34 will again be accessed, as will be the vendor search engine 41. The first set of ads returned by the ad selector will continue to be displayed to the user for viewing until the search results from the vendor search engine 41 are available.

When the vender search engine 41 completes the search, it returns the search results to the mixer 35. Similarly, the ad selector 34 returns a second set of ads to the mixer 35. The mixer 35 mixes the ads with the content provided by the vendor search engine 41 and forwards the combined page to the page display 42.

The result of this process is that a yellow page inquiry posed by the user is categorized either as a category search or a vendor search. In both cases, the type of the query is matched with a certain category of ads, the search results and the ads are mixed, and a page is constructed and shown to the user. Upon further input from the user, the system selects and mixes a second set of ads with the content page of the publisher, and another page containing ads is constructed and shown to the user.

The "focus" arrows 43 shown in Fig. 2 indicate that a certain focus is associated with each category. The query may have been directed to a category of listings or a

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particular vendor. In both cases there is a "focus" associated with the content of the query (e.g., automobiles, physicians, lawyers, etc.). In addition, there may be a focus associated with the geographic location of the user to permit advertisers to target users in particular geographic regions. The focus process plays a major part in the present invention. No advertisements are shown unless it can be determined that the advertisements are in some way focused or related to the content of what the user requested.

Referring to Figs. 3A-3D, the page views displayed to the user during the process of Fig. 2 will be described. Figs. 3A-3D show four form views labeled successively Form# YP_1, Form# YP_2, Form# YP_3, and Form# YP_4. These form views correspond to the references made to the same form numbers in the flow chart of Fig. 2.

The user is first presented with a user's screen that looks like Form# YP_1 and the user is prompted to type in a query. For example, the user can type in a query for car dealers in Morristown, NJ. This query will result in a search type as previously described, either as a category or a vendor. In fact, the user can pick one or the other by selecting the appropriate box on Form# YP_1. At this point, the system knows whether the search type is category or vendor and, because the user has typed in car dealers, the system knows the focus.

At this point, if the search type is vendor, the system will show a screen that looks like Form# YP_2. This screen informs the user that it will take approximately 30 seconds for the system to respond to the user and asks the user whether this is okay. If the user wants to proceed,

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the user clicks on the box labeled "Search it now" and the system begins the search.

If the search type is category, the system displays a screen that looks like Form# YP_3. This Form# YP_3 shows a list of categories under the heading of car dealers. The user is then asked to make a selection of one of these categories. Simultaneously, the system goes into the ad selection mode and selects and places ads on the Form# YP_3 that is being displayed to the user. In this case the advertisement shown on Form# YP_3 is the Bellcore logo.

The user then selects one of the subcategories being displayed and clicks on the box "Search it now."

The system next displays a screen that looks like Form# YP_4. The ads placed on this Form# YP_4 have been selected by the ad selector 34, and the listings on the form have been searched and retrieved by the vendor DB entries search engine 41.

In summary, the general process for a yellow page search request in the system is that first the user states a query, the result of the query is a set of possible categories that the user wants to see. The system then makes a choice of one category from this list of categories and shows the relevant providers in that category to the user. When the user states a query and the system displays to the user a list of categories, certain advertisements are shown to the user as well. This is the top half of the flow chart of Fig. 2 where the category search engine 33 or search time estimator 38 and the ad selector 34 provide the two components to the mixer 35 and the mixer 35 comes up with a page containing both an advertisement and a list of categories or the search time estimation of how long it will take.

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If a user requested a category, the user will be shown advertisements and a list of categories that relate to the user's query. If the user requested a particular vendor, the user will be shown advertisements related to the focus of the user's query and an estimation of how long it will take for the system to process the query. In both cases, the user has been shown advertisements and some part of the information and then asked to make a further choice. Once the user makes the further choice, the system again tries to find what the user requested plus what advertisements to show as a part of this process. Thus, whenever the user asks the system to do something, the system will do what the user asks, but at the same time will find advertisements that it can mix in with what the user requested.

Although the flow chart of Fig. 2 illustrates the present invention only in conjunction with a yellow page publisher, similar processes are used with other types of publishers. The process of the present invention for placing ads with home page providers is described below in conjunction with the flow chart of Fig. 7.

Referring now to Fig. 4, the layout manager 10 of the present invention will be described in further detail. At step 50, the layout manager 10 is given the collection of data to be displayed. The layout manager 10 has a collection of rules that it evaluates so that it can return the best layout for each page. When the layout manager 10 receives data it reads the parameters of the data for each rule (step 51) and expands on the expand meta template 53.

There are two main components of the layout manager 10, as previously discussed -- a layout data base and a layout rule base. The layout rules describe certain

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parameters that can be used to determine the best layout to use under a given set of situations. The layout data base is a collection of templates that can be thought of as forms that need to be filled out with certain kinds of data.

When the layout manager 10 is given a piece of data, it uses the rules to determine which templates to use. Specifically, the layout manager 10 evaluates each and every rule in its rule base to figure out which rule is the best for a given piece of data. The rules are evaluated at step 54 by calculating a meta and a target function cost. The meta template is the template that describes what the layout is about. For example, the template may provide that there are only five places for advertisements in a particular layout.

There is a cost associated with each kind of layout. The basic problem that the layout manager 10 is faced with is that are a certain number of advertisements to show and there is a certain amount of user-requested data that has to be shown. This creates a spectrum of objective versus subjective content that has to be evaluated. That is, it must be determined how much subjective content to provide and how much objective content to provide. If the publisher is a yellow page publisher, the layout manager 10 must decide how many telephone listings to display and how much of the page to fill with advertisements. The system could, for example, display only three telephone listings and fill the rest of the page with advertisements, or the system could display twenty telephone listings and only one ad. Each template in the layout database has a set of meta attributes associated therewith indicating the number of advertisements that can be displayed, the amount of content

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to be displayed, and the cost function associated with the template.

In summary, the layout manager 10 picks up a rule in the data base, calculates the cost function for each template and stores the template with the minimum cost in a safe place (step 55). At the end of this computation the layout manager 10 succeeds in finding the minimum cost layout within its data base that it can use for the current data account. It then picks the minimum cost layout as the best layout and returns the best layout (step 52) to the typography manager 14 for display to the user.

Referring to Fig. 5, a flow chart of a parser 60 of the present invention will be described. The purpose of the parser 60 is to interpret the meta comments and meta tags inserted on the publishers' pages. As described above, these are generally pages constructed by magazine or newspaper publishers that have provided special tags in their content for the present system to interpret in a special way. These pages are referred to in Fig. 5 as enhanced HTML or E_HTML 61.

The parser 60 first searches for special tags (step 62) in the input E_HTML. There are two kinds of special tags: tags for focus and tags for advertisement space. Tags for focus are tags that tell the system what the focus of the page is or what the context or content of the page is about. For example, a focus tag might indicate that the page is about sports cars, cooking, or travel destinations in the Caribbean. The advertisement space tags, on the other hand, indicate a space on the page that is so many pixels by so many pixels and that can be used for advertisements. The parser 60 searches for these special tags and identifies the tag name as either a focus or an

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advertisement tag (step 63). If the parser 60 cannot find any special tags, it simply returns from where it was called.

If the parser 60 finds a focus kind of tag, it extracts and stores the focus words (step 64). If the parser 60 finds an advertisement kind of tag, it extracts and stores the size value (step 65). In both cases, the process returns the focus and ads information to another module in the system (step 67) after reaching the end of the page (EOF) 66.

Referring to Fig. 6, a process flow of the mixer and ad selector will be described. The purpose of the mixer 35 (as previously described in reference to Fig. 2) is to take publishers' content and advertisements and combine them together so that the content and the advertisements are mixed on the same page.

In Fig. 6, the mixer 35 is shown receiving two inputs from the publishers: data 50 (which is the content) and E-HTML 61 (which contains the special tags). The layout manager 10 and parser 60 both form a part of the mixer 35. The data 50 is input to the layout manager 10, and the E_HTML 61 is input to the E_HTML parser 60, as previously discussed. Both of these sub-modules then determine where the advertisements can be placed on the publisher's page.

The advertisement list is then input from the ad selector 34. The ad selector 34 receives a focus input 43, retrieves relevant ads (step 70), and creates the advertisement list using the prime space manager 20 (step 71). These advertisements are then placed in the parser 60 and the layout manager 10 (step 72), as described above. The mixer 35 then logs all the essential billing and other user information (step 73) for keeping track of the

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system's placement of an advertiser's ad. At this point, a refresh tag is inserted (step 74) and the system outputs an HTML page (step 75).

The HTML page output from the mixer 35 has no special tags and can be displayed by any client that can understand HTML. The E_HTML 61 is peculiar to the present invention. The HTML 75 is the standard HTML used on computer networks. The E_HTML 61 is peculiar in the sense that it has the special tags for advertisements and focus, as discussed above.

The refresh tag inserted at step 74 is a special tag inserted into every page that is to be displayed. The purpose of this tag is to refresh the page if the user does not take any action for a predetermined period of time. The system will refresh and show a new advertisement in the ad space, while leaving the rest of the page the same. Thus, while the user is viewing the page, the system will not show the same advertisements for more than a predetermined period of time so as to take advantage of the user's limited attention span. This permits the system to effectively run as many ads as possible.

For example, while a user is reading an online magazine page, the advertisement may change every so often as the user is viewing the same page. If the user is making changes to the page or is going back and forth on the page, then the advertisements will not be changed by the refresh tag function. The timer for the refresh tag function can be specified by the advertiser or determined by the system.

As described above, there are five basic types of contracts supported by this system. One type of contract, the ratio-based contract, requires that a certain

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advertisement has to be shown on the first screen of information or the prime space screen of information for a certain percentage of the time. In order to satisfy this contract, the system has to be able to refresh the prime space screen. Otherwise, once an advertisement was placed on a user's screen it would remain on the screen the entire time that the user is viewing the screen. The insert refresh tag function 74 ensures that the user will be shown new advertisements and not be subjected to the same advertisement for any great length of time.

Referring to Fig. 7, a flow chart of the present invention as used with a home page provider will be described. The flow chart of Fig. 7 is somewhat similar to the flow chart of Fig. 2. However, while the flow chart of Fig. 2 shows the process used with yellow page publishers, the flow chart of Fig. 7 shows the process used with home page provider publishers. As described above, home page providers are publishers that have provided special tags and special focus and advertisement space tags in the meta content supplied to the present system.

To start (step 80), the user enters a query. For example, the user may enter restaurants or cars as a query. The query has a focus, as described above. The system determines what the focus is and, as described above, the system provides the user with a list of categories that relate to the query. For example, if the user requests restaurants, the user might be shown a list of restaurant types, such as Chinese, American, French, Italian, and so forth. The query entered by the user is evaluated by a query form manager (step 81) to determine the focus of the query.

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The screen ("Form# 1") illustrated in Fig. 8A is the graphical interface used to enter the query. Form# 1 shows the space (immediately following the phrase "SEARCH FOR") where the user types in the query (in this case "car"). The result of the query is a list of relevant subcategories for cars, as shown in Fig. 8B ("Form# 2").

Referring again to Fig. 7, the category search engine 33 generates a number of subcategories of the query (e.g., cars), and the ad selector 34 (Fig. 7) finds certain advertisements that are related to cars. The mixer 35 mixes these two screens to create the display shown as Form# 2 in Fig. 8B (step 82).

At this point (step 82) the user is asked to make a further selection. That is, the user is asked to pick one or more of the categories displayed in Form# 2 so that the system will provide more specific information. The user may pick, for example, "new and used car dealers retail" by highlighting that item and clicking on the submit button. Upon clicking the submit button, the content provider search engine 83 is accessed. At the same time the ad selector 34 is directed to find appropriate advertisements for the category "new and used car dealers retail."

The content provider search engine 83 and the ad selector 34 then return their respective outputs to the mixer 35. The mixer 35 then mixes the outputs and produces a list of matching content providers plus the advertisements (step 84). The combined display at this point is shown as Form# 3 in Fig. 8C. Form# 3 shows a list of different car dealers in the center of the display, and five advertisements along both sides of the display.

The user is then further asked to make a selection of a particular dealer (e.g., a Mazda 626 dealer or a Ford

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Mustang dealer) that the user wants to visit. The user makes the choice, and the choice of the user is given to the content provider dispatcher 85 and the ad selector 34. As the content provider dispatcher 85 is retrieving the requested home page, the ad selector 34 again finds an appropriate advertisement based on the user's request.

For example, the user can pick a Mazda 626 dealer by clicking on Mazda 626. As the page for a Mazda 626 dealer is being retrieved, the ad selector 34 finds advertisements that can be inserted on this page. There may or may not be advertising space on the home page for the Mazda 626 dealer.

If there are no spaces on the home page for the system to place ads, the system will either insert the ads before or after the page, or the system may decide not to place any advertisements at all. In any case, for any home pages requested, the ad selector 34 will attempt to find suitable advertisements and give these ads to the mixer 35, and the mixer 35 at that point will display the content provider's home page with or without ads.

In summary, Figs. 8A-8C show three screen displays referred to in Fig. 7 as Form# 1, Form# 2 and Form# 3, respectively. Form# 1 is the first screen that the user sees and in which the user is expected to type in a general query in the typeable space. This results in a second screen (Form# 2) where the user is asked to make a choice from a list of categories. After choosing from the list of categories in the second screen, a third screen (Form# 3) is shown to the user from which the user makes a choice from a list of subcategories. The present invention uses these three screens also to show ads related to the user's requests. Form# 1 shows two ads for the owner of the

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service provider (e.g., Bellcore in this case). Form# 2 shows advertisements related to cars because the user typed in cars. Form# 3 shows more car advertisements relating to particular makes of cars because the user asked for retail car dealers.

Referring to Figs. 9A and 9B, a description of the billing system of the present invention will be provided. Figs. 9A and 9B show two submodules of the system called the info bank and ad auditing. The purpose of these two modules is to construct log reports of various usages of the present invention.

Fig. 9A shows the process flow for the info bank submodule 90. The purpose of the info bank submodule 90 is to log certain kinds of information during a particular client's session. The logged information is then used to provide advertisers with a description of what advertisements have been shown, what the user has bought after seeing an ad, and so forth. Thus, the info bank submodule provides an information bank to show advertisers who has been accessing the system and how successful the ads have been.

The screen for the relevant module contains a link called the info bank which the user can select. When the user clicks on the info bank link, the user is shown the start 91 of the info bank submodule. At this point the user is asked for authentication information (step 92), such as the user's name and personal identification number (PIN). The system then goes into the authentication mode 93 and verifies whether the user ID and PIN number typed in are valid. If the authentication is successful, the system then searches the transaction log and filter (step 94) and pulls up the appropriate log requested by the user. The

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user can ask to see all transactions performed by the client or all of the things of a certain type that the user has bought. A report of the results (step 95) is automatically produced for the client and displayed.

The submodule for ad auditing 96 has a similar purpose to the info bank submodule. With the ad auditor, an advertiser that has placed an advertisement with the system is able to go into the system at any point in time and find out who has seen his ad, what was the content of the query when the advertisement was displayed, how many times has the advertisement been displayed, and so forth. The authentication and other process steps are similar to the corresponding steps of the info bank submodule 90.

More specifically, in order to use the ad auditing submodule 96 the advertiser is shown a screen with a link for ad auditing. The user clicks on the ad auditing link and is led into the start 97 of the ad auditing module. The advertiser is then asked to type in authentication information (step 98), which consists of the user name followed by a PIN number. If the PIN and the user name check out and are authenticated by the authentication step 99, the user is then asked to tell the system which advertisement or which subset of advertisements they want to verify or audit (step 100). Once the user specifies the advertisement by name or by browsing all the advertisements in the system and clicking on the ones that the user wants to get a report on, the system generates a report (step 101), which is a log of who has seen the ad, what machine they were using, what time and for how long the advertisement was displayed, and other desired information.

All the log information accessed by the info bank and ad auditing submodules is logged in a single database 23

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(Fig. 1). Whether the user is looking for auditing information, transactions, things that the user has bought, or user demographics, the information is all in the same database. However, when a user uses the info bank submodule 90, the user is interested in only certain things, as described above. But when the user uses the ad auditing submodule 96, the user is interested in other things. Therefore, the reports that are produced by the info bank and ad auditing submodules contain different data. The database is filtered and only the items of interest for a certain report are retained so that the rest of the database need not be used.

Referring to Fig. 10, the flow of an ad placement process 110 according to the present invention will be described. The purpose of ad placement is to allow advertisers to enter their advertisements into the system. For entering an ad, the system provides a screen that is shown to the user asking whether the user wants to enter an ad. If the user indicates yes by clicking on that particular choice, the system enters the start 111 of the ad placement mode. At this point the system asks the user for the focus (step 112). The advertiser may say, for example, that he is in the car business, the car washing business, or that he is a physician, a lawyer or whatever other category name that he wants to give. The user is also asked for an advertisement name at step 112. This is just a name for future reference.

The purpose of the focus in step 112, as discussed above, is to prevent an advertisement from being shown that is not relevant to the query at hand. The system of the present invention always shows advertisements that are relevant to what the user has asked for. Therefore, it is

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of paramount importance that the system know the context of the ad. Thus, when the advertiser places an ad, the system establishes the focus.

The present invention describes the world in terms of SIC codes, which is a categorization of approximately 64,000 categories. For example, the system knows that there is a distinction between opera glasses and operating tables. It knows a distinction between lawyers and physicians, as well as the distinction between different kinds of physicians. For example, when the user types in bicycle as the focus, the present invention accesses the category search engine 33 and returns a list of subcategories related to the bicycle business (e.g., bicycle repair, bicycle sales, bicycling as a sport, and so forth). The user is prompted (step 114) to select one or more of the subcategories from the list that are relevant to the user's ad. The user can also create his or her own categories at this point. The result is that the advertisement is tied to all of the categories selected or created by the user.

The user may also be asked to provide certain demographic or profile information. For instance, the user can require that his advertisement be shown only to people in age group 30 to 40 or only to people living in Morristown, NJ or any other geographic location. The last item that the user is asked to specify is the contract. The various contracts available to the advertiser are explained above. When the user is finished entering all of this information, the system updates the ad info database (step 115).

The system then either accepts the advertisement (step 116), or the system rejects it. The system might reject

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the advertisement because the contract that the user wants cannot be satisfied by the system. If the system decides at this point that the user's contract cannot be satisfied, the system displays to the user the next best possible contract that it can satisfy, and the user is then free to either choose that contract or to suggest a different one for consideration by the system. Upon confirmation of the ad placement, the advertisement becomes a part of the database.

Referring to Fig. 11, the flow of a page placement process 120 according to the present invention will be described. The purpose of the page placement process is similar to the ad placement process described above with reference to Fig. 10. The page placement process 120 is distinct from the case where the page resides outside of the present system, either as a part of a search engine or because somebody else owns the home page. The page placement process is used for publishers interested in creating a home page for use in the present system. The page placement process permits publishers to provide a page with meta tags and meta contacts.

The page placement process has a starting screen 121 in which one of the menu choices is, "Would you like to place a page?" If the user clicks on that menu choice, a screen is shown to the user asking the user to type in a page name, a page URL (i.e., Universal Resource Locator), and a focus. The URL is a physical address in terms of the WWW of where the page is actually residing. As discussed above, the focus is a list of key words that the user believes captures the content of the page.

Upon entry of the focus, page name, and page URL, the system retrieves a list of subcategories from the category

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search engine 33 that are related to the focus at hand and displays those subcategories to the user (step 124). The user picks one or more of these subcategories as being relevant to the content of the page. The system is then able to integrate the page into the page database of the present invention (step 125) and return a confirmation of the new home page being linked to the relevant categories (step 126).

Referring to Fig. 12, an architecture of the underlying transaction system of the present invention will be described. One of the basic features of the present invention is that the advertisements displayed to users provide a gateway for the client to take further action with the advertiser. That is, the ads are not just there for the user to see, they are interactive.

For example, if the system shows the user a picture of a car or a cookie and the user wants to buy or receive further information about the advertised product, the user can make a transaction with the system. The transaction can be very simple, such as where the user clicks on the advertisement and is displayed all information about that particular product. Or the transaction could be something more complicated, such as where the user actually enters a dialogue with the system and buys the product.

The flow chart shown in Fig. 12 describes a typical scenario in which the client has seen a certain advertisement and clicks on that advertisement to actually buy something. In particular, whatever this person is going to buy is going to involve multiple servers. The client is running on Host 1, and the transaction that the client is requesting will involve multiple servers, perhaps geographically distributed. Host 4 is a bank server

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running at a bank somewhere on the computer network. Host 3 is a transaction server for logging and serving as the transaction focal point. Host 2 is a server that accepts the start of the transaction from the client housed at Host 1.

A typical transaction where the client 130 sees an advertisement and clicks on the advertisement will now be described by reference to the transaction system architecture diagram shown in Fig. 12 and the screen displays shown in Figs. 13A and 13B. The action of clicking on the advertisement is captured by the gate 131 in Host 2, and the appropriate information is then displayed to the client by the transaction client 132 in Host 2. For example, the transaction client 132 might prompt the client to enter the type of transaction desired. The transaction client in Host 2 is a client for a transaction server 133 in Host 3.

Referring to Figs. 13A and 13B, in the typical transaction the user first clicks on an item from a list of features offered by the particular publisher (Fig. 13A), in this case, the item "Internet DMV." A second screen display (Fig. 13B) then appears in which an advertisement is provided in the middle of the page that says "Division of Motor Vehicles, Morristown, New Jersey, Automatic Renewal of Driving License." The user may then click on this particular advertisement. At this point a screen is displayed to the user asking the user what type of transaction the user wants to make. The next screen generated by the transaction client at Host 2 would say, for example, "Would you like to renew your license?" or "Would you like to get a new car registration?" If the user says, "I would like to renew my driver's license," the

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request is captured by the transaction client 132 at Host 2 and given to the transaction server 133 in Host 3. The transaction server 133 in Host 3 then receives this request for renewal of driving license, extracts the appropriate forms to be filled out from its local database, and provides the forms to the transaction client 132 in Host 2. The transaction client 132 at Host 2 then receives these forms and fills them out with the client's information with help from the client 130 at Host 1. Thus, the client's name, address, car ID and other necessary information are filled in for the client automatically.

The client 130 is asked to type in a PIN number to start the second part of the transaction. If the client 130 types in the PIN number, the second part of the transaction starts. The second part of the transaction is that the form that has now been filled in and constitutes the request for a renewal of driver's license is sent from the client 130 in Host 1 to the transaction client 132 in Host 2, and from the transaction client 132 in Host 2 to the transaction server 133 in Host 3. At this point, there are two things that have to happen at Host 3. First, the particular request for renewal of the driving license has to be processed by making a record that this person has renewed the license and by sending confirmation back to the client. Second, the transaction server 133 must be paid for the renewal of the driving license. In other words, there has to be a monetary fee that has to be exchanged between the client and the DMV.

In exchanging the monetary fee, the transaction server 133 will also act as a transaction client 134 to the bank server 135 in Host 4. The transaction client 134 sends a message to the bank server 135 in Host 4 indicating that it

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has the client's PIN number and the authorization to deduct a certain fee from the client's account. The bank server 135 authenticates that information, logs the information in its own records, and sends back an electronic approval for the debit.

The transaction client 134 at that point indicates receipt of the payment to the transaction server 133 in Host 3. The transaction server 133 in Host 3 logs receipt of the money, receipt of the request, and sends a confirmation message through the transaction client 132 and gate 131 back to the client 130 at Host 1. The confirmation might say, for example, "We have received your request; we have deducted $17 from your account; your license is in the mail; here is your new driving license number; thank you very much."

Referring to Fig. 14, the transaction process of the present invention will now be described by reference to a flow chart. The user starts the process (step 140) by clicking on an appropriate advertisement to ask for a transaction. The system then links the user (step 141) to the transaction server (step 142). The transaction server then returns the required form to the client (step 143), and the client fills in the form with the user's profile information. The form is then resubmitted to the transaction server (step 144). The transaction server accesses the bank server (step 145) to determine whether the user has the required money and whether the money can be withdrawn.

Upon authentication by the bank server, the transaction server receives confirmation from the bank server (step 146) that the user has given a valid account number, and that the bank server has in fact authenticated

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the user and has authenticated the deduction of the appropriate sums from the bank. The transaction server then makes the deduction and puts the deducted amount into the bank server's log (step 147). These logs are maintained so that at any time users can find out how much money they have spent or who has bought what things. The transaction server also maintains a transaction server log of the transaction time and any other particulars of the transaction desired (step 148). Once the logging is complete, the transaction server then generates a confirmation of the transaction which is then displayed to the client (step 149).

Referring to Fig. 15, the prime space manager 20 will now be described in further detail. As explained above, an important feature of the present invention is that it offers advertisers certain contractual guarantees as to how and when their ads will be shown in prime space (the first screen of information displayed to the user). These contractual guarantees include frequency-based contracts, ratio or percentage-based contracts, exclusive or competitive contracts, dependent contracts, and story contracts. These contracts can be used alone or combined in a variety of ways, as previously explained.

The prime space manager 20 has a prime space algorithm 150 that accepts as inputs the list of relevant ads that are related to the query at hand, the size of the prime space, and the list of all ad contracts. The prime space manager 20 then looks at all the ad contracts and determines which advertisements to show to the user. The prime space manager 20 then updates the contracts (step 151) to indicate which ads were selected (this information is used in considering which ads to select the next time).

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The prime space manager 20 then provides a list of prime space ads to be shown to the appropriate module. That is, the prime space manager 20 accepts a possibly very long list of advertisements and, based on the contracts that it has, filters the ads to a smaller list containing exactly the number of advertisements that it can show based on the size of prime space.

The following examples of prime space algorithms are provided to further illustrate the function and operation of the prime space manager 20 of the present invention. It should be noted that many variations of these algorithms are possible, and that the specific examples provided are for purposes of illustration only.

Notations:

Let $A_1 \ldots\ldots A_n$ denote the advertisements in the system of the present invention.

Let $P_1 \ldots\ldots P_n$ denote the contract values associated with the corresponding advertisements (P_i denotes the contract value associated with advertisement A_i, as a function of the price paid by the advertiser.)

Let S denote the size of the prime space in the system.

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Prime Space:

The prime space on a user's terminal means the first screen of data which constitutes the answer to the user's query (plus the relevant advertisements). In this context, advertisers will be assured of "fair" treatment in the sense that their advertisements will be presented to the targeted users in a manner that is commensurate with the fees they were charged. Fairness means equal access as well as controlled access--ensuring that advertisers who pay more are more accessible than those who pay less.

Contracts:

Contracts are specifications that indicate the frequency of display of a given advertisement in response to relevant user queries.

The example prime space algorithms provided below may be used for the following four types of advertisement contracts:

1. Frequency-based: These contracts specify the number of times a given advertisement is to be shown in response to the relevant user queries.

2. Ratio-based: These contracts specify how often a given advertisement is to be shown in the prime space in response to the relevant user queries.

3. Dependent: An ad A_i can have a dependent contract of X% with another ad A_j. The dependent contract will ensure that ad A_i is shown together with A_j at least X% of the times ad A_j will be shown.

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4. Exclusive: An ad A_i can have an exclusive contract with another ad A_j. The exclusive contract will ensure that ad A_i will not be displayed along with ad A_j.

Algorithm for Frequency-based Contracts:

```
WHILE (screen space is not filled)
begin
    1. Select an advertisement, say Ai, with the
       selection biased by the contract value Pi
    2. Include Ai in the screen space
end
```

Algorithm for Ratio-based Contracts:

```
WHILE (prime space is not filled)
begin
    1. Select an advertisement, say Ai, with the
       selection biased by the contract value Pi
    2. Include Ai in the prime space
end
```

Algorithm for Dependent Contracts:

```
WHILE (Prime space is not filled)
begin
    1. Select an advertisement, say Ai, with the
       selection biased by the contract value Pi
    2. Assign Ai to A
    3. WHILE (some advertisement is selected AND prime
       space is not filled)
       - Select one of the dependents of A, say Aj,
         with the selection biased by the contract
         value Pj
```


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- Assign A_j to A
- Include A in the prime space

end

Algorithm for Exclusive Contracts:

WHILE (prime space is not filled)
begin

1. Select an advertisement, say A_i, with the selection biased by the contract value P_i
2. Remove all advertisements A_j's that have an exclusive contract on A_i
3. Remove all advertisements A_k's that A_i has an exclusive contract on
4. Include A_i in the prime space

end

Algorithm for Overall Prime Space Management:

WHILE (prime space is not filled)
begin

1. Select an advertisement, say A_i, with the selection biased by the contract value P_i
2. Assign A_i to A
3. WHILE (some advertisement is selected AND prime space is not filled)
   - Remove all advertisements A_j's that have an exclusive contract on A
   - Remove all advertisements A_k's that A has an exclusive contract with
   - Select one of the dependents of A, say A_m, with the selection biased by the contract value P_m

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- Assign A_m to A
- Include A in the prime space

end

Algorithm for Checking Consistency:

Notations:

Let P_A denote the prime space contract value of Node A.

Let $D(A,B,X)$ denote the dependency contract value from advertisement A to advertisement B (A should appear together with advertisement B, X% of the times advertisement B appears).

Let $E(A,B)$ denote the exclusive contract from advertisement A to advertisement B (note that no value is associated with exclusive contracts).

If a new advertisement A is to be introduced into the system with a prime space contract value of P_A, a set of dependency contracts $D(A,1,x),\ldots,D(A,k,y)$ and a set of exclusive contracts $E(A,1),\ldots,E(A,q)$, then for checking the consistency of all the contracts, the following basic checks have to be carried out (more specific checks may be required for specific algorithms and their implementations):

1. Check whether Inequality (I) can be satisfied
2. For each of the dependency contracts $D(A,i,x)$ check whether Inequality (II) can be satisfied
3. For each of the exclusive contracts $E(A,i)$ check whether conditions (III) can be satisfied

The consistency checking algorithm verifies if the new advertisement can be accommodated with the corresponding contract. If the new advertisement can be accommodated, the contract is approved and the system is updated to

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reflect the new addition, else, the consistency checking algorithm informs the advertiser of the maximal contract that can be accommodated for the new advertisement.

Install Equation Editor and double-click here to view equation.

Install Equation Editor and double-click here to view equation.

For checking the Dependency Contracts and the Exclusive Contracts a graph is drawn by representing all the advertisements as nodes in a directed graph. A dependency contract "Advertisement *C* appears 50% of the times as advertisement *D* appears (together)" is represented as an edge from the node "*C*" to the node "*D*". A weight of 0.5 is assigned to this edge. For each exclusive contract *E(C,D)*, there exists an edge in the graph. Thus, a graph is formed where the nodes denote the advertisements, and the edges denote the dependency and exclusive contracts.

If a new dependency contract *D(A,B,X)* is to be introduced, then the following check has to be made for consistency:

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If a new exclusive contract *E(A,B)* is to be introduced, the following conditions *(III)* should hold (for any value of *x*):

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Install Equation Editor and double-click here to view equation.

where $X_{(A,B)}$ denotes the weight of the dependency edge from A to B, i.e., $D(A,B,X_{(A,B)})$.

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Fairness:

The fairness guarantees of an algorithm for the system ensures that the advertisements are displayed in a way that is proportional to the fee charged for that advertisement. The fairness of the frequency-based contract algorithm, ratio-based contract algorithm, and the dependent contract algorithm follows from the probability distribution of the contract values and the random number generator that selects an advertisement with the correct random bias. The probability that the random number generator will generate a number in a particular range is proportional to the length of the range. The larger the range, the more probable that a number corresponding to that range will be selected. Each advertisement is assigned a range of values depending on the fee charged for that advertisement. The more the fee charged, the greater the range assigned to that advertisement. This ensures that the larger the fee, the more frequently (more number of times) that advertisement will be displayed.

Exclusive contracts are constraints imposed on the display of advertisements. Fairness in meeting the exclusive contracts means that the contracts are satisfied (no two advertisements that have an exclusive contract are displayed together). The prime space management algorithm 150 ensures that the exclusive contracts are met, by removing all the advertisements that have a relative contract with an advertisement A, as soon as advertisement A is selected for display in the prime space.

In order to ensure fairness, the contracts have to be consistent. When contracts are negotiated with the advertiser, certain consistency checks (using the

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consistency checking algorithm) are made in order to ensure that the fairness guarantees can in fact be met.

Story Advertisements:

Story advertisement is a kind of advertisement in which the advertisement changes dynamically as time progresses. The story advertisement is composed of a sequence of static conventional advertisements, which together tell a story. A story advertisement is displayed using the notion of refresh-insert tags. A refresh tag that is associated with a page denotes the time period after which the story advertisements are refreshed (the next advertisement in the sequence is displayed). All other static advertisements are unaffected by the refresh timer. The refresh tag can be set by the client or the application. Thus, the story advertisement is a logical sequence of a number of advertisements, that will be displayed one at a time at each refresh cycle.

It will be appreciated that the present invention is not limited to the exact construction or process steps that have been described above and illustrated in the accompanying drawings, and that various modifications and changes can be made without departing from the scope thereof. It is intended that the scope of the invention only be limited by the appended claims.

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WHAT IS CLAIMED IS:

1. A system for advertising on a computer network, comprising:

a server containing a plurality of advertisements;

means for electronically connecting the server to a computer network; and

means for selecting and retrieving an advertisement from said server in response to a query entered on said network.

2. The system for advertising as set forth in claim 1, wherein said selecting means comprises means for ensuring that a selected advertisement is relevant to the query.

3. The system for advertising as set forth in claim 1, further comprising a mixer means for combining a retrieved advertisement with a content page returned by the computer network in response to the query.

4. The system for advertising as set forth in claim 1, further comprising a prime space manager means for controlling when the advertisements contained on said server are selected by said selecting means, said control being based upon respective advertiser contracts associated with each of said advertisements.

5. The system for advertising as set forth in claim 1, further comprising a local client means for displaying a retrieved advertisement only during a download delay time period in which a user is waiting for a content page to be downloaded in response to the query.

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6. The system for advertising as set forth in claim 1, further comprising means for calculating a search time estimation for the query, and means for combining a page containing said search time estimation and a retrieved advertisement.

7. The system for advertising as set forth in claim 1, further comprising means for determining a geographic location of a user that entered the query, and means for selecting an advertisement based upon the user's geographic location.

8. A method for advertising on a computer network, comprising the steps of:

placing a plurality of advertisements on a server;

placing the server in electronic communication with a computer network;

selecting an advertisement on said server in response to a query entered on said network; and

retrieving the selected advertisement from said server for display to a user.

9. The method for advertising as set forth in claim 24, further comprising the step of combining the retrieved advertisement with a content page returned by the computer network in response to the query.

10. The method for advertising as set forth in claim 24, further comprising the step of controlling when the advertisements on the server are selected based upon respective advertiser contracts associated with each of the advertisements.

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11. The method for advertising as set forth in claim 24, further comprising the step of displaying the retrieved advertisement only during a download delay time period in which a user is waiting for a content page to be downloaded in response to the query.

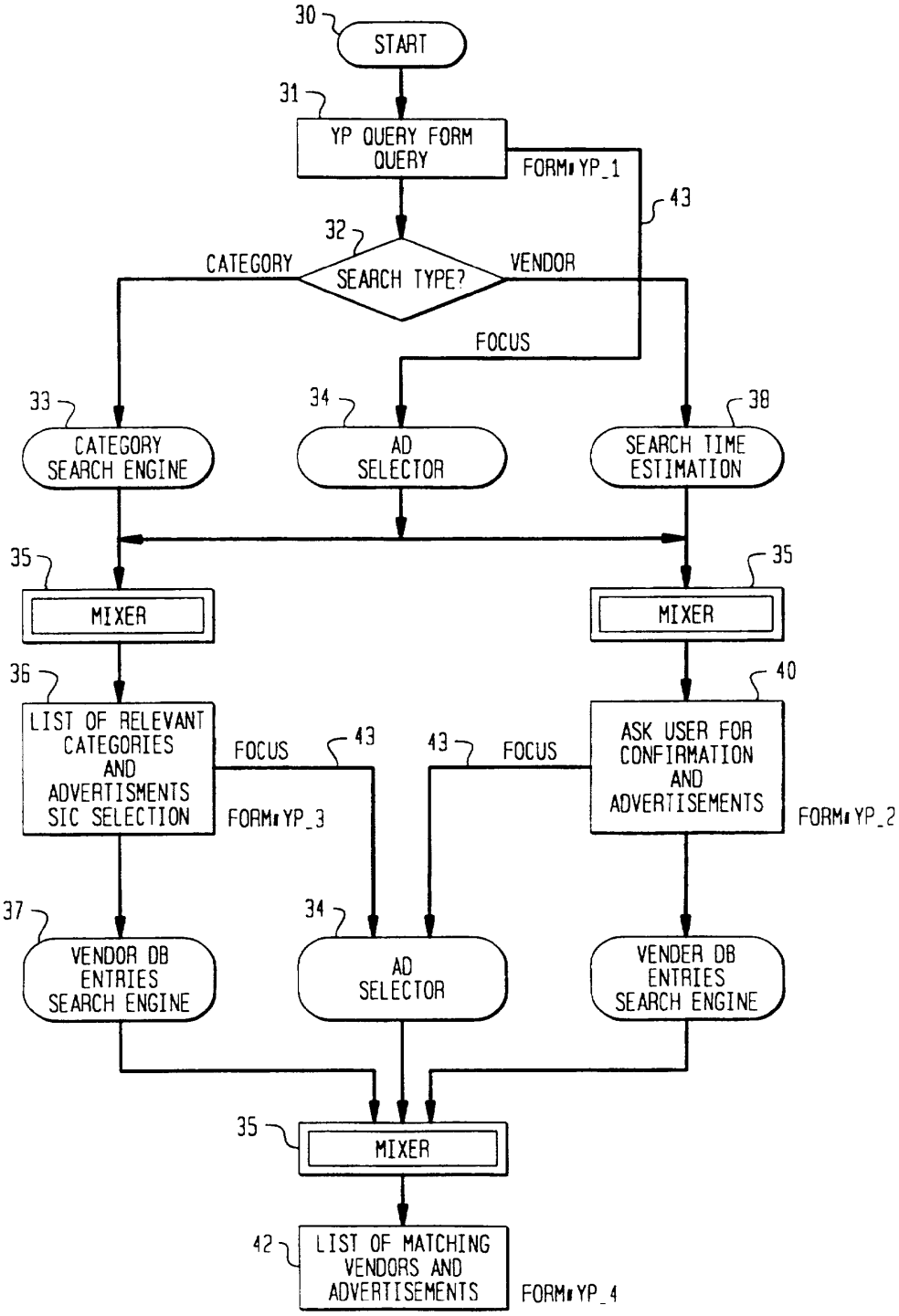
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SUBSTITUTE SHEET (RULE 26)

FIG. 1

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FIG. 2



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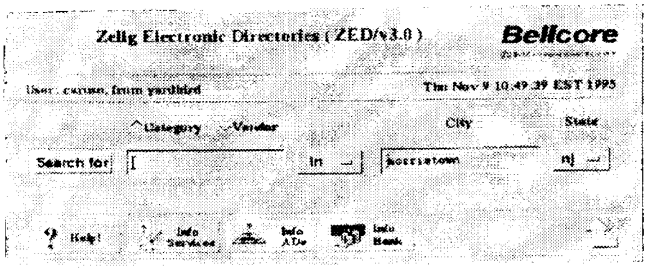


FIG. 3A

FORM# YP_1

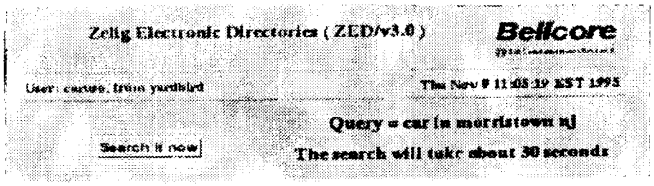


FIG. 3B

FORM# YP_2

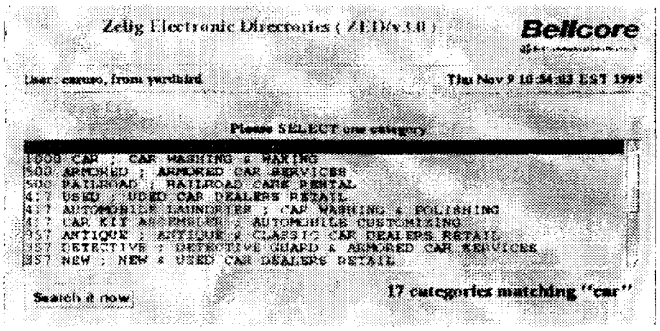


FIG. 3C

FORM# YP_3

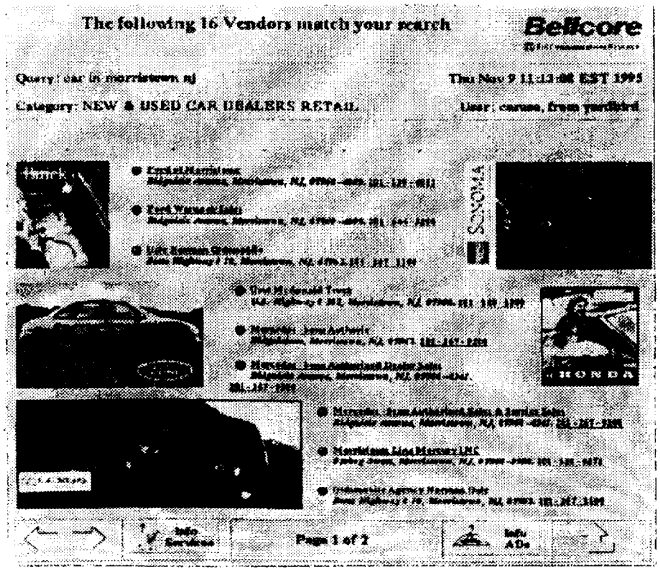
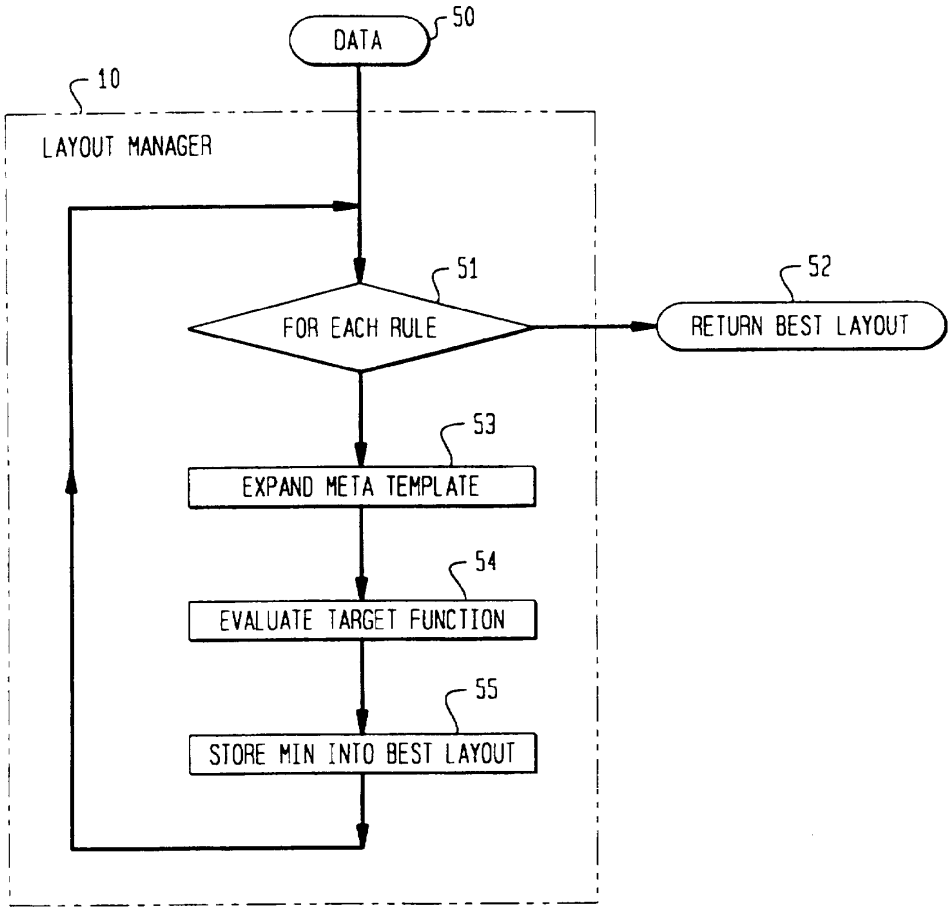


FIG. 3D

FORM# YP_4

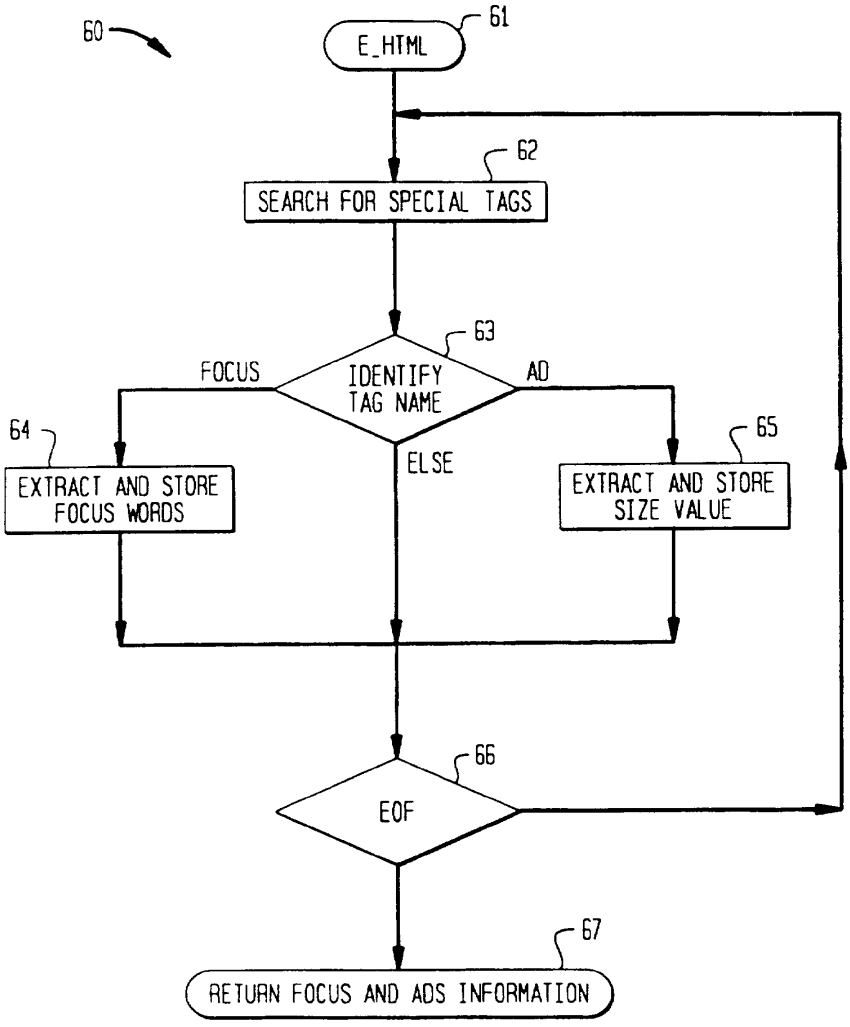
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FIG. 4



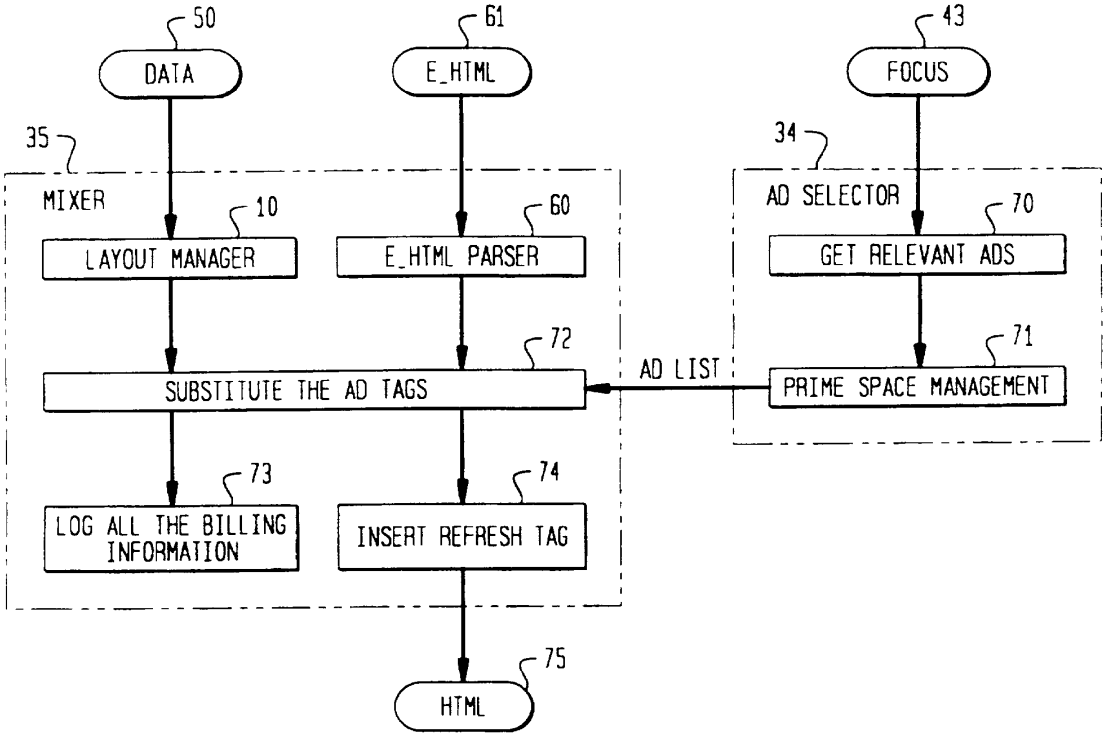
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FIG. 5



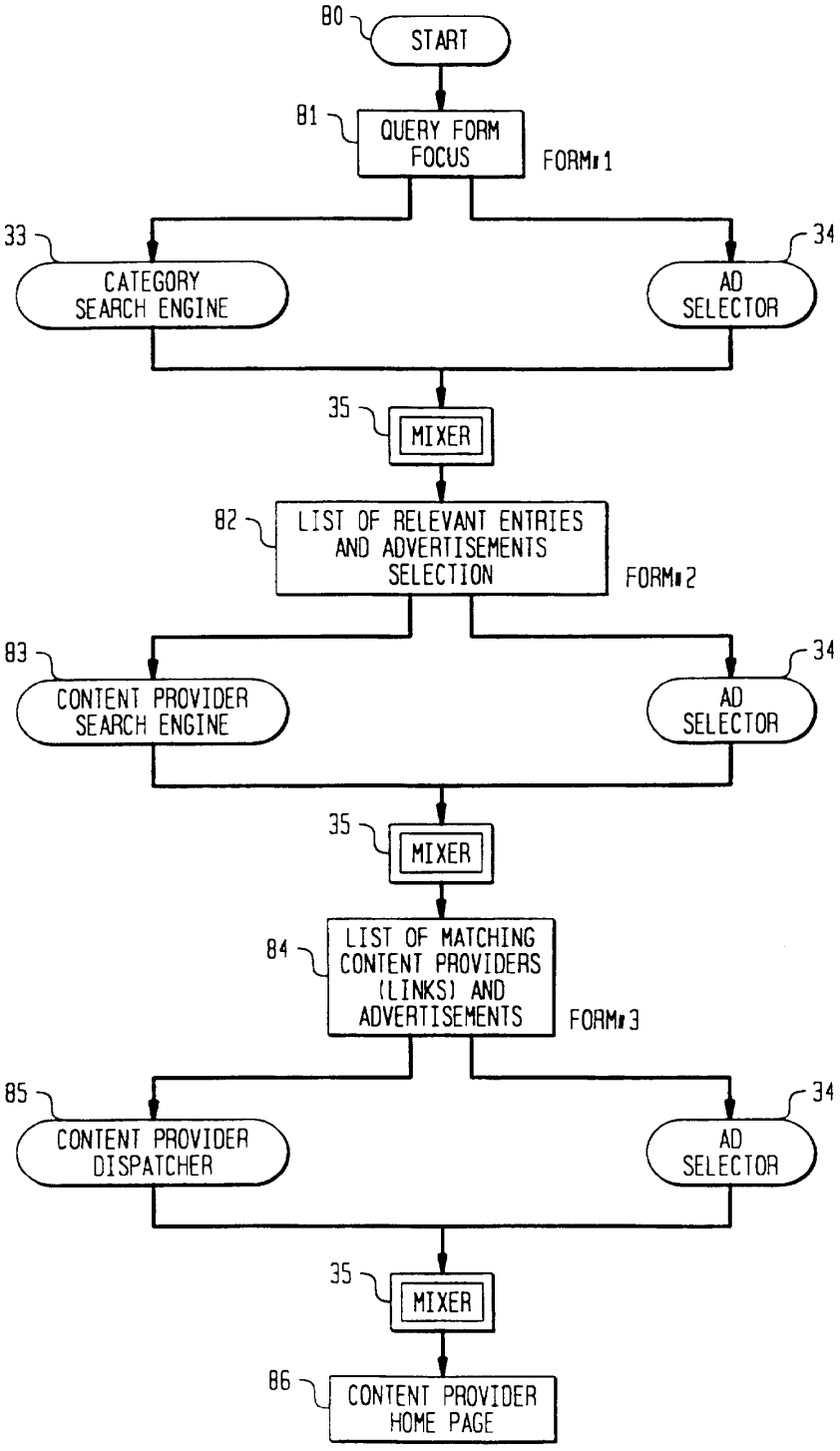
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FIG. 6



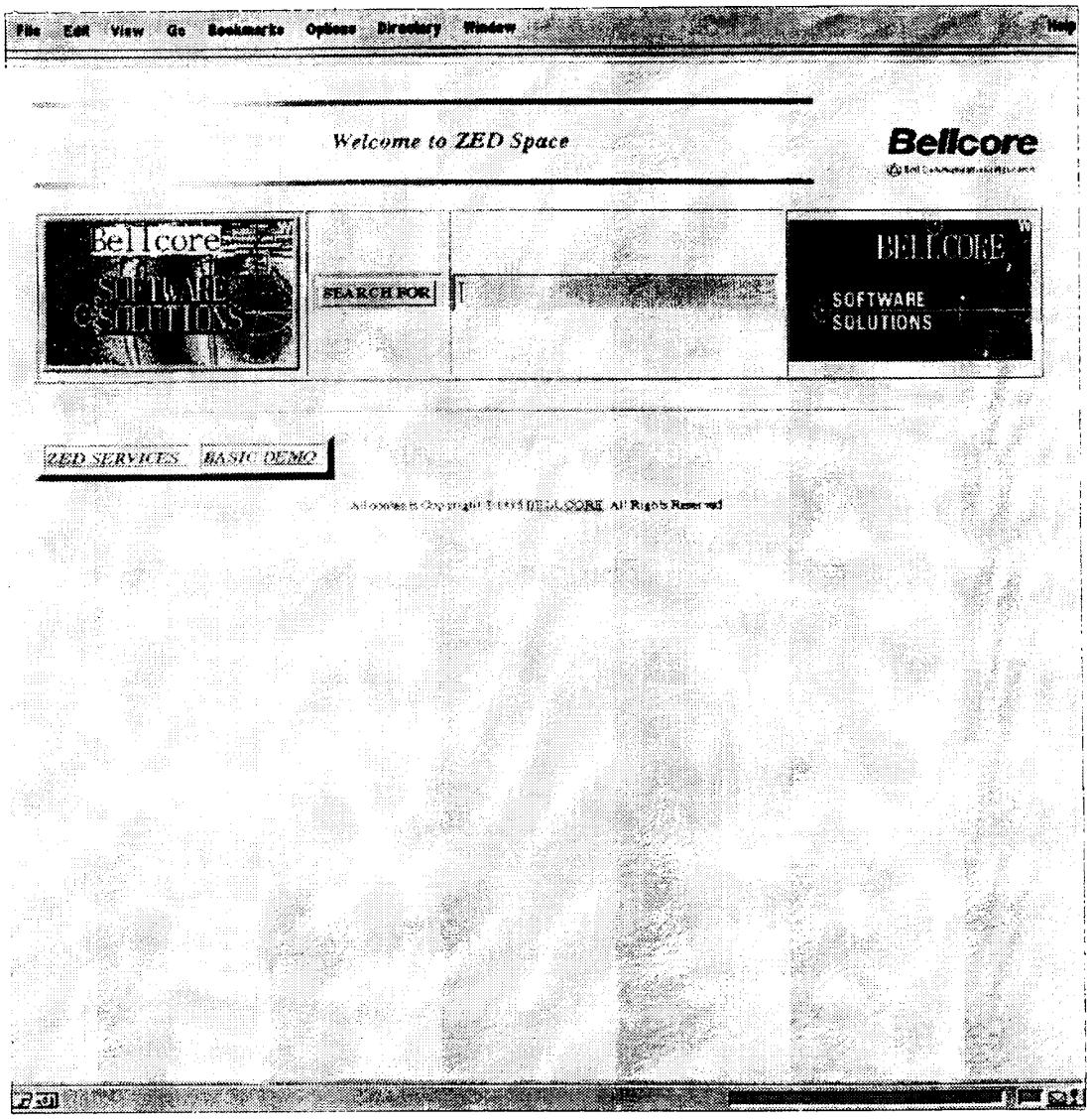
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FIG. 7



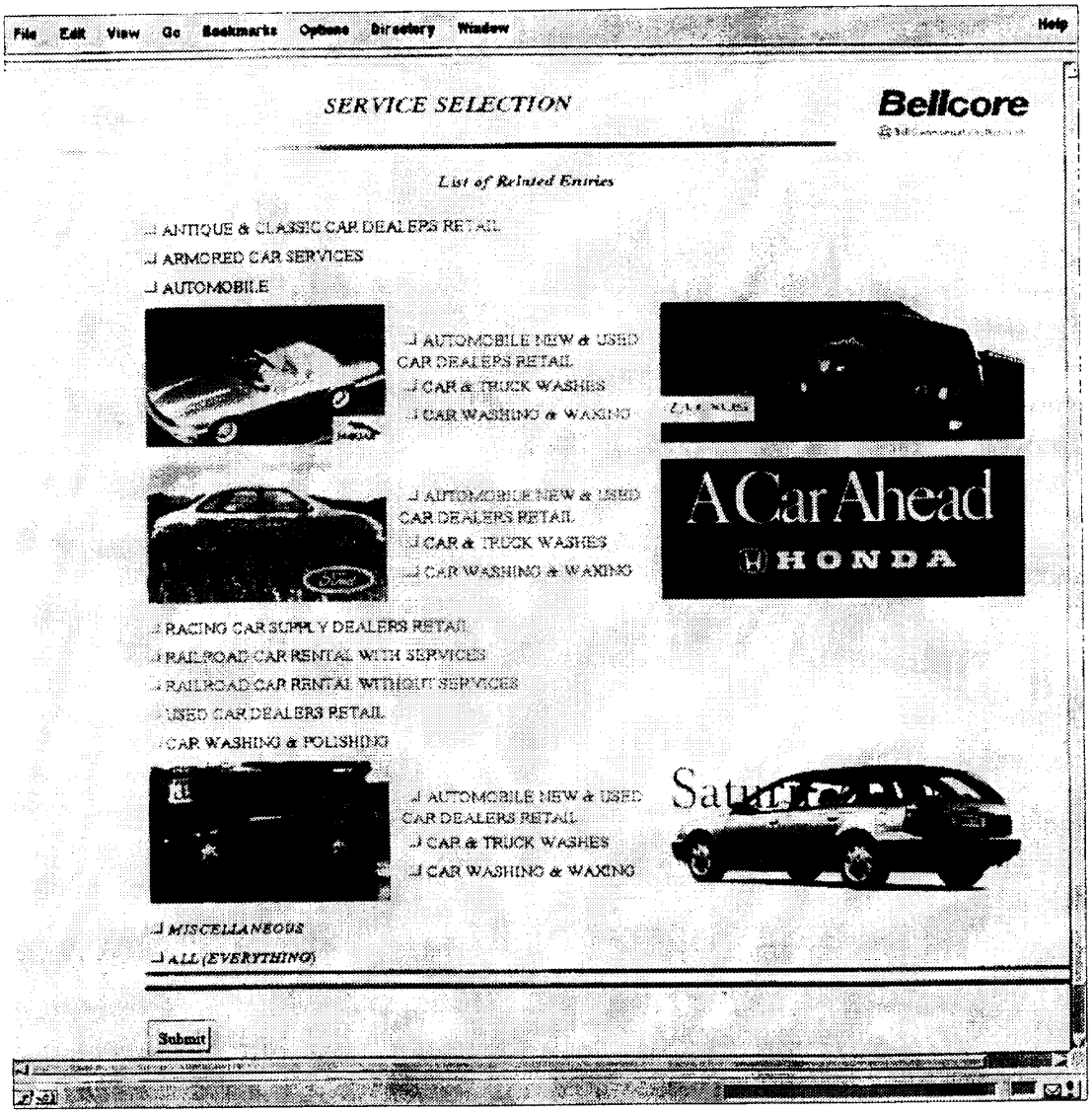
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FIG. 8A



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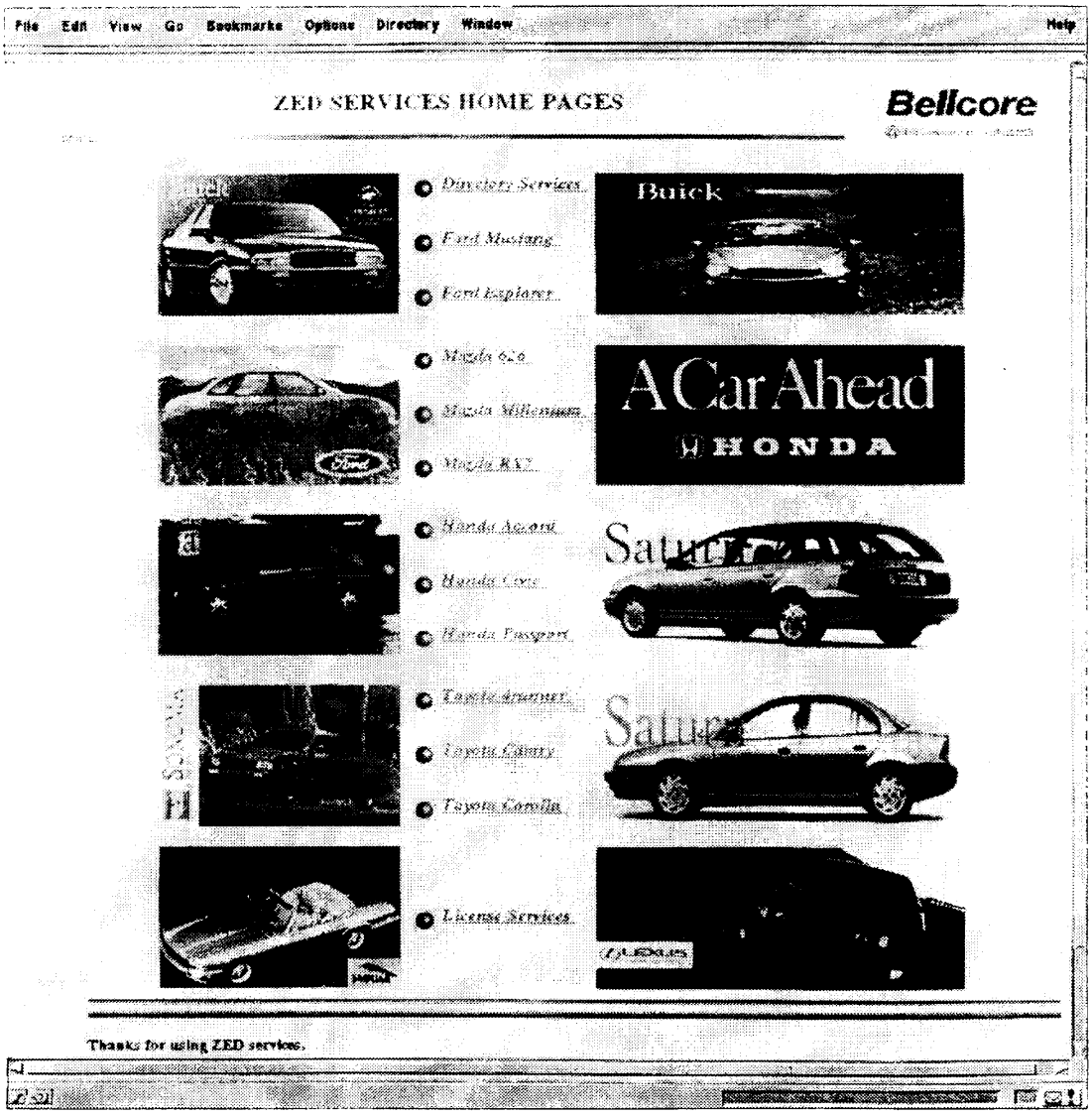
FIG. 8B



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FIG. 8C



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FIG. 9A

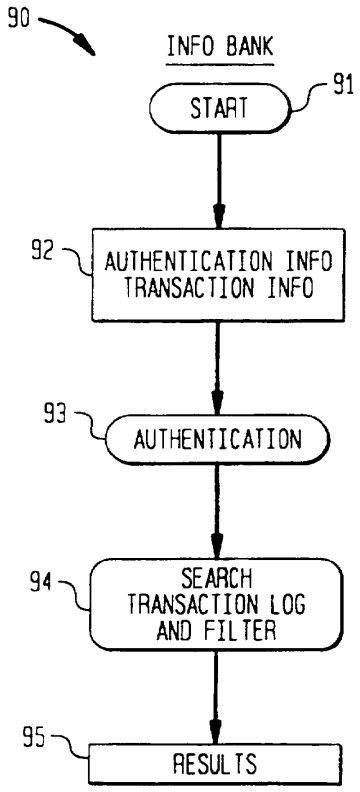
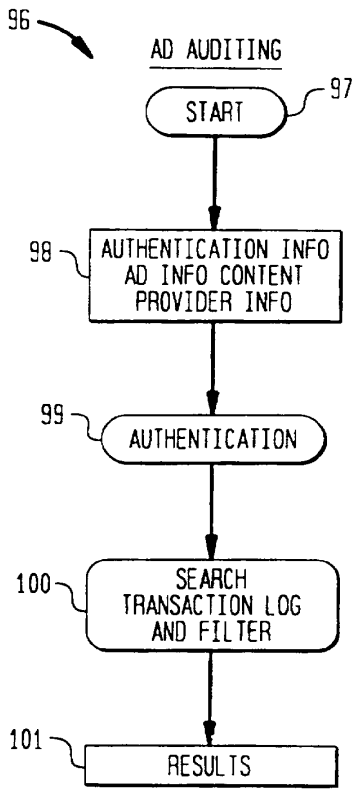


FIG. 9B



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FIG. 10

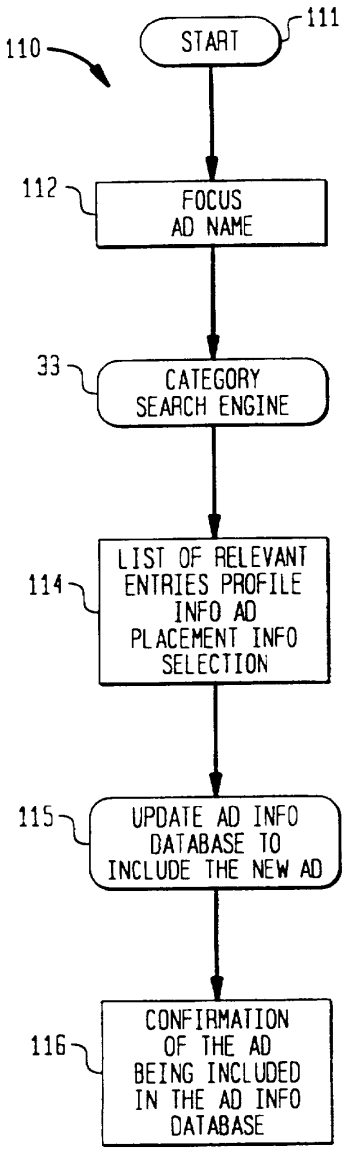
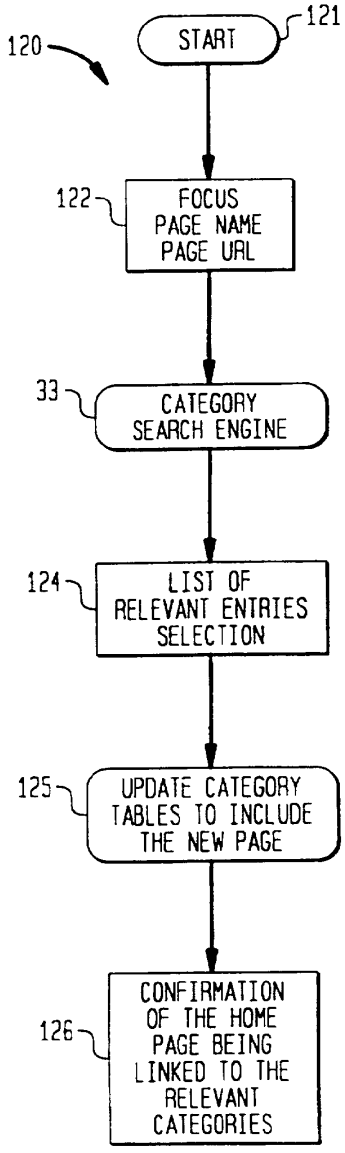


FIG. 11



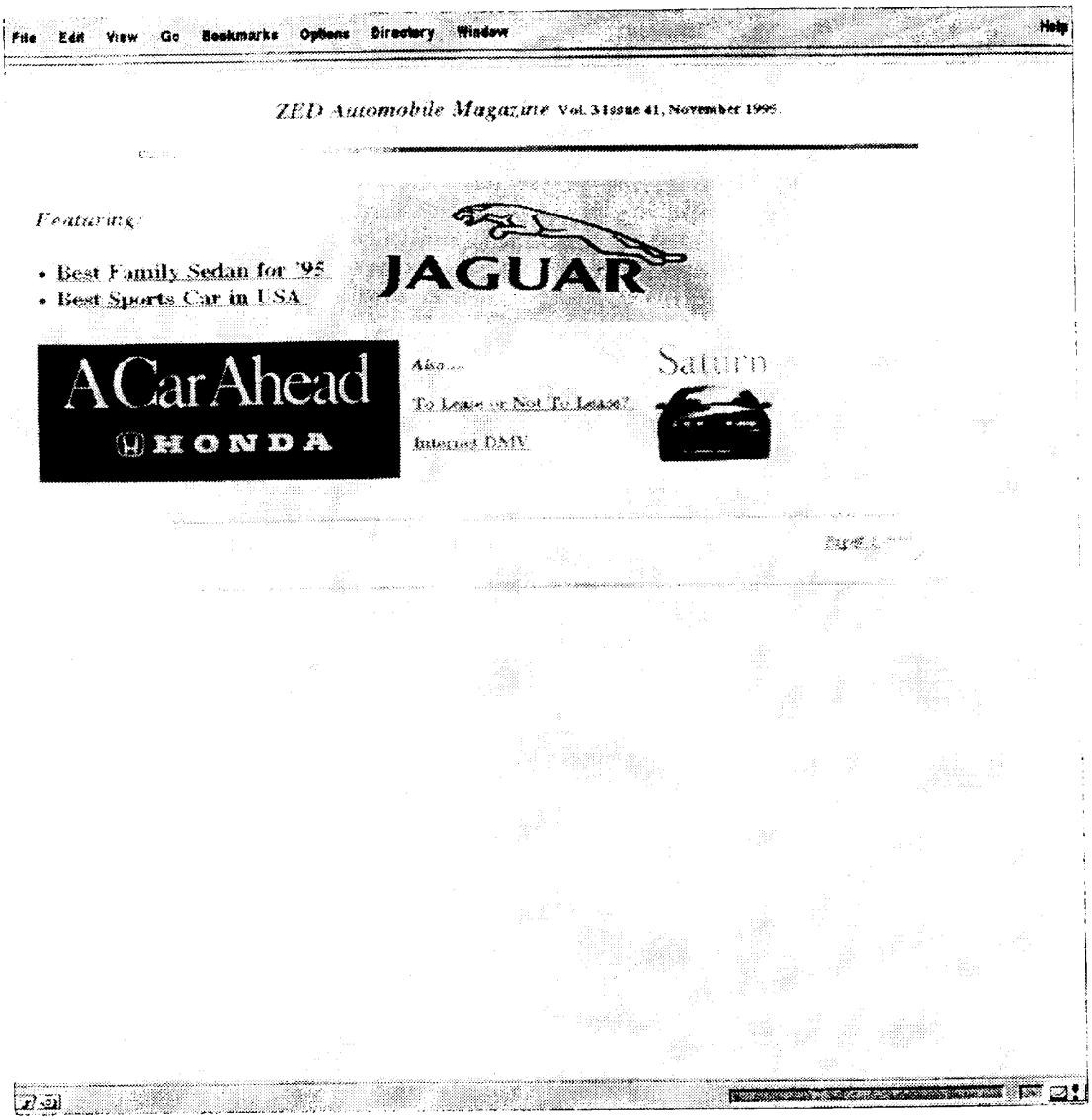
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FIG. 12

SUBSTITUTE SHEET (RULE 26)

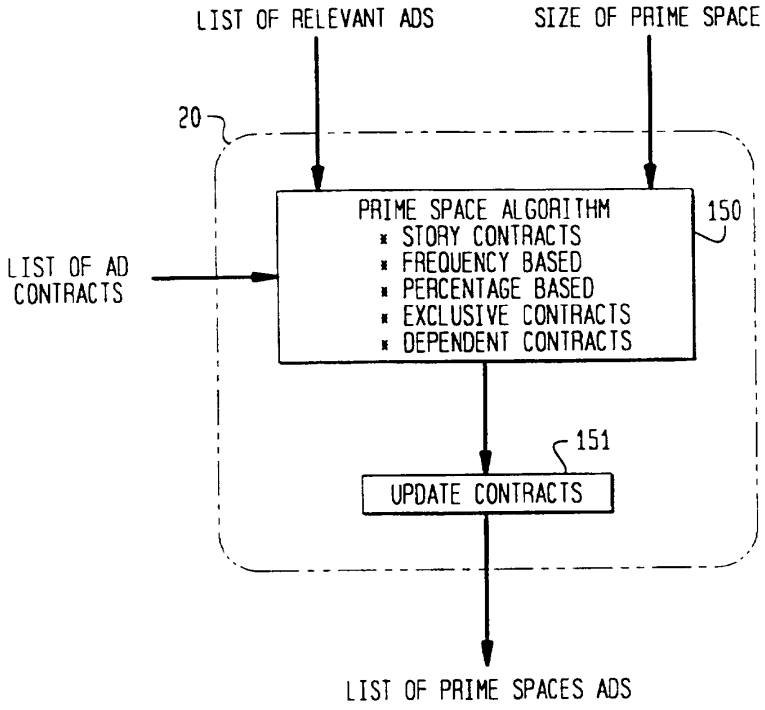
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FIG. 13A



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FIG. 15



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US96/19509

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : G06F 151:00/00, 153:00/00
US CL : 395/226, 227, 214
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 395/226, 227, 214

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

APS, DIALOG

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,283,731 (Lalonde et al.) 01 February 1994, Figs 1-3, 7-9, col. 3, line 42 to col. 4, line 54, col. 12, line 40 to col. 14, line 17.	1-5, 7-11
A	US 5,412,416 (Nemirofsky) 02 May 1995, figs. 1-3, abstact	1-11
A	US 5,448,625 (Lederman) 05 September 1995, figs 1-6, cols. 2-6.	1-11
Y	ONLINE International Command Chart, U.S. Systems, 1985-1986 Edition, See page 6.	6
A,P	APTEX announces SelectCast..., M2 Presswire, M2 Communications, December 5, 1996.	1-11

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Date of the actual completion of the international search 06 FEBRUARY 1997	Date of mailing of the international search report 07 MAR 1997
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer GAIL HAYES Telephone No. (703) 305-9711

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PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : G06F 17/31

A1

(11) International Publication Number: **WO 99/57660**

(43) International Publication Date: 11 November 1999 (11.11.99)

(21) International Application Number: PCT/IL99/00237

(22) International Filing Date: 6 May 1999 (06.05.99)

(30) Priority Data:

60/084,397	6 May 1998 (06.05.98)	US
09/205,729	4 December 1998 (04.12.98)	US

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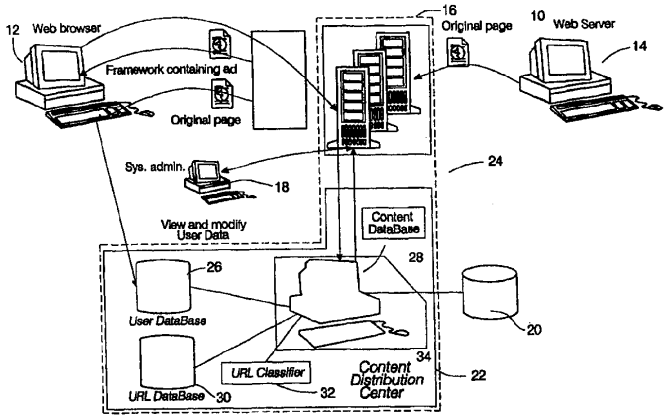
(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published

With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: CONTENT ENHANCEMENT SYSTEM



(57) Abstract

A system (10) and a method for delivering the content, including rich media content, to a particular audience of computer users, preferably according to characteristics of these users, such that the content is exposed in a controlled manner and such that the content is delivered by a third party into a "two–party" system such as the World Wide Web. For example, rather than delivering the content, such as an advertisement, as part of a Web page at a Web site which is remote (14) to the computer user, the present invention delivers the advertisement through the ISP (Internet Service Provider) of the user on the screen of the user's computer, for example. The advertisement or other content is therefore optionally displayed to the user regardless of the Web page being displayed on the screen of the computer of the user, in a manner which is substantially transparent to the user. Thus, the content is targeted specifically to the user rather than being generally displayed on the Web page or otherwise delivered through "two–party" channels such as Web servers (14).

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CONTENT ENHANCEMENT SYSTEM

FIELD AND BACKGROUND OF THE INVENTION

The present invention relates to a system for content enhancement and, in particular, to a system which enables various types of content, such as information, to be presented to a computer user according to specific criteria, preferably through a Web browser. The information is optionally in the form of advertisements or other messages, for example, and preferably includes rich media such as audio samples and video clips. The system of the present invention is able to inject such content as a third party, such that the content is preferably provided to the computer user directly at substantially any convenient time, such as during a waiting period, and in a manner which is preferably substantially transparent to the computer user.

Many consumers are connected to the World Wide Web (WWW) on the Internet through a computer connection at home. For the vast majority of consumers, such a connection to the Internet is obtained by purchasing services from an ISP (Internet Service Provider), which charges monthly fees for such access. These consumers can then view Web pages on the World Wide Web for news, entertainment or information. Viewing Web pages, or "surfing the Web", is a popular leisure activity for many consumers.

Since many Web pages can be viewed without a separate access charge from the provider of the Web page itself, other sources of revenue have been sought by providers of commercial Web pages. Advertisements incorporated into the Web page itself are frequently sold by these Web page providers as a source of revenue. One drawback of such advertisements is the difficulty of determining how many computer users actually view these advertisements, let alone the demographic characteristics of these users. Without such information, the value and efficacy of the advertisements is difficult to ascertain.

Other media, such as television and radio, have developed ratings systems for determining how many consumers typically watch or listen to a given program and/or a given time slot, as well as the demographic characteristics of such consumers. Such ratings information enables the value of the advertisements to be more easily determined.

Ratings information is more difficult to obtain from the World Wide Web because of its diffuse, non-localized and non-controlled nature. First, monitoring viewing of advertisements to determine the number of users who actually see a particular advertisement is very difficult, and must currently be performed only as a measure of past performance. Furthermore, Web pages can be viewed all over the world, without regard to the physical

location of the computer user. However, many advertisers are only interested in reaching a particular segment of the population. For example, a restaurant owner in London does not necessarily want to advertise to consumers in Tokyo, and so forth. Therefore, determining the ratings information for a Web page, in order to determine the value of advertisements on this page, is not as simple as counting the number of computer users who view the Web page.

In addition, it is very difficult to gauge the number of computer users who not only view the Web page, but for whom the advertisement has any relevance. Such relevance may be geographical, as in the example of the restaurant, and/or demographic, as for advertisements aimed at parents of young children. Currently, proper targeting of the advertisement to the intended audience cannot be guaranteed.

Furthermore, the exposure of advertisements to computer users is part of a more general characteristic of the World Wide Web. The World Wide Web is structured as a "two-party" system, in which a first party, the computer user, receives content from a second party, the Web server. Client-server systems are also "two-party" systems. However, these systems do not enable a third party to inject content directly to the screen of the computer user, for example through a Web browser or other computer software on the computer of the user, in a manner which is substantially transparent to the user. Thus, current "two-party systems" have limitations for the transparent, controlled exposure of rich media content to the computer user.

Clearly, a system is required which would enable a third party to inject such content and to control exposure of the content to the computer user. For example, such a system would enable advertisers to target a particular audience of computer users, according to geographical and/or demographic information about the users, such that the advertisement would be displayed substantially only to members of that audience and such that the number of exposures of an advertisement could be sold in advance. Furthermore, such a system could advantageously load such content onto the computer of the user during waiting periods and other "down" times. Unfortunately, such a system does not currently exist.

Therefore, there is an unmet need for, and it would be highly useful to have, a system and a method for delivering content, including rich media content such as audio samples and video clips, to a targeted audience according to a controlled exposure in a manner which is preferably substantially transparent to the computer user, such that the content could be presented to each user in the audience optionally without being tied to the Web page or other

"two-party system" content being examined by the user.

SUMMARY OF THE INVENTION

The present invention is of a system and a method for delivering content, including rich media content, to a particular audience of computer users, preferably according to characteristics of these users, such that the content is exposed in a controlled manner and such that the content is delivered by a third party into a "two-party" system such as the World Wide Web. For example, rather than delivering the content, such as an advertisement, as part of a Web page at a Web site which is remote to the computer user, the present invention delivers the advertisement through the ISP (Internet Service Provider) of the user on the screen of the user's computer, for example. The advertisement or other content is therefore optionally displayed to the user regardless of the Web page being displayed on the screen of the computer of the user, in a manner which is substantially transparent to the user. Thus, the content is targeted specifically to the user rather than being generally displayed on the Web page or otherwise delivered through generic "two-party" channels such as a generic Web server.

According to the present invention, there is provided a method for displaying an added content on a GUI (graphical user interface) of a first client of a first user being served by a general server, the general server serving a substantially similar general content to a plurality of clients of a plurality of users, the method comprising the steps of: (a) providing an added content server for serving an added content; (b) receiving a request for the general content from the first client by the general server; (c) selecting the added content according to a selection characteristic by the added content server; (d) sending the added content by the added content server to the first client for being displayed on the GUI of the first client; (e) sending the general content to the first client for being displayed on the GUI of the first client; and (f) displaying the added content and the general content on the GUI of the first client, such that a display of the added content is controlled according to the selection characteristic.

According to another embodiment of the present invention, there is provided a method for displaying an added content to a Web page on a Web browser of a user, the Web page being served by a remote Web server, the method comprising the steps of: (a) providing an added content server for serving the added content; (b) receiving a request for the Web page from the Web browser; (c) transmitting the request to the remote Web server; (d)

receiving the Web page from the remote Web server; (e) selecting the added content according to at least one user characteristic by the added content server, such that the added content is targeted to the user; (f) adding the added content to the Web page to form a content-added Web page by the added content server; (g) sending the content-added Web page from the added content server to the Web browser; and (h) displaying the content-added Web page by the Web browser.

According to yet another embodiment of the present invention, there is provided a system for delivering a content to a Web browser of a computer user when the user requests a Web page, the system comprising: (a) a content distribution center for storing, distributing and managing the content; (b) an content enhancement module for receiving the content from the content distribution center and for delivering the content to the Web browser upon receiving the request for the Web page, such that the content is specifically targeted to the computer user; and (c) a service provider for providing a connection between the Web browser and the content enhancement module.

According to still another embodiment of the present invention, there is provided a system for delivering a content to a Web browser of a user computer when a user requests a Web page, the system comprising: (a) a content distribution center for storing, distributing and managing the content; (b) an content enhancement module for receiving the content from the content distribution center; (c) a client module for requesting the content from one of the content enhancement module or the content distribution center, and for providing the content to the Web browser, such that the content is specifically targeted to the computer user; and (d) a service provider for providing a connection between the client module and the content enhancement module.

According to still another embodiment of the present invention, there is provided a method for transparently installing a client module on a Web browser of a user computer, the Web browser being operated by a user computer, the method comprising the steps of: (a) starting to operate the Web browser by the user computer; (b) detecting the start of operation of the Web browser; and (c) installing the client module on the user computer when the user computer is connected to the Internet substantially without any intervention by the user, such that the client module operates in a manner which is substantially transparent to the user.

Hereinafter, the term "computing platform" refers to a particular computer hardware system or to a particular software operating system. Examples of such hardware systems include, but are not limited to, personal computers (PC), Macintosh ™computers,

mainframes, minicomputers and workstations. Examples of such software operating systems include, but are not limited to, UNIX, VMS, Linux, MacOS™, DOS, one of the Windows™ operating systems by Microsoft Inc. (Seattle, Washington, USA), including Windows NT™, Windows 3.x™ (in which "x" is a version number, such as "Windows 3.1™"), Windows CE™, Windows95™ and Windows98™. For the present invention, a software application could be written in substantially suitable programming language, which could easily be selected by one of ordinary skill in the art. The programming language chosen should be compatible with the computing platform according to which the software application is executed. Examples of suitable programming languages include, but are not limited to, C, C++ and Java.

Hereinafter, the term "Web browser" refers to any software program for displaying a GUI (graphical user interface), and in particular for any software program which can be used to view a document written at least partially with at least one instruction taken from HTML (HyperText Mark-up Language), DHTML (Dynamic HyperText Mark-up Language) or VRML (Virtual Reality Modeling Language), or any other equivalent computer document language, hereinafter collectively and generally referred to as "document mark-up language". Examples of Web browsers include, but are not limited to, Mosaic™, Netscape Navigator™ and Microsoft™ Internet Explorer™.

Hereinafter, the term "two-party system" refers to any system, such as a client-server system or a Web browser-Web server system, in which content is normally delivered from a first party (the server) to a second party (the client).

BRIEF DESCRIPTION OF THE DRAWINGS

The invention is herein described, by way of example only, with reference to the accompanying drawings, wherein:

FIG. 1 is a flowchart of an exemplary method for adding content by a third party into a two-party system according to the present invention;

FIG. 2 is a schematic block diagram illustrating an exemplary system according to the present invention;

FIG. 3 is a schematic block diagram showing the system of Figure 2 in greater detail;

FIG. 4 is a schematic block diagram illustrating an exemplary display screen according to the present invention;

FIG. 5 is a flowchart of an exemplary method for the operation of Promo according to the present invention;

FIG. 6 is a schematic block diagram of an illustrative embodiment of a system for collecting a charge for added content according to the present invention;

FIG. 7 is a schematic block diagram of an illustrative but preferred embodiment of a portion of the system of Figure 2; and

FIG. 8 is a schematic block diagram of an illustrative but preferred embodiment of the system of Figure 7.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention is of a system and a method for presenting various types of content, such as information, to a computer user according to specific criteria, preferably through a Web browser. The information is optionally in the form of advertisements or other messages, for example, and preferably includes rich media such as audio samples and video clips. The system of the present invention is able to inject such content as a third party, such that the content is provided to the computer user directly at substantially any convenient time, such as during a waiting period, and in a manner which is substantially transparent to the computer user.

For example, if the content is in the form of advertising, rather than delivering the advertisement as part of a Web page at a Web site which is remote to the computer user, the present invention delivers the advertisement through the ISP (Internet Service Provider) of the user on the screen of the user's computer. The advertisement is therefore optionally displayed to the user regardless of the Web page being displayed on the screen of the computer of the user. Thus, the advertisement is targeted specifically to the user rather than being generally displayed on the Web page, and is delivered to the user in a transparent, controlled manner.

The principles and operation of the system and method according to the present invention may be better understood with reference to the drawings and the accompanying description.

Referring now to the drawings, Figure 1 is a flowchart of an example of a method for operating a general system for injecting content as a third party into a two-party system. The method displays an added content on a GUI (graphical user interface) of a user. The GUI is connected to, and is served by, a general server. This general server serves a plurality of

such users as part of a "two-party system". The method of the present invention, as shown in Figure 1, is capable of injecting specific, tailored content to the user through the GUI in a controlled manner, preferably according to at least one characteristic of the user. Preferably, this additional content is served by an added content server, which could be a separate server computer from the general server computer, or alternatively could be a separate function of the general server computer, for example as a separate software module. Thus, the method of the present invention generally controls the exposure of the added content to the user from a third party into the two-party system.

In step 1, the general server receives a request for the general content from the GUI. In step 2, preferably at least one user characteristic of the user is determined. In step 3, the added content is selected according to some criteria by the added content server, preferably according to the at least one user characteristic, such that the added content is preferably targeted to the at least one user. In step 4, the added content and the general content are sent to the client for being displayed on the GUI, such that the added content is injected into the client GUI-server relationship, either by the added content server or by the general content server. Preferably, the added content is sent to the client in a controlled manner, such that the added content is sent during a period when the client is idle or otherwise has capacity for receiving the content for example. More preferably, the added content is to the client in a substantially transparent manner to the user, such that the user does not need to interact with the GUI specifically in order to receive the content.

Preferably, the method also includes two more steps. In step 5, first the added content is displayed on the GUI. In step 6, more preferably the general content is displayed on the GUI, such that the added content is displayed substantially before the general content. This preferred embodiment might be suitable for Web advertising, for example if the added content is an advertisement, the GUI is a Web browser, the general content is a Web page and the general server is a Web server. Most preferably, the added content could be removed from the GUI substantially before the general content is displayed. Alternatively, the added content and the general content could be displayed substantially simultaneously. For example, if the added content was an advertisement and the general content was a Web page, the advertisement could be displayed as an overlay to the Web page, either static or moving.

Alternatively, the general server and the GUI of the client are optionally connected through an intranet of a corporation, and the user is an employee of the corporation, such that the added content is targeted to the employee.

In any case various types of added content are possible. For example, the added content could feature information of a type selected from the group consisting of customer support, news, entertainment and instruction.

Figure 2 is a schematic block diagram illustrating a specific example of a system according to the present invention for delivering targeted advertising and other messages. Although the following description centers upon targeted advertising, it is understood that this is for the purposes of discussion only and is not meant to be limiting in any way, since the present invention could be used for delivering substantially any type of targeted content to the user, including but not limited to, advertisements, messages, software objects, audio and video clips and other rich content.

As shown in Figure 2, in a general system **10**, a computer user interacts with a Web browser **12**. As used herein, the term "Web browser" can apply to substantially any type of GUI (graphical user interface) being displayed by the display device of the computer user, and not only to software which is capable of rendering mark-up documents for display. However, the following description is directed toward software programs which render mark-up documents for display only for the purposes of clarity and without intending to be limiting in any way.

Web browser **12** receives content from, and sends commands to, a remote Web server **14**, according to the HTTP (HyperText Transfer Protocol) protocol. Web browser **12** is not directly connected to remote Web server **14**, however. Rather, Web browser **12** is connected to an content enhancement module **16**. Content enhancement module **16** is also connected to remote Web server **14**. In this embodiment of the present invention, substantially all interactions between Web browser **12** and remote Web server **14** therefore pass through content enhancement module **16**, such that content enhancement module **16** is an intermediary layer between Web browser **12** and remote Web server **14**. Optionally, content enhancement module **16** may also connect to remote Web server **14** indirectly, through one or more additional proxy servers (not shown).

Content enhancement module **16** accesses the data streams transmitted according to the HTTP protocol between Web browser **12** and remote Web server **14**, and is able to inject additional data according to the HTTP protocol for display by Web browser **12**. For example, content enhancement module **16** can send data to Web browser **12** which causes Web browser **12** to display an advertisement, such that the Web page displayed by Web browser **12** is a "content-added Web page". The advertisement optionally features a static

graphic, with or without text, preferably including sound data. More preferably, the advertisement features animation. The advertisement can be static, but alternatively and preferably moves within the display of Web browser **12** in order to more effectively catch the attention of the computer user. Most preferably, additional rich content, such as audio and/or video clips, or optionally streaming audio and/or video data, is included.

In order to more effectively use the period of time required for Web browser **12** to load a particular Web page requested from remote Web server **14**, preferably content enhancement module **16** displays the content, such as the advertisement, within the display of Web browser **12** as the requested Web page loads into Web browser **12**. More preferably, the content is displayed in the context of a display Web page, which is optionally a completely separate Web page with separate Web content from the requested Web page. Thus, the time which is required for the requested Web page to load can now be used for displaying an advertisement or other content. The advertisement or other content, such as the display Web page, then preferably disappears from the display of Web browser **12** after the requested Web page has been loaded.

Alternatively, the advertisement or other content could appear at substantially any time during the operation of Web browser **12**, and not only when a requested Web page was being loaded, such that the display Web page could be built from a combination of the content and the requested Web page, for example. Other preferred features and embodiments of the content itself and of the display of the content are discussed in greater detail below with reference to Figures 5 and 6. According to one particularly preferred embodiment of the present invention, the content itself is quite rich, including for example video data in the form of video clips. This rich content is optionally and preferably supported by a pre-fetch method of the present invention, described in greater detail below.

In either case, the content is preferably displayed as an overlay to the Web page display, even if the Web page itself is in the process of being downloaded.

In order to provide external control over the advertisements, the type of display and the timing of the display, content enhancement module **16** is optionally connected to a system administrator Web browser interface **18**. System administrator Web browser interface **18** provides a management interface which enables the administrator of the service provider to control the type of advertisement shown, the type and timing of the display, and the identity of the user or users to whom the advertisement is shown. System administrator Web browser interface **18** controls the management functions of content enhancement

module **16**.

The exact identity of the administrator depends upon the type of connection provided between Web browser **12** and remote Web server **14**. For example, if this connection is provided by an ISP (Internet service provider), then the administrator could be an employee of the ISP. Alternatively, if the connection was an intranet connection provided by a company to employees of that company, then the administrator could be an employee of that company. Of course, the administrator could be substantially any individual charged with administering system **10**.

According to preferred embodiments of the present invention, general system **10** also features a content management system **20** for enabling the content provider to transmit content. Preferably, the content provider can also receive statistics concerning the number of users to whom the content was made available, as well as an analysis of the characteristics of these users. Such characteristics optionally and preferably include the types of Web pages visited by the users, as well as demographic and/or geographic characteristics. More preferably, the content provider is also able to request users with certain demographic and/or geographic characteristics through content management system **20**.

The identity of the content provider, as well as the type of information requested or required by that content provider in order to determine which content is to be served to each user or groups of users, can vary depending upon the implementation of general system **10**. Such variations could easily be determined according to one of ordinary skill in the art for the particular implementation of general system **10**. For example, if the content is advertisements, then the content provider could optionally be an advertisement agency or vendor of products and/or services to be advertised. On the other hand, if the content is corporate information being provided to employees of a corporation, then the content provider could optionally be the corporation itself.

Content management system **20** is connected to a content distribution center **22**. Content distribution center **22** is directly associated with, and interacts with, content enhancement module **16**, such that collectively content distribution center **22** and content enhancement module **16** form a content enhancement system **24** according to the present invention.

Content distribution center **22** preferably receives content from content management system **20**, in the form of graphics, sounds, video, text or other data to be displayed by Web browser **12**. Content distribution center **22** then relays the content to content enhancement

module **16**, which actually performs the necessary steps for preparing the content to be sent to Web browser **12** for display.

Preferably, content distribution center **22** features a plurality of databases for storing different types of information. These databases preferably include a user database **26**, for storing demographic and/or geographic information about the computer users; and a content database **28** for storing the content such as advertisements. User database **26** preferably contains demographic information about the computer user, such as age, family size, profession, hobbies and interests, and other potentially useful information for the content provider such as an advertiser. Such information could be provided voluntarily by the computer user. Optionally, the information could be gathered by an analysis of the Web pages requested through Web browser **12**. Also optionally, the information could be provided by the content provider, such as the ISP. Preferably, all of these sources of information are gathered for storage in user database **26**.

Preferably, the demographic information includes such personal information as the name of the user, age, gender, marital status, occupation, hobbies or other interests. The geographic information preferably enables the user to be located within a fairly precise geographical area. For example, in the United States of America, such geographic information would optionally and preferably include the zip code, state and city of the user.

The information preferably also includes the language preference of the user, which is not necessarily determined according to the country in which the user physically resides. The language preference is particularly preferred for displaying advertisements which include text, and enables the advertisements to be adjusted according to the language of the user, rather than using only one language for all advertisements throughout the World Wide Web.

Also, user database **26** preferably stores user profile information, such as the history of Web page browsing, or "surfing" and the ratings of the user in various categories which might be of interest to advertisers. All of this information, including the classification of the requested Web page and the user information, is preferably accessible as a "request factor" to enable a particular type of content, such as a particular advertisement, to be selected.

In addition, user database **26** preferably also stores such information as the permissions which the user has given for access by content enhancement module **16**. For example, the user is preferably able to determine whether advertisements from content enhancement module **16** can be blocked, or whether content enhancement module **16** is

allowed to construct a dynamic history of the Web page browsing by a user.

Optionally and preferably, content distribution center **22** also includes an URL (universal resource locator) database **30** for storing the Web page addresses (URL's) for any Web pages associated with the advertisement content stored in content database **28**. More preferably, these URL's are classified by an URL classifier module **32**. Distribution module **28** preferably receives information concerning the type of Web page being requested from URL classifier module **32**. URL classifier module **32** could include information about different types of Web pages which is manually entered through system administrator Web browser interface **18**, for example. Alternatively and preferably, the Web pages could be classified automatically according to keywords.

Within content distribution center **22**, distribution module **34** determines which content is selected from content database **28** for being served by content enhancement module **16**. The selection of content is preferably performed according to the profile of the computer user, and more preferably is also performed according to the type of Web page being displayed. The selection according to the type of Web page being displayed is particularly important for computer users in the home environment, in which more than one user may share Web browser **12**. Under these circumstances, the content, such as an advertisement, is preferably tailored according to the type of Web page being displayed.

Figure 3 shows a more detailed view of an illustrative, preferred embodiment of general system **10**. In this preferred embodiment, again Web browser **12** requests Web pages from remote Web server **14** through content enhancement system **24**. Content enhancement system **24** includes content enhancement module **16**, which serves both the Web page and the added content to Web browser **12**. Content enhancement module **16** receives the added content from distribution module **34** of content distribution center **22**. The operation of these components of general system **10** is explained in greater detail below.

Content enhancement module **16** features a proxy server **36**, which is an HTTP server. Proxy server **36** receives a request for a particular Web page from Web browser **12**. If proxy server **36** already has the Web page stored, then proxy server **36** can serve the Web page directly, without transmitting the request to remote Web server **14**. Otherwise, proxy server **36** must transmit the request to remote Web server **14** and wait to receive the Web page from remote Web server **14**.

Proxy server **36** also serves the advertisement or other content to Web browser **12**, for example while the computer user waits for Web browser **12** to load the Web page. Proxy

server **36** receives the content from a Core module **38**.

Core module **38** preferably communicates with proxy server **36** according to the HTTP protocol, or alternatively through another type of software-based interface. Core module **38** receives HTTP events from proxy server **36**, such as requests for a particular Web page. Preferably, Core module **38** filters the event according to a preconfigured event filter. Core module **38** then passes the event to a Brain module **40**.

Brain module **40** then receives the event from Core module **38**. Brain module **40** preferably controls the session with Web browser **12**, including initiating communication with Web browser **12** and terminating such communication. Brain module **40** also preferably can alter the event filter in Core module **38**. Brain module **40** preferably communicates with URL classifier **32** to classify the Web page being requested according to site-related information. The site-related information describes the Web site holding the requested Web page. The site-related information can be important for displaying the advertisement, as described in further detail below. URL classifier **32** communicates with distribution module **34** and URL database **30** to receive this information.

After receiving the site-related information from URL classifier **32**, Brain module **40** then decides which plug-in module should handle the event and passes the event to that plug-in module. Brain module **40** preferably also passes the site-related information to that plug-in module. Preferably, there is a plurality of plug-in modules, although for the purposes of illustration, only one such module is shown in Figure 3, a Promo module **42**.

Once Promo module **42** has received the event, Promo module **42** performs a number of functions. First, Promo module **42** decides whether to serve the content, such as the advertisement, to Web browser **12**. Preferably, the decision is made by Promo module **42** at least partially according to information received from content management system **20**. Such information could include criteria for deciding when the content should be displayed, for example.

Next, if Promo module **42** decides to serve the content, Promo module **42** retrieves the framework for the content. For example, if the content is an advertisement which is to be displayed on an HTML page, Promo module **42** first retrieves a framework for that page. Promo module **42** then requests at least one advertisement from content management system **20**. Promo module **42** adds the at least one advertisement to the framework, as well as causing distribution module **34** to serve the advertisement to proxy server **36** for serving to Web browser **12**. The framework is then given to Brain module **40**.

Brain module **40** receives the framework from Promo module **42**. Brain module **40** then passes the framework to Core module **38**, which also receives the original requested Web page from proxy server **36**. Core module **38** first passes the framework to Web browser **12**, preferably either while the Web page is being received by proxy server **36** or while the Web page is being served to Web browser **12**.

Web browser **12** then displays the framework with the advertisement. For example, as noted previously, preferably an advertisement can be displayed on Web browser **12** in several ways. The advertisement could be seamlessly integrated onto the displayed Web page, such that the advertisement appeared to be another banner advertisement, for example. Banner advertisements are a common feature of advertising on the World Wide Web, and are displayed at the top or side of a Web page. Alternatively and preferably, the advertisement could be a "fly-by" advertisement, which moves across the Web page and then disappears. Also preferably, the user might specify "audio only" advertisements, in which only sounds would be produced for the advertisement. Brain module **40** is preferably able to receive a request for a particular type of advertising from Web browser **12** and to transmit the request to Promo module **42**, such that proxy server **36** then delivers the correct type of advertisement to Web browser **12**.

In addition, preferably Brain module **40** is able to support various criteria which determine the length of time for displaying the advertisement. For example, the advertisement could disappear after a fixed length of time has elapsed. Alternatively and preferably, the advertisement could disappear after some positive action by the user, for example clicking a button on the advertisement with the mouse or other pointing device. The advertisement could also disappear when the requested Web page has finished loading, assuming that the advertisement is displayed while the Web page is being loaded. Alternatively, the advertisement could disappear only after the content of the advertisement, such as video or animation, has finished being displayed. All of these different display modes, as well as the control over the display of the advertisement, is preferably handled by Brain module **40**.

An example of the displayed framework with the content is shown in Figure 4. A display **44** of Web browser **12** is shown, with content in the form of a banner **46**. Banner **46** could include text or graphic images, for example.

The implementation of the display of the advertisements on Web browser **12** is optionally performed in a number of ways. For example, a Web page produced by Brain

module **40** could be substituted for the requested Web page, preferably adding a refresh tag to the original request for the Web page. Alternatively and preferably, the requested Web page could be changed into a Web page with at least two style sheets or layers. One layer would contain the original requested Web page, while the other layer would display the Web page with the additional advertising. The latter option is particularly preferred because the delay for loading the Web page is substantially reduced or eliminated. In addition, with the latter option the user is able to request that the advertisement disappear after a period of time has elapsed or some other criterion has been fulfilled, leaving only the originally requested Web page being displayed by Web browser **12**.

Web browser **12** displays the framework with the advertisement until the Web page has been received from proxy server **36**. Preferably, Web browser **12** then removes the advertisement from the display and displays the requested Web page.

Promo module **42** preferably also gathers data related to the content which is served. For example, Promo module **42** preferably records which content was displayed to the user through Web browser **12**. In addition, Promo module **42** preferably gathers content-specific data. For example, if the content is an advertisement, Promo module **42** preferably determines the advertisement(s) which were "clicked through" by the user. More preferably, Promo module **42** determines which users purchased a product from a vendor after "clicking through" or otherwise interacting with an advertisement. All of this gathered data can be used to assess the efficacy of the content which is served. For example, in the case of advertisements, the gathered data could be used to determine the cost for serving the advertisement.

According to a preferred embodiment of the present invention, a slightly different protocol is optionally followed for initiating a session between Web browser **12** and content enhancement module **16**. Web browser **12** initiates the session by requesting an initial Web page in order to start the session. Core module **38** receives the request for the Web page through proxy server **36**. As for the previous embodiment, Core module **38** then passes the event to a Brain module **40**, as well as requesting the original Web page from remote Web server **14**.

Brain module **40** receives the event from Core module **38**, and decides which plug-in module should handle the event and passes the event to that plug-in module, in this case Promo module **42**.

Web browser **12** receives the requested Web page from remote Web server **14**

through proxy server **36**. Once Web browser **12** requests the next Web page, apart from the home page, Brain module **40** initializes Promo module **42**. Such initialization preferably includes obtaining user data from user database **26**, as well as "pre-fetching" content, as described with regard to Figure 5 below.

Figure 5 is a flowchart of an exemplary method for "pre-fetching" content such as advertisements, in order to more rapidly display such content to the user through Web browser **12**. Web browser **12** and Promo module **42** each has a storage area for storing the pre-fetched content: Web browser **12** has a cache, and Promo module **42** has a prefetch FIFO (first in first out) storage. At the beginning of the process, both storage areas are empty.

In step 1, Web browser **12** connects to Promo module **42**. In step 2, Promo module **42** requests at least one, and preferably two, prefetched content parcels such as advertisements from content management system **20**. In step 3, content management system **20** sends the advertisement(s) to Promo module **42**, which stores these advertisement(s) in the pre-fetch storage FIFO. In step 4, Web browser **12** requests a Web page. In step 5, Promo module **42** sends the framework with at least one advertisement to Web browser **12**. In addition, in step 6, Promo module **42** also sends at least one, and preferably two, additional advertisements to Web browser **12**. In step 7, Web browser **12** preferably stores the advertisement(s) in the cache. More preferably, if the file, such as the advertisement, is relatively large, such that the period of time required to load it into the cache of Web browser **12** is undesirably long, the file is broken into more than two portions, and each portion is loaded separately. The advertisement(s) are now optionally available for future display, such that the amount of time required for Web browser **12** to display the next advertisement is much shorter, since the advertisement is stored locally. Steps 2-7 could optionally be repeated during the session with Web browser **12**.

Figure 6 shows yet another preferred embodiment of the present invention, featuring another plug-in module, the Meter module. In this embodiment, an content enhancement system **48** again features an content enhancement module **50** and a content delivery center **52**. Now, however, content enhancement module **52** also includes a Meter module **54**. In addition, content delivery center **52** also includes a billing module **56**. Components which have the same numbering as for Figure 3 retain their previously described function, unless otherwise specified.

Meter module **54** enables the user to pay for content obtained from remote Web server **14** or from content database **28**, or from a combination thereof. For example, if the

user requests a Web page from a Web site for which payment is required, remote Web server **14** communicates with Meter module **54** to request payment. If such payment is authorized, manually for example by having the user click on a button displayed by Web browser **12**, or automatically, Meter module **54** communicates with billing module **56**. Billing module **56** then records the payment. The service provider is then able to request remuneration from the user. The service provider also sends payment to the holder of the Web site, possibly after subtracting a commission or other handling fee. Thus, Meter module **54** enables users to purchase content through regular billing, such as part of a monthly bill from an ISP, without entering a credit card number.

As noted previously, the system and method of the present invention are useful for many types of content, such as advertisements, messages, customer support, announcements and educational materials. Furthermore, control over the type of content and the display of the content would depend upon the service provider. For example, if the service provider was an ISP, then the ISP could optionally control the content in order to generate advertising revenue. Alternatively, if the service provider was a corporation, the corporation could optionally control the content in order to inform or instruct its employees, for example.

Figure 7 shows a preferred, illustrative embodiment of the system of Figure 2. In this embodiment, a system **58** again includes a Web browser **60** for interacting with a computer user, as described for Web browser **12** of Figure 2. However, in system **58**, Web browser **60** is alternately connected to a content enhancement module **62** and to a remote Web server **64** for serving a Web page **66**. Content enhancement module **62** is also connected to remote Web server **64**. In addition, as for Figure 2, a content distribution center **22** is connected to content enhancement module **62**. Thus, Web browser **60** is either connected directly to remote Web server **64** or alternately is connected indirectly, through content enhancement module **62**.

When Web browser **60** is connected to content enhancement module **62**, substantially all interactions between Web browser **60** and remote Web server **64** therefore pass through content enhancement module **62**, such that content enhancement module **62** is an intermediary layer between Web browser **60** and remote Web server **64**, as described for system **10** of Figure 2. However, such a connection can place a heavy load on content enhancement module **62**, which effectively acts a proxy server. Therefore, as shown in Figure 7, preferably Web browser **60** can also connect directly to remote Web server **64**, thereby by-passing content enhancement module **62** such that content enhancement module

62 is not able to send data to Web browser **60** in this mode.

More preferably, system **58** alternates between these two different modes, with Web browser **60** either connected directly to remote Web server **64**, or alternately connected indirectly through content enhancement module **62**, most preferably according to either a predetermined schedule or alternatively according to a dynamic schedule. For example, Web browser **60** could be connected to content enhancement module **62** only when the user first "logs on" and connects to the Internet. Alternatively, Web browser **60** could periodically connect to content enhancement module **62** in order for content enhancement module **62** to be able to more effectively track the activity of the user on the Internet. For example, Web browser **60** could periodically connect to content enhancement module **62** every *n* minutes for such tracking, in which *n* is an integer. In any case, such a periodic connection significantly reduces the burden on content enhancement module **62**, such that the amount of traffic flowing through content enhancement module **62** is significantly reduced.

In the other, alternative and optional embodiment of system **58**, Web browser **60** connects to content enhancement module **62** dynamically, preferably according to the traffic between Web browser **60** and remote Web server **64**, such that as the amount of traffic is increased, Web browser **60** connects to content enhancement module **62** more frequently. Such detection of the amount of traffic could be performed by a client module **68** as shown, which could be an applet being operated by Web browser **60** for example.

In either embodiment, as for Figure 2, in order to more effectively use the period of time required for Web browser **60** to load a particular Web page **66** requested from remote Web server **64**, preferably content enhancement module **62** causes the content, such as the advertisement, to be displayed within the display of Web browser **60** as the requested Web page **66** loads into Web browser **60**. More preferably, the content is displayed in the context of an additional displayed Web page. Thus, the time which is required for Web page **66** to load can now be used for displaying an advertisement or other content. The advertisement or other content, such as the displayed Web page, then preferably disappears from the display of Web browser **60** after the Web page has been loaded.

Alternatively, the advertisement or other content could appear at substantially any time during the operation of Web browser **60**, and not only when a Web page was being loaded, such that the display Web page could be built from a combination of the content and the requested Web page **66**, for example. Other preferred features and embodiments of the content itself and of the display of the content were previously discussed. More preferably,

the rich content is supported by a pre-fetch method of the present invention.

Figure 8 shows a preferred, illustrative embodiment of the system of Figure 7. In this embodiment, system **58** again features a Web browser **60** connected to a client module **68**. Both Web browser **60** and client module **68** are installed on, and are operated by, a user computer **70**. In addition, a service provider **72** for providing a connection to the Internet, which could be an ISP (Internet Service Provider) for example, is shown for clarity. User computer **70** could be connected to service provider **72** through substantially any type of suitable connection, such as a modem connection to the telephone network for example, which could easily be selected by one of ordinary skill in the art.

However, Web browser **60** now connects directly to Web server **64** in order to request and download Web page **66**. Client module **68** now connects directly to content enhancement module **62** and requests the additional content, such as the advertisement or other media content, directly from content enhancement module **62**. Thus, this embodiment of the present invention can be distinguished in that client module **68** now "pulls" content from content enhancement module **62**, rather than having content enhancement module **62** push this content. Alternatively, client module **68** could retrieve content from content distribution center **22**.

Preferably, client module **68** is automatically installed on user computer **70**, in a manner which is transparent to the user, such that client module **68** is able to cause the additional content to be displayed by Web browser **60** as previously discussed, without intervention by the user. Client module **68** would therefore be a "hidden" client software module. For example, client module **68** could be installed on user computer **70** by content enhancement module **62** only when the user first "logs on" and connects to the Internet, particularly for a non-permanent connection, such that user computer **70** is alternately connected to, and disconnected from, the Internet. Optionally, content enhancement module **62** could detect when client module **68** was no longer operating on user computer **70**, and could then install client module **68** on user computer **70** again.

More preferably, content enhancement module **62** is employed as a proxy server at certain times, and most preferably is employed as such a server when the user first "logs on", or first activates Web browser **60** and/or first connects to the Internet, for example through service provider **72**, thereby enabling client module **68** to be installed on user computer **70**. For example, either Web browser **60** or service provider **72** could be configured such that when Web browser **60** first connects to service provider **72**, Web browser **60** initially

connects to content enhancement module **62** as a proxy server. Content enhancement module **62** would then install client module **68**.

Optionally and most preferably, client module **68** is implemented as an applet, which is installed on user computer **70** in a non-permanent, transient installation, such that client module **68** is not installed on the hard disk or other permanent storage medium of user computer **70**. Rather, client module **68** is preferably only stored in the RAM (random access memory) or other volatile memory of user computer **70**. Thus, client module **68** preferably does not consume any permanent resources of user computer **70**.

While the invention has been described with respect to a limited number of embodiments, it will be appreciated that many variations, modifications and other applications of the invention may be made.

WHAT IS CLAIMED IS:

1. A method for displaying an added content on a GUI (graphical user interface) of a first client of a first user being served by a general server, the general server serving a substantially similar general content to a plurality of clients of a plurality of users, the method comprising the steps of:

(a) providing an added content server for serving an added content;

(b) receiving a request for the general content from the first client by the general server;

(c) selecting said added content according to a selection characteristic by said added content server;

(d) sending said added content by said added content server to the first client for being displayed on the GUI of the first client;

(e) sending the general content by the general server to the first client for being displayed on the GUI of the first client; and

(f) displaying said added content and the general content on the GUI of the first client, such that a display of said added content is controlled according to said selection characteristic.

2. The method of claim 1, wherein said selection characteristic is a user characteristic and wherein step (c) further comprises the step of:

(i) determining at least one user characteristic of the user, such that the added content is targeted to said at least one user.

3. The method of claim 2, wherein the GUI is a Web browser, the general content is a Web page and the general server is a Web server.

4. The method of claim 3, wherein the added content is an advertisement.

5. The method of claim 4, wherein said advertisement includes at least one type of content selected from the group consisting of an image, a text, an animation, a video clip and a sound.

6. The method of claim 4, wherein step (f) further comprises the steps of:

(i) displaying the added content on the GUI; and

(ii) displaying the general content on the GUI, such that the added content is displayed substantially before the general content.

7. The method of claim 6, wherein the step of displaying the general content on the GUI further includes the step of removing the added content from being displayed on the GUI substantially before the general content is displayed.

8. The method of claim 7, wherein said at least one user characteristic is selected from the group consisting of demographic information and geographic information about the user.

9. The method of claim 8, wherein said at least one user characteristic is determined according to said Web page being requested.

10. The method of claim 2, wherein the general server and the GUI are connected through an intranet of a corporation, and the user is an employee of said corporation, such that the added content is targeted to said employee.

11. The method of claim 1, wherein the added content features information of a type selected from the group consisting of customer support, news, entertainment and instruction.

12. The method of claim 11, wherein the added content features a type of data selected from the group consisting of an audio sample, a graphic image, a text message, a software object and a video clip.

13. The method of claim 1, wherein step (d) further comprises the steps of:

(i) detecting a period of time when the client is receptive to receiving data; and

(ii) sending the added content substantially only during said period of time.

14. A method for displaying an added content to a Web page on a Web browser of a user, the Web page being served by a remote Web server, the method comprising the

steps of:

(a) providing an added content server for serving the added content;

(b) receiving a request for the Web page from the Web browser;

(c) transmitting said request to the remote Web server;

(d) receiving the Web page from the remote Web server;

(e) selecting the added content according to at least one user characteristic by said added content server, such that the added content is targeted to the user;

(f) adding the added content to the Web page to form a content-added Web page by said added content server;

(g) sending said content-added Web page from said added content server to the Web browser; and

(h) displaying said content-added Web page by the Web browser.

15. A system for delivering a content to a Web browser of a computer user when the user requests a Web page, the system comprising:

(a) a content distribution center for storing, distributing and managing the content;

(b) an content enhancement module for receiving the content from said content distribution center and for delivering the content to the Web browser upon receiving the request for the Web page, such that the content is specifically targeted to the computer user; and

(c) a service provider for providing a connection between the Web browser and said content enhancement module.

16. The system of claim 15, further comprising:

(d) a remote Web server for serving the Web page to said content enhancement module upon receiving a Web page request from said content enhancement module;

such that said content enhancement module delivers the content to the Web browser substantially before serving the Web page to the Web browser, the content being delivered in a form of a display Web page.

17. The system of claim 15, further comprising:

(d) a remote Web server for serving the Web page to said content enhancement module upon receiving a Web page request from said content enhancement module;

such that said content enhancement module delivers the content to the Web browser substantially simultaneously with the Web page, such that the Web page is a content-added Web page.

18. The system of claim 17, wherein said content enhancement module further comprises:

(i) a proxy server for serving the content to the Web browser, said proxy server receiving the content from said content distribution center.

19. The system of claim 18, further comprising:

(d) a content management system for managing the content and for determining the content for delivering to the Web browser from said content distribution center.

20. The system of claim 19, wherein said content enhancement module further comprises:

(ii) a Core module for receiving the request from the Web browser;

(iii) a Promo module for requesting the content from said content management system according to at least one request factor; and

(iv) a Brain module for receiving the request from said Core module and for passing the request to said Promo module, and for determining said at least one request factor.

21. The system of claim 20, wherein said at least one request factor is at least partially determined according to the Web page.

22. The system of claim 21, wherein said content distribution center further comprises:

(i) an URL database for storing at least one URL of at least one Web page; and

(ii) an URL classifier for classifying said at least one URL according to

information presented in said at least one Web page.

23. The system of claim 22, wherein said Brain module requests a classification of the Web page from said URL classifier, such that said at least one request factor is at least partially determined according to said classification.

24. The system of claim 23, wherein said content distribution center further comprises:

(iii) a user database for storing user information, such that the content is selected by said Promo module according to said user information.

25. The system of claim 24, wherein the content is an advertisement.

26. The system of claim 25, wherein said user information is selected from the group consisting of demographic and geographic information.

27. The system of claim 26, wherein the Web browser, said remote Web server, said proxy server and said Promo module communicate according to the HTTP (HyperText Transfer Protocol) protocol, and wherein the content is delivered in a form of a display Web page, the system further comprising:

(e) a framework for the display Web page for holding said advertisement, said framework being retrieved by said Promo module, and said framework determining a display of the content.

28. The system of claim 27, wherein said display is determined according to a criterion selected from the group consisting of a length of time for said display and a location on the Web browser of said display.

29. The system of claim 28, wherein said length of time for said display is a fixed period of time.

30. The system of claim 28, wherein said length of time for said display is determined according to an action of the computer user.

31. The system of claim 28, wherein said advertisement is displayed substantially only until the requested Web page is loaded by the Web browser.

32. The system of claim 28, wherein said location of said display is fixed.

33. The system of claim 28, wherein said location of said display is substantially continuously altered, such that said advertisement appears to move across a display of the Web browser.

34. The system of claim 27, wherein said framework for the display Web page features two layers, a first layer including the requested Web page and a second layer including the requested Web page and said advertisement.

35. The system of claim 27, wherein the Web browser further comprises a cache for storing a stored advertisement, said Promo module sending said stored advertisement to said cache of the Web browser substantially before the Web browser requests the requested Web page, such that the Web browser rapidly displays said display Web page upon receipt of said framework.

36. The system of claim 35, wherein said Promo module sends said stored advertisement in a plurality of portions to said cache of the Web browser, such that each of said plurality of portions is sent substantially separately to said cache.

37. The system of claim 36, wherein a size of each of said plurality of portions is adjusted according to a period of time available for sending each of said plurality of portions to said cache, such that a performance of the Web browser is not altered by receiving each of said plurality of portions.

38. The system of claim 25, wherein said service provider is an ISP (Internet Service Provider).

39. The system of claim 25, wherein said service provider is a corporation and the

computer user is an employee of said corporation.

40. The system of claim 19, wherein said content enhancement module further comprises:

(ii) a Core module for receiving the request from the Web browser; and

(iii) a Meter module for requesting the Web page from said remote Web page server, and for determining a cost of receiving the Web page from said remote Web page server.

41. The system of claim 40, wherein said service provider is an ISP (Internet Service Provider) and said ISP provider charges the computer user for said cost.

42. The system of claim 15, further comprising:

(d) a client for being operated by the Web browser;

(e) a remote Web server for serving the Web page to said content enhancement module upon receiving a Web page request from said content enhancement module or alternatively directly to the Web browser upon receiving a Web page request from the Web browser, said client determining whether said content enhancement module or alternatively the Web browser receives the content and the Web page.

43. The system of claim 42, wherein said client contacts said content enhancement module for said content enhancement module to receive the Web page.

44. The system of claim 43, wherein said client contacts said content enhancement module at predetermined intervals.

45. The system of claim 43, wherein said client contacts said content enhancement module at dynamically determined intervals, said intervals being determined according to a level of traffic to the Web browser.

46. The system of claim 15, further comprising:

(d) a remote Web server for serving the Web page to said content enhancement

module upon receiving a Web page request from said content enhancement module or alternatively directly to the Web browser upon receiving a Web page request from the Web browser, said content enhancement module determining whether said content enhancement module or alternatively the Web browser receives the content and the Web page.

47. The system of claim 46, wherein said content enhancement module receives the Web page at predetermined intervals.

48. The system of claim 46, wherein said content enhancement module receives the Web page at dynamically determined intervals, said intervals being determined according to a level of traffic to the Web browser.

49. A system for delivering a content to a Web browser of a user computer when a user requests a Web page, the system comprising:

(a) a content distribution center for storing, distributing and managing the content;

(b) an content enhancement module for receiving the content from said content distribution center;

(c) a client module for requesting the content from one of said content enhancement module or said content distribution center, and for providing the content to the Web browser, such that the content is specifically targeted to the computer user; and

(d) a service provider for providing a connection between said client module and said content enhancement module.

50. The system of claim 49, wherein said client module requests the content from said content enhancement module.

51. The system of claim 50, wherein said client module is installed by said content enhancement module without any intervention by the user.

52. The system of claim 51, wherein said client module operates in a manner

which is substantially transparent to the user.

53. The system of claim 52, wherein said client module is installed temporarily by said content enhancement module, thereby obviating the need for storing said client module on said user computer.

54. The system of claim 53, further comprising:

(e) a Web server for serving the Web page, said Web server communicating with the Web browser through said service provider.

55. A method for transparently installing a client module on a Web browser of a user computer, the Web browser being operated by a user computer, the method comprising the steps of:

(a) starting to operate the Web browser by the user computer;

(b) detecting the start of operation of the Web browser; and

(c) installing the client module on the user computer when the user computer is connected to the Internet substantially without any intervention by the user, such that said client module operates in a manner which is substantially transparent to the user.

56. The method of claim 55, wherein step (a) further comprises the step of connecting the user computer to the Internet by a non-permanent connection before the start of operation of the Web browser, such that the user computer is alternately connected to, and disconnected from, the Internet.

57. The method of claim 55, further comprising the step of providing a content enhancement module for installing the client module on the user computer, said content enhancement module detecting when the user computer is connected to the Internet.

58. The method of claim 57, wherein step (b) further comprises the step of detecting if the client module is already installed on the user computer, such that step (c) is only performed if the client module is already installed on the user computer.

59. The method of claim 58, wherein step (c) is performed by installing the client module on a non-permanent memory storage media of the user computer.

60. The method of claim 59, wherein step (c) is performed by installing the client module on a RAM (random access memory) of the user computer.

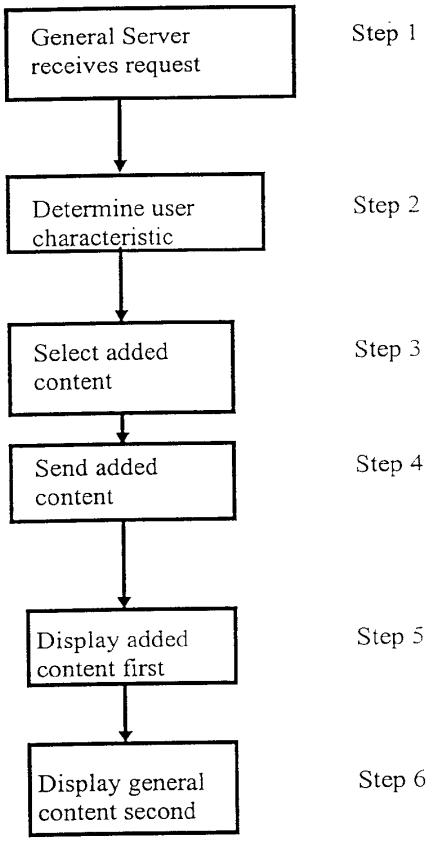
61. The method of claim 60, further comprising the steps of:

(c) requesting a Web page by the Web browser;

(d) requesting an additional content by the client module from said content enhancement module; and

(e) delivering the content to the Web browser by the client module.

Figure 1


General Server receives request
Step 1
Determine user characteristic
Step 2
Select added content
Step 3
Send added content
Step 4
Display added content first
Step 5
Display general content second
Step 6

SUBSTITUTE SHEET (RULE 26)

FIG. 2

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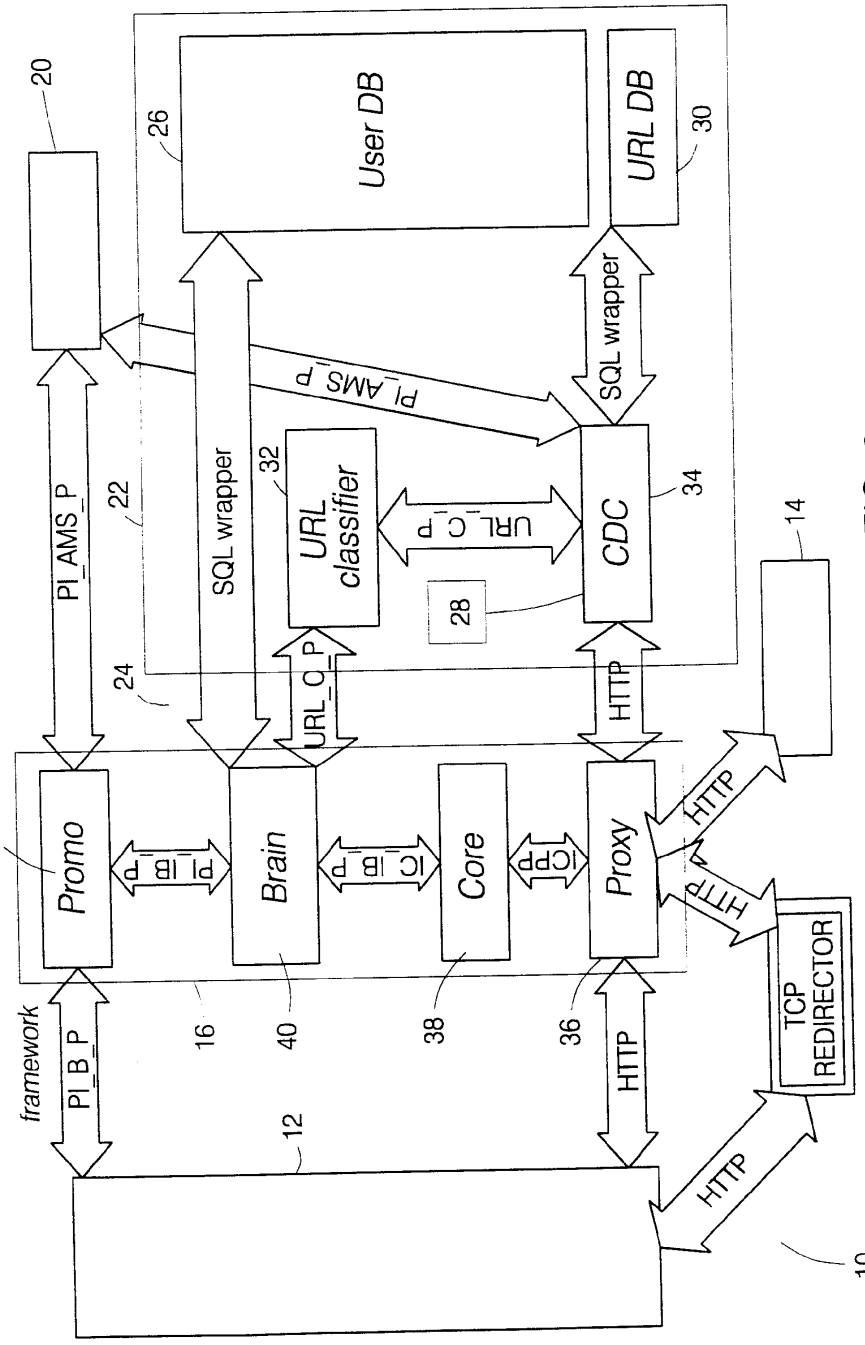


FIG. 3

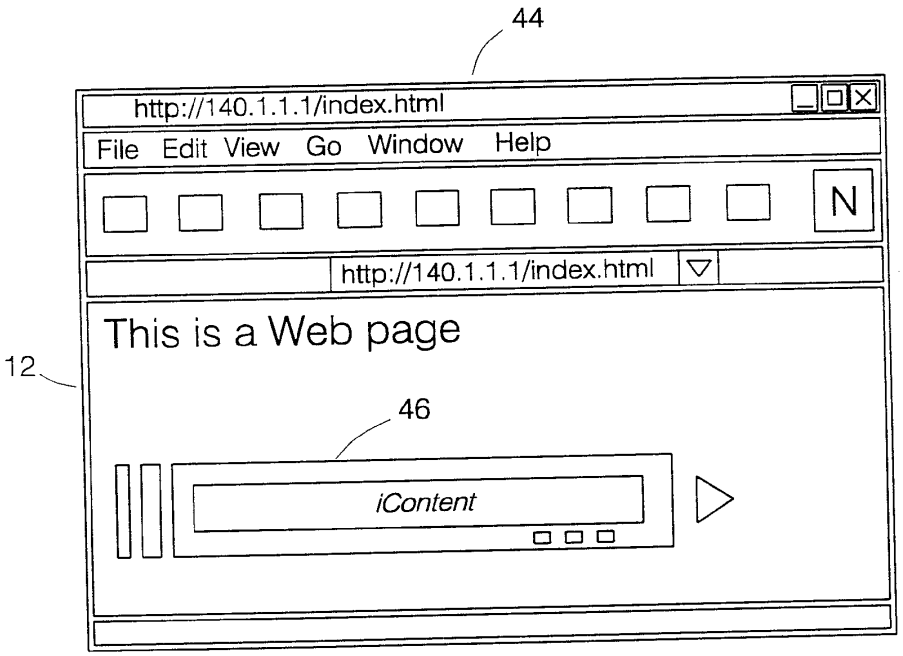
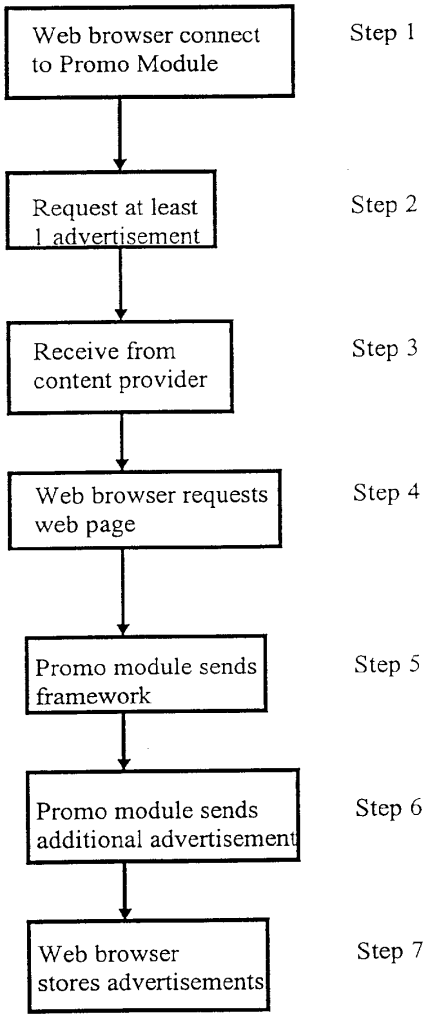


FIG. 4

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Figure 5


Web browser connect to Promo Module
Step 1
Request at least 1 advertisement
Step 2
Receive from content provider
Step 3
Web browser requests web page
Step 4
Promo module sends framework
Step 5
Promo module sends additional advertisement
Step 6
Web browser stores advertisements
Step 7

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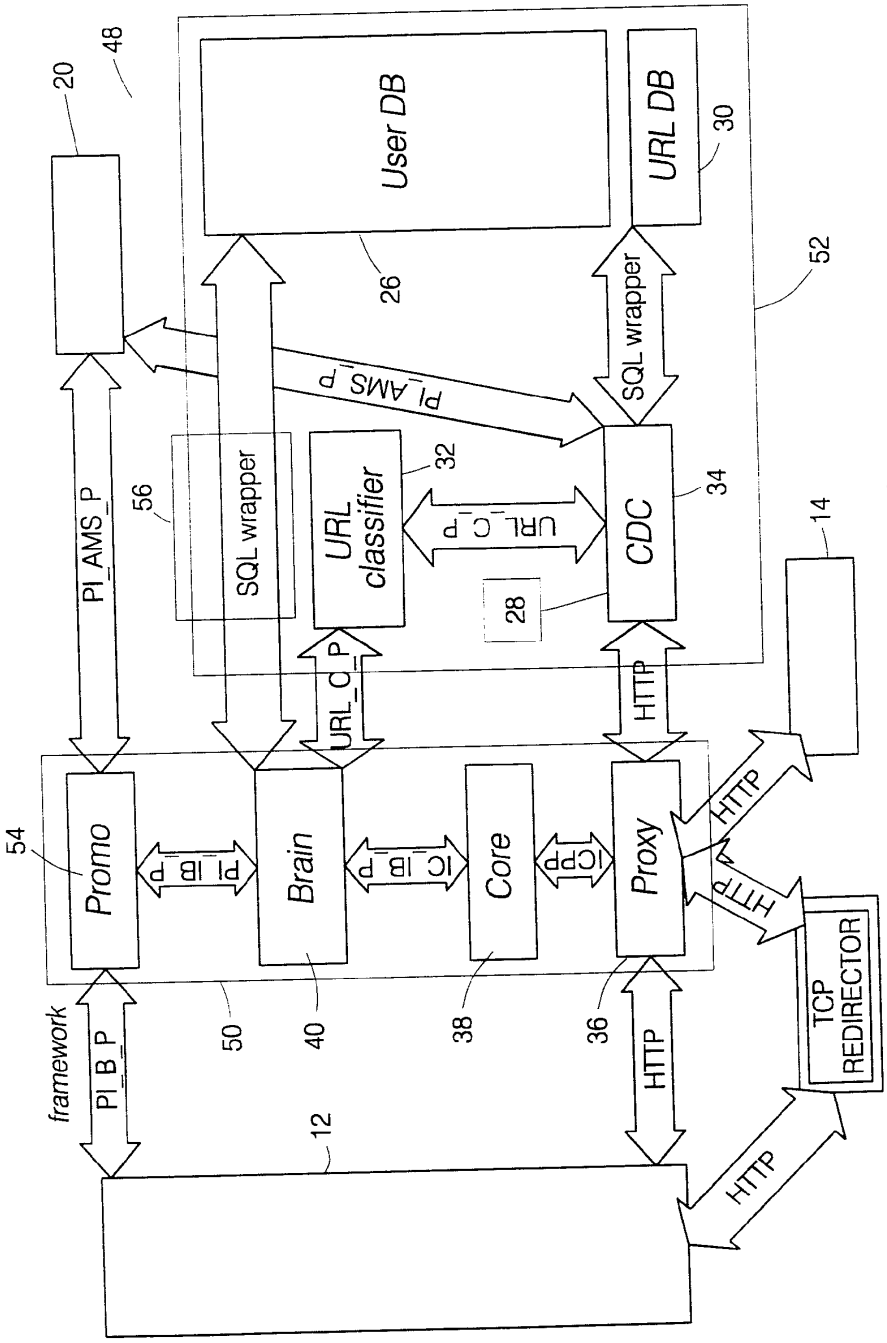


FIG. 6

Figure 7

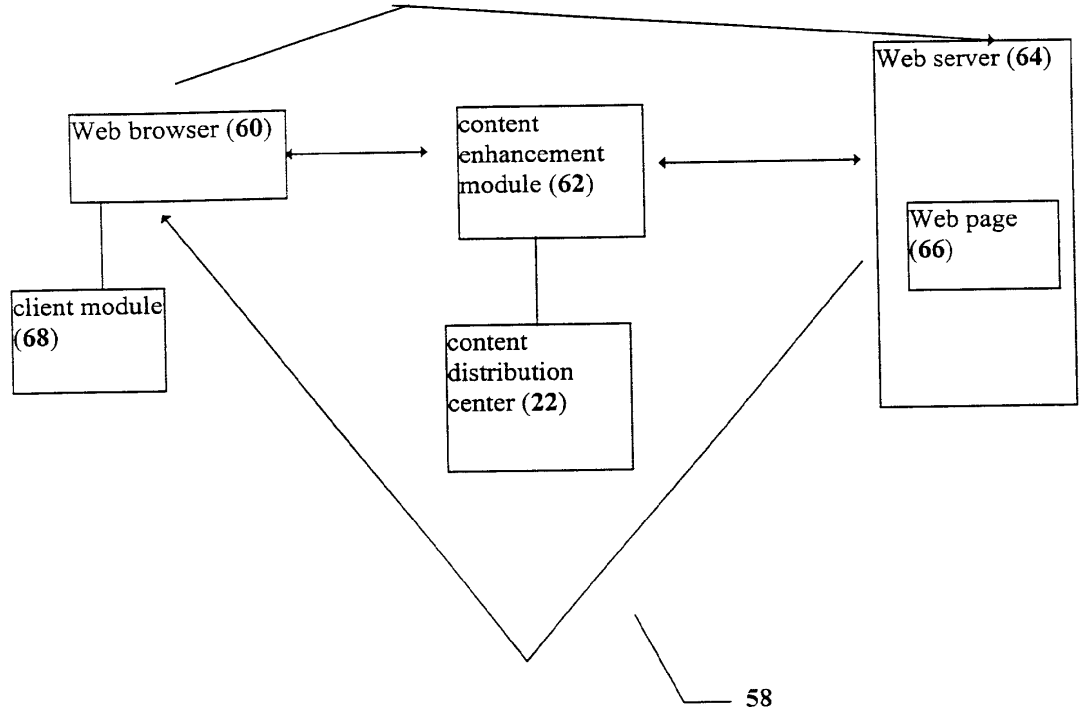
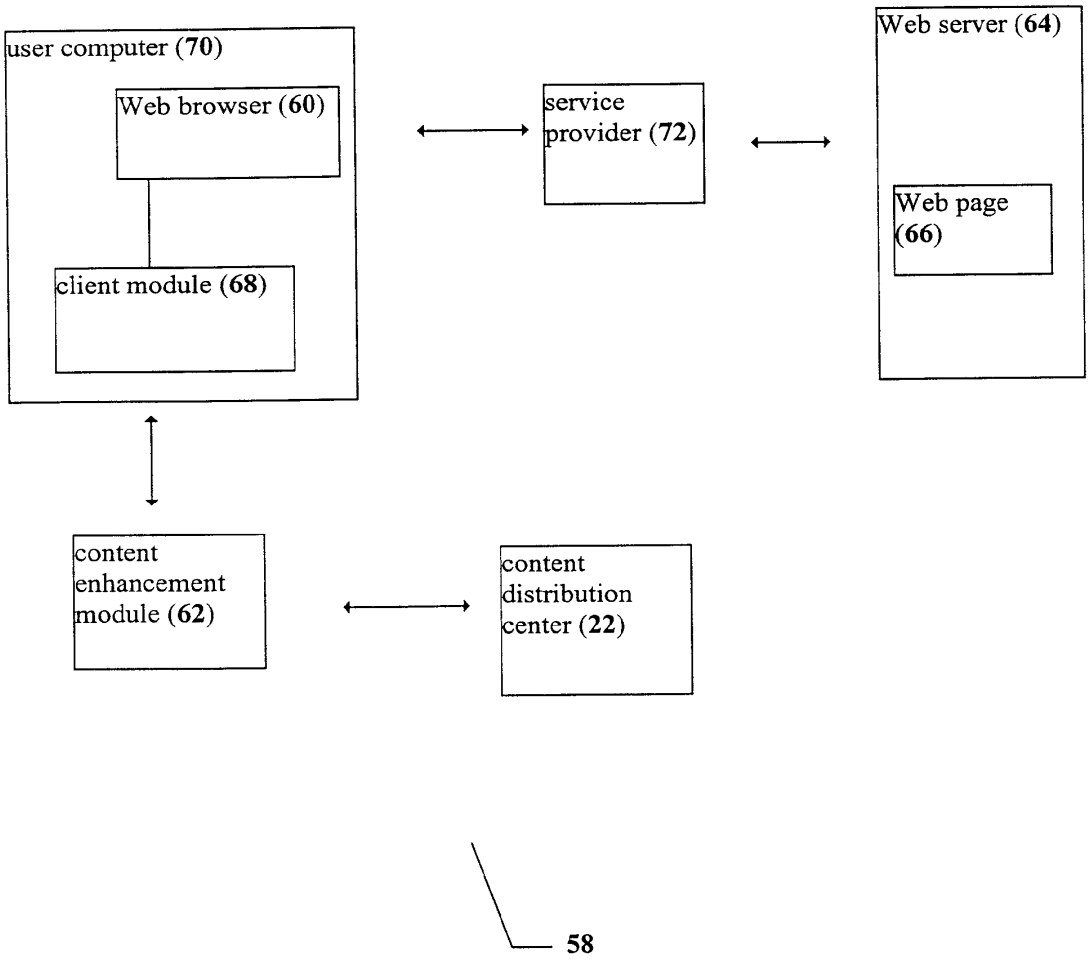

Web server (64)
Web browser (60)
content enhancement module (62)
Web page (66)
client module (68)
content distribution center (22)
58

Figure 8


user computer (70)
Web browser (60)
client module (68)
service provider (72)
Web server (64)
Web page (66)
content enhancement module (62)
content distribution center (22)
58

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IL99/00237

A. CLASSIFICATION OF SUBJECT MATTER
IPC(6) :G06F 17/31
US CL :707/ 1, 6, 10, 102, 104
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 707/ 1, 6, 10, 102, 104

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Extra Sheet.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P ----- Y,P	US 5,778,367 A (WESINGER, JR. ET AL.) 07 JULY 1998 (07/06/98), See whole document	1, 14, 15, 49 ------- 2-13, 16-48, 50-60
Y, P	US 5,809,242 A (SHAW ET AL.) 15 SEPTEMBER 1998 (15/09/98), See whole document	1-60
A,P	US 5,799,151 A (HOFFER) 25 AUGUST 1998 (25/08/98), See whole document.	1-60

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search	Date of mailing of the international search report
01 SEPTEMBER 1999	30 September 1999 (30.09.99)
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer SANJIV S James R. Matthews Telephone No. (703) 305-8355

Form PCT/ISA/210 (second sheet)(July 1992)★

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/IL99/00237

B. FIELDS SEARCHED
Electronic data bases consulted (Name of data base and where practicable terms used):

U.S. PTO APS

Search terms: ISP or (Internet Service Provider), advertisement, WWW or (World wide Web)

Form PCT/ISA/210 (extra sheet)(July 1992)*

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
26 July 2001 (26.07.2001)

PCT

(10) International Publication Number
WO 01/54034 A1

(51) International Patent Classification[7]: G06F 17/60

(21) International Application Number: PCT/US01/01862

(22) International Filing Date: 19 January 2001 (19.01.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/177,451 21 January 2000 (21.01.2000) US
09/626,534 27 July 2000 (27.07.2000) US

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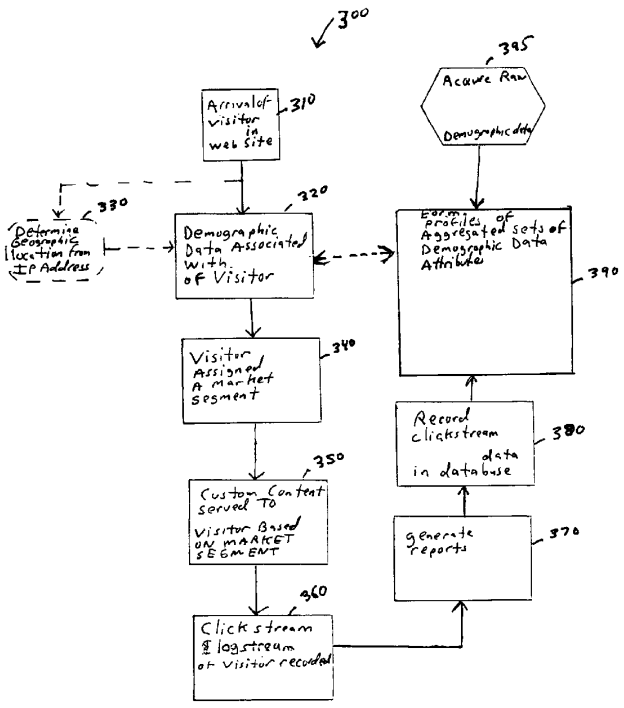
(74) Agents: VAN GIESON, Edward, A. et al.; Fenwick & West LLP, Two Palo Alto Square, Palo Alto, CA 94306 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian

[Continued on next page]

(54) Title: ELECTRONIC COMMERCE SERVICES



(57) Abstract: Custom content is provided to the visitor of a web-site by assigning a market segment (340) to the visitor and delivering content based upon the market segment (350). The market segment is selected based upon demographic data associated with the visitor (320). In a preferred embodiment, cookie data from multiple vendors is aggregated to form a database for forming visitor profiles of a substantial fraction of potential visitors. A default market segment is preferably reserved for visitors for whom limited demographic data is available. The demographic data may also include geographic data associated with the visitor's IP address (330). In one embodiment, click stream data, such as purchase instance data, is recorded (360) along with the visitor's profile, thereby forming an augmented profile for later analysis of conversion rates and consumer behavior. In a preferred embodiment the market segment is determined by a central service site and communicated to the client servers that then serve the custom content via HTTP commands.

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patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*

ELECTRONIC COMMERCE SERVICES

RELATED APPLICATIONS
BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates generally to an on-line e-commerce system, and more particularly, to an electronic commerce service for providing custom content to the visitor of a web-site.

2. Description Of Background Art

Electronic commerce, also known as "e-commerce" is a form of commerce that utilizes the World Wide Web (WWW) to market goods to consumers and businesses. An e-commerce web-site may contain a wide variety of information on the goods that are offered for sale via the web-site. This information may be in the form of text, pictures, interactive demonstrations, and audio messages. Recently, the technology to provide video-files, so-called "streaming media," permits a web-site to include video messages. Many e-commerce sites offer for sale a wide variety of different types, styles, and models of goods. Consequently, an e-commerce web-site also typically includes a significant number of web pages, each of which is often packed with descriptions of the different products or pages containing links to the products. An e-commerce site may also provide other types of information used by consumers to make buying decisions, such as information on warranties, shipment, or customer support.

E-commerce web-sites may use a variety of techniques to customize the shopping experience for repeat visitors to the site. As shown in FIG. 1, when a repeat visitor logs onto an e-commerce site 110 the web-site may examine a data log of the visitor's previous visits 120. The data log may include a summary of which pages of the web-site that the visitor previously viewed, what items they purchased on previous visits, or registration data voluntarily supplied by the visitor on previous visits. The site then provides customized content to the repeat visitor 130 directed towards the visitor's interests. For example, if the visitor previously bought women's clothes via the web-site, the web-site may serve web pages having a large fraction of women's clothing in

the home-page of the web-site. As another example, if the visitor previously bought luxury goods, the web-site may serve web pages to the visitor that have a large fraction of luxury goods on the home page.

Unfortunately there has been heretofore no satisfactory solution to providing compelling content to first time visitors. Designing an e-commerce web site that appeals to a wide cross-section of first-time visitors poses several special marketing problems for an e-commerce company. It is difficult to design a single web site that fulfills all of the needs of the majority of first-time visitors. First, the language, style, format, and graphics of the web-site should be appealing to a broad variety of different potential consumers throughout the world. Second, the site should assist consumers to find items of interest to the user. Some users will leave a site without buying anything if they do not find items of interest in a short length of time. Finally, a web-site preferably helps price-sensitive consumers to locate bargains. Some consumers use an on-line store for the convenience of being able to quickly find and purchase an item without having to go to a conventional store. However, other consumers are price sensitive and use an e-commerce site to attempt to find bargains. It is difficult to design a single home page that adequately addresses these conflicting tastes and preferences in a satisfactory manner.

The fraction of first-time visitors to a web site who make a purchase is often called the "conversion rate" of a web-site. Conversion rates are generally low. Typically less than 5% of first-time visitors to an e-commerce web-site actually make an on-line purchase. The low conversion rates encountered in the e-commerce industry force many e-commerce companies to spend a large fraction of their operating budget on advertising. Consequently, conversion rates are a major concern in the e-commerce industry.

Providing custom content addressed to the needs and interests of first time visitors is likely to increase conversion rates. However, conventional methods for customizing content for first-time visitors have several drawbacks that have prevented their widespread use. As shown in FIG. 2, one prior art approach to customizing content for first time visitors logging into a web site 210 is to request a first-time visitor to fill out a registration card or other profile data 220 when they log onto the site. The registration card that the visitor inputs includes data that can be used to determine the user's preferences. After the visitor submits registration data 230, the site can then

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provide customized content to the visitor 240 based upon the registration data. However, requesting a visitor to submit detailed registration data before displaying a custom home page to the visitor imposes a significant burden that may scare away first-time visitors from the web-site without looking at the home page. Consequently, e-commerce sites rarely utilize the registration method shown in FIG. 2, although some e-commerce sites request that a visitor input their geographic location or language preference (e.g., English, French, or Spanish) after the visitor has logged onto the home page of the web-site.

Another variation of the conventional registration approach is to use personally identifiable information (PII) of the visitor in order to lookup consumer profile information (e.g., previous purchasing behavior or credit history) for the visitor from another database. For example, some consumer information services collect data on the purchasing and/or credit history of individual consumers that is potentially accessible if the name, address, phone number or other personally identifiable information of the visitor is known. This approach obviates the need for the visitor to submit detailed registration data. However, this approach has several drawbacks. First, a large percentage of visitors are unwilling to voluntarily submit personally identifiable information prior to entering a web-site. PII can be obtained without the knowledge of the visitor. For example, PII databases can be acquired by collecting PII via cookies from a collection of affiliated web-sites, i.e., by collecting PII every time visitors access one of the affiliated web-sites. However, the e-commerce industry is under increasing pressure to minimize the quantity of PII that it acquires, uses, stores, or distributes downstream to others. Finally, the database of a conventional consumer information service typically has many limitations. For example the databases of conventional consumer information services often contain records corresponding to only a fraction of all potential computer users and the databases are not structured to provide the type of information required to improve conversion rates for e-commerce applications.

What is desired is a new system and method for customizing the content delivered to visitors to a web-site who have not previously purchased goods at the site and which does not require collecting registration data or personally identifiable information.

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SUMMARY OF THE INVENTION

Generally speaking, the present invention includes a system and method to permit a demographic market segment to be assigned to the visitor of a web-site even if the visitor has not previously submitted registration information or purchased items at the web-site. The market segment assigned to the visitor can then be used to select a category of custom content to be delivered to the browser of the visitor that is likely to appeal to the visitor, based on the visitor's physical, socio-economic, geographic, behavioral, lifestyle, or other demographic attributes. One embodiment of the present invention includes a capability to record click stream data for the visitor browsing the custom content, which allows calculation of conversion rates in addition to permitting the formation of enhanced profiles of visitors including both demographic data and purchase instance data.

One aspect of the present invention is a method of providing custom content from a web server, the method including the steps of: receiving an identification code residing on the computer of a visitor to a web-site and delivering custom content to the visitor as a function of a demographic profile of the visitor associated with the identification code. Another aspect of the present invention is a method of determining an appropriate market segment including the steps of: forming at least two market segments having different demographic attributes; receiving an identification code residing on the visitor's computer; accessing a database of demographic records to find at least one demographic profile for the identification code; and selecting one of the market segments for the visitor as a function of said at least one demographic profile. In one embodiment, click stream data is recorded as the visitor browses custom content served by a client server as a function of the selected market segment.

Another aspect of the present invention is a system to determine an appropriate market segment for a visitor to a web site of a client server, the system generally comprising: a host server coupled to the client server; a demographic database coupled to the host server, the demographic database including a plurality of demographic profiles, each demographic profile having at least one set of demographic attributes for each identifiable browser in the demographic database; a marketing segment database coupled to the host server storing at least two preselected demographic market segments; and a decision engine coupled to the host server, the decision engine receiving an identification code stored in the visitor's computer and selecting one of the

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at least two market segments as a function of the attributes of the visitor's demographic profile. In a preferred embodiment, a visitor's metrics module is used to record click stream data as the visitor browses the custom content served by the client server as a function of the selected market segment.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a flow chart of a prior art e-commerce system for providing custom content to a repeat visitor to a web-site.

Figure 2 is a flow chart of a prior art e-commerce system for providing custom content to a visitor who submits a registration form.

Figure 3 is a flow chart showing an embodiment of a method of serving custom content in accordance with the present invention.

Figure 4A is an illustrative diagram of a market segmentation hierarchy in accordance with the present invention.

Figure 4B is a block diagram illustrating how cookie data from multiple sources may be combined to form improved profile data in accordance with the present invention.

Figure 5A is a flow chart showing an embodiment of a method of serving custom content in accordance with the present invention.

Figure 5B is a flow chart showing an embodiment of a method of serving custom content in accordance with the present invention.

Figure 6 is a block diagram illustrating a method of recording click-stream data to form profiles containing both demographic data and click-stream data in accordance with the present invention.

Figure 7 is a block diagram of an apparatus in accordance with the present invention.

Figure 8 is an overview of the components that compose the host web server.

Figure 9 is a diagram of a preferred apparatus in accordance with the present invention.

Figure 10 is an illustration showing an embodiment having offline data processing in accordance with the present invention.

Figure 11 is an illustrative diagram of a hierarchy of a test and control system for optimizing market segment models and content in accordance with the present invention.

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Figure 12A is an illustration of the message flows between the sites when a profile vendor server is used.

Figure 12B is an illustration of the message flows between the sites when a profile vendor server is not used.

The figures depict preferred embodiments of the present invention for purposes of illustration only. One of skill in the art will readily recognize from the following discussion that alternative embodiments of the structures and methods disclosed herein may be employed without departing from the principles of the claimed invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS OF THE INVENTION

FIG. 3 is a block diagram illustrating an embodiment 300 of the method of the present invention that facilitates providing custom content to a visitor to a web-site without requiring personally identifiable information or registration data. As shown in FIG. 3, a visitor (such as a first-time visitor) accesses a web-site 310, such as by entering the generic Uniform Resource Locator (URL) of the site in their browser. A demographic data profile is associated with a visitor 320. As described below in more detail, in preferred embodiments the demographic data profile is a profile having an aggregated set of data attributes 390 from a plurality of sources 395 of demographic data. The demographic profile may also include the geographic location 330 of the visitor.

The term "demographic data" has the common definition in the business world as the characteristics of human populations and population segments used to identify consumer markets. The common definition of demographic data typically includes physical and socio-economic attributes of individuals, such as age, gender, household income, and educational level. However, as used in this application demographic data may also include the geographic location of the visitor. Additionally, as used in this application demographic data may also include behavioral and lifestyle attributes, such an individual's interest in specific hobbies or activities, such as sports or clothes.

In a preferred embodiment the demographic profile associated with the visitor is based upon the Internet Protocol (IP) address of the visitor and cookie profile data obtained from a plurality of commercial vendors having specific cookie identification

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(ID) files residing on the visitor's computer. The IP address is the network address of an Internet Service Provider (ISP) to which data is delivered to the user during an Internet session. As described below in more detail, some types of geographic data may be inferred from the IP address of the user. Many ISPs reuse the same IP address for subsequent users, i.e., an IP address defines a unique computer user only during the user's Internet session. Consequently, in the preferred embodiment cookie identification (ID) data residing on the visitor's computer is read to uniquely identify (ID) a visitor so that demographic profile data from a plurality of commercial vendors may be associated with the visitor to form an improved set of demographic attributes for the visitor.

The visitor is then assigned a market segment 340. There are at least two market segments. One or more default market segments are also preferably included for those visitors for whom only limited demographic data is available. As used in this application, a market segment is a demographic segment believed to have similar tastes, preferences, interests, or lifestyle such that individuals in the market segment have a propensity to have similar opinions and tend to make similar decisions regarding content displayed on a web-site. Illustrative examples of variables useful for forming an e-commerce market segment are the estimated age, gender, income, marital status, children living at home, education, geographic location (e.g., Far West, Northeast, Midwest, or Deep South), and behavioral and lifestyle attributes of the first-time visitor.

The market segments are selected to correspond to likely patterns of consumer interests or behavior. For example, in the clothing industry it is known that tastes and preferences for clothing tend to follow strong age preferences. Additionally, consumer purchasing decisions for clothing also tend to strongly depend upon income, marital status, and gender. Additionally, as used in this application a market segment may include attributes of the visitor's browser type and line speed, since these attributes may correlate with other demographic variables such as the expectations and tastes of a demographic segment for the manner in which content is delivered. For example, it may be relevant in forming a market segment for teenagers that the visitor has a broadband connection, since this permits high quality streaming video to be served on a home page and because high quality streaming video may appeal to the market segment composed of teenagers.

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A variety of different approaches can be used in regards to determining how to select appropriate market segments for a visitor as a function of the set of demographic attributes of the profile of the visitor. As one example, a pre-computed segmentation model may be implemented as a simple lookup of a demographic vendor cookie value. This model requires a single database table containing two columns, the demographic attributes for the cookie value associated with the visitor and the segmentation decision. Another model is based upon a rule set. In a preferred embodiment, the rule-based model defines a segmentation that is both complete and unique (each user satisfies one and only one rule). The database table contains one row for each rule and the select statement fetches the row corresponding to the user properties. For example, a rule set of {if sex=M then decision=A; if sex=F then decision=B; if sex=? then decision=A} could be implemented with a table T(sex, decision) with rows {{M,A}, {F,B}, {?,A}} and with select statement "select decision from T where sex = ?". Still another model type utilizes a decision tree. The decision tree model defines a decision tree that is executed online to make a decision. Each node in the tree is an expression that evaluates to N possible values; a node with N possible values has N children. Each child is either another node or a leaf. A leaf specifies a decision. It will be understood that is all of these models that geographic data associated with the IP address of the visitor may be used as an additional variable.

The market segment may be used to determine a demographic audience for providing custom content. The market segment may be output as a separate output signal but is preferably used as part of a larger system for providing custom content to a visitor based upon the demographic attributes of the visitor. FIG. 4A is a diagram of an illustrative of a market segmentation hierarchy for a clothing site. As can be seen in FIG. 4A, a small number of demographic variables permits many different market segments to be selected. In this illustrative example, the market segments are based upon observations that women tend to be interested in different clothes then men and that marital status and income also influence tastes, preferences, and interests. In this illustrative example, the visitors are divided into ten market segments, including market segments for which one or more attributes, such as age, is unknown. The market segments may be derived from analysis of the consumer buying patterns in related industries or they may be based upon the experience and intuition of industry experts. Additionally, the market segments may be empirically varied to assess their efficacy.

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Referring back again to FIG. 3, custom content is served 350 to a first time visitor based upon the market segment assigned to the visitor, e.g., each market segment may be shown a different home page that displays different goods or which presents the goods in a different manner. The custom content served to each market segment may be regularly or dynamically updated to take into account bargain offers, seasonal specials, and new product offerings. Any known method to customize content for an intended demographic audience may be used, such as test market studies and market psychology analysis. For examples, an on-line shoe store may show test content of several different home pages to a test audience in order to determine the content to be delivered to different market segments.

In a preferred embodiment the click-stream data of the visitor is then recorded 360 in a database. The click-stream data for an e-commerce site preferably includes purchase instance data, i.e., a decision to make a purchase, since this allows conversion rates to be calculated for first time visitors. As described below in more detail, the click-stream and purchase instance data of a first time visitor assists in forming relevant market segments and in determining the content best suited for a particular market segment. In a preferred embodiment reports are generated 370 from the click-stream data for each market segment to provide empirical data on the conversion rate of each market segment. The purchase instance and click-stream data are preferably recorded 380 in database 390 for future analysis.

First time visitors who for which a profile 390 cannot be formed from raw demographic data 395 are assigned a default value. In one embodiment, the default values are the same for all geographic regions. In another embodiment, the default value is particular to a given geographic region such that geographic data 330 is used to determine the default content served to the first-time visitor to the web-site.

The demographic profiles 390 are preferably formed by acquiring raw demographic data profiles from at least two available suppliers of demographic data 395. This permits the profiles that are formed to potentially include a set of aggregated demographic data attributes. Techniques to select a set of data attributes for a visitor from two or more sources of profile data are described below in more detail. Each supplier of raw demographic data potentially has a database entry containing demographic profile data (commonly known as "cookie data") for the visitor indexed by a cookie ID code residing on the visitor's computer. This data may be acquired from a

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vendor as a set of demographic attributes or, in some cases, as a demographic profile key (e.g., one or more codes that may be used to lookup the demographic attributes in a table of attributes). As shown in FIG. 4B and as described below in more detail, in a preferred embodiment the cookie data of multiple vendors is preferably used because it facilitates obtaining high quality demographic profile data for a large number of Internet users. A profile formed by analyzing the cookie data for a visitor is preferably stored in database 390 along with geographic data 330 and click-stream data 380 for each visitor who logs onto the site. A persistent cookie may also be written in the visitor's computer to facilitate identifying the visitor and accessing profile data collected for the visitor. The profile of each visitor is preferably cached in case the visitor returns to the site, thus reducing or eliminating the need to look up cookie data in subsequent visits to the same site or an affiliated site.

Commercially available sources of raw demographic data profiles vary widely in content and quality. Many commercially available sources of raw data include age, gender, and (in some cases) approximate income bracket. Other sources are more detailed. For example, some Internet service providers, such as IWON.com, require members to fill out registration questionnaires. This so-called "deep data" may include profiles having a wide variety of demographic data attributes for a significant number of computers. Some data sources also have profiles that include lifestyle attributes, such as interests in sports, cars, or travel. Consequently, the inventors of the present application have recognized that it is desirable to be to combine several available sources of demographic data to obtain a superset having greater coverage and more potential demographic data for an individual visitor than a single source. This capability is particularly important for e-commerce sites in which the tastes, preferences, and behavior of potential consumers is a rapidly varying function of one or more demographic attributes such that detailed demographic information is required to form meaningful market segments.

Table 1 is an illustrative table of some of the major providers of demographic data showing the inventors' rough estimates of the approximate number of demographic profiles in each source. There are presently estimated to be over 100 million users of the Internet. As can be seen in Table 1, no single source of raw demographic data covers all of the users of the Internet. Note that the largest vendors have records for less than about 60% of all Internet users. In order to be able to acquire demographic data for

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greater than about 60% of all possible Internet visitors data from several vendors must be combined.

Source Of Raw Demographic Data	Approximate Number Of Cookies, June 2000
24 x 7 Media	30 million
Alladvantage	4 Million
DoubleClick	40 million
Engage	50 million
Juno	3 million
Matchlogic/Excite	60 million
NetZero	4 million
Naviant	3 million

TABLE 1. Estimated number of data records from various commercial vendors.

Data depth is another problem with many commercially available sources of profile data. The largest vendors (in terms of numbers of cookies) typically provide the least amount of demographic information for each computer user having a cookie ID listed in their index. Unfortunately, detailed demographic information, such as detailed age or income estimates, may be required in some cases in order to be able to form effective market segments. For this case, data from several different sources is preferably combined to form a "super profile" for individual computer users by combining the data of different commercial vendors into one set of data attributes. The data records of many of the major providers overlap, i.e., have entries for the same user. Statistical methods are preferably implemented in a computer program to merge the attributes of the cookie data profiles of multiple data vendors into a superset. For example, suppose that there are a total of M different data sources and some of the attributes appear in a subset of the data sources, i.e., D'=[D1, D2, . . . Dm]. For each attribute, j, appearing in the databases of D', a combining function may be developed having the form f(D1,j; D2,j; . . . Dm,j) where Di,j is the value of attribute j in database i. Illustrative examples of combining functions include taking the value of the attribute with the highest confidence value, using a linear weighting function, or using a complex non-linear mapping function, such as one learned by a neural network. The most useful

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attributes can be determined using cross-correlation methods, such as by measuring the cross-correlation between attributes using conventional methods such as the standard linear correlation coefficient for numerical attributes or the chi-square measure for discrete-valued attributes.

In addition to a statistical merging process, a rule-based search of the cookie data from different vendors can be performed to form a set demographic attributes required to form a market segment for a visitor. For example, a first set of rules may be used to determine the order in which to look up cookie profile data from different data sources and a second set of rules may be used to determine how to make a decision regarding selecting data attributes from the different cookie profiles. For example, a primary data source may be selected based upon its high coverage. Secondary data sources may comprise data sources having a lower coverage or different degrees of demographic information. A first set of rules may, for example, be to search the primary data source and to use it if the visitor is listed in the primary database, with the secondary sources being searched for demographic attributes of interest according to an ordered ranking (e.g., highest coverage to lowest coverage) only if the data attribute is not found within previously searched vendor sources within a pre-defined range or confidence interval. The second set of rules may also include searching multiple secondary sources, if necessary, to find at least one source having a data attribute range (e.g., age range) within a pre-selected range. Additionally, the second set of rules may include limits on the total number of cookie sources searched before assigning a default value to a demographic attribute or may include a default rule, such as selecting the cookie source having data attributes closest to market segment ranges if no other cookie data can be found for the visitor. This approach has the advantage that it potentially the time spent searching and analyzing cookie data. For example if a single large source of cookie data (e.g., EXCITE) has sufficient demographic data available to assign a user a market segment there is no need to search for other cookies. However, if the visitor is not listed in the largest source(s) of cookie data or if the largest source(s) have insufficient data then the cookie data of other vendors may be analyzed and/or combined to form the data required to assign the visitor a market segment.

FIG. 4B is a block diagram illustrating how data from two or more different profiles 405, 410, 415 may be aggregated to form a single data set 420 for a visitor. In the illustrative example of FIG. 4, profile data on the age, income, and gender from

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three different sources 405, 410, 415 for a visitor is read using the cookie files on the visitor's computer. The data is statistically combined to form a single data set having greater detail than any one single source. This permits a data set 420 with greater demographic detail than any one of its sources. Thus, data set 420 has improved depth compared to a single data source 405, 410, 415. For example, the improved depth of data set 420 facilitates forming demographic market segments with comparatively narrow ranges of ages and incomes that correspond to consumer tastes, preferences, and interests for the goods sold by a particular e-commerce site.

While a single e-commerce site could practice the method of the present invention, there are significant economies of scale for a service provider to form demographic profiles 390 from a plurality of raw data sources 395. In preferred embodiments, shown in FIGS. 5A and 5B, a central service site is used to assign an appropriate market segment to a visitor visiting any e-commerce site. The embodiments shown in FIGS. 5A and 5B are similar except that the embodiment of FIG. 5A uses a market segment code to define a re-direct path back to the client server whereas the embodiment of FIG. 5B communicates a market segment code to the web server of the client via a server-server interaction in order to provide custom content. As shown in FIG. 5A, when a first time visitor logs onto a client web site 510, they are redirected to a service site 520. As described below in more detail, the redirection is preferably performed using a hypertext transfer protocol (HTTP) command path link.

After the initial request of the visitor is redirected to the service site, the service site associates demographic data with the visitor 530. This may include any cookie data that can be acquired by reading one or more cookie IDs previously stored on the visitor's computer and data that can be acquired by analyzing the IP address of the visitor. Additionally, any known method for determining the browser type and line speed may also be employed, since in some cases it is desirable to have capability to select content based upon the browser type and line speed of the visitor.

The service site uses a decision engine to assign the visitor a market segment 540 based upon the demographic profile of the visitor. Each client site serviced by the central service site is likely to have its own market segmentation model. Consequently, the central service site is preferably configured to determine the URL of the client site in order to assign a market segment appropriate for the particular client site. Techniques to determine the URL of a site originating a re-direct request are well-known in the art,

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with a preferred technique including passing a parameter indicative of the URL of the client site. The market segment of the visitor is then communicated to the client server, which in one embodiment is achieved by passing a parameter indicating the segment to be served. As illustrated in the embodiment of FIG. 5A, a market segment code defines a re-direct path back to the client server, as shown in step 550-A. In a preferred embodiment this is through a second HTTP command link forming a path link to one of a plurality of web page files within the client server, with the path link including a market segment code parameter for defining the re-direct path back to the market-specific web-page content in client server. In the embodiment of FIG. 5B, the market segment of the visitor is communicated to the client server as shown in step 550-B. The client server of the client web site then delivers custom content to the first time visitor 560 in accord with the assigned market segment. Click-stream data for the visitor is then preferably communicated back to the service site 570 for storage in the database of the service site. A cookie may also be recorded on the visitor's computer to facilitate recognizing the visitor in subsequent visits to the client web-site or other web-sites linked to the service site.

One advantage of a central service site 520 is that the cost of forming a high quality aggregated database of demographic data from a variety of sources is spread out over multiple client sites. Additionally, as indicated in FIG. 6, another benefit of a single service site is that it may store click-stream and purchase instance data for a large number of client sites. For example, the click-stream data from a clothing site, a booksite, and a sportsite may be stored in the database of a service site, as shown in FIG. 6. As an illustrative example, suppose that a woman in the age range of 18-30 years old with an income of $31,000 to $40,000 visited a sports site, a clothes site, and a book site. The click-stream data for the events may be recorded as part of a single profile in the database of the service site. Consequently, the general interests of individual visitor may be determined even if the visitor makes only a small number of purchases at each separate e-commerce site. This enhanced profile data may then be used as a source of information to customize content when the woman visits any site coupled to the service site. Additionally, the database of enhanced data profiles may be analyzed to refine market segment models for a particular e-commerce site. For example, the database of enhanced profiles can be used to find correlations in the

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interests of various market segments, to refine market segments, or to assist in customizing content for market segments.

FIG. 7 is a block diagram of a preferred embodiment 700 of an apparatus for performing the method of the present invention. A client web server 720 hosts an e-commerce site (not shown in FIG. 7). The visitor inserts the URL of the client web site in their web browser 705 and a conventional Internet data link 732 (e.g., a link made by a HTTP command path link) is made between browser 705 and client web server 720. The client web server 720 re-directs the initial request to the host web server 730 via a second data link 735, such as a link made by a HTTP redirect command path link. At least one cookie ID (e.g., data key) is received (read) from the user's browser 705 and is used to look up demographic and geographic information at the host web server 730 via the profile server 740. As shown in FIG. 7, in a preferred embodiment, a third data link 738, preferably also a HTTP command path link, is used to access the profile server 740 from browser 705. The profile server 740 may access one or more different sources of raw demographic data stored in the databases of commercial vendors via a network connection. Alternately, the profile server 740 may access an off-line database of demographic profiles. As described below in more detail, additional data path links (not shown in FIG. 7) permit information to be coupled from the profile server 740 to the decision engine (not shown in FIG. 7) of the host web server 730 for determining an appropriate market segment.

FIG. 8 is a detailed functional block diagram of a preferred embodiment 800 of an apparatus to practice the method of the present invention. The host web server includes a decision engine 805, a visitor metrics module 810, an event log module 815, a user logger module 820, an event logger module 825, a web server 830, a heartbeat daemon 835, a marketing profile database 845 and a customer profile database 850. It will be understood that the customer profile database 850 may be coupled to the profile server 740 for serving the profiles as required or to obtain profiles not already in profile database 850. The elements shown in FIG. 8 can be divided for the purposes of discussion into a front-end web server 860, a backend server 865, and an offline storage section 870. A host web server 860 may host visitors from multiple sites and experience bursts of high traffic. Consequently, the apparatus is preferably implemented using load balancing and fault tolerant techniques. A preferred fault tolerant apparatus include a fault-tolerant redundant architecture for both the front end 860 and backend 865.

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Referring again to the preferred embodiment of FIG. 8, the user links their computer to the web-site 890 of client web server 720. The user's computer is redirected to the host web server 830, preferably via a HTTP redirect command path link 895. Cookie ID data is read from the user's computer, as indicated by link 895. The host web server accesses demographic and geographic information stored in the customer profile database 845 or obtained as required via a profile server 740 so that a decision on the appropriate marketing segment stored in the marketing segments module 845 made by decision engine 805. In a preferred embodiment described below in more detail, the market segment assigned to the visitor by decision engine 805 is converted into a market segment code used to define a re-direct path back to the client server.

The user logger 820 accepts logging requests and records user metrics in the storage module 870. The user logger also can consolidate the user metric data. The event logger writes information, warning, error, and fatal events to an event log within the storage module. In response to fatal events, the event logger 825 can trigger alerts to warn an operator. The heartbeat daemon 835 periodically polls processes for status information and raises error events when a process doesn't respond or crosses error thresholds.

FIG. 8 also shows a segment ID server (SegID) 840 as an optional element (shown in phantom as an optional element) used in an alternate embodiment. Segment ID server 840 is coupled to the host web server 830 and serves a market segment ID code to client web server 720, preferably via a server-server interaction 842. The segment ID server 840 shown in FIG. 8 retrieves market segment ID codes preferably stored in a portion of storage element 870 (not shown in FIG. 8). For example, if there are a total of ten market segments for web site 890 the market segment ID codes may be 1, 2, 3, . . . 10. Communication between the client web server 720 and the segment ID server 840 typically occurs only during a segment ID serving interaction. It will also be understood that the market segment codes may be a separate output 844 of segment ID server 840 that is used for applications besides the customization of web-page content. For example output 844 of segment ID server 840 may be stored for analysis of the demographic characteristics of visitors to a web-site. Such information may be useful, for example, in making decisions about the types of goods and services to be offered by an e-commerce site. It will also be understood by those of ordinary skill in the art that

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the market segment code served by segment ID server 840 may also be used by an advertising service to assign market-specific advertising banners to a web-site.

The decision engine 805 converts the user metric/click-stream data into user profile information. The demographic profiles 850 is preferably implemented as one or more tables of potential user profiles accessible by a profile server. In the preferred embodiment the decision engine 805 determines the appropriate market segment based upon analyzing a request received from the user's web browser and comparing the information embedded within that request with demographic profiles 850 which are stored within the storage module. Additionally, the approximate geographic location of the user may also be determined from the internet protocol address of the visitor. In a preferred embodiment this is implemented by having a look-up table of IP addresses and their approximate geographic location. Although precise (i.e., street) locations cannot be determined from the IP addresses of most ISPs, the inventors have recognized that the general geographic location (e.g., Northeast, Midwest, Southwest, Far West, East Coast) of an IP address can be determined via a lookup table. IP addresses may also be used to determine visitor location down to the metro level, although the statistical confidence level tends to degrade if the visitor's location must be determined within a metro-region. However, routing technology now permits the path of data packets to be determined with a high confidence within sub-metro regions. Consequently, an e-commerce site employing the present invention can customize content appropriate for the metro area of the visitor. As one illustrative example, the present invention permits first-time visitors to an on-line clothing shop to be served a home page having merchandize related to the local home-teams of the visitor, such as baseball caps of the local baseball team.

The visitor metrics module 810 is used to record information about visitors. This information may comprise "click-stream" maintained by the host web server 860. Such information may include a timestamp, host web server cookies ID, a profile server cookie ID, a referral URL web site, a name of the URL on the host web server web site, a flag denoting whether a market segment decision was made based on the profile server cookie ID or extra information from the decision engine that was used in a feedback loop. Geographic profiles (not shown) may be recorded by visitor metrics 810. In a preferred embodiment a single pixel in Graphics Interchange Format (GIF) file format may be included in the delivered content to determine if a user has purchased something

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during their visit to the web-pages served by the client web server. However, it will be understood that other techniques to record a purchase instance may also be used, such as techniques based upon re-direct commands.

FIG. 9 shows a preferred implementation of the apparatus of FIG. 8. As shown in FIG. 9, in a preferred embodiment the communication link between the front end 860 web server system and the backend 865 server system is accomplished by an enterprise application integration platform software package, such as TIBCO/RENDEZVOUS™ by Tibco Software of Palo Alto, California. A preferred front end includes a TIBCO CLIENT™, TIBCO DAEMON™, NETSCAPE IPLANET™, and JAVA SERVLET™. and is coupled to the back end . A preferred back end includes a TIBCO DAEMON™, TIBCO CLIENT™, and ORACLE™ database. This preferred enterprise application integration platform software packet not only facilitates the communication between the web server system and the backend server system, but also load balances requests to the backend server system to evenly distribute the requests from the web server system across the plurality of computers operating within the backend server system. The enterprise application integration platform software also provides fail-over that ensures that if one of the plurality of computers of the backend server fails, requests will be routed to the remaining computers of the backend server.

FIG. 10 is a flowchart illustrating how the apparatus of the present invention allows profile data to be augmented by visitor log data (e.g., click stream and purchasing data) and by geographic data. One benefit of the present invention is the profile augmentation 1010 that is possible by combining raw profile data, geographic data, and clickstream feedback data from a visitor's log 1020. This permits market segmentation behavior models to be refined 1030 or new models 1040 to be developed. Additionally, the data from multiple visitors may be aggregated 1050. A database schema can then be prepared 1060, coupled to a database loader 1070, and connected to a report database 1085 to generate system reports 1080 and custom reports 1090 specific to a particular client site. The custom reports 1090 may, for example, contain conversion rates for first time visitors for each pre-selected market segment. This may be used to revise market segmentation models 1095 used by the e-commerce site.

FIG. 11 is a diagram of an illustrative test and control hierarchy for improving market segment models and improving content for each market segment. In the illustrative example, the visitors are divided according to the ISP domain name

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extension. Visitors from universities having a .edu browser extension form a first class of visitors 1105. Visitors from browsers connected to non-educational ISPs form a second class of visitors 1150. A small fraction (e.g., 1-5%) of each class is preferably assigned to a control group and served a baseline content. The control group may be a random sample of all visitors in the class. Alternately, the control group may be further defined into market segments. The use of a control group permits improvements in conversion rates to be measured against a standard. Additionally, note that a market segment, such as segment 3, can have its reaction to various types of content tested by rotating the content delivered to the market segment. This facilitates optimizing content for the market segment. Note also that segment 3 may be a test market segment, i.e., a demographic market for which it is desired to determine if the reaction to content is significantly different than other market segments. The use of test and control techniques facilitates improving market segments and content.

Conventional Internet browsers typically use HTTP commands to form path links to data files in an on-line Web server. For example, when a uniform resource locator is input to a web browser a HTTP command is sent to the corresponding Web server that directs it to fetch and transmit the requested Web page stored in a file of the Web server. The inventors have developed preferred sequences of HTTP command path links (hereinafter command links) for directing the interactions of the visitor's browser, a client server, and a central server site. Two preferred embodiments are shown in the interaction diagrams of Figures 12A and 12B. For the purposes of illustration, the central server site is labeled as "Angara.com". The sequence of arrows illustrate HTTP command path links at different times in a sequence of interactions between the browser of a visitor's computer and the client site, central service site, and a profile server.

FIG. 12A is an illustrative interaction diagram for a site having a profile server coupled to an on-line database of profiles. As shown in step 1, a visitor inputs a first generic uniform resource locator (URL) of a web-site (e.g., "clientsite.com"). The visitor's request is re-directed by the client site to the host web server of the central service site (e.g., lift.Angara.com) as shown in step 2. A URL encoded as a rootpage parameter is also returned that can be used as a basis for future redirection. As shown in step 3, in response to the receipt of the source URL, the profile server retrieves the cookie from the visitor's web browser to act as a key to the profile data held by the

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profile server. This URL has all of the parameters of the original request as well as a new "profilekey" parameter that may be used to lookup the demographic profile data. The visitor's web browser requests this new URL and the host web server decodes the "profilekey" parameter to determine a marketing segment and hence the content to be displayed, as shown in step 4. As shown in step 5 the client server responds by returning a web page to the visitor's web browser. As shown in step 6, the visitor may browse the content until they encounter a purchase instance page, i.e., a web-page from which they can make a purchase. Visitor logging relates to using a GIF pixel element or other technique to create a record of a visitor's activities (e.g., a purchase decision) on the e-commerce service site. As shown in step 7, a visitor accesses the URL of the client web server's purchase page. The client web server returns an HTML page containing a host web server embedded image (e.g., a one pixel GIF). The visitor's web browser requests the image from the host web server. The host web server gets the visitor's ID from the cookie. If a cookie isn't present, one is created to be returned. The event is logged and the host web server records purchase instance data. FIG. 12B shows an interaction diagram for an embodiment having an offline profile database residing at the central service site. It is substantially similar except for the omission of the step of accessing an online profile server, i.e., the information for forming a segmentation decision is accessible from the central service site.

While FIGS. 12A and 12B illustrate preferred HTTP redirect interaction for providing custom content from a client server via a host web server, it will be understood that a variety of alternate redirection techniques may be employed which use an assigned market segment to deliver custom content to the visitor based upon using a market segment and HTTP command path links. Examples of alternate implementations include content redirection and content serving. Content redirection relates to the client web server referring a user session to a URL of the host web server. In this embodiment the client web server embeds a URL relating to the profile of the user to the profile server. For example, the client web server can redirect the user using a profile key where the profile server encodes the profile key in a URL and redirects the profile key to the host web server. The host web server then can look-up the profile key in a profile database, which is stored locally within the host web server. Alternatively, the client web server can redirect the user by using profile data where the profile server encodes the profile data in a URL and redirects the profile data to the host web server.

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This reference to the host web server will be redirected back to a URL on the client web server where an appropriate marketing segment for a user is located. Content serving refers to the client web server storing one URL for each marketing segment on the host web server. In this embodiment the client web server directly refers to the host web server for the profiling information. In particular, the client web server embeds a URL to the host web server.

One benefit of the method and system of the present invention is that it does not require personally identifiable information (PII) to be acquired, stored, or distributed in order to deliver custom content to first-time visitors. Many commercial sources of demographic data can be purchased stripped of all PII, i.e., containing no individual names, residence addresses, credit card numbers, phone numbers, or e-mail addresses. The one-pixel gifs used to collect purchase instance data are preferably configured to record a decision to purchase an item from the client e-commerce site without collecting additional PII. In a preferred embodiment, no information is collected regarding the exact item purchased, i.e., the purchase instance that is recorded is limited to a yes/no decision made by the visitor to purchase an item from the site. Consequently, in a preferred embodiment the superset of aggregated data demographic data does not collect or store PII. Moreover, in the preferred embodiment using a central service site, the client site is provided (via the redirect) with a market segment ID code (e.g., 1, 2, 3, 4) (or URL containing a market segment code) that contains no PII.

While the method of the present invention is described in detail in regards to the sale of goods on an e-commerce web-site, it will also be understood that the method of the present invention may also be used to provide custom content for web-sites offering services, such as financial planning services. Additionally, the method of the present invention may be applied to media and information sites. For example, some media web-sites make money from banner advertisements. The method of the present invention may be used to create custom media content designed to appeal to first time visitors to a media web-site. For example, a music site could use the present invention to serve content based upon the estimated age, income, or other demographic attributes of visitors to the web-site. As another example, using the method of the present invention a political web-site could serve content based upon the age, income, household status, and geographic location of the visitor.

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Additionally, while the method of the present invention has been described in detail in regards to providing custom content for a first time visitor, it will be understood that the demographic data may be combined with purchase instance data to determine an appropriate market segment for a repeat visitor. In particular, it will be understood that an individual e-commerce company may also desire to associate or link an individual's purchasing history to the superset of demographic data 390. This would permit, for example, the market segment assigned to the visitor 340 to be adjusted in light of subsequent purchasing decisions made by the visitor during repeat visits to the e-commerce site.

Moreover, while the present invention has been discussed primarily in regards to using the geographic location of the visitor as an additional demographic attribute, it will be understood that in some cases that determining the geographic location of the visitor may be sufficient by itself to define a market segment. As an illustrative example, if a market is divided into native speakers of English, native speakers of Spanish, and native speakers of French, an e-commerce site located in the United States but seeking orders from individuals in Canada and Mexico may segment the market by language and provide language in the likely native language of the visitor based upon the geographic region in which the IP address of the visitor resides, i.e., provide Spanish content for visitor's residing in Mexico and French content for visitor's residing in Quebec.

The features and advantages described in the specification are not all inclusive and, in particular, many additional features and advantages will be apparent to one of ordinary skill in the art in view of the drawings, specification, and claims. Moreover, it should be noted that the language used in the specification has been principally selected for readability and instructional purposes, and may not have been selected to delineate or circumscribe the inventive subject matter.

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CLAIMS

What is claimed is:

1. A system for determining a demographic market segment of a visitor to a web-site submitting a uniform resource locator (URL) of the web-site via a web browser residing on the visitor's computer, the system comprising:

a) a server;

b) a demographic database coupled to the server, the demographic database including a demographic profile or a demographic profile key for each computer identification code listed in the demographic database;

c) a marketing segment database coupled to the server storing at least two pre-selected market segments; and

d) a decision engine coupled to the server, said decision engine receiving at least one identification code residing on the visitor's computer, said decision engine accessing the demographic database to determine a set of demographic attributes for the visitor, said decision engine selecting one of said at least two market segments as a function of said set of demographic attributes of the visitor.

2. The system of Claim 1, wherein said decision engine determines a geographic location of the visitor from the internet protocol address of the visitor and said set of demographic attributes includes the geographic location of the visitor.

3. The system of Claim 1, wherein the demographic database is coupled to the server via a profile server.

4. The system of Claim 1 wherein said market segment is used to determine the content of at least one web-page of the web-site displayed to the visitor.

5. The system of Claim 4 wherein said content includes the option to buy a good or service and the system further comprises:

a visitor metrics module coupled to the server, said visitor metrics module linked to the content displayed to the visitor and recording click stream and purchase instance data.

6. The system of Claim 1, further comprising a second server hosting the web-site and linked to said first server via hypertext transfer protocol (HTTP) command path links whereby an initial HTTP request from the visitor's browser to the web-site is re-directed to the first server and the URL of a subsequent HTTP request

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from the visitor's browser to the second server includes a market segment code defining a path to at least one custom web-page stored in the second web-server.

7. A system for providing custom content to a visitor submitting a uniform resource locator (URL) request for a web-site via a browser residing on the visitor's computer, the system comprising:

a) a first server;

b) a second server containing a plurality of web-page files corresponding to at least two different files coupled to said second server configured to be accessible by URLs having different path destinations within said second server;

c) a first hypertext transfer protocol (HTTP) command path link configured to redirect an initial HTTP access request of the visitor from the second server to said first server;

d) a profile server coupled to the first server for accessing a demographic database, the profile server outputting a demographic profile or a demographic profile key for each computer identification code listed in the demographic database;

e) a marketing segment database coupled to the first server storing at least two pre-selected market segments;

f) a decision engine coupled to the first server configured to read at least one identification code residing on the visitor's computer, the decision engine accessing the demographic database to determine a set of demographic attributes for the visitor, said decision engine selecting one of said at least two market segments as a function of said set of demographic attributes of the visitor and outputting a corresponding market segment code; and

g) a second HTTP command path link configured to form a path from the visitor's browser to one of the files coupled to said first server as a function of said market segment code.

8. The system of Claim 7, further including at least one 1-pixel gif image file link configured to report click-stream data to said first server.

9. The system of Claim 8, wherein said click-stream data includes purchase instance data.

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10. A method of determining an appropriate market segment for a visitor to a web-site, comprising the steps of:

a) forming at least two market segments having different demographic attributes;

b) reading an identification code residing on the visitor's computer;

b) accessing a database of demographic records to determine at least one demographic profile for the identification code; and

e) selecting one of the market segments for the visitor as a function of said at least one demographic profile.

11. The method of Claim 10, wherein said step of selecting one of the market segments is performed using a lookup table.

12. The method of Claim 10, wherein said step of selecting one of the market segments is a function of a set of rules.

13. The method of Claim 10, wherein said step of selecting one of the market segments is based upon a tree search.

14. The method of Claim 10, further comprising the step of delivering custom content to the visitor as a function of the selected market segment.

15. The method of Claim 10 wherein there is a separate set of custom content for each market segment.

16. The method of Claim 10 further comprising the step of recording a log of the visitor's response to the custom content.

17. A method of providing custom content from a web server having categories of custom content to be delivered to a visitor to a web-site based upon demographic attributes of the visitor, the method comprising the steps of:

a) receiving an identification code stored on the computer of the visitor;

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Page 309

b) delivering custom content to a browser of the visitor as a function of a demographic profile associated with the identification code of the visitor.

18. The method of Claim 17, further comprising the step of recording click stream data from the visitor's computer as the user browses the custom content delivered to the visitor.

19. A method of providing custom content from a client web server, the method comprising the steps of:

a) selecting at least two market segments having different demographic attributes;

b) creating for each market segment at least one market-specific web page having attributes specific to said market segment and storing said web pages in a first database coupled to said client web server;

c) reading an identification code stored on the computer of a visitor to a web site linked to the client web server;

d) accessing a database of demographic records and assigning a demographic profile to the visitor based upon said identification code;

g) selecting one of the market segments as a function of the demographic profile;

h) downloading on the visitor's web browser the market-specific web page appropriate for the market segment of the visitor; and

i) recording a visitor's log entry as the visitor browsers said market-specific web page, said log entry including click stream and purchase instance data.

20. A method of electronic commerce using a host web server to form a central database of consumer profile and purchasing behavior instance data, the method comprising the steps of:

a) coupling the client servers of at least two websites to the host web server;

b) selecting for each of the web sites at least two market segments having different demographic attributes;

c) creating for each market segment at least one market-specific web page having attributes specific to said market segment;

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d) reading an identification code stored on the computer of each visitor to one of the web sites;

e) accessing a database to acquire profile data for each visitor;

f) selecting one of the market segments for each visitor as a function of said profile data;

g) downloading on the visitor's web browser the market-specific web page appropriate for the market segment of the visitor; and

h) recording a visitor's log entry of clickstream data for each visitor as the visitor browsers the market-specific web page.

21. A method of forming a data warehouse for use in the electronic commerce of related industries, the method comprising the steps of:

a) providing a decision engine coupled to a plurality of client servers by a web hosting server, the decision engine coupled to a profile module and market profile module, wherein the decision engine determines an appropriate market segment for displaying custom content to each visitor logging onto the client servers, said decision engine reading an identification code stored on the visitor's computer and selecting an appropriate market segment for each visitor based upon the demographic profile associated with the visitor;

b) recording click stream and purchase instance data for each visitor browsing the web pages of said plurality of client servers; and

c) forming a database containing visitor profiles and associated click stream and purchase instance data for visitors from said plurality of client servers.

22. A method of forming a demographic profile for visitors to a web-site, the method comprising the steps of:

a) acquiring a first set of profile data having a first set of demographic data attributes for a first set of computers;

b) acquiring a second set of profile data having a second set of demographic data attributes for a second set of computers; and

c) forming a superset of profile data by statistically combining said first and said second set of profile data to have a common set of demographic data attributes for a computer listed in both said first set and said second set of computers.

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23. The method of Claim 22, wherein said first and second set of demographic data is cookie data and at least one cookie identification code is read from the visitor's computer to identify a computer common to said first and second set of computers.

24. A method of delivering web pages having custom content to a visitor to a web-site, the method comprising the steps of:

a) reading the internet protocol address of the visitor;

b) comparing the Internet protocol address of the visitor to a database of Internet protocol addresses, the database having an index of geographic locations associated with a plurality of Internet protocol addresses;

c) selecting a geographic region for the visitor within which the geographic location of the visitor's internet protocol address resides; and

d) serving custom content to a browser of the visitor as a function of the geographic location of the visitor.

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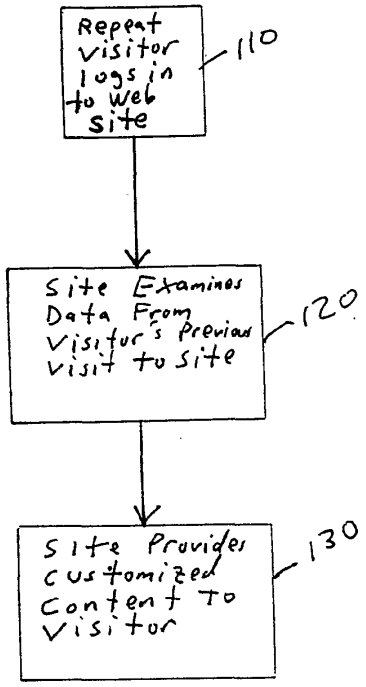


FIG. 1 (prior art)

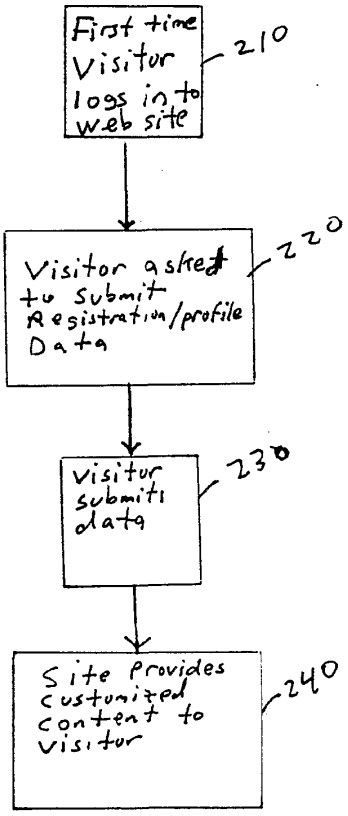


FIG. 1 (prior art)

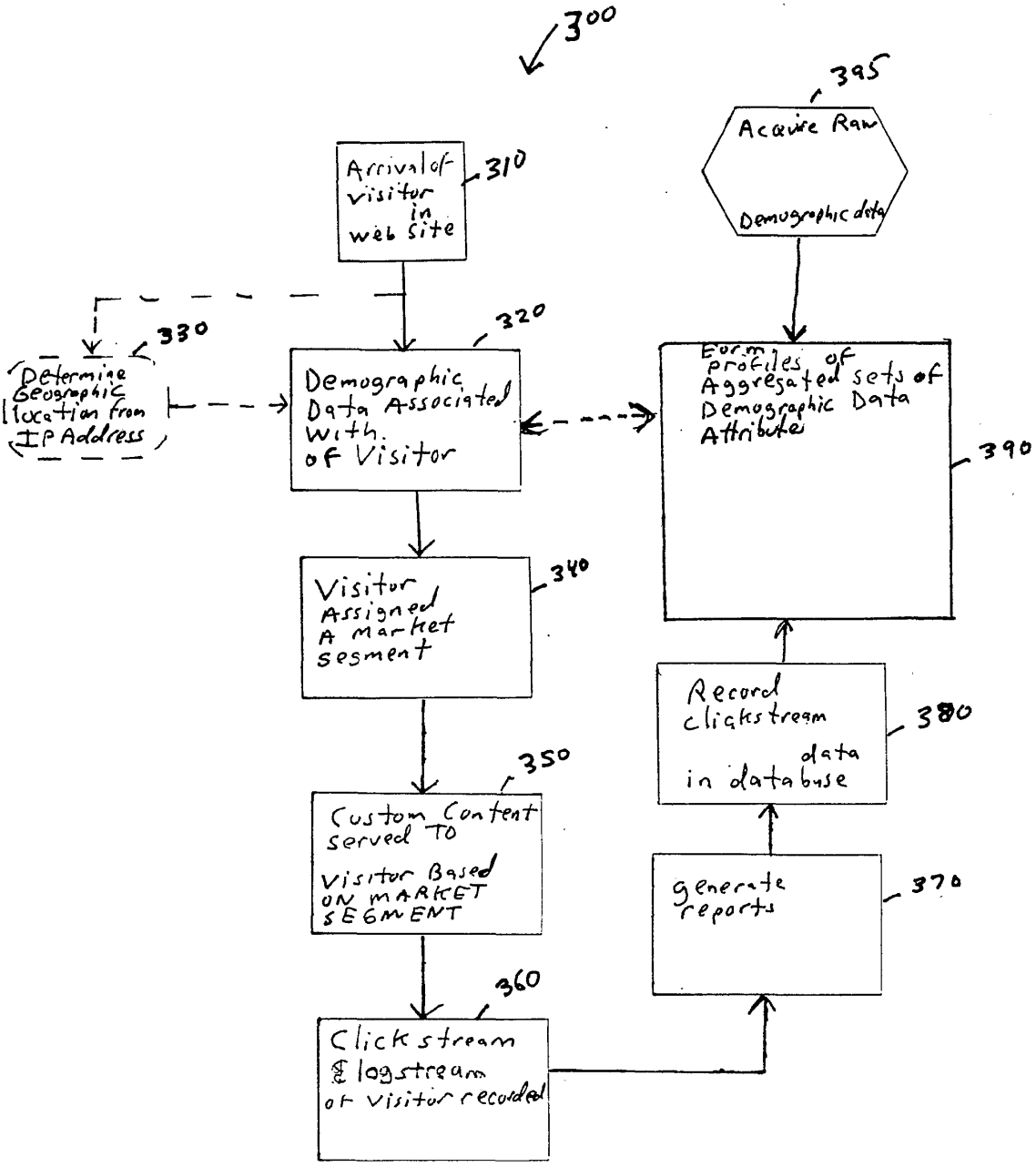

300
395
Acquire Raw
Demographic data
Arrival of visitor in web site
310
330
Determine Geographic location from IP Address
320
Demographic Data Associated With. of Visitor
Form profiles of Aggregated sets of Demographic Data Attributes
390
Visitor Assigned A market sesment
340
Record clickstream data in database
380
350
Custom Content served TO Visitor Based ON MARKET SEGMENT
generate reports
370
360
Clickstream & logstream of visitor recorded

FIG. 3

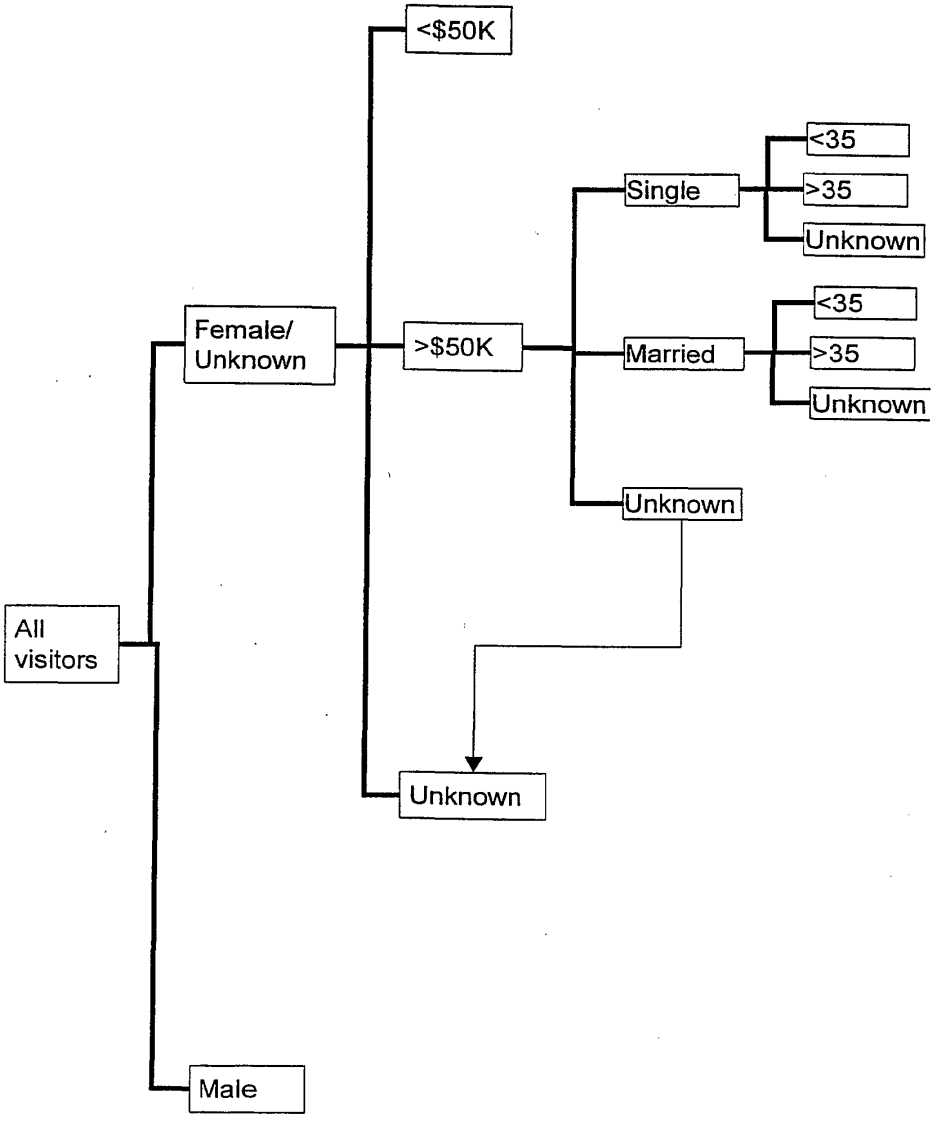

All visitors
Female/ Unknown
Male
<$50K
>$50K
Unknown
Single
Married
Unknown
<35
>35
Unknown
<35
>35
Unknown

FIG. 4A

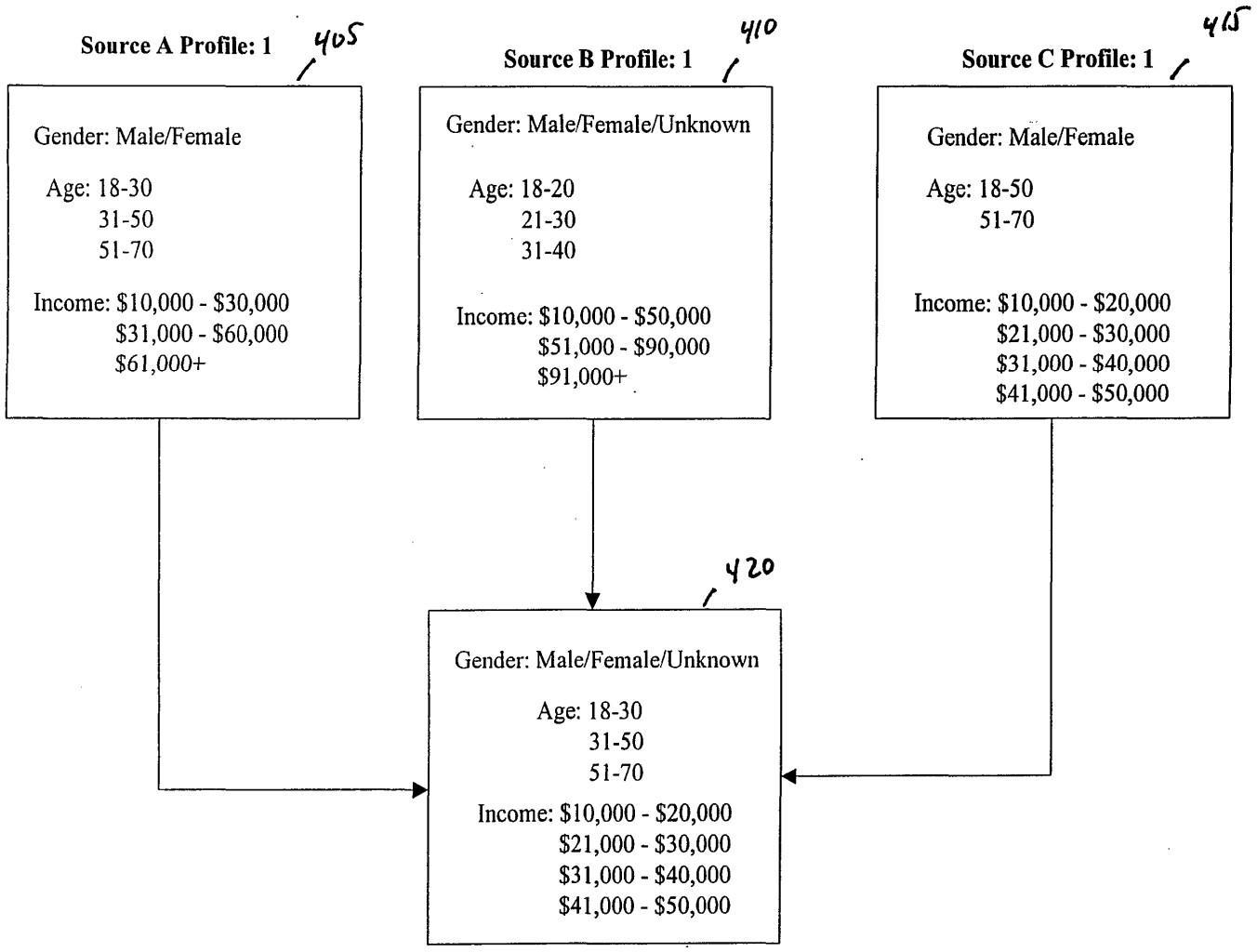

Source A Profile: 1
405
Gender: Male/Female
Age: 18-30
31-50
51-70
Income: $10,000 - $30,000
$31,000 - $60,000
$61,000+
Source B Profile: 1
410
Gender: Male/Female/Unknown
Age: 18-20
21-30
31-40
Income: $10,000 - $50,000
$51,000 - $90,000
$91,000+
Source C Profile: 1
415
Gender: Male/Female
Age: 18-50
51-70
Income: $10,000 - $20,000
$21,000 - $30,000
$31,000 - $40,000
$41,000 - $50,000
420
Gender: Male/Female/Unknown
Age: 18-30
31-50
51-70
Income: $10,000 - $20,000
$21,000 - $30,000
$31,000 - $40,000
$41,000 - $50,000

FIG. 4B

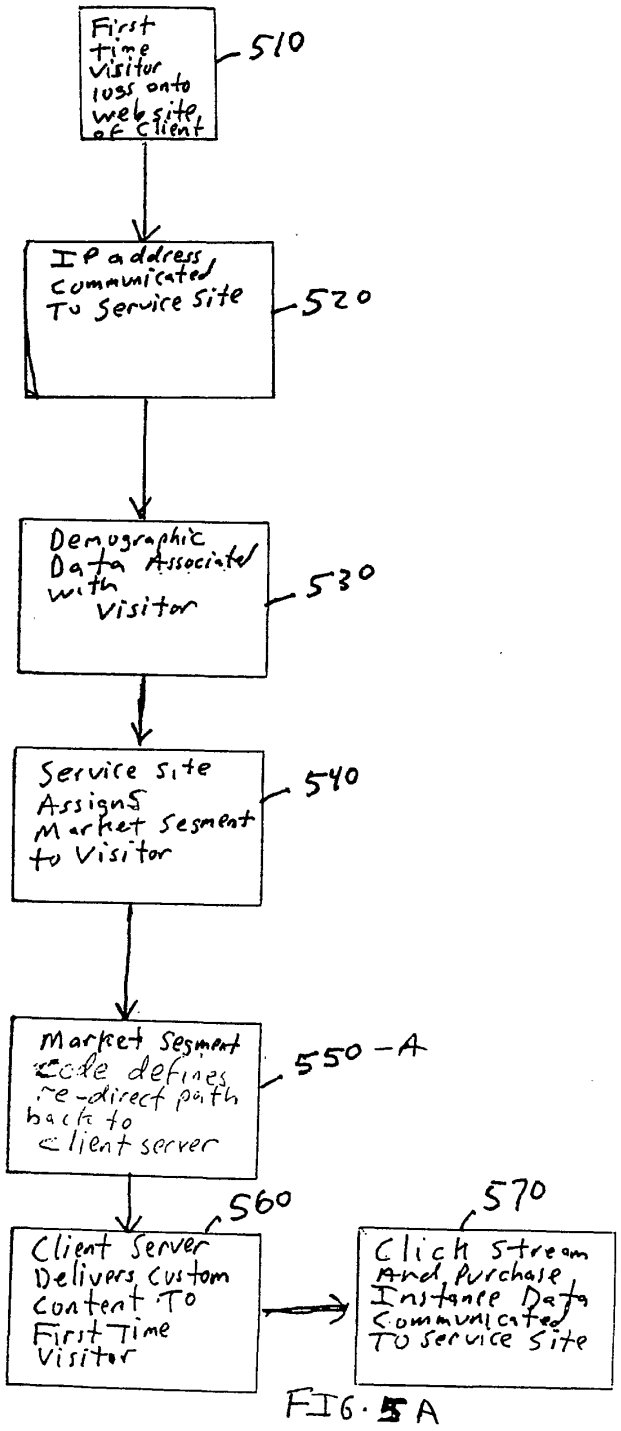

First time visitor logs onto web site of Client
510
IP address communicated To Service Site
520
Demographic Data Associated with Visitor
530
Service Site Assigns Market Segment to Visitor
540
Market Segment Code defines re-direct path back to client server
550-A
Client Server Delivers Custom Content To First Time Visitor
560
Click Stream And Purchase Instance Data Communicated To Service Site
570

FIG. 5A

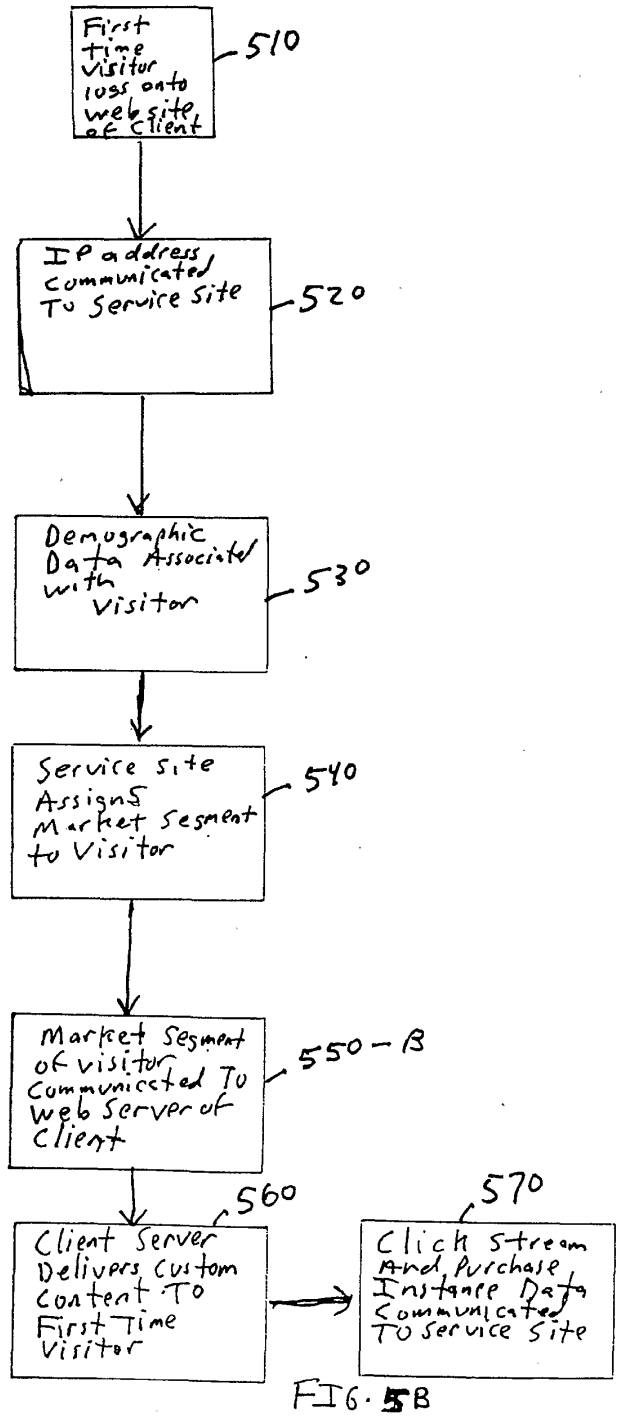

First time visitor logs onto web site of Client
510
IP address communicated To Service Site
520
Demographic Data Associated with Visitor
530
Service site Assigns Market Segment to Visitor
540
Market Segment of visitor Communicated To web Server of Client
550-B
Client Server Delivers Custom Content To First Time Visitor
560
Click Stream And Purchase Instance Data Communicated To Service Site
570

FIG. 5B

www.sportssite.com
Web requests
Browser
www.clothessite.com
Clickstream data
www.bookssite.com
Gender:Female
Age: 18-30
Income: $31,000 - $40,000
Interests: Sports, clothes, books
Profile

FIG. 6

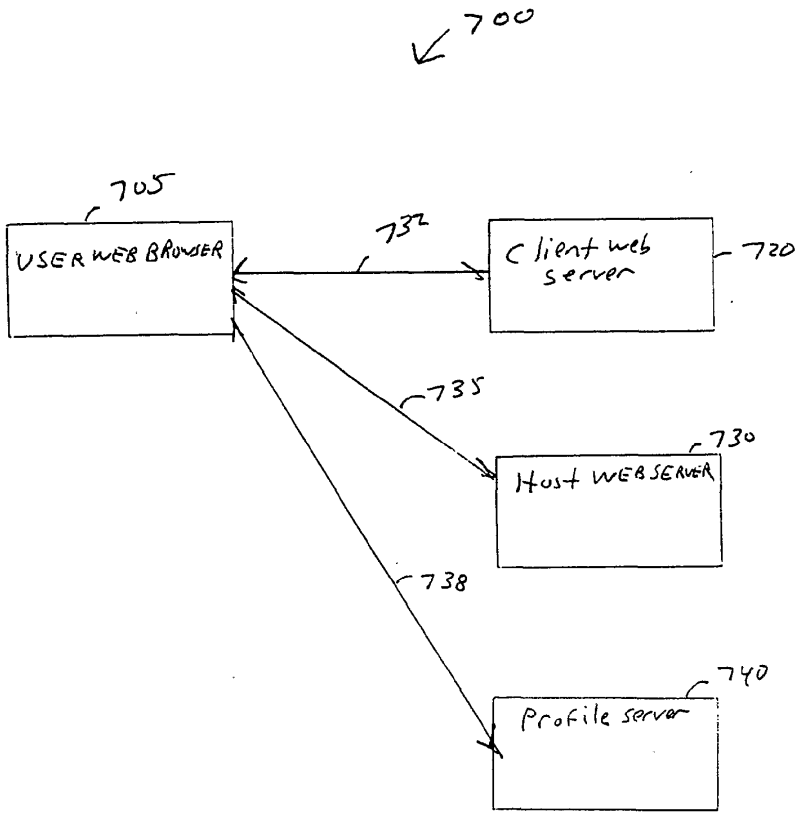

700
705
USER WEB BROWSER
732
Client web server
720
735
730
Host WEB SERVER
738
740
Profile server

FIG. 7

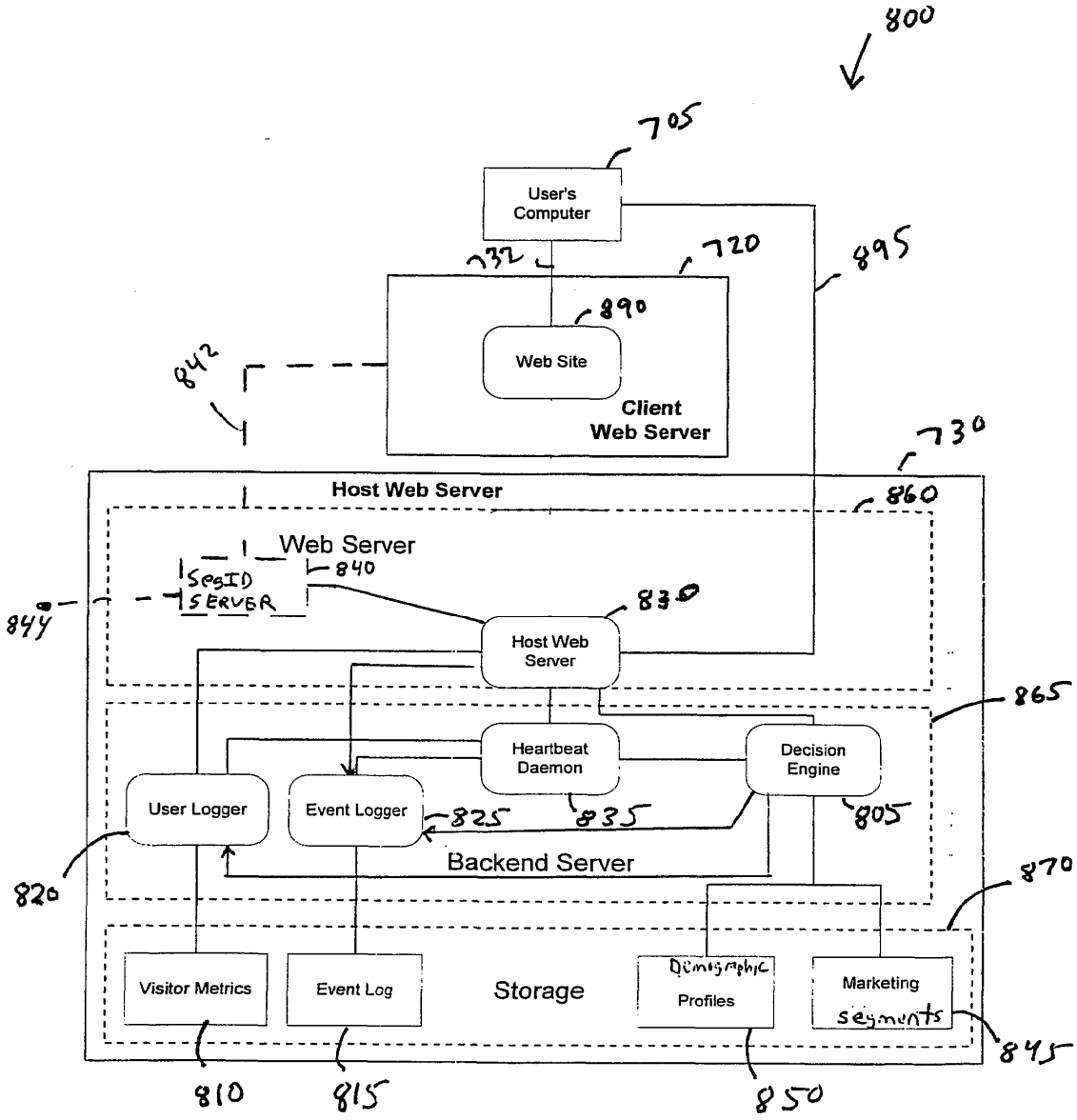

800
705
User's Computer
732
720
895
890
Web Site
842
Client Web Server
730
Host Web Server
860
Web Server
SegID SERVER
840
844
830
Host Web Server
865
Heartbeat Daemon
Decision Engine
User Logger
Event Logger
825
835
805
820
Backend Server
870
Visitor Metrics
Event Log
Storage
Demographic Profiles
Marketing segments
845
810
815
850

FIGURE 8

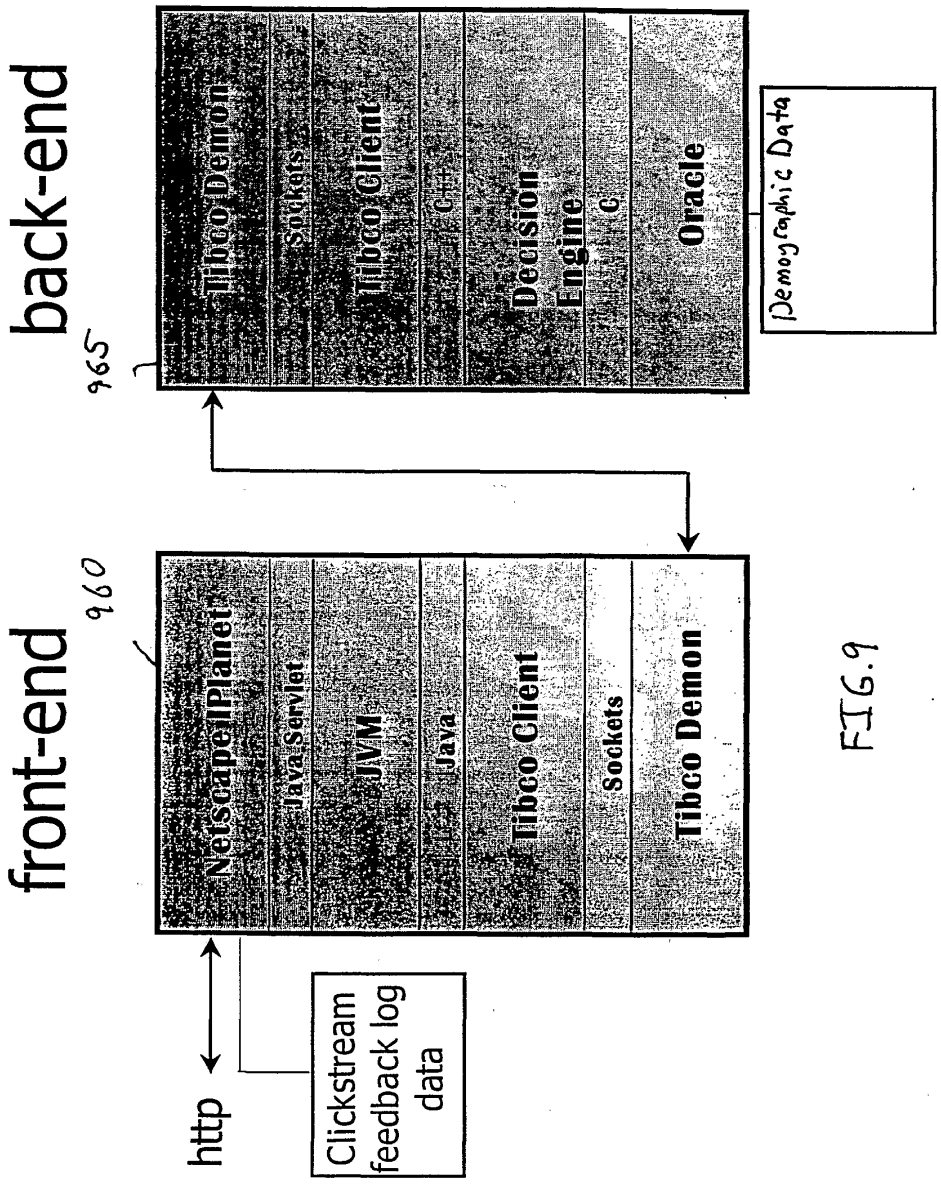

back-end
965
Tibco Demon
Sockets
Tibco Client
C++
Decision Engine
C
Oracle
Demographic Data
front-end
960
NetscapeIPlanet
Java Servlet
JVM
Java
Tibco Client
Sockets
Tibco Demon
http
Clickstream feedback log data

FIG. 9

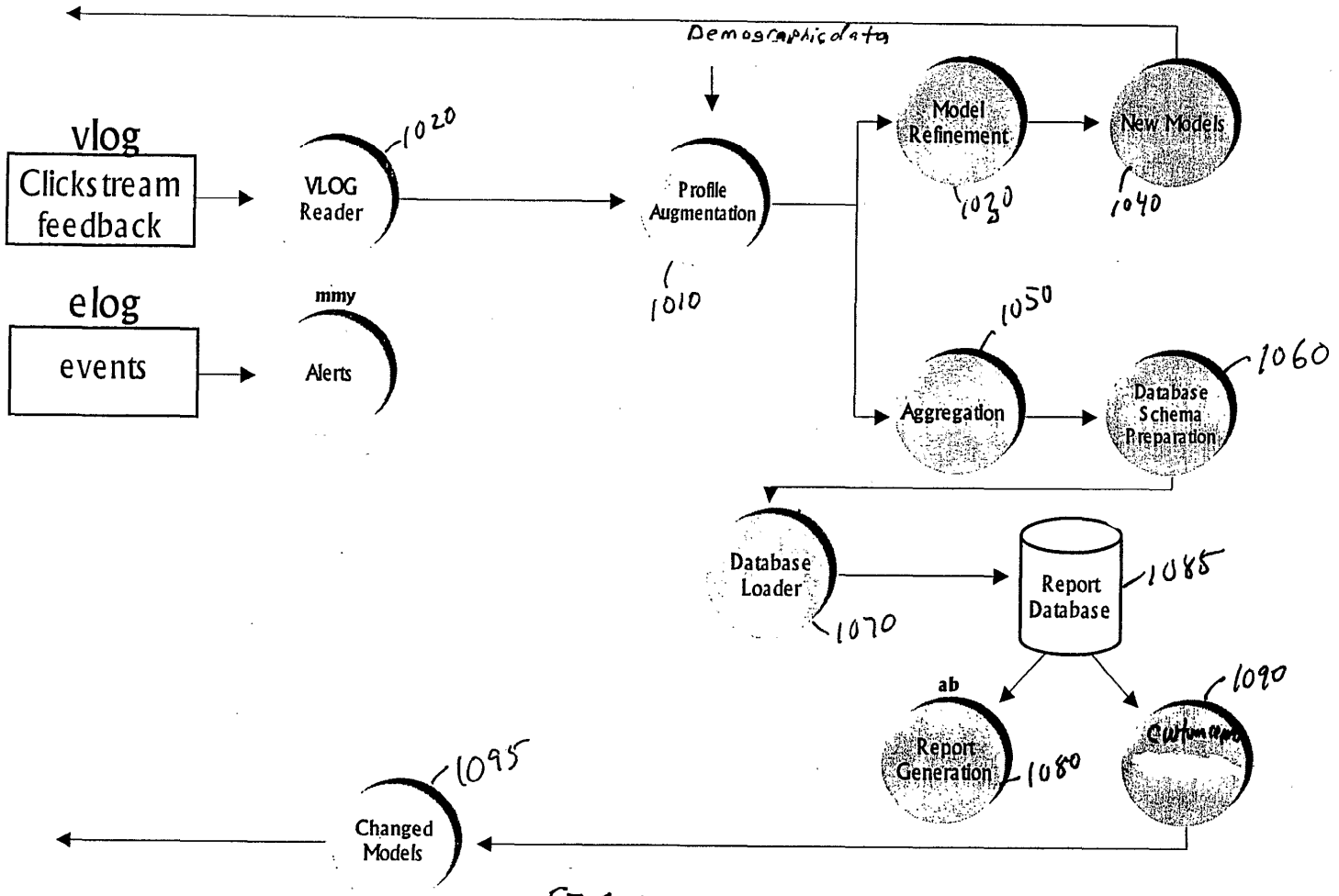

Demographic data
vlog
Clickstream feedback
VLOG Reader
1020
Profile Augmentation
1010
Model Refinement
1030
New Models
1040
elog
events
mmy
Alerts
1050
Aggregation
Database Schema Preparation
1060
Database Loader
1070
Report Database
1085
ab
Report Generation
1080
1090
Changed Models
1095

FIG. 10

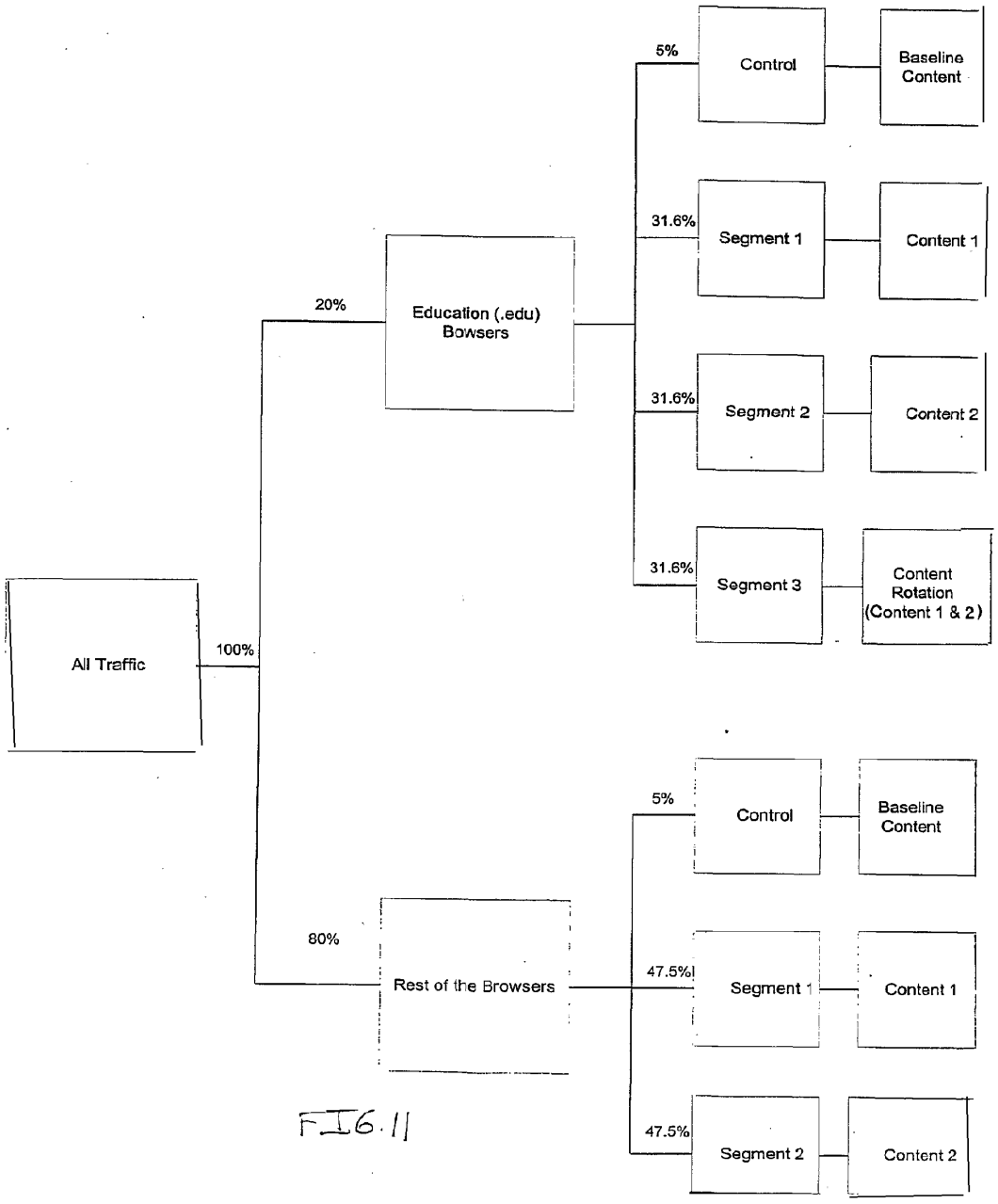

All Traffic
100%
20%
Education (.edu) Bowsers
5%
Control
Baseline Content
31.6%
Segment 1
Content 1
31.6%
Segment 2
Content 2
31.6%
Segment 3
Content Rotation (Content 1 & 2)
80%
Rest of the Browsers
5%
Control
Baseline Content
47.5%
Segment 1
Content 1
47.5%
Segment 2
Content 2

FIG. 11

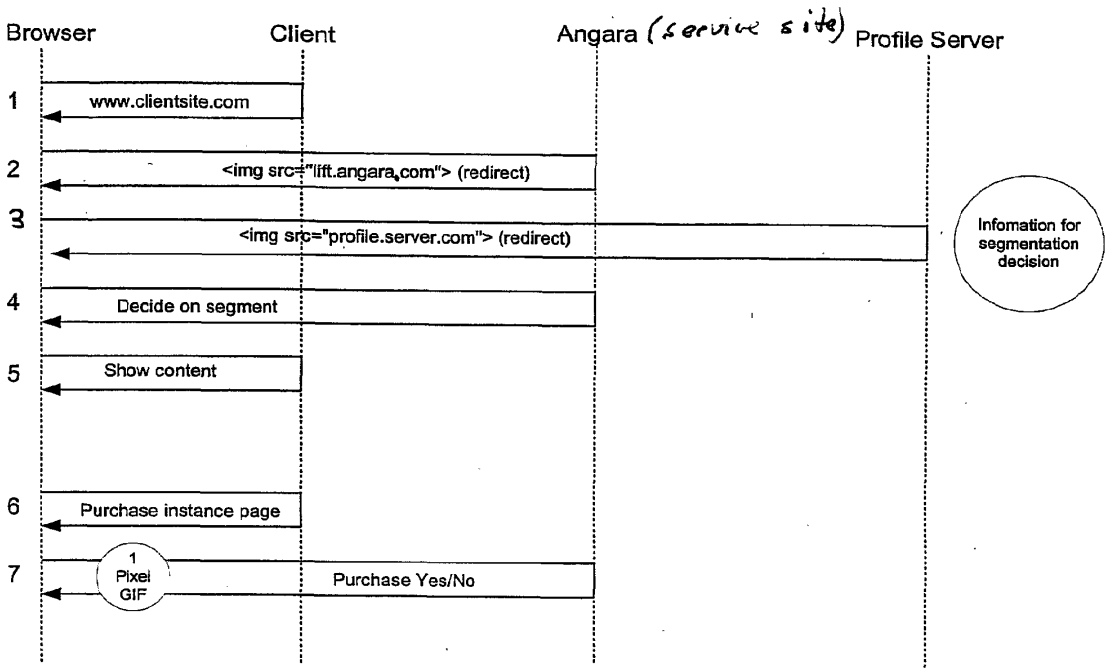

Browser
Client
Angara (service side)
Profile Server
1
www.clientsite.com
2
<img src="lift.angara.com"> (redirect)
3
<img src="profile.server.com"> (redirect)
Infomation for segmentation decision
4
Decide on segment
5
Show content
6
Purchase instance page
7
1 Pixel GIF
Purchase Yes/No

FIG. 12A

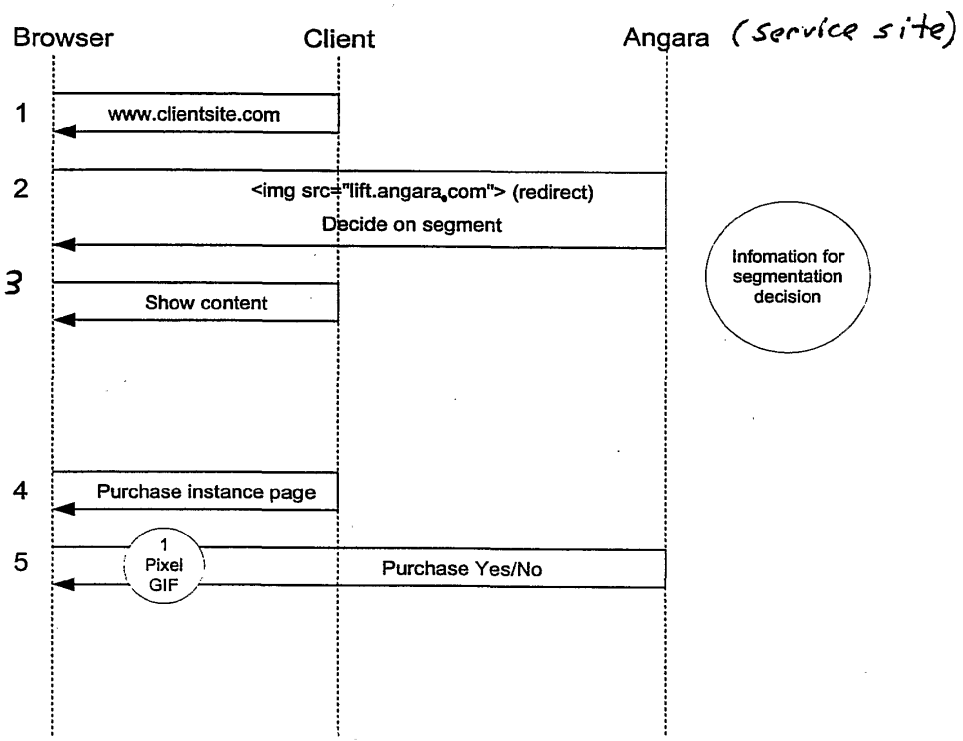

Browser
Client
Angara (Service site)
1
www.clientsite.com
2
<img src="lift.angara.com"> (redirect)
Decide on segment
Infomation for segmentation decision
3
Show content
4
Purchase instance page
5
1 Pixel GIF
Purchase Yes/No

FIG. 12B

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US01/01862

A. CLASSIFICATION OF SUBJECT MATTER
IPC(7) : G06F 17/60
US CL : 705/1
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 705/1, 14, 26

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,968,125 A (GARRICK et al) 19 October 1999 (19.10.1999), See entire document	1-24
Y	US 6,014,638 A (BURGE et al) 11 January 2000, (11.01.2000), See entire document	1-24
Y	US 5,933,811 A (ANGLES et al) 03 August 1999 (03.08.1999), See entire document	1-24
Y	US 5,991,735 A (GERACE) 23 November 1999 (23.11.1999), See entire document	1-24
Y	US 6,009,410 A (LEMOLE et al) 28 December 1999 (28.12.1999), See entire document	1-24
A	US 5,996,007 A (KLUG et al) 30 November 1999 (30.11.1999), See entire document	1-24
Y,P	US 6,038,598 A (DANNEELS) 14 March 2000 (14.03.2000), See entire document	1-24
Y,E	US 6,182,050 B1 (BALLARD) 30 January 2001 (30.01.2001), See entire document	1-24
Y,P	US 6,144,944 A (KURTZMAN, II et al) 07 November 2000 (07.11.2000), See entire document	1-24
Y,P	US 6,112,192 A (CAPEK) 29 August 2000 (29.08.2000), See entire document	1-24
Y,P	US 6,061,658 A (CHOU et al) 09 May 2000 (09.05.2000), See entire document	1, 7, 10, 19-21

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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Date of the actual completion of the international search
28 February 2001 (28.02.2001)

Date of mailing of the international search report
20 APR 2001

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Form PCT/ISA/210 (second sheet) (July 1998)

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
27 June 2002 (27.06.2002)

PCT

(10) International Publication Number
WO 02/50694 A1

(51) International Patent Classification[7]: G06F 15/173

(21) International Application Number: PCT/AU01/01629

(22) International Filing Date:
18 December 2001 (18.12.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PR 2154 18 December 2000 (18.12.2000) AU

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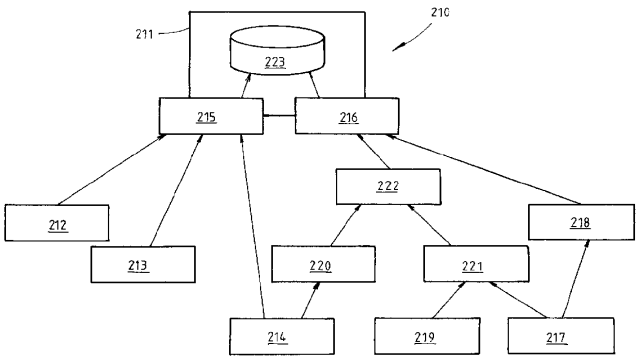
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

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(54) Title: METHOD FOR TRACKING THE TRANSFER OF USER ATTENTION IN A COMPUTER NETWORK



(57) Abstract: A method of tracking browsing activity of a user in a computer network (210) including two or more independent computer network servers (220, 221, 2118) or server clusters, the user establishing a connection session with the computer network, the method including the steps of: receiving a user request for content located on a first of the network servers or server clusters; dynamically including a unique session identifier (session ID) in content served from that first network server or server cluster to the user during the connection session; transmitting the session identifier from the first (240) to a second (241) of the network servers or server clusters when a subsequent user request for content is made to the second network server or server cluster; transmitting an event message including at least that session identifier to a central session manager (211) upon the occurrence of a user browsing event during that connection session; and logging session information derived from the event messages in a session data structure (223).

WO 02/50694 A1

METHOD FOR TRACKING THE TRANSFER OF USER ATTENTION IN A COMPUTER NETWORK

The invention relates generally to a method for tracking the transfer of user attention in a computer network, such as the Internet.

Traditionally, an online marketer's ability to track the activity of a network user has been limited to the simple measurement of a user's access to and movement within an individual network site, without regard for the impact upstream activities have on downstream activities, as network users' within and across network sites controlled by the online marketer.

The business of buying and selling network user attention is a relationship between publisher and advertiser, typically undertaken according to one of the following a variety of business models.

Business relationships between publishers and advertisers are conducted according to an assortment of business terms tailored to each relationship, remuneration for which may or may not be financial. The advertiser or publisher may specify the technology platform used for each business relationship. Optionally, operators of network sites sit on the publisher side of some business relationships, while simultaneously conducting business as the advertiser in other relationships.

Consequently, publishers and advertisers are finding themselves using a variety of technology platforms based on different methodologies. The metrics generated by each of the methodologies may not be compatible; therefore comparing the performance of various relationships is difficult and often impossible.

Moreover, current methodologies do not facilitate the measuring of impact that upstream publishers have on downstream advertisers as network users pass through intermediary network sites.

Publishers and advertisers are also not able to conduct business according to multilevel payment models. These are models in which compensation is offered to any number of upstream publishers that are more than one network site detached from downstream advertisers.

It would therefore be desirable to provide a method of tracking the transfer of user attention in a computer network that alleviates or overcomes one or more problems existing methods.

It would also be desirable to provide a method of tracking the transfer of user attention in a computer network that is more accurate and reliable than existing methods across multiple network sites.

It would be desirable to provide a method of tracking the transfer of user attention in a computer network that was simple and convenient to implement and/or facilitated the analysis of captured network user data.

One aspect of the present invention provides a method of tracking browsing activity of a user in a computer network including two or more independent computer network servers or server clusters, the user establishing a connection session with the computer network, the method including the steps of:

receiving a user request for content located on a first of the network servers or server clusters;

dynamically including a unique session identifier in content served from that first network server or server cluster to the user during the connection session;

transmitting the session identifier from the first to a second of the network servers or server clusters when a subsequent user request for content is made to the second network server or server cluster;

transmitting an event message including at least that session identifier to a central session manager upon the occurrence of a user browsing event during that connection session; and

logging session information derived from the event messages in a

session data structure.

The event messages may be generated and delivered by the user. Alternatively, the event messages are generated and delivered by the network server providing content.

The event messages may be generated for session events, including any one or more of synchronisation event messages, impression events, result events, exposure events, click events and/or person events.

Another aspect of the present invention provides a method of tracking upstream and downstream traffic flow between multiple sites within a computer network; the method including the steps of:

at the central session manager, receiving site entrance and exit data collected upon the transferral of user attention between the multiple sites;

identifying network site relationships from correlations in the site entrance and exit data; and

establishing a sequence of cause-and-effect relationships between the multiple sites.

The site entrance and exit data may be captured by one or more tracking gates provided in one or more computer network servers hosting or forming part of a same network server cluster as the sites.

One or more of the tracking gates may be an exit tracking gate that dynamically includes a site identifier and/or session identifier in the link to the second site. The exit tracking gate may include a click sequence number or custom tracking data.

One or more of the tracking gates may be an entrance tracking gate that attempts to identify and record the site identifier and/or session identifier from data encoded in the user request. The data encoded in the user request may include any one or more of a URL, a cookie and/or a referrer.

One or more of the tracking gates may be a clickthrough tracking gate that records both first and second site identifier at the first site. The clickthrough gate may identify or create the session identifier, click sequence number and

custom tracking data from the first site.

The site entrance and exit data may be captured by session management based techniques. The session management based techniques may include analysing session data at the second site to identify entrance points from the first site.

The session management based techniques may include identifying external events directly resulting from an external hyperlink, and analysing external events to identify the first site. The external events may be analysed by extracting a session identifier, a click sequence number and/or custom tracking data from the first site. The external events may also be analysed by using any one or more of a flagged entrance algorithm, a sequencing based algorithm, or an internal identifier algorithm.

The session management based techniques may include applying a clicktrees tree index structure to identify session exit points.

The site entrance and exit data may be captured by session-less entrance detection means. The session-less entrance detection means may use an entrance recorded flag. The session-less entrance detection means may also use HTTP Host and Referrer Request Header Analysis.

The site entrance and exit data may be captured by generating transition identifiers.

The sequence of cause-and-effect relationships may be established by constructing a time-based clickstream tree index structure of use attention transfer.

A further aspect of the present invention provides a method of maintaining connection session state in a computer network including multiple sites, the user establishing a connection session with the computer network, information characterising the user being captured whenever the user interacts with each site to generate a user browsing signature; the method including the steps of:

at a central session manager, receiving the user browsing signature; and

deriving session information for the connection session from the transmitted browsing signatures.

The captured information includes information may identify a network presence of the user. Information identifying a network presence of the user may include the user's network address.

The computer network is preferably the Internet, and the user's network address may be an IP address.

The captured information may also include an data packet header. The data packet header may be an HTTP header. The data packet header may be a referrer request header, an accept language request header or a user agent request header.

The captured information may include user custom data. A source data string may be constructed from the captured information.

A hashing function may be applied to the source data string.

Yet another aspect of the present invention provides a method of tracking browsing activity of a user in a computer network including multiple sites, the user establishing a connection session with the computer network, impression events being generated when content is requested by the user from a network site, and result events being generated when the user completes a step towards a connection session result; the method including the step of:

at a central session manager, receiving messages representative of the impression and results events; and

interleaving impression events and result events to derive result progress path information for the user.

The results events may include at least result start, result report and result end events.

A still further aspect of the present invention provides a central session manager including a processing means and associated memory means, including code storage means for storing computer program code to cause the central sessions manager to carry out a method as previously described.

A further aspect of the present invention provides a computer program code for storage in memory means associated with processing means, the processing means and memory means forming part of a central session manager, the computer program code causing the central session manager to carry out a method as described previously.

The following description refers in more detail to the various steps and features of the present invention. To facilitate an understanding of the invention, reference is made in the description to the accompanying drawings where the method, system and system components of the invention are illustrated in preferred embodiments. It is to be appreciated that the present invention is not limited, however, to these exemplary steps and/or features.

In the drawings:

Figure 1 is schematic diagram illustrating a browser based user attention tracking system in accordance with the present invention;

Figure 2 is schematic diagram illustrating a server based user attention tracking system according to the present invention;

Figure 3 is a schematic diagram illustrating a combination of the systems illustrated in Figures 1 and 2;

Figure 4 is a more detailed schematic diagram of the central session manager forming part of the system illustrated in Figure 3;

Figure 5 is a schematic diagram illustrating exemplary ways in which network user attention is delivered from a first site to a second site in accordance with the invention;

Figures 6 and 7 are schematic diagrams illustrating the creation of connection sessions by network users on two network sites;

Figures 8 and 9 are schematic diagrams illustrating the creation of sessions by multiple network users across multiple network sites;

Figure 10 is a schematic flow chart illustrating the events occurring during a connection session resulting in a user joining a subscription based network site;

Figure 11 is a clicktrees tree index structure illustrating the interconnection between the events shown in Figure 10;

Figure 12 is a clicktrees tree index structure illustrating a variant of the structure shown in Figure 11;

Figure 13 is a schematic diagram illustrating the purchase of traffic from publisher sites by a broker site, and the on-selling of that traffic to advertiser sites;

Figure 14 is a schematic diagram illustrating the flow of traffic from a first group of network sites to a second group of network sites through a hub site;

Figure 15 is a detailed schematic diagram illustrating the flow of traffic through various hub sites to and from other network sites;

Figure 16 is a schematic diagram illustrating the flow of user attention between five different sites;

Figure 17 is a schematic diagram illustrating a clicktrees tree index structure representative of the flow of user attention illustrated in Figure 16;

Figure 18 is a variant of the clicktrees tree index structure shown in Figure 17;

Figure 19 is a schematic diagram illustrating the flow of information to and from various network sites through a central network hub;

Figures 20 and 21 are schematic diagrams illustrating the flow of user attention of two network users during connection session in which the network sites shown in Figure 19 are accessed;

Figure 22 is a schematic diagram illustrating a clicktrees tree index structure of the events occurring during the connection sessions shown in Figures 20 and 21;

Figure 23 is a schematic diagram illustrating various components of a central session manager and its interaction with various websites;

Figure 24 is a schematic diagram illustrating the data structure of a browser signature;

Figure 25 is a schematic diagram illustrating four impression events occurring during a connection session;

Figure 26 is a detailed schematic diagram showing the components and function of a central session manager forming part of the present invention;

Figure 27 is a general schematic diagram showing part of a network server and associated plugin operating in conjunction with the central session manager shown in Figure 26; and

Figure 28 is a detailed schematic diagram of the plugin of Figure 27.

There now follows a brief explanation of several terms used in the description:

(a) Browser Based Measurement

Upon receipt of content at a network user's client software ("browser"), the client software is typically expected to contact a measurement server and inform it of the content request. This client-initiated measurement technique is commonly referred to as Browser Based Measurement. Depending on the Browser Based Measurement implementation, a measurement directive may or may not be required to be included in the content served to the user to instruct the client to record a session event.

Passive Browser Based Measurement is essentially a tool that involves the placing of some particular piece of content, typically an image, onto a network page. Each time the network page is requested, the client also requests all of the files that are associated with that page including a measurement image that is used for measurement of viewing, or impressions, of that particular network page. To determine the results available from passive Browser Based Measurement, one would typically analyse a web server log file to determine the number of times that the measurement image has been called.

Active Browser Based Measurement is another sub-set of Browser Based Measurement. Unlike Passive Browser Based Measurement, before using Active Browser Based Measurement, network users are required to install an executable measurement add-on to their existing client software. This add-on is

responsible for capturing network user activity information and delivering it to a network server for processing.

(b) Server Based Measurement

When a client requests a document from a server, and the server subsequently delivers a document to the client, the server may optionally choose to record the request. The process of recording this request is known as Server Based Measurement. Typically, each time content is requested from the network server, a time stamped entry is typically recorded in a simple log file. Each entry included rudimentary information such as the document URL and the remote network address of the user.

An alternative to the basic log file is the storage of user activity information in a relational database management system, such as the widely distributed solution available with Microsoft's network servers such as Internet Information Server and Site Server.

(c) Log file Analysis

Log file analysis software is used to examine the log files and formulate a report. For example, log files might be analysed to determine the number of impressions and result events over a particular period.

(d) Session Management

Using a technique known as session management seemingly unrelated document requests are grouped together into a single session, thereby creating a list of related events. Without session management, it is difficult to determine whether a number of requests for various content over a network originate from a single user, or a number of users. For session management to function correctly, each user session is identified by way of a unique session identifier. Activity monitoring systems process and analyse the events for each network user's session with reference to the session identifier, thereby identifying relationships in a seemingly unrelated set of events.

Session Management can be applied to data collected via Browser Based or Server Based Measurement techniques, discussed above, provided that a technique has been applied at the data capture stage that results in a session identifier being included with the data.

(e) Session-less State Management

Session-less state management is a means of tracking relationships between seemingly unrelated network user events without the need for complex session identifier schemes used to identify individual user sessions.

Unlike session management, session-less state management involves grouping events associated with one or more user sessions under a single identifier. In reference to the publisher/advertiser model previously described, the identifier identifies a publisher's network site, and events occurring on an advertiser's network site are recorded with reference to a publisher's identifier.

(f) Ad-Serving

With traditional above the line media such as television, radio, print and outdoor, the advertising message remains static no matter how many people are exposed to it. Unlike traditional media, publishers can rotate advertising messages into and out of a single advertising space each time that it is viewed.

Ad-Serving technology facilitates this rotation. Every time a network user requests content containing advertising messages, an Ad-Server selects an appropriate advertisement and fills the space.

Ad-Servers are integrated into content one of three ways:

(i) Ad-Serving through Insertion

Integrated into the network server software, this form of Ad-Server modifies the content on the fly before delivering it to the network user.

(ii) Direct Ad-Serving

After the network user has received the content, special coding within the content instructs the network user's client to transfer part of the document request to an Ad-Server so the space may be filled.

(iii) Redirected Ad-Serving

It is possible to chain Ad-Servers so that the request transferred to the primary Ad-Server can be redirected to a second, third, fourth, and so on Ad-Server if so desired.

(g) Clickthrough Tracking

Clickthrough Tracking is used when the relationship between publisher/advertiser requires a measure of user attention caught, normally in terms of clicks sent into the advertiser's web site.

Publishers are expected to direct users (by way of a hyperlink) to the Clickthrough Tracking Gate. Encoded in the Clickthrough Tracking Gate's Universal Resource Locator (URL) is a publisher identifier and/or an advertiser identifier. When a network user clicks on the hyperlink, the request arrives at the Clickthrough Tracking Gate for processing. The server logs the request and then, according to the HTTP specification, sends a 3XX HTTP response code accompanied by a Location HTTP Response Header containing a copy of the advertiser's network address. On receipt of the information, the client automatically proceeds to the network address as specified in the Location Response Header without user intervention.

It is possible to chain Clickthrough Tracking Gates so that the request transferred to the primary Clickthrough Tracking Gate can be redirected to a second, third, fourth, and so on Clickthrough Tracking Gate if so desired.

(h) Referrer logging

Referrer logging is a technique applied when Clickthrough Tracking is not available but a measure of user attention caught by a publisher and directed into an advertiser's network site is still required. For example, a network site

maintainer generally has no control of search engine links and therefore is unable to direct network users through a Clickthrough Tracking Gate.

For referrer logging to function correctly, the application of some form of analysis is required to establish which page impression is associated with a network user entering a network site. Once established, the referrer field is extracted from the HTTP request data associated with the page impression previously identified.

The referrer field allows the client to specify, for the server's benefit, the address or URI of the resource from which a link was obtained. Given that the referrer field is an optional part of the HTTP specification, data loss should be expected.

In the Browser Based model shown in Figure 1, clients 200 to 202 deliver event data to an active sessions database with a session manager 203 after processing a content request served from a network server 204. Whether Active or Passive Browser Based Measurement is used, the network user's client software is expected to report to the Session Manager 203 separately from the document request.

In the Server Based model shown in Figure 2, a network server 205 delivers event data to an application running on the Session Manager 203. The Session Manager 203 can reside on the same machine as the Network Server 205, or a physically distinct machine.

In a preferred embodiment, the present invention is capable of accepting events from a network server via both a browser and server based interfaces. Regardless of the interface, a similar set of events are generated and uniformly applied to the same active sessions data structure. Whenever network users are encountered, whether via the Browser or Server Based model, their activity is translated by the relevant interface as a series of single events. The Session Manager maintains Session State as network users travel between various sites during connection sessions.

Network user activity is monitored according to an event model, which may include the exemplary events set out in Table 1.

Table 1

Example Event	Description
Session	This event is applied to the active sessions when a network user's session starts or ends.
Impression	This event is applied to the active sessions when a measure of user activity is required. Impression events document the path network users take through a network site from entrance to exit. Every time a document is requested from a network server, an impression event is triggered.
Result	Result events are applied to the active sessions when a network user achieves a quantifiable goal, financial or otherwise.
Exposure	Ad Exposure events are applied to the active sessions when an advertising message is delivered to a network user, in an attempt to capture network user attention.
Click	Click events are applied to the active session when network user attention has been successfully captured.
Person	Person events are generated to indicate, by way of persistent state, that a network user (or machine) has been identified by the system.

Session events describe an abstract concept in terms that can be easily dealt with by information systems. Session events can be applied to an active session record or a data structure. Session events include the events set out in Table 2.

Table 2

Example Event	Details

Session Start	On receipt of a session start event an entry under a specific session identifier is made in an active session structure under which further events can be recorded. When applying an event to the active session structure, under a specific session identifier, the system determines that that session identifier is not contained in the active session records, a new session is created records and a session start event is generated.
Session End	On receipt of a session end event, an entry in the active session structure identifiable by way of a session identifier is marked for removal. If, during the execution of a session end detection algorithm on the active session structure, it is determined that a session is no longer active then the session is marked for removal and a session end event is generated.
Session Heartbeat	The session heartbeat or synchronisation event allows an interconnected traffic manager to keep a real time list of all active sessions (and continue to pass the information along to other networked computers, as required) without interconnected traffic managers being confused of whether or not events have timed out and thereby preventing the tracking of sessions being prematurely terminated.
Session Map	On receipt of a session map event, one or more active sessions are combined so that all future references made under any of the identifiers refers to the same entry in the active sessions structure. Where it is determined that two or more session identifiers are being used to refer to a single network user's session, a session map event is generated indicating that an error correction adjustment should be applied.
Session Query	On receipt of a session query event, the entire contents of an active session are returned to the generator of the session query event.

Impression events are described differently between implementations of network site activity applications, for example site impressions, hits, and page requests. Impression events are different to exposure events. Exposure events are also known as banner impressions or simply impressions.

Impression event data may be used to record the start of a session and record how a network user arrived at a network site. That data is also used to calculate traffic indicators, including how many network users have traversed a network site; how often users return, how long users spend on the site, and how many pages they reviewed at the site.

Result events can be categorised as events occurring when the user achieves a measurable goal, financial or otherwise. Broadly speaking, result events generally fall into the categories set out in Table 3.

Table 3

Result Type	Example
Lead	A user joins a mailing list or creates an account on your site
Subscription	A user subscribes to a pay-for-access site that is billed monthly
Softgood	A user purchases digital goods that are delivered via the net
Hardgood	A user purchases hard goods that are delivered offline

In each of these situations, there might be a confirmation page at the end of the process that informs the user that they have joined the mailing list, that their digital goods are available online at a specific URL; that their goods have been shipped, etc.

Ad exposure events represent an attempt to capture network user attention, while click events represent the capture of network user attention. It is common to see a combination of both exposure and click events within a single session.

A person event is generated when a network user is encountered. Two types of person event exist – new person and existing person. Person events can be implemented by way of identifying a network user's machine through the use of persistent cookies, and storing habit information, which facilitates the generation of existing person and new person events at appropriate intervals based on past contact with the network user.

A single document or other content may be delivered to a network user by a network server, and may contain one or more advertising messages, trigger one or more result events; and/or trigger one or more person events. Therefore, if delivery of that content generates an impression event, the impression event can have a relationship with one or more secondary exposure, result, or person events.

Figure 3 shows generally a system 210 for tracking the transfer of user attention within a computer network in accordance with the present invention. In the system 210, a central session manager 211 accepts event messages directly from network users 212, 213 and 214 via a browser interface 215. The central session manager 211 is also capable of accepting event messages via a server based interface 216. On the serving of content to a network user 217, a network server 218 may provide an event message to the server interface 216. Alternatively, when content is served from network servers 220 and 221 to network users 214 or 217 or to a network user 219 an event message, or other information representative of an event, may be forwarded to a network session manager 222, for forwarding to the server interface 216 of the central session manager 211.

Regardless of the interface used or the means by which the event message or other information corresponding to an event is generated and transported to the central session manager 211, a similar set of events are generated and uniformly applied to the same active sessions data structure. Regardless of the interfaces available, network user activity is translated into events, which are then applied to an active sessions data structure. Browser

interfaces manager this translation on the receiver request from a network user, while server interfaces process events generated externally of the central session manager 211. As soon as Figure 4, browser interfaces may include an ad-server 224, Clickthrough gate 225 and Measurement gate 226. Server interfaces may include an events gate 227 and structures gate 228.

The central session manager 211 maintains a single active session data structure across one or more browser or server based interfaces. The central session manager 211 records one or more events with regards to a single session identifier, a process known as maintaining state. Several forms of state may be maintained, as set out in Table 4 below.

Table 4

Type of State	Description
Site State	State within a network site is required to group events generated by a network user while visiting a network site.
Cross Site State	Cross-site state involves linking one or more groups of events arranged through the maintenance of site state. In this way, when cross-site state is maintained one can track the movement of a specific user as they move between network sites.
Persistent State	Persistent state refers to the maintenance of state between sessions. Persistent state is normally dealt with in terms of a single network user accessing a single network site. Example applications of persistent state are Person Events and Custom Tracking Data (see above).

A wide variety of situations exist whereby a network user is directed to a second site with or without the aid of a Clickthrough Tracking Gate and/or an Ad-Server. Figure 5 illustrates four exemplary ways in which network user attention is delivered from a first site to a second site, based on the optional presence of the Ad-Server 224 or Clickthrough Tracking Gate 225 shown in Figure 4, in circumstances where a known connection session already exists on the first site.

These cases are respectively referenced 242 to 245. In all four cases, a session identifier is passed from a first network site 240 to a second network site 241 by way of URL token, referrer token or cookie. However, in situations where none of these options exists, digital foot printing may be used to match two seemingly unrelated sessions.

When a session is created on the first site, the first site is preferably identifiable by way of a site ID, which is then passed to the second site by way, for example, of URL token or referrer token.

In cases where a Clickthrough Tracking Gate does not exist, then a clear identification - in terms of a click event - that network user attention has been delivered to a network site is not generated. As an alternative, various algorithms can be applied at the second network site to identify, the first network site (if any).

Each of these algorithms assume that one or more events exist within a session at the second network site 241 and that the algorithm is applied to the set of events at the second network site 241 for the purpose of identifying those events which contain information relating to the first site 240. The event is then analysed and the first site 241 identified, either in terms of a session identifier relevant to the first site or in terms of a site identifier that identifies the first site.

Figure 6 illustrates an arrangement where five network users, respectively referenced 270 to 274, access two network sites 275 and 276. Each of the network users 270 to 274 establishes a separate connection session, respectively referenced 277 to 282. The network sites 275 and 276 form part of a computer network and may be maintained on independent computer network servers or server clusters. When each network user 270 to 274 accesses one or other of the sites, a separate connection session is established. Figure 7 illustrates the manner in which events generated by each network user 270 to 274 are represented in terms of an active session data structure maintained in the active sessions database 223 of the central session manager 211. In this figure,

impression events are represented by "Imp", whilst result events are represented by "Res". The events occurring during each session are represented in a logical clicktree tree index structure representative of the browsing activity of each user within each connection session.

Whilst Figures 6 and 7 describe an arrangement in which each session state is maintained within a single site, Figures 8 and 9 represent the manner in which the present invention is able to maintain multiple cross site relationships within a single active sessions data structure. In this example, three network users, respectively referenced 300, 301 and 302, simultaneously access three network sites, respectively referenced 303, 304 and 305. In this scenario, the second network user 301 has accessed all three network sites 303 to 305 during a single connection session 306. The network users 300 and 302 respectively establish connection sessions 307 and 308. In Figure 9 "Exp" represents an exposure event, while "click" represents a click event.

The exemplary data structure shows that during connection session 306, the network user 301 responded to an advertising message appearing on site A, briefly visited site B then proceeded to a clearly definable result event at site C. Clearly, the result at site C was a direct result of an advertising exposure appearing on site A.

Much of the data maintained by active sessions data base 223 is in terms of publisher/advertiser relationships, whereby, for any given publisher/advertiser relationship, a detailed session structure describing interaction within and between sites is available. A further dimension to the data is possible in terms of custom tracking data. For each session, a persistent set of custom tracking data can be maintained for each network user visiting each network site. If a new publisher/advertiser relationship delivers the same network user to the same network site later, the existing persistent custom tracking data can be overwritten and replaced with new custom tracking data.

Custom Tracking Data may be defined by publisher and/or advertiser and normally consists of one or more identifiers that describe the relationship in further detail. For example, a placement identifier can be incorporated into the custom tracking data to describe where on a page an advertising message has appeared; a further placement identifier may be provided to identify where in a network site an advertising message appeared; and an advertisement identifier might be used to identify the exact advertising message presented to a network user.

As has been described previously, results events are generated when a network user achieves a quantifiable goal, financial or otherwise. A confirmation page is normally presented to the user after the result has been achieved and, at the same time, a result event is generated.

For example, a non-financial result event occurs when a user joins a mailing list or creates an account on a network site. In these situations, a confirmation page at the end of the process typically informs the user that they have joined the mailing list or supplies their username and password respectively. After the result event is generated, a sales representative might contact the network user later and attempt to sell them one or more products.

Another example is when a user subscribes to a pay-for-access site that is billed monthly. In this case, a confirmation page at the end of the process informs the user of their password and might detail how to cancel the subscription in the future. Several months and billing cycles after the result is generated, the network user might cancel their subscription.

When a user purchases hard goods that are delivered offline, a confirmation page is presented with a receipt and an estimated delivery time. After the event has been generated, a fulfilment house may determine that part or all of the order is out of stock and issue a refund accordingly.

In all of these examples, actions may occur well after the initial session has finished that, while a side effect of the session, are not directly related to the original session.

Moreover, the result event mentioned does not provide insight into any multistage registration or purchase processes that have led to the generation of a result. Considering that many result confirmation pages involve a multistage linear process leading up to the confirmation page (and result event), a need exists for measurement of dropout rates when the linear process commences but is not completed. A fine-grained measure of when a result process has begun, how far a user has been through the process, and whether the process was completed would be desirable. In addition, a means of detecting dropouts would be beneficial.

In one or more embodiments, the present invention clearly identifies when a result begins, when the user has moved closer to or further away from completing the result, and when a result ultimately ends. Exemplary result events are shown in Table 5.

Table 5

Event Name	Details
Result Start Event	The Result Start event informs the central session manager that a network user has begun a potentially result-generating process.
Result Report Event	As the user moves through a result generating process, result report events are optionally generated at relevant stages informing the central session manager that a progress meter should be updated.
Result End Event	The Result End event is comparable to other result measurement systems. When used without Result Start and Result Stop events, the outcome is identical to that of other result measurement systems. In regards to the improved system, a Result End event informs the central session manager that a result (that was previously started) has now been completed.

Result start events represent a network user commencing a multistage result generation process. Parameters to a result start event may include a Result ID, Result Name, and Maximum Progress Limit, as explained below:

(a) Result ID

When a network site expects network users to complete one or more result generating processes of the same type during the same session, the network site operator provides a result ID for each result generating process. The result ID must not be repeated in the same session. For example, an online trading web site expects users of network sites to place multiple bids in a session, sometimes simultaneously. Whenever the process of placing a bid begins, a Result Start event is generated containing a bid number. Subsequent Result Report and Result End events must also include the same result ID.

(b) Result Name

In situations where a network site offers multiple types of results, the start event for each type of result is given a mutually exclusive name, which is also to be used in subsequent result report and stop events. For example, a magazine publisher's network site might offer its publications electronically after a user completes a result generating process to create a username/password for accessing the publications. A separate result generating process is offered for users requiring delivery of printed via postal mail. The events associated with these results might be named "online subscription" and "offline subscription" respectively.

(c) Maximum Progress Limit

It has been determined to be useful analyse where in the process a user has dropped out. If this is to be analysed in terms of what percentage of the result process was successfully completed, the maximum size of the result process can be provided as part of the Result Start event. When specifying a Maximum Progress Limit, the maximum number of linear steps required to

reach a Result End event not including the initial Result Start event, can be defined.

Result Report events are used to describe at which stage in a result generating process the network user is positioned. The Result ID and Result Name are only included in a Result Report event if the accompanying Result Start event also included a Result ID and/or Result Name. In addition to the Result ID and Result Name parameters, Result Report events also include Progress Interval and Interval Description parameters, as explained below:

(a) Progress Interval

The numeric progress interval describes which stage the network user is currently at in relation to the Progress Limit specified during a Result Start event.

(b) Interval Description

The interval description is a human readable description of the current stage. In situations where the progress interval is not sufficient for identifying the network user's current stage within the process, An interval description can be used to describe the stage in question.

A Result Stop event marks the successful completion of a result generating process. A result event can be used by itself, or in conjunction with Result Start and Result Report events.

No event is provided for informing the central session manager that a user has dropped out of a result generating process – this is intentional. If a session end occurs and the session contains unfinished result generating processes (in other words, one or more Result Start events without an associated Result End event), they can be recorded as a result that has dropped out.

Figure 10 illustrates a practical example of the foregoing. Consider the example of a user joining a subscription based network site, where access is

provided to network users at a monthly rate of $29.95. Figure 10 illustrates the information architecture of the process required to subscribe.

In this process, two payment options are provided at step 350 – the user has a choice of entering a credit card number at step 351 or alternatively calling a 1-900 number at step 352. The credit card option is further complicated, in that if the credit card is rejected the first time at step 353, a second attempt is provided at step 354. The transaction is either subsequently denied at step 355, or approved at step 356. In the 1-900 option, entry of a code is required at step 357. Unsuccessful entry of the code results in rejection at step 358, or else approval of the transaction at step 356. Following approval, a confirmation page is served at step 359.

The following sessions are provided in the context of a scenario in which three network users attempted to subscribe using the above subscription process, of which only one succeeds. A list of events for each session is provided, along with a Clicktree tree index data structure for each session describing how each event occurring during that session is related.

From the example shown in Table 6 and illustrated in Figure 11, a linear process can be seen to have been followed by the user, eventually resulting in a Result End event. In this situation, the user did not drop out of the Result process and therefore very little extra information has been achieved by including the additional result events.

Table 6

	Event	Details
1	Impression	Choose Payment Method
	Result Start	No Result ID; No Name; Progress Limit = 5
2	Impression	Call 1-900 for code

	Result Report	Progress Interval = 1
3	Impression	Enter Code
	Result Report	Progress Interval = 2
4	Impression	Transaction Approved
	Result Report	Progress Interval = 4; Description = Approved
5	Impression	Confirmation Page
	Result End	

In the example shown in Table 7 and Figure 12, no result end occurred, however result dropout information is still available. In addition, two attempts were made by the user to subscribe – first with a credit card, and the second time via the 1-900 facility. Note that the progress interval counter was reset to one during the transition from the fifth to the sixth impression – in this example, both the credit card and 1-900 payment options are considered part of the same process.

Table 7

	Event	Details
1	Impression	Choose Payment Method
	Result Start	No Result ID; No Name; Progress Limit = 5
2	Impression	Enter Credit Card Info
	Result Report	Progress Interval = 1
3	Impression	Transaction Denied
	Result Report	Progress Interval = 2 Description = Credit Card Rejected

4	Impression	ReEnter Credit Card
	Result Report	Progress Interval = 3
5	Impression	Transaction Denied
	Result Report	Progress Interval = 4 Description = Credit Card Rejected
6	Impression	Call 1-900 for code
	Result Report	Progress Interval = 1
7	Impression	Enter Code
	Result Report	Progress Interval = 2
8	Impression	Invalid Code
	Result Report	Progress Interval = 3; Description = 900 Code Rejected

In existing Advertiser Centric systems, publishers send traffic into an advertiser and reports on publisher performance are made available from the advertiser's perspective. The inverse applies to existing Publisher Centric systems, where a publisher sends traffic into multiple advertisers and reports on advertiser performance are made available from the publisher's perspective.

Considering that most publishers deal with a number of advertisers and vice versa, and each publisher may be using a publisher and/or advertiser centric system to manage the flow of traffic, publishers and advertisers often find themselves using a variety of publisher centric or advertiser centric systems to essentially analyse the traffic flowing into or out of their network site.

Consider the example shown in Figure 13 whereby a broker site 400 purchases traffic from publisher sites 401 to 403 then re-sells the traffic to advertisers 404 to 406.

Traffic flowing from any of the publishers can be expected to arrive at any of the advertisers. From the broker's perspective, it would be most useful if data was available to this effect, describing the impact traffic flowing from upstream sites has on the traffic flowing into downstream sites. This data could then be used in future purchasing decisions or the broker may choose to structure remuneration of upstream publishers according to the traffic and results generated at downstream advertiser sites.

In the above described example, one could say that the broker site is simultaneously playing the role of publisher and advertiser.

In one all network sites can play the role of publisher and advertiser. In a traffic-trading environment, the aim is to acquire traffic from other sites, convert it into results, and then re-sell the traffic to other network sites.

Applying the traffic-trading model to the broker example, the result is now as shown in Figure 14. There are no longer any publishers or advertisers – just network sites. What was the broker site is now a hub site 420, in that any traffic that flows from sites 421 to 427 must pass through hub site 470.

The example shown in Figure 15 illustrates a typical situation where a group of loosely connected hub sites 430 to 433 collect traffic from a wide variety of network sites 434 to 448, then re-distribute the traffic amongst themselves in an attempt to extract the highest amount of results from the traffic.

In the context of the present invention, traffic is traded in units of network user attention. Traffic flow exists when a network user's attention is transferred from one network site to another. When network user's attention flows from one network site to another, it may be measured according to a variety of metrics, the most common metric used is a click. Optionally, advertisers, in consideration of traffic flowing from the publisher to the advertiser, remunerate publishers according to the traffic flow.

Tracking upstream/downstream traffic flows can involve identifying the transfer of network user's attention between sites as a sequence of cause and

effect relationships. In some situations, the flow of network user attention from a first to second to third network site is clearly definable, for example, when click events are generated connecting the first network site to the second, and the second to the third. In other situations, the relationship is not as clear, for example, when a first network site mentions that a network user should visit a second network site, and as a result, a network user suddenly appears at a second network site.

A number of observations can be made which facilitate the upstream/downstream tracking of network user attention. Firstly, if a network user can be independently identified at the first and second network sites, then the transferring of, the network user's attention from the first network site to the second network site is a single operation identifiable by the first or second network site without the need for measurement data from the second or first network site respectively. In other words, a network user exiting from one network site can be later matched against an entrance at another network site. If the network user cannot be independently identified at the first and second network site, then the connection between activity at the first and second network site may be identifiable using the data recorded during the transition from first to second site. In other words, the data recorded during the transition must include details of the first and second network site, including session identifiers at the first and second network site.

Secondly, when a network user exits a first network site, a second network site is entered. A network user can exit a first network site multiple times; only a single second network site is entered each time. A network user can enter a second network site multiple times; only a single (one) first network site is exited each time. An exception to this is that a network user may exit a network site without entering another network site. In this case, the network user's attention has reached its destination.

Thirdly, if the transfer of a network users attention from a first to a second network site can be identified; and the transfer of a network users

attention from a second to a third network site is may be identified; then the first network site affected the network user attention delivered to the third network site by way of the second network site.

These three observations can then be used to analyse a series of exits and entrances across a group of network sites to establish, for each network user, the sequence of cause-and-effect relationships between each network site.

In order to track upstream/downstream traffic flow it is desirable to identify where and when a network user has entered and exited a network site. Depending on the technique used, either an entrance into a network site is identified; an exit from a network site is identified; or both an exit from a first network site with a corresponding entrance into a second network site is identified. In addition, a variety of additional data relating to the first and/or second network site can be collected, including a site identifier, a session identifier, a click sequence number and custom tracking data.

The techniques used to track user attention flow include gate based techniques, including the use of exit gates. An exit gate is used to identify a network user leaving a network site. When a user chooses to exit, they are first directed to an exit gate, which in turn records the network user leaving a first network site. The exit gate then directs the user to a second network site. The first network site may be identifiable in the information recorded by the exit gate. Optionally, when directing the network user to the second network site, the exit gate may choose to incorporate a site identifier and/or session identifier from the first network, in the link to the second network site. A click sequence number or custom tracking data may also be included.

Entrance tracking gates may also be used. An entrance gate is the inverse of an exit gate – it is used to identify a network user entering a network site. Users enter via an entrance gate, which in turn records the network user entering the second network site. The entrance gate then directs the user into a specific section of the second network site. The second network site may be

identifiable in the information recorded by the entrance gate. Optionally, the entrance gate can attempt to identify and record the site and/or session identifier from the first network site by way of data encoded in the URL, referrer or cookies. A click sequence number and custom tracking data may also be identified.

Another gate that may be used in a Clickthrough Tracking Gate. Clickthrough gates combine the functionality of exit and entrance gates. When leaving the first network site, the network user is directed to a Clickthrough Tracking Gate. The Clickthrough Tracking Gate identifies and records both the first and second network site, and optionally identifies a session identifier, click sequence number and custom tracking data from the first network site. In session management based environments, the Clickthrough Tracking Gate may also create a session identifier for use by the second network site.

The Clickthrough Tracking Gate then directs the network user to the second network site, optionally incorporating a site identifier from the first network or a session identifier in the link to the second network site. A click sequence number or custom tracking data may also be included.

The techniques used to track user attention may also include session management based techniques. For example, session data may be analysed to identify entrance points. When an Entrance or Clickthrough Tracking Gate does not exist, then a clear identification that network user attention has been delivered to a second network site is not available. An alternative is to analyse detailed session data for the second network site to identify which parts of the detailed session data includes entrance data. The algorithm used to conduct the analysis may assume that one or more events exist within a session at a second network site and that the algorithm is applied to the set of events at the second network site for the purpose of identifying those events that contain information relating to the first site. The following algorithms work on a common principal that there should be a differentiation between events that are a direct result of a

hyperlink external to the network site (in other words, from a first network site) as compared with events that are a result of a hyperlink within the network site. After identifying one or more external events, they are further analysed and the first site further identified. Optionally, a session identifier, click sequence number, and user definable tracking data from the first site may be extracted from the event data as part of the further analysis.

The first algorithm is a flagged entrance algorithm. When network users are directed to a second network site, some form of flag is supplied to the second network site to highlight events. Session data is then searched for events containing the flag. Flagged events are then analysed to identify the first network site, (if any). For example, a hyperlink presented on the first network site contains a flag indicating to the second network site that a session identifier from a first network site is being provided.

Another algorithm is a sequencing based algorithm. This algorithm involves application of a sequencing technique to session data. After sequencing, event data is arranged in such a way that the first event can be identified. One means of sequencing a session is time based, where events are sorted based on when the occurred. An alternate arrangement includes using Clicktree based sequencing, where events are arranged according to matching previous and current click sequence numbers. After sequencing is applied to the events from a second network site's session, the first event is assumed to contain information relating to the first network site, if any. In the case of applying Clicktree based sequencing, multiple first events may be identified and analysed.

A third algorithm is an internal identifier algorithm. According to the common principal described above, there needs to be a differentiation between events that are a direct result of a hyperlink external to the network site as against events that are a result of a hyperlink within the network site. In line with this principal, session data is analysed to determine those events that are a

direct result of hyperlink within the network site. After internal events have been identified, the remaining events are assumed to be the direct result of an external hyperlink, and as such are analysed to identify the first network site, if any. For example, a site maintainer may choose to add an "internal" flag to all hyperlinks within the site that announces that the next event is the result of an internal hyperlink.

Another example does not require site-specific modifications of each link, but rather is based on analysis of the referrer and host HTTP request headers. Given that the host header identifies the hostname of the current network site, if the hostname from the host header matches the hostname from the referrer header, the assumption can be made that the request is the result of an internal hyperlink. In the case of a blank HTTP request header, the assumption is made that the event is the result of an external hyperlink.

A further session management based technique used to track user attention includes applying a Clicktrees tree index structure to identify session exit points. Given the nature of hypermedia systems, it is difficult to identify when a network user has left a network site without the use of an Exit or Clickthrough Tracking Gate. However, when click sequence numbers are included with session data, and a click sequence number from a first network site is transferred to a second network site, an clear link between the exit of a first network site to the entrance at a second network site can be established.

The techniques used to track user attention may also include session-less entrance detection techniques. The above-described techniques have all required Session Management or Gates to function. Various options exist, however, which do not require a gate or session management to function. Even in situations where Gates and/or Session Management exist, the following options may be used due to site specific limitations on passing of site identifiers, session identifiers, click sequence numbers and custom tracking data between

first and second network sites. These options include the use of an Entrance Recorded Flag.

Whenever a request to a network site occurs, the request may be checked to see if a flag representing the network user entering the network site has already been recorded. If the flag does not exist, the current event is analysed for identifying a first network site that may have potentially sent the network user into the second (current) network site. After analysis, the flag can then be attached to the network user. This can be in the form of a cookie attached to the network user or, alternatively, hyperlinks that reference the current network site might include the flag.

Another option includes HTTP Host & Referrer Request Header Analysis. Given that the HTTP referrer request header identifies the network address of the previous resource that referenced the current resource, in situations where a first network site has directed a network user into a second network site, the HTTP referrer header contains the full network address of the first network site. Given that the HTTP host header identifies the hostname of the current network site, if the hostname from the host header does not match the hostname from the referrer header, it can be assumed that the current request is the result of a first network site directing a network user into a second (current) network site. In this case, the current request at the second network site can be is analysed so as to identify the first network site.

The techniques used to track user attention may also include generating transition identifiers. Each time a network user's attention is transferred from a first network site to a second network site, a unique transition identifier may be generated. The first and second network site and any gates in between can then track exit and entrance events with reference to the transition identifier. In this way, detailed data relating to both the exit and entrance pages is made available, even in situations where a single network user has entered or exited a network site multiple times. While by itself not a means of detecting entrance, this

technique can be used to apply session management entrance (and exit) detection techniques to session-less environments.

As previously described, when network user attention is transferred from a first network site to a second network, it can be recorded with reference to the first and/or second network site. The second part of tracking upstream/downstream traffic flow may be to analyse these records to identify correlation between records documenting when network user attention left a first network site, and records that document network user attention delivered to a second network site.

Depending on the means by which the transfer of attention is recorded, establishing these 1:1 relationships between first and second network sites can occur at different times. The earlier the relationship is established, the more robust the data. Accordingly, a clear relationship between a network user exiting one network site and the same network user entering another network site can be defined. Strong relationships are identified at the time network user attention was transferred. For example, in the case of Clickthrough Tracking Gates, a single piece of data can be generated at the time of transferring network user attention that identifies both the first and second network sites.

In the case of using Transition Identifiers, again the identifier can be generated at the time of transferring network user attention and as such and , the relationship between the first and second network site is very strong.

In the case of transferring a site identifier, session identifier, and possibly a click sequence number from a first network site to a second network site, again the relationship between the first and second network site is very strong.

However, a weak relationship will be defined when two separate pieces of data representing an entrance and an exit are joined together for the purpose of defining a network user exiting one network site and the same network user entering another network site. Weak relationships are identified once the two separate entrance and exit pieces of data are joined together. For example, when user attention is transferred from a first network site directly to a second

network site, and Browser Based Measurement at the second network site identifies the same user entering the second network site from a first network site, a weak relationship between the first and second network site is established.

When neither the exit or entrance can be clearly defined no clear relationship will be established. However, an assumption can be made that a network user appearing on a second network site was the result of that network user accessing a first network site. This type of relationship can be determined, for example, after no more data is available relating to the network user's current activity and a sequencing algorithm is applied to establish relationships between network sites. Consider the example of a network user appearing at a first network site, then a few minutes later appears at a second network site. Although no information exists that clearly identifies the relationship between the first and second site, an assumption can be made, based on sequencing events according to the time at which they occurred, that the first network site has some relationship with a network user delivered to a second network site.

From the perspective of a single user, after both strong and weak relationships have been identified, a sequence of cause-and-effect relationships can be established.

In the following example illustrated in Figure 16, a network user travels between five network sites 500 and 504, two of which (referenced 500 and 503) do not have any measurement software installed. A list of network site relationships can be created as follows:

Site 500 to 501: A clearly definable relationship between the first and second site exists due to the use of a Clickthrough Tracking Gate.

Site 501 to 502: A weak connection between the second and third site has been established. Browser Based Measurement at the third network site detected that the network user arrived by way of a session at the second network site.

Site 502 to 503: No knowledge of the transition from the third to fourth site is available.

Only measurement data is collected for the activity at network site 504, and no relationship established. This measurement data is however collected with reference to the same user that accessed sites 500 through 502.

After establishing links between sites, part of the story is now complete. Arranging the data according to the active sessions tree index data structure shown in Figure 17, we see the relationships between sites 500 to 502 clearly identified. Events are arranged according to time-based clickstream sequencing so the earliest events are at the top and the latest events at the bottom. Site 500 does not have a session, however it is still included according to the data supplied via the Clickthrough Tracking Gate. Site 503 is not included as no data was collected, thereby creating a gap.

Once all the data has been collected, the clickstream sequencing can be analysed to discover that the first event at site 504 occurred shortly after the last event at site 502. An unclear relationship between sites 502 and 504 is filled in. The upstream/downstream relationship between sites is now site 500 to site 501 to site 502 to site 504.

In general, the upstream/downstream flow of network user attention can be defined according to the first entrance point for each session. However, the active sessions data structure maintained by the central session manager 211 serves as a useful way to programmatically deal with the problem of multiple entrance and exit points. The example scenario shown in Figure 18 involves a single network user accessing four network sites 502 to 523. Represented in this figure is that site 521 delivered the network user to both sites 522 and 523. The network user also returned to site 521 after responding to an advertisement at site 522, and subsequently generated a result.

If applying the general rule of thumb that the upstream/downstream flow of network user attention should be defined according to the first entrance point for each session, one would determine that the result generated at site 521 was a result of the network user being delivered from site 520.

However, detailed analysis of session activity can be applied for the purpose of determining which network sites where most responsible for driving results. Consider the result generated at site 521 in the above example. If only the first entrance to site 521 was analysed, it is determined that site 520 is responsible for the result at site 521. No allowance has been made for the fact that the network user responded to an advertisement at site 522 before generating the result at site 520.

Analysis of the detailed interaction between sites 521 and 522 though, enables one to determine that the network user attention flowed sequentially through sites 500, 501, 502 and 501 before achieving the results. After detailed analysis, it becomes clear that site 500 played only a minor role in driving the result and that site 522 was the initial source of the result.

A more detailed scenario will now be considered with reference to Figure 19. In the following scenario, network site 540 acts as a hub and directs traffic from the sites 546 - 548 into sites 542 - 544. In addition, traffic flows freely between sites 541 and 545 through site 540. Figures 20 and 21 illustrate examples for two network users traversing the network of network sites shown in Figure 19 – Users X and Y.

In Figure 20, User X begins at network site 548, then at step 600 travels to network site 540 via a Clickthrough Tracking Gate. Once at network site 540, the User X travels directly to network site 541 at step 601, then at step 602 returns to network site 540 via another Clickthrough Tracking Gate. After returning to network site 540, the network user X finally travels back to network site 542 at step 603.

In Figure 21, user Y begins at network site 547, then at step 610 travels to network site 540 via a Clickthrough Tracking Gate. Once at network site 540, the User Y travels directly to network site 543 at step 611.

Figure 22 provides a more detailed view of the transfer of user attention of User X. User X begins at the first network site 548. Given the lack of measurement at the first network site; only exposure events are recorded. After the Browser Based Ad Server Interface delivers four advertising messages, the network user responds and clicks on an advertising message. The network user's attention is then transferred from the first network site to the second network site 540.

The Browser Based Ad Server Interface, by way of session cookies, can maintain site state while at the first network site 540. Alternatively, a Browser Signature for User X can be generated and checked against a list of active Browser Signatures for the first network site 540. To ensure that browser-based session cookies are not re-used mistakenly across network sites, each request to the Browser Based Ad Server Interface may include the site identifier, for example:

http://www.optitrack.com/adserver?site=9

Given the presence of the Browser Based Clickthrough Tracking Gate, cross-site session state between the first site 548 and second site 540 involves two stages. The first stage involves maintaining cross-site state between the first network site 548 and the Browser Base Clickthrough Tracking Gate by way of session cookies or a browser signature. Again, the request to the Browser Based Clickthrough Tracking Gate may include the site identifier, for example:

http://www.optitrack.com/clickthrough?fromsite=9&tosite=1

The second stage involves maintaining cross-site state between the Browser Based Clickthrough Tracking Gate and the second network site 540. Prior to directing the user to the second network site 540, the Clickthrough Tracking Gate creates a new session entry in the Active Sessions tree index structure maintained in the central session manager 211. For the second

network site 540, in this case Session B, and a click event recorded with reference to the new session. The new session identifier is then encoded into a URL in a form recognisable to the second network site 540, and the network user directed to that URL as follows:

http://www.site1.com/index.cfm?session=B

After network user attention is transferred from the first network site 548 to the second network site 540, Server Based Measurement at the second network site 540 detects the supplied session identifier, and tracks impression events with reference to the supplied session identifier (as opposed to generating a new session identifier). These impression events are delivered to the central session manager 211 by way of the Server Based Event Interface 216, and include information that identifies the second network site 540 and the session identifier at the second network site 540. Using this information, the central session manager 211 can easily determine where in the active session structure to insert the generated events.

From a page received from the second network site 540, the network user clicks on the following link:

http://www.site2.com/index.html?site=1

After clicking on the link, the network user is transferred from the second network site 540 to the third network site 541. On arrival at the second network site 540, Server Based Measurement carried out by the central session manager 211 creates a new session identifier and supplies events to the Server Based Event Interface 216, again containing identifiers for the third network site and session. In addition to the site and session identifiers for the third network site 541, included in the impression is the second network site's identifier retrieved from the URL site 548 above, along with a session identifier for the second network site 540, which was extracted from the referrer HTTP header. The central session manager 211 then uses the previously described Flagged Event, First Event, or External Event algorithms to determine which impression should

contain the second network site's session and site identifiers and use this data to maintain cross-site state.

While at the third network site 541, an advertising message is delivered to the network user from the Browser Based Interface 215. Again, site state must be maintained, but this time its cross-interface – the session and site identifier used at the third network site 541 must be supplied to the Browser Based Interface 215. One option is to encode the data in the request to the Browser Based Ad Server, as follows:

http://www.optitrack.com/adserver?site=2&session=C

When the request arrives at the Browser Based Interface 215, an exposure event is generated and stored with reference to the session at the third network site 541. The Browser Based Interface 215 also creates a session cookie for later reference.

After receiving the advertising message, the network User X responds once again by clicking on the link. The two-stage process required to deliver cross-site state via a Browser Based Clickthrough Gate is once again required. The first stage involves maintaining cross-site state between the third network site 541 and the Browser Base Clickthrough Tracking Gate by way of session cookies or a browser signature. Again, the request to the Browser Based Clickthrough Tracking Gate may include the site identifier, for example:

http://www.optitrack.com/clickthrough?fromsite=2

The second stage involves maintaining cross-site state after the network User X leaves the Browser Based Clickthrough Tracking Gate. Prior to directing the user to the second network site 541, the Clickthrough Tracking Gate locates an existing session entry in the Active Sessions tree index structure 223 for the destination network site 540, in this case Session B and a click event recorded with reference to the new session. The new session identifier is then encoded into a URL in a form recognisable to the second network site 540, and the network user directed to that URL as follows:

http://www.site1.com/index.cfm?session=B

After network user attention is transferred from the third network site 541 back to the second network site 540, Server Based Measurement at the second network site 540 either detects the supplied session identifier, and tracks impression events with reference to the supplied session identifier (as opposed to generating a new session identifier) or detects an existing cookie. Impression events are delivered to the central session manager 211 by way of a Server Based Event Interface 216, and include information that identifies the second network site 540 and the session identifier at the second network site 540. Using this information, the central session manager 211 can easily determine where in the active session structure to insert the generated events.

From a page received from the second network site 540, the network user once again clicks on a link, as follows:

http://www.site3.com/index.html?site=1

After clicking on the link, the network User X is transferred from the second network site 540 to the fourth network site 542. On arrival at the fourth network site 542, Server Based Measurement creates a new session identifier (session D) and supplies events to the central session manager 211 via the Server Based Event Interface 216, again containing identifiers for the fourth network site 542 and session. In addition to the site and session identifiers for the fourth network site 542, included in the impression is the second network site's identifier retrieved from the URL (site 548 above), along with a session identifier for the second network site 540, which was extracted from the referrer HTTP header. The central session manager 211 then uses the Flagged Event, First Event, or External Event algorithms to determine which impression should contain the second network site's session and site identifiers and use this data to maintain cross-site state.

Figure 23 illustrates the integration of the session manager 211 and the cross-linking sessions as a user travels from site to site to thereby enable, upstream and downstream traffic analysis to become possible. As the page for Web Site 650 is served to the user, a Content Server module 651 selects an

appropriate Web Site 652 creative from the Web Site 650/Web Site 652 relationship to serve from a database 653 at step 654, logs an impression event at step 655, which is then placed into the session list in database 223. This logging records the display of Web Site 652's creative to the user. The creative is then served at step 655 to the user for display on Web Site 650's web page, and the Browser Based Measurement module 671 detects an impression at step 657 and so logs an impression event at step 658 in the session list at step 659.

If the user clicks on Web Site 652's creative, which is contained on Web Site 650, then an HTTP request is sent to a Redirect sub-module 670 at step 672, which is logged in the session manager 211 at step 673 and recorded in the session list at step 659. The link to the next page, here Web Site 652, is retrieved at step 674 from the database and the user is automatically redirected at step 675 to page on Web Site 652.

As with Web Site 650, the Content Server module 651 determines the appropriate Web Site 676 creative from the Web Site 652/Web Site 676 relationship that is stored in the database 653, and which is to be served as part of Web Site 652 at step 677. As Web Site 652's page is displayed, an impression event for that page is detected at step 678 and logged at step 658 and stored 659 in the session list.

If the user clicks on Web Site 676's creative, which is contained on Web Site 652, then an HTTP request is sent to the Redirect sub-module at step 679, which is logged in the session manager at step 673 and recorded the session list at step 659. The link to the next page, now Web Site 676, is retrieved at step 674 from the database and the user is automatically redirected at step 680 to page on Web Site 676.

As with Web Sites 650 and 652, the Content Server module 651 may determine that there is an appropriate creative from some relationship where Web Site 676 is an affiliate, and which is stored in the database 653 that can be served as part of Web Site 676 at step 681. As Web Site 676's page is

displayed, an impression event for that page is detected at step 682 and logged at step 658 and stored at step 659 in the session list.

From this example, it can be seen that the concentration of event recording provided by the above-described integration leads to a new ability to be able to attribute the arrival of traffic at Web Site 676 to not only Web Site 652, but also Web Site 650. The present invention allows the tracking of a user across multiple web sites and not just the movement from one site to another. Following the process shown above, this integration allows tracking of a user or session to occur across an infinite number of sites, so long as each site is connected to a system according to the present invention.

Various additional means of maintaining cross-site state may also be used by the present invention. These include the use of browser signatures. A browser signature is a short-term network user identifier that functions via the HTTP protocol without the need for cookies. A browser signature can be used most commonly as a short-term replacement for session and/or user ID's, where cookies or other means of maintaining Session State does not exist.

Consider for a moment that a single network user's access of one or more network sites generally tends to include the same or similar IP addresses for the duration of the session. Consider also that given the wide variety of network client software, the slight variations in the software between each version, and the different way in which each browser is configured. A browser signature involves gathering up all this information and generating a short-term user ID from the data. To generate a browser signature, a string containing a variety of information pertinent to the network user is constructed. A hashing function is then applied to the string. The result is a numeric identifier by which the network user can be identified.

Construction of the source string is an important part of generating a Browser Signature. There can be no limit to the size of the source string – it can be as long as is required to fit the source data. As shown in Figure 24, the first 24-bits or three bytes may contain the first three bytes of the network user's IP

address 700. After the IP address, a selection of HTTP header 701 from the network user's client software may be appended to the source string. After the selection of HTTP headers 702, optional custom data can be appended. For example, a network site ID could be incorporated if you required different Browser Signatures between network sites.

The selection of HTTP headers chosen to incorporate into the source string is important to the application in question. Effectively a browser signature identifies a network user using their specific IP address and HTTP headers. The fewer HTTP headers that are incorporated into the source string, the higher the likelihood that two network users will simultaneously be allocated the same browser signature. The more HTTP headers incorporated into the source string, the higher the likelihood that one network user will simultaneously have multiple browser signatures.

The minimum headers include are the contents of the HTTP referrer request header, the HTTP accept language request header, and the HTTP user agent request header. Further request headers can be chosen on the basis that they would not change during a session, thereby generating a new Browser Signature.

The selection of custom data is based on the application in question. In situations where network user activity is being tracked for a number of network sites simultaneously, adding the network site identifier to the source string ensures that browser signatures remain unique for each network site.

After constructing a source string, a hashing function is applied to the source string, resulting in a numeric browser signature. The choice of hashing function is based on the requirement that whenever the exact same source data is passed to the hashing function, the same browser signature is returned. In addition, if the source string changes only slightly, a different hash is generated. Finally, the numeric value returned by the hashing function should be at least a

32-bit number. An ideal example hashing function is applying a CRC-32 to the source string.

To maintain Session State using browser signatures, every time the network user is encountered, a browser signature is regenerated. The browser signature is then used in place of a session identifier. To maintain cross-site Session State, when a user is first encountered on a network site, a browser signature is generated. If the user travels to a second network site and a browser signature at the second network site matches a browser signature from a first network site, a relationship between the network user's session at the first network site and the network user's session at the second network site is created.

The Referrer request-header field in HTTP requests allows the client to specify, for the server's benefit, the URI of the resource from which the Request-URI was obtained. Figure 25 illustrates four impression events 720 to 723 occurring as user attention is transferred between two sites 724 and 725. For each impression event, both the request URI and the HTTP referrer are shown. At impression 722, the transfer from the first site 724 to the second network site 725 includes the first network site's site identifier in the URL (site=9). In addition, the referrer contains the session identifier of the first site 724. The second site 725 is capable of determining the session and site identifiers from the first network site by analysing both the requested URL and the HTTP request header. Therefore, the referrer header can be used as an aid to maintaining cross-site state.

A detailed embodiment of the invention will now be described with reference to Figures 26 to 28. The central session manager and network server described hereafter form part of the systems 210 of Figure 3, and implement the above-described methods and techniques. The central session manager 800 shown in Figure 28 includes a Server Measurement Module 801, Browser-Based Measurement module 802; and Content Serving module, which includes the Redirect sub-module 804.

The Server Measurement Module 801 is responsible for receiving and processing various event messages that relate to a user's navigational behaviour across a network 3. The event messages may originate from one or more information servers that are connected to the network 3, and which run a plugin illustrated in Figures 27 and 28 as part of the information server configuration. The Server Measurement Module 801, may exist independently of the other modules that make up the system illustrated in Figure 26.

The Server Measurement Module 801 operates by listening for incoming event messages 1 that are received from across the network 3. When a message arrives at the Server Measurement Module 801 at step 4 then the module accesses stored data in a database 5 to retrieve information that relates to the merchant that is specified in the incoming event message at step 6.

Once the module has retrieved the relevant merchant's information from the system data store 5, then the module looks at the incoming message at step 7 to determine if this is a time synchronisation event message. Time synchronisation messages are used to synchronise the system with the merchant's information system, which may be physically located in a different time zone. The synchronisation event helps to keep both the merchant's online system synchronised with the traffic measurement system. If this is a synchronisation event, and the module identifies a difference between the time specified in the synchronisation message and the system time, then the system adjusts the amount of delay between the time of each event received from the merchant and the system clock at step 8. If this is a time synchronisation message, which has been received by the module then no further processing of that incoming message will occur at step 9.

However, if the module determines at step 7 that this is not a synchronisation event message then the module begins to record information that is contained in the incoming event message, and which is forwarded from the relevant plugin located on the remote web server on the network 3.

Each event message that arrives at the module 801 in may, have multiple different session IDs for each event. The Server Measurement Module 801 processes each different session ID in turn at steps 10 and 15.

The module begins by examining the first session ID that is contained in the incoming event message that was received at step 10. The central session manager 800 then examines the list of sessions that are currently being tracked to determine if that first session ID already has an entry in the session list, signifying that this session is currently being tracked at step 11 . This involves a query of the list of sessions that are currently being tracked at step 12.

If this first session ID is contained within the session list, then the Server Measurement Module 801 will store the event information at step 13 into a list of events 14 that relate to this particular session.

Once the Server Measurement Module 801 has processed the first session ID contained in the incoming event message, the module then examines the incoming message to determine if the message contains any other session IDs to which this particular event will also apply at step 15.

If there are further session IDs to be processed, then the next session ID is examined at step 10, otherwise there is no further processing of this event message at step 16. This next session ID is then also checked at step 11 against the session list 12 to determine if that session ID is contained within the session list that is currently being maintained.

If the Server Measurement Module 801 determines at step 11 the list of this session IDs 12 does not contain the session ID that is currently being considered, then the Server Measurement Module 801 creates a new session entry in the session list 12 and then performs a session mapping. Session mapping occurs when one incoming event messages contains two or more different valid session IDs. It is clear in such an instance that the same user has, for various reasons relating to the technical aspects of some networks, been allocated multiple session IDs. The logical step is then to map the events that occur in each of the different session IDs as being events that relate to a single

session 17. This may also be accomplished by mapping one session ID that has been allocated to the tracked user to refer also to the different, but mapped, session IDs.

As with the previous session ID, if this session ID exists at step 11 in the current list of sessions 12, or if it did not exist at step 11 but has now been created at step 17 and mapped, then the module 801 will store at step 13 the event for this particular session into list of events 14.

This process will continue while there are still session IDs in the incoming message that have not yet been handled. When there are no more session IDs in the incoming event message to be processed at step 15 then further processing of this incoming event message terminates at step 16.

Browser Based Measurement involves the tracking of a user's movement across a network 3, by examining the requests made of the central session manager 800 server to serve a one-by-one pixel GIF, those requests having originated from a particular user that is connected to the network 3. HTML code, which is included in the network pages that are served to the user, directs the user's browsing software or client, to request the serving of a particular file from the server.

A web server at the site 2 that is connected to the network 3 initially receives the incoming request for the file, and that web server then communicates that request to the Browser Based Measurement module 802 at step 18 via a Fast CGI interface. Typically, the file requested is a one-by-one pixel GIF and the incoming request will be an HTTP request.

When a request for the one-by-one pixel GIF is received at the Browser Based Measurement module 802 at step 18, then the module extracts data required for further processing from that request at step 19.

One field that is extracted from the incoming HTTP request is the merchant for whom this one-by-one pixel GIF has been requested to allow tracking. Information relating to this particular merchant is then retrieved at step 20 from the data store 5.

The Browser Based module 802 then considers at step 21 whether the merchant specified in the incoming request is contained in data store 5. If the system is currently handling the merchant specified in the incoming request then that merchant will be stored in the data store 5. If the Browser Based module 802 detects at step 21 that this merchant is not currently contained in the data store 5, then the server will serve an error GIF at step 22 back to the requesting user's browser software and all further processing is terminated at step 9.

If the Browser Based module 802 detects at step 21 that this merchant is currently in the data store, then the module examines at step 23 whether this incoming request is part of an event that signifies that an impression or a transaction has taken place. An impression event is simply that a particular piece of content, such as an image, has been sent to, and therefore probably viewed by, the user. A transaction can be a financial or non-financial transaction and includes the purchase of an item, or the subscription to a mailing catalogue.

If the Browser Based module 802 detects at step 23 that this request is not part an impression or a result event, then the server will serve an error GIF at step 22 back to the requesting user's browser software and all further processing is terminated at step 9.

If the Browser Based module 802 detects at step 23 that this request is part of either an impression or a transaction event, then the module calculates a digital footprint for the requesting user at step 24.

The Browser Based module 802 then considers at step 25 whether there is a session ID that is contained in the incoming request, which is possibly stored in a cookie that exists on the user's computer, or client.

If the Browser Based module 802 detects at step 25 that this request contains a Session ID that corresponds to a session that is already stored in the session list 12, then the server will serve that same session ID back to the user at step 27 in a cookie.

If the Browser Based module 802 detects at step 25 that this request does not contain a session ID, or contains a session ID that does not correspond to a session that is already stored in the session list 12, then the server will create a new session ID for this user at step 26, insert that session into the session list 12, and then serve that new session ID back to the user 27, usually in a cookie.

The Browser Based module then refers to the session list 12 to determine if this particular merchant that is referenced by this incoming request has a session ID in the list of sessions that is maintained at step 28. If this particular merchant does not have an entry in the session list for the current session ID, then a new session is created for the merchant and stored in the list at step 29. If there is already a session list entry for this merchant at step 28, or a new session has been created in the list at step 29, then the Browser Based module 802 determines whether this incoming request is part of an impression event at step 30. If this is an impression event then the module logs at step 31 this impression event in the list of events 14. If this is not an impression event at step 30, or it is an impression event and the event has now been logged into the event list at step 31, then the Browser Based module considers this incoming HTTP request to determine if this event is part of a result at step 32.

Where the incoming request is part of a result event that has been initiated by the network user, then the Browser Based module 802 checks at step 33 whether there is a cookie that is temporarily stored on the user's computer that contains a digital footprint. A digital footprint is a value that represents, to the finest level of accuracy possible, this particular network page being viewed by this particular user.

If this is not a result event at step 32 or if this is a result event, but there is a digital footprint stored on the user's computer that matches the digital footprint of the current result event at step 33, then the Browser Based Measurement module 802 serves the result one-by-one pixel GIF at step 34 and then terminates further processing at step 35.

If the digital footprint matches a digital footprint stored on the user's computer then it is apparent that this user has just previously visited this result page and another result should not be recorded. This storage of the digital footprint is used to ensure that if the user, for example, re-navigated back through the current page then the system will not count that navigation as another result. If the user did re-navigate to this current page as part of a result then the system changes the digital footprint so that the new result will be recorded as a different result to the original transaction.

If this is a result event but the digital footprint of this current page does not match a digital footprint that is currently stored on the user's computer, then the Browser Based module 802 logs at step 36 the result event into the list of events 14 and then serves the digital footprint of this current page at step 37 to the user in the form of a cookie at step 34.

Once the result has been logged at step 36 and a cookie containing the current digital footprint at step 37 has been served back to the user, then the Browser Based module 802 serves the result one-by-one pixel GIF at step 34 to the user and terminates further processing at step 35.

The third module in the central session manager 800 is the Content Server module 803, which is responsible for providing and tracking specific content to users located on the network 3.

As with the Browser Based Measurement module 802, Optitrack's Content Server module 803 receives messages from a co-located web server 2 via a Fast CGI interface that operates between the module and the web server at step 38.

The first step taken by the Content Server module 803 is to consider at step 39 whether this incoming request is a request from a network user's computer that requests some particular content to be served to that user's computer for display to the user. Typically, the user's computer makes such requests because of code that is placed into the HTML embedded in affiliates network pages.

If this is a request from a user connected to the network 3 for content to be served to the user, then the next consideration made by the module 803 is whether this is a request to serve an advertisement, or creative, of some type to the network user at step 40.

If this is a request to serve some particular creative to a network user then the Content Server module considers for which merchant this creative has been requested. Following that, the module retrieves that particular merchant's information at step 41 from the data store 5 that is maintained by the server.

Next, the Content Server module 803 examines the incoming request to determine two additional values used to appropriately match the incoming request to an appropriate creative from the group of available creatives. Those two additional values are the affiliate whose page contains the HTML code requesting the creative, and the size of the creative that is required to be displayed on the affiliates network page at step.

The Content Server module 803 then considers the relationship between affiliates and the range of creatives that are available to that affiliate at step 43. If this incoming request for a particular creative is not a valid request, because of an invalid creative size or invalid affiliate, then the Content Server Module 803 serves an error GIF at step to be displayed on the affiliates page, and further processing is terminated at step 45.

If, however, this is a valid request for a particular creative at step 43, then the Content Server module 803 goes on to consider all of the relationships between the merchant and the affiliate. In other words, the module then examines each of the merchant's advertising campaigns that involve this affiliate at step 46. This process essentially involves of examination of each of the merchant's campaigns that are underway where this particular affiliate is participating at step 46, and then examining each creative in each such campaign at step 47 to determine if any of those creatives match the incoming request at step 48. Practically, this may be accomplished by looping through each of the merchant's campaigns where the affiliate is participating at step 46

and 50, and then also looping through each creative set to be used in each of those campaigns at steps 47 and 49, until a suitable creative is found at step 48.

Logically, the module 803 examines the first of the merchant's campaigns where this affiliate is participating at step 46. For that first campaign, the module 803 checks each creative that is set to be used in that campaign at step 47 to determine if any creative matches the incoming request at step 48. If, after checking each creative set to be used in this first campaign, the module 803 finds that no creative match the affiliate's incoming request then the module checks another of the merchant's campaigns where this affiliate is participating. If after examining all of the creatives at step 49 in all of the merchant's campaigns at step 50 where this affiliate is set to participate the module does not find a match at step 48 for the incoming request, then an error GIF is served at step 44 to be displayed as part of the affiliates network page, and further processing is terminated step 45.

If the Content Server module 803 detects a creative that exists in a campaign that is a part of the merchant/affiliate relationship at step 48 then the Content Server module 803 crosschecks the matched creative at step 51 to determine whether this is, in fact the correct creative to serve for display as part of the affiliate's network page. This is achieved by crossmatching the creative/campaign relationship and the relevant campaign against the merchant/affiliate relationship. Each should be a member of the corresponding relationship.

If this cross matching detects that the selected creative should not be served as part of the affiliates network page at step 51, then the Content Server module serves an error GIF at step 44 and further processing terminates at step 45.

If this is a valid creative at step 51 that has been selected to be served to the network user then the Content Server module 803 creates a digital footprint at step 52 that is a unique identifier that represents this particular network user having viewed this particular creative to be served as part of this particular

affiliate page. This digital footprint may be effectively used as an impression event for the selected creative. That digital footprint is then added at step 53 to the event list 14. Once the footprint, or impression event, has been added to the event list, then the creative is served to the network user at step 54 as part of the affiliates network page and further processing is terminated at step 45.

The Redirect sub-module 804 of the Content Server module 803 is typically used to detect instances where a user has clicked on a particular piece of content on an affiliates network page, perhaps a creative served by the Content Server module 803 as outlined above, and has moved to another page on the network. An example of such an event is that a network user clicks on a merchant's advertising banner that is displayed on an affiliates network page, whereupon the affiliate would wish to know that a user has navigated from the affiliates page to the merchant's network site.

Initially, if the Content Server module 803 determines that an incoming request is not a request to serve content, but is actually a request to redirect the network user to another location at step 39, then the Content Server module 803 passes the incoming request to the Redirection sub-module 804 so that it may record the event and then redirect the user to the specified redirect location at step 55.

The next step that the sub-module 804 undertakes when redirecting a user to another location is to retrieve at step 56 the details of the affiliate, who is specified in the incoming request from the user. It is the affiliate's network page that contained the redirect link and the sub-module will be able to determine the affiliate based on details that are embedded in the redirect link.

Once the relevant affiliate has been determined , the affiliate's details are then retrieved at step 56 from data store 5.

The sub-module 804 then considers whether the affiliate specified in the incoming request is a valid affiliate at step 57, who is known to the server and stored in the data store 5.

If the sub-module 804 is unable to detect that the affiliate specified in the incoming request is a affiliate known at step 57, then the network user is redirected to an error page at step 58 and further processing terminates at step 59.

If the sub-module 804 detects that the affiliate specified is known, then the sub-module 804 determines at step 60 whether the incoming request also contains a creative identifier (an Ad ID), which specifies the particular creative that has been clicked, the campaign to which that creative belongs, and the merchant who is running that particular campaign.

If the incoming request does not contain an Ad ID then the sub-module generates a digital footprint at step 61, which uniquely identifies this particular creative, the campaign to which the creative belongs, and the merchant who is running the campaign. In essence, this digital footprint is instead of an Ad ID.

Once the digital footprint has been generated at 61, then the sub-module 804 performs a look-up at step 62 of the digital footprint list 34 which matches the digital footprint value to a creative identifier, a campaign identifier and a merchant identifier. The sub-module 804 then performs a crosscheck to verify the creative, campaign and merchant identifiers are valid at step 64.

If the incoming request for a redirect contains an Ad ID at step 60, the sub-module 804 extracts at step 65, from that Ad ID, identifiers for the creative that was clicked, the campaign to which that creative belongs, and the merchant who is running that campaign. The sub-module 804 then performs a crosscheck to verify the creative, campaign and merchant identifiers are valid at step 64 and match. In other words, the crosscheck at step 64 ensures that the creative does belong to the specified campaign, and that the merchant is actually the merchant who is running the specified campaign.

The sub-module 804 then generates a digital footprint for those incoming requests that contain an Ad ID, and uses the digital footprint already generated for those that do not, to create an event that corresponds to a click of the creative on the affiliate's network page, or click event at step 66.

The sub-module 804 then looks up the list of sessions 12 to determine if the session ID contained in the incoming redirect request is contained within the list at step 67.

If the session ID contained in the incoming redirect request does not exist in the session list, then the sub-module 804 creates a new session ID at step 68 and inserts that session into list of sessions 12. If the sub-module 804 finds that the session ID exists at step 67 in the list of sessions 12, or the session ID has just been created at step 68 in the session list 12, the session ID is served back to the network user, in the form of a cookie, for future reference at step 69.

Once the session ID has been served back to the network user, the click event is then inserted at step 70 into the list of events 14.

The content that is to be served to the network user is then parsed to insert tokens into that content at step 71. The redirect page is then served to the network user at step 72 and further processing is terminated at step 73.

Figure 27 shows generally a network user or client 101 connected to a network server 151 in this example by the Internet 102. The network server 151 is representative of the network servers 220, 221 and 218 shown in Figure 3, and acts to serve content stored in a storage media 116 to the client 101. The network server 151 includes network server software 157, the functionality of which is determined by a network server plugin 158 acting in conjunction with an information server engine 154 to serve content stored on the storage media 116 to the client 101. The network server plugin 158 includes a session ID detection module 155, a synchronisation module 153 and a filter module 152.

The operation of the network server 151 will now be briefly described with relation to Figure 28. Initially, the client 101 makes a request to receive content located on the network server 151. This request is intercepted by the session ID module 155 and analysed at step 103. At step 104, the session ID module 155 determines whether a token has been encoded within the HTTP request sent by the client 101. Next, the session ID module 155 determines at step 105 whether a cookie stored on the client 101 has set a cookie value, acting

as a session identifier, within the HTTP request. In the next step 106, the session ID module 155 determines whether a session identifier can be derived from the referrer field in the HTTP request header.

If the session ID module 155 determines that a session identifier can be determined at any one or more of steps 104 to 106, the session identifier will be temporarily stored in a memory storage device 107.

If the module 155 is unable to positive identify the user as a user whose browsing activity is currently being tracked by matching the detected session identifier with previously generated and stored session identifiers, the session ID module 55 will trigger a flagged impression event at step 109.

Alternatively, if the session ID module 155 is able to identify the user as one that is currently being tracked at step 108, a non-flagged impression event will be triggered at step 110. At step 111, flagged and non-flagged impression events are placed into a queue in a memory device 112. Subsequent event messages are added to the memory device 112, and the contents of that memory device may be subsequently retrieved by the traffic manager module 156 to link session events within a same connection session.

Once the session ID module 155 has stored an event message in the memory device 112, the content request is passed at step 113 to the information server engine 154. Once the server request is received by the information server engine 154 at step 114, the information server engine 154 retrieves the requested content stored in the storage media 116 at step 115, and streams or otherwise transmits this retrieved content at step 117 to the filter module 152.

At step 118, the content forwarded from the information server engine 154 is received at step 118, and subsequently examined at step 119 to determine if the content is part of a sale, subscription, query or other result event. If the content does contain something to signify that the content is part a result event at step 120, the filter module 152 raises a result event message at step 121, and transmits this event message for storage in a queue maintained in the memory device 112.

The filter module 152 then dynamically alters the content at step 122 to be served to the user, in order that the browsing activity of the user may be tracked during the current connection session. Information that is dynamically included into the content at step 122 is obtained either from counter that exist in a memory device 123, or from configuration files 124, which may typically be maintained locally on the network server 151. Once the content has been dynamically altered at step 122, the content is transmitted at step 125 across the Internet 102 to the client 101 for viewing by the user.

The synchronisation module 153 generates a set of synchronisation event messages to allow for temporal stamping of information flowing from the plugin 158. Synchronisation event messages are initiated at step 126 by the generation at regular intervals of a sync signal, which are sent to the memory device 112 at step 127 either as a timesync event message 128 or a server ping message 129. The purpose of the timesync event message 128 is to mark the place in the queue maintained in the memory device 112 when a particular time occurred. For example, if the queue maintained in the memory device 112 was backlogged by 30 minutes worth of processing, then the timesync signal will still allow interfacing software to record the viewing transactions with some form of time date or other temporal data. At predetermined intervals the server ping messages 129 are may be placed in the queue maintained in the memory device 112 for each website or source of content active on the webserver 157. The purpose of the server ping message 129 is to signal to interfacing software that the network server is still active.

A central session manager 160 interfaces with the network server plugin 58, and is responsible for processing the event messages generated by an event message transmission module 161 forming part of the network server plugin 58. The module 161 acts at step 162 to transmit event messages stored in the data structure 12 to the central session manager 160 to enable tracking of user attention at a central location.

The network session manager 222 shown in Figure 3 may include the same modules as that shown in Figure 28, with the addition of a traffic manager module to enable the centralised tracking of user activity in sites maintained on servers (such as those referenced 220 and 221) in communication with the network session manager 222. Having developed a session list of events occurring at those sites, the network session manager 222 then transmits the event messages in the session list to the central session manager 211.

From the foregoing numerous features and benefits become apparent. As the above-described system consolidates the three once disparate competencies of ad-serving, measurement and tracking modules, the appropriate payments to be made to an affiliate based on a number of known predefined events are able to be determined.

A centralised control console for a number of publishers that provides the mechanism for any publisher to buy or sell, or buy and sell user attention is also provided.

Numerous merchant banners can be rotated through the Ad-Server and provide accurate accounting that allows affiliates to receive one payment at the end of the month. A centralised control console also allows publishers to choose to download and serve banners if they wish, and also allows publishers that are acting as merchants and/or affiliates to form user attention trading relationships that can be initiated, reviewed and controlled using a powerful web and email based relationship management system.

The above-described system also provides a means of collecting, collating and recording consistent metrics that emanate from all inbound and outbound currents of user attention. This element enables marketers to facilitate detailed analysis and optimisation based on one consistent data source and subsequent reporting tool.

Finally, it should be appreciated that various modifications and/or additions may be made to the above-described method, system and components

without departing from the spirit or ambit of the present invention as defined in the claims appended hereto.

CLAIMS:

1. A method of tracking browsing activity of a user in a computer network including two or more independent computer network servers or server clusters, the user establishing a connection session with the computer network, the method including the steps of:
receiving a user request for content located on a first of the network servers or server clusters;
dynamically including a unique session identifier in content served from that first network server or server cluster to the user during the connection session;
transmitting the session identifier from the first to a second of the network servers or server clusters when a subsequent user request for content is made to the second network server or server cluster;
transmitting an event message including at least that session identifier to a central session manager upon the occurrence of a user browsing event during that connection session; and
logging session information derived from the event messages in a session data structure.

2. A method according to claim 1, wherein the event messages are generated and delivered by the user.

3. A method according to claim 1, wherein the event messages are generated and delivered by the network server providing content.

4. A method according to any one of the preceding claims, wherein the event messages are generated for session events, including any one or more of synchronisation event messages, impression events, result events, exposure events,

click events and/or person events.

5. A method of tracking upstream and downstream traffic flow between multiple sites within a computer network; the method including the steps of:
at the central session manager, receiving site entrance and exit data collected upon the transferral of user attention between the multiple sites;
identifying network site relationships from correlations in the site entrance and exit data; and
establishing a sequence of cause-and-effect relationships between the multiple sites.

6. A method according to claim 5, wherein the site entrance and exit data is captured by one or more tracking gates provided in one or more computer network servers hosting or forming part of a same network server cluster as the sites.

7. A method according to claim 5, wherein one or more of the tracking gates is an exit tracking gate that dynamically includes a site identifier and/or session identifier in the link to the second site.

8. A method according to claim 7, wherein the exit tracking gate includes a click sequence number or custom tracking data.

9. A method according to any one of claims 6 to 8, wherein one or more of the tracking gates is an entrance tracking gate that attempts to identify and record the site identifier and/or session identifier from data encoded in the user request.

10. A method according to claim 9, wherein the data encoded in the user request

includes any one or more of a URL, a cookie and/or a referrer.

11. A method according to any one of claims 6 to 10, wherein one or more of the tracking gates is a clickthrough tracking gate that records both first and second site identifier at the first site.

12. A method according to claim 11, wherein the clickthrough gate identifies or creates the session identifier, click sequence number and custom tracking data from the first site.

13. A method according to any one of claims 5 to 12, wherein the site entrance and exit data are captured by session management based techniques.

14. A method according to claim 13, wherein session management based techniques include analysing session data at the second site to identify entrance points from the first site.

15. A method according to either one of claims 13 or 14, wherein the session management based techniques include identifying external events directly resulting from an external hyperlink, and analysing external events to identify the first site.

16. A method according to claim 15, wherein the external events are analysed by extracting a session identifier, a click sequence number and/or custom tracking data from the first site.

17. A method according to either one of claims 15 or 16, wherein the external events are analysed by using any one or more of a flagged entrance algorithm, a sequencing based algorithm, or an internal identifier algorithm.

18. A method according to any one of claims 13 to 17, wherein session management based techniques include applying a clicktrees tree index structure to identify session exit points.

19. A method according to any one of claims 5 to 18, wherein the site entrance and exit data is captured by session-less entrance detection means.

20. A method according to claim 19, wherein the session-less entrance detection means uses an entrance recorded flag.

21. A method according to either one of claims 19 or 20, wherein the session-less entrance detection means uses HTTP Host and Referrer Request Header Analysis.

22. A method according to any one of claims 5 to 21, wherein the site entrance and exit data are captured by generating transition identifiers.

23. A method according to any one of claims 5 to 22, wherein the sequence of cause-and-effect relationships is established by constructing a time-based clickstream tree index structure of use attention transfer.

24. A method of maintaining connection session state in a computer network including multiple sites, the user establishing a connection session with the computer network, information characterising the user being captured whenever the user interacts with each site to generate a user browsing signature; the method including the steps of:

at a central session manager, receiving the user browsing signature; and

deriving session information for the connection session from the transmitted

browsing signatures.

25. A method according to claim 24, wherein the captured information includes information identifying a network presence of the user.

26. A method according to claim 25, wherein information identifying a network presence of the user includes the user's network address.

27. A method according to claim 26, wherein the computer network is the Internet, and the user's network address is an IP address.

28. A method according to any one of claims 24 to 27, wherein the captured information also includes an data packet header.

29. A method according to claim 28, wherein the data packet header is an HTTP header.

30. A method according to either one of claims 28 or 29, wherein the data packet header is a referrer request header, an accept language request header or a user agent request header.

31. A method according to any one of claims 24 to 30, wherein the captured information includes user custom data.

32. A method according to any one of claims 24 to 31, wherein a source data string is constructed from the captured information.

33. A method according to claim 32, wherein a hashing function is applied to the

source data string.

34. A method of tracking browsing activity of a user in a computer network including multiple sites, the user establishing a connection session with the computer network, impression events being generated when content is requested by the user from a network site, and result events being generated when the user completes a step towards a connection session result; the method including the step of:
at a central session manager, receiving messages representative of the impression and results events; and
interleaving impression events and result events to derive result progress path information for the user.

35. A method according to claim 34, wherein the results events include at least result start, result report and result end events.

36. A central session manager including a processing means and associated memory means, including code storage means for storing computer program code to cause the central sessions manager to carry out a method according to any one of claims 1 to 35.

37. Computer program code for storage in memory means associated with processing means, the processing means and memory means forming part of a central session manager, the computer program code causing the central session manager to carry out a method according to any one of claims 1 to 36.

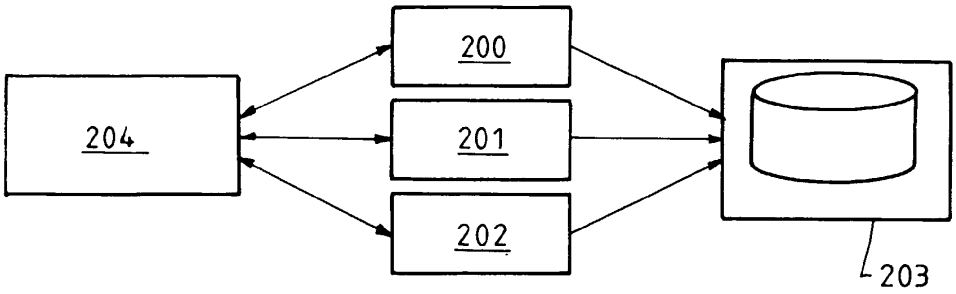


FIG. 1.

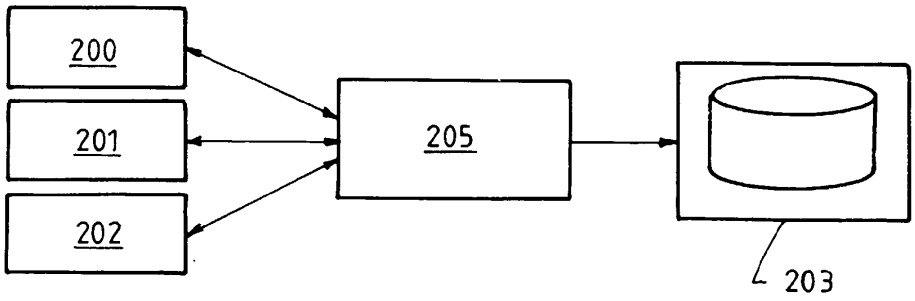
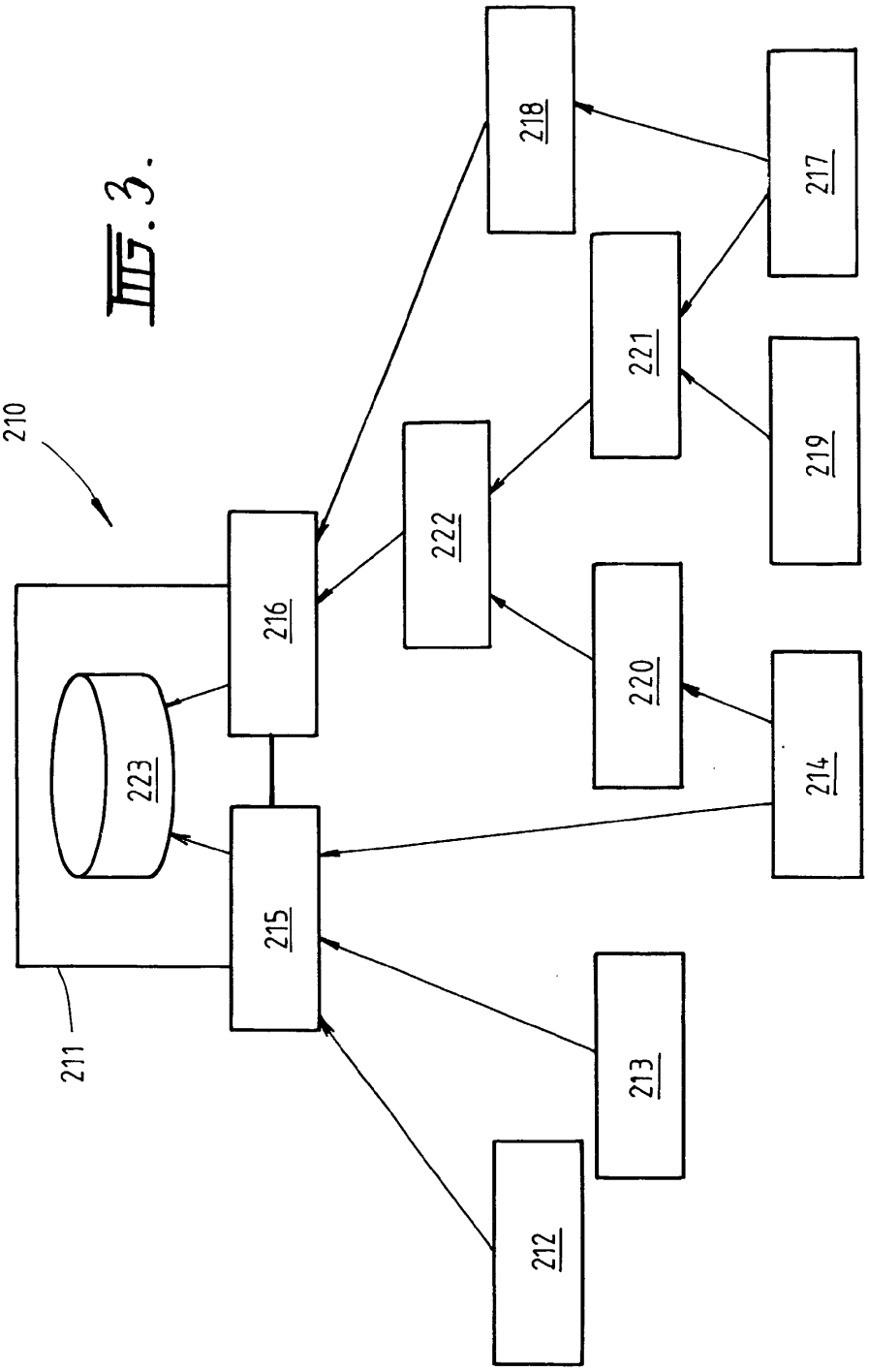


FIG. 2.

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Fig. 3.



Amazon/AlmondNet
Exhibit 1006
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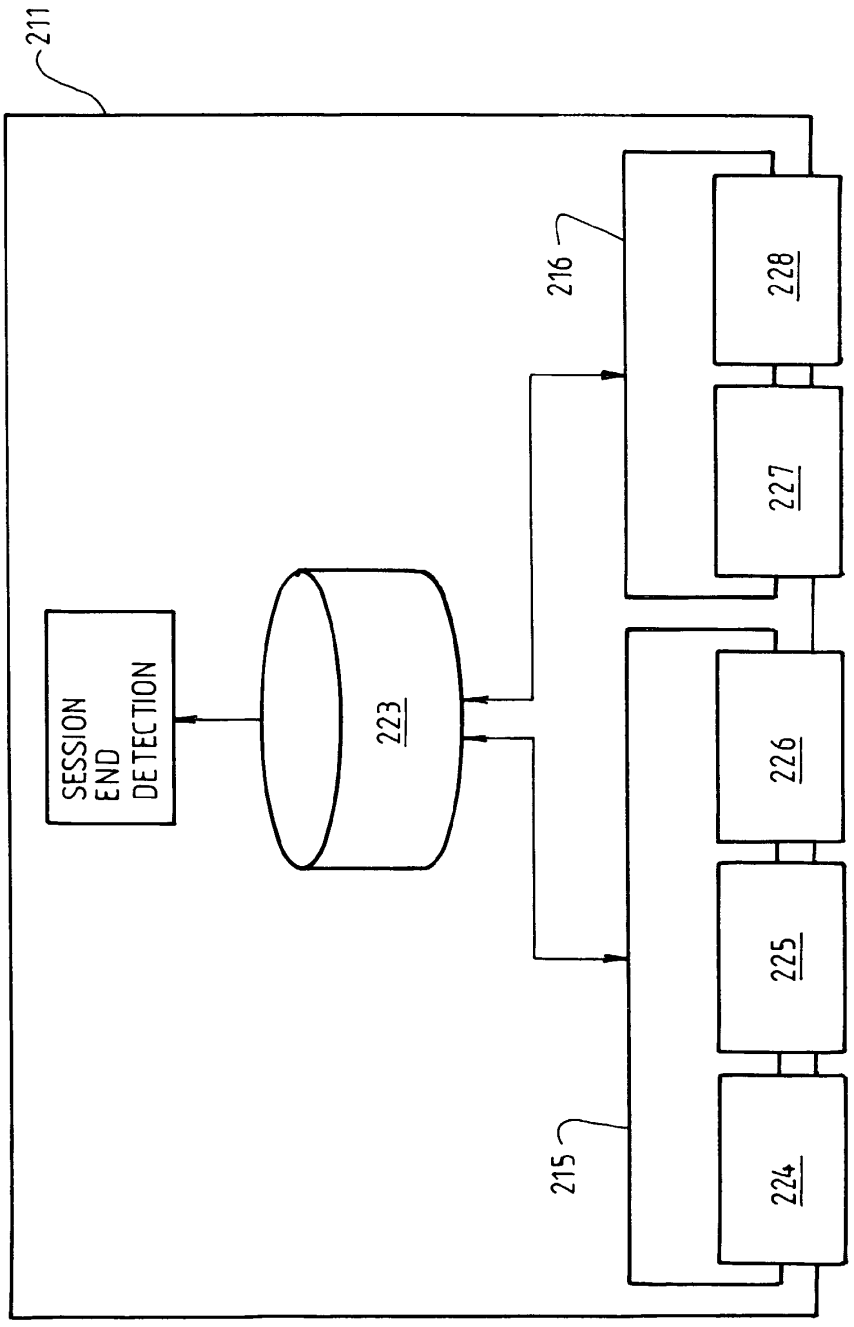


FIG. 4.

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Exhibit 1006
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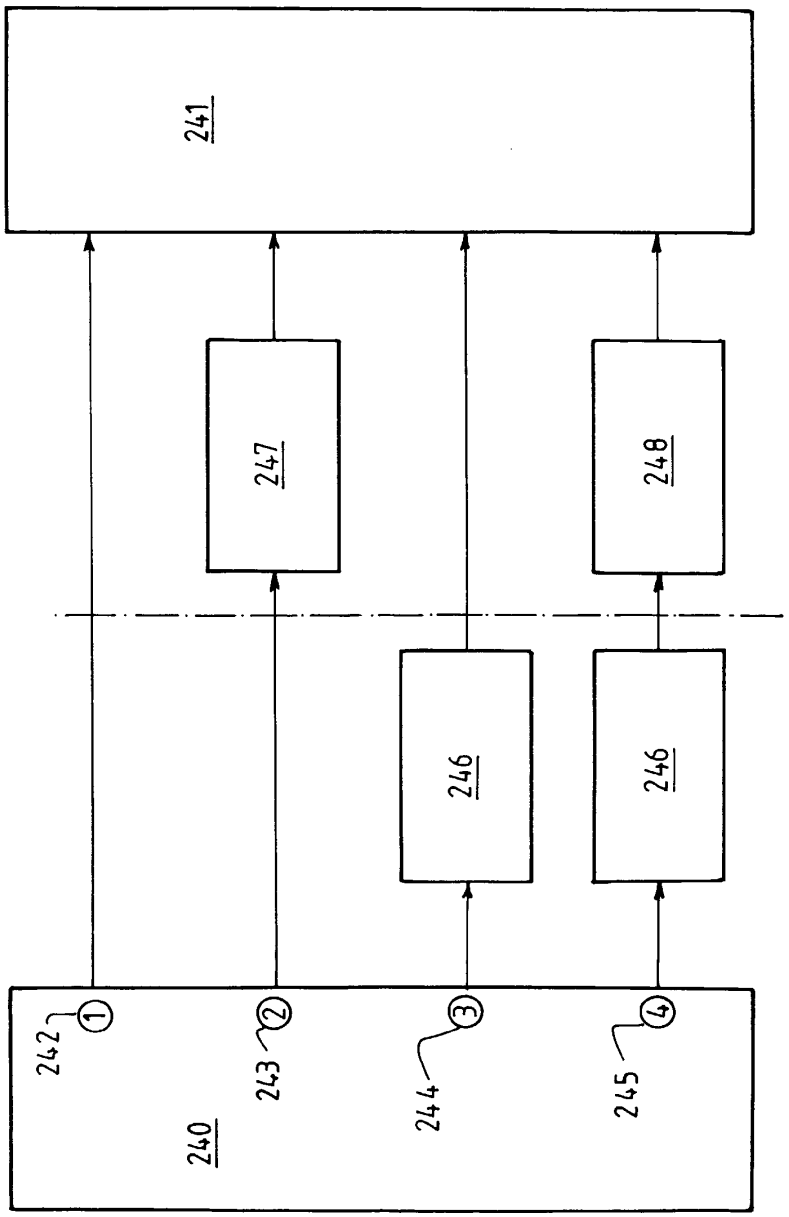


FIG. 5.

Amazon/AlmondNet
Exhibit 1006
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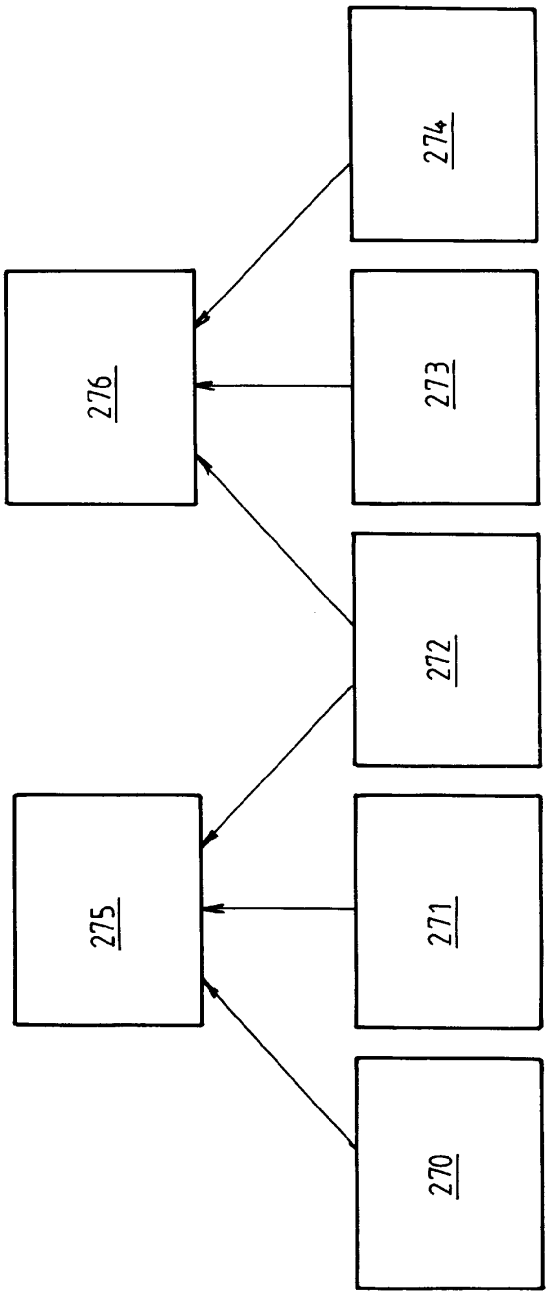


Fig. 6.

Amazon/AlmondNet
Exhibit 1006
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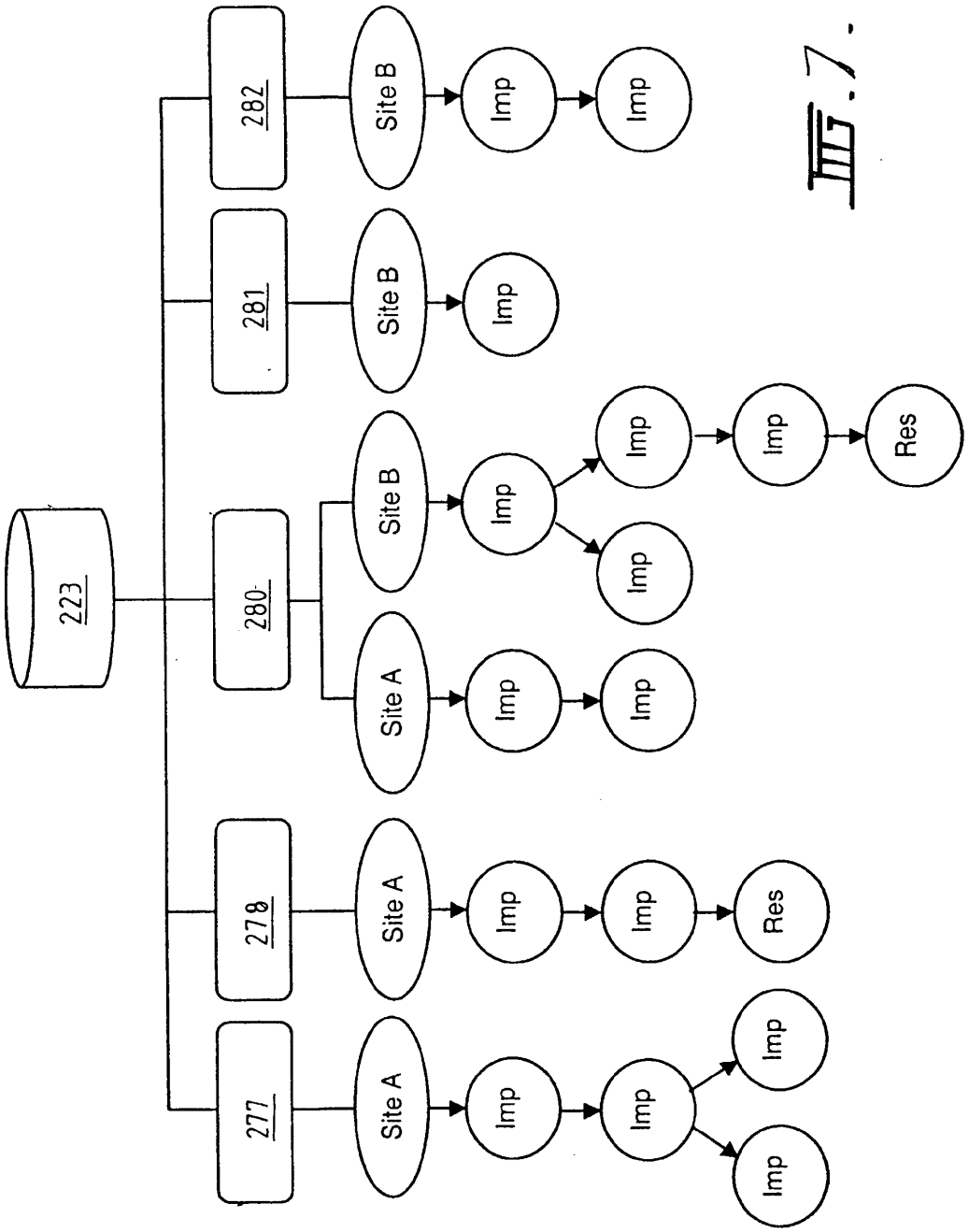


Fig. 7.

Amazon/AlmondNet
Exhibit 1006
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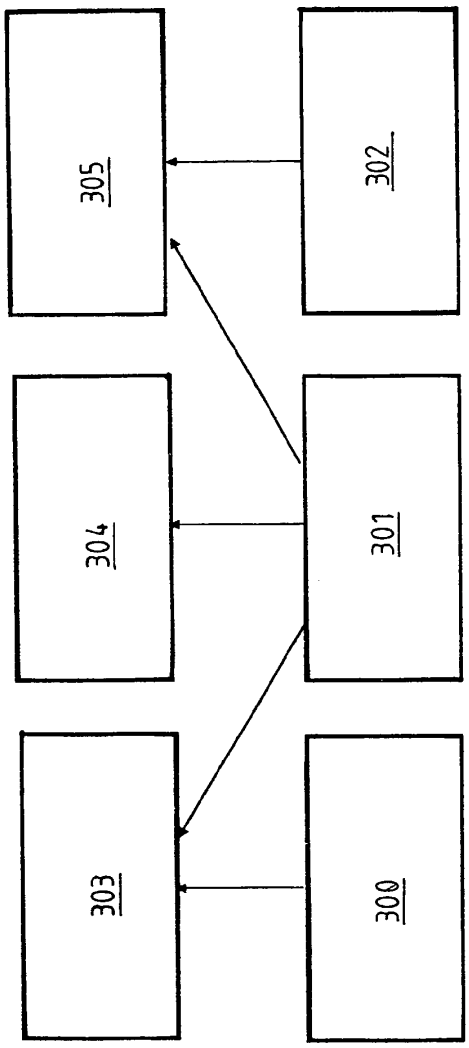


Fig. 8.

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Exhibit 1006
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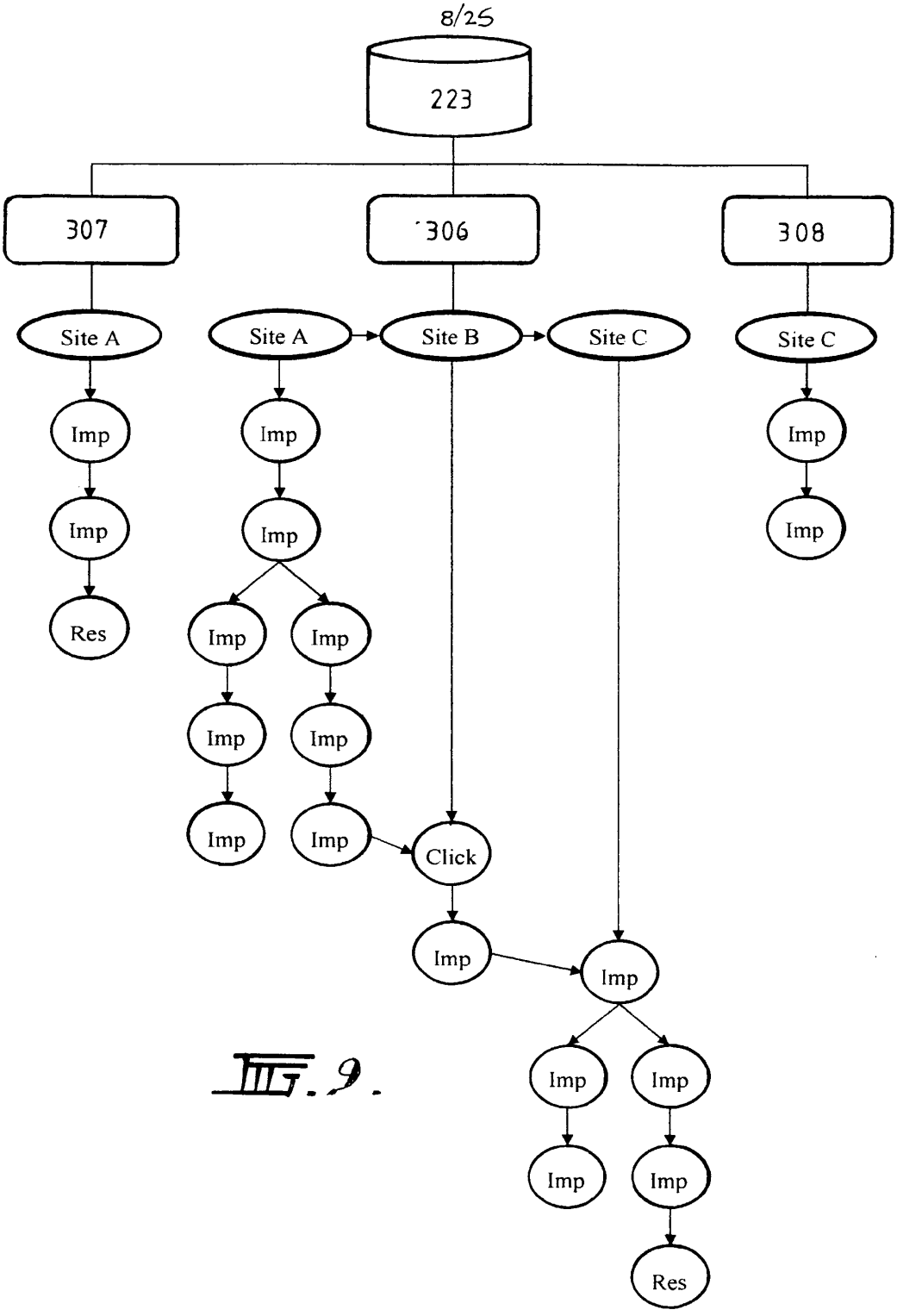


FIG. 9.

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Exhibit 1006
Page 403

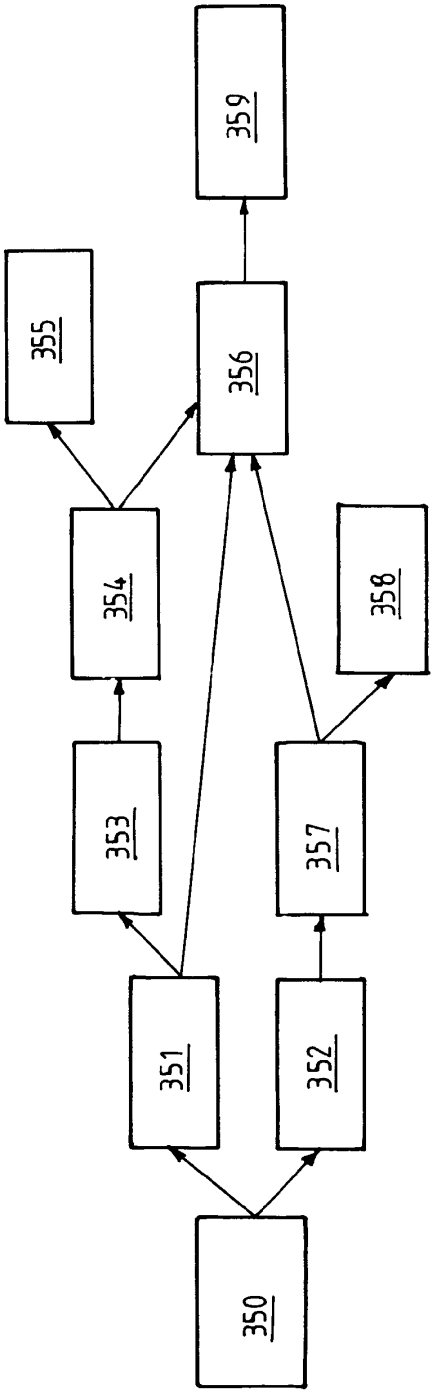
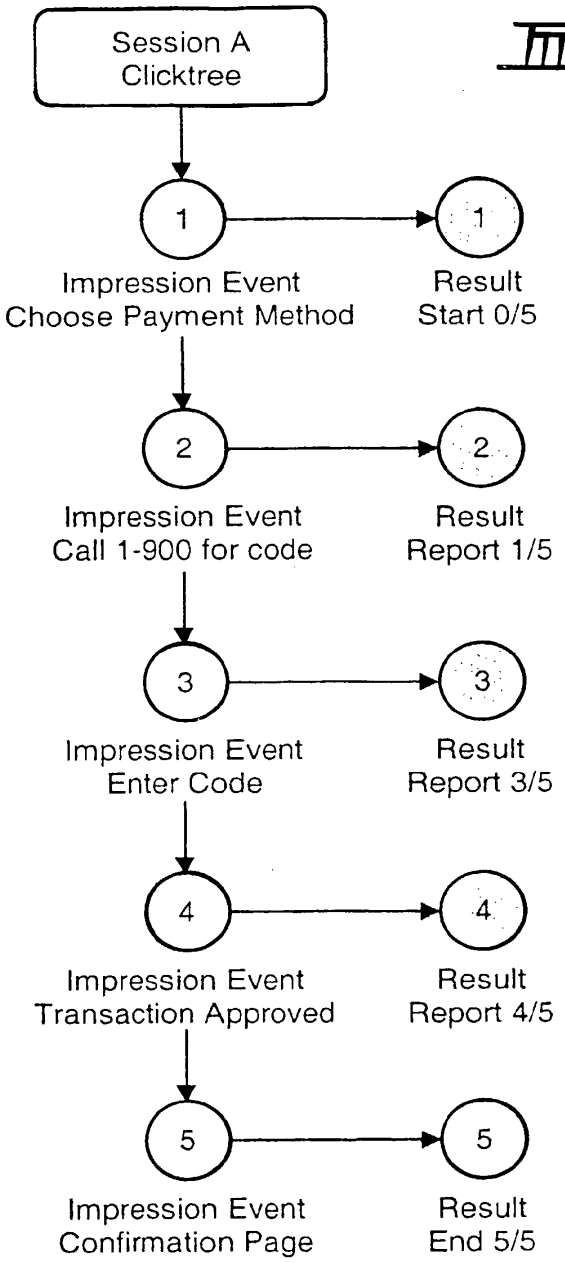


Fig. 10.

Amazon/AlmondNet
Exhibit 1006
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FIG. 11.



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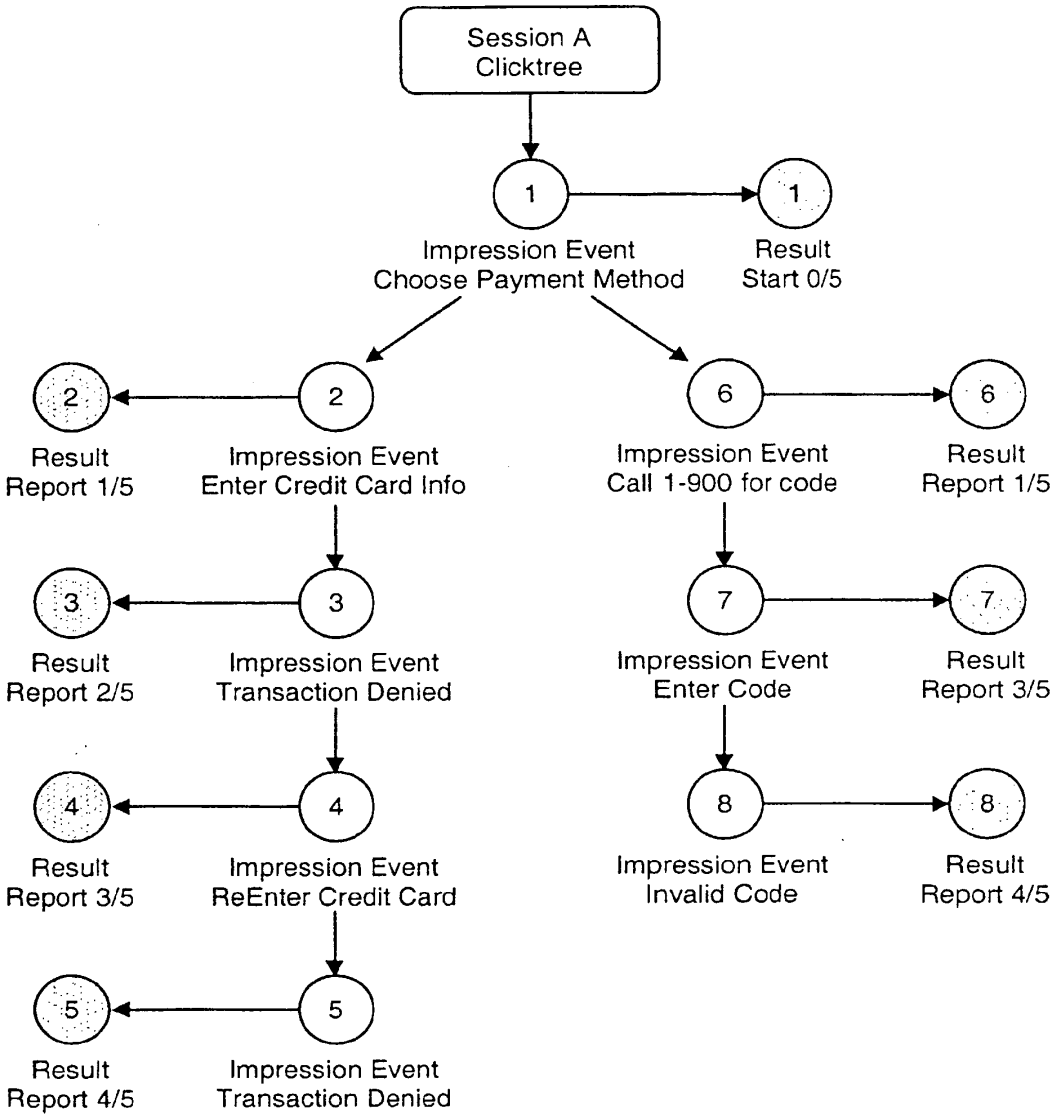


FIG. 12.

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Exhibit 1006
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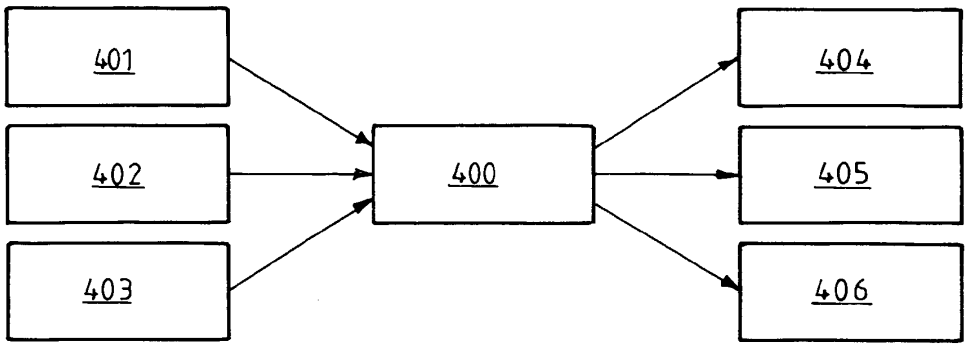


FIG. 13.

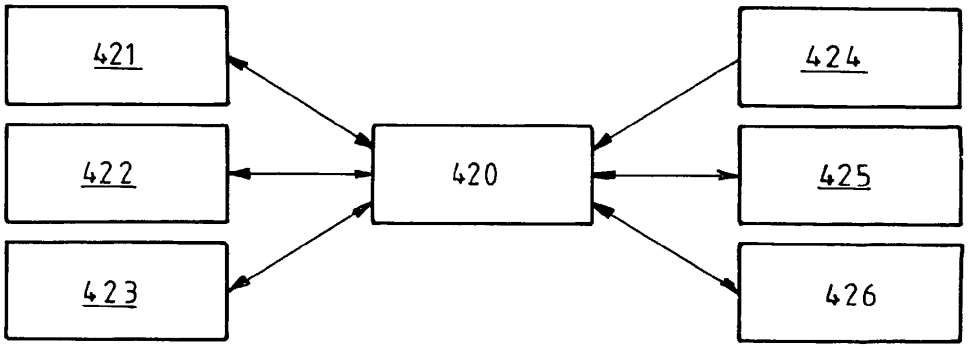


FIG. 14.

Amazon/AlmondNet
Exhibit 1006
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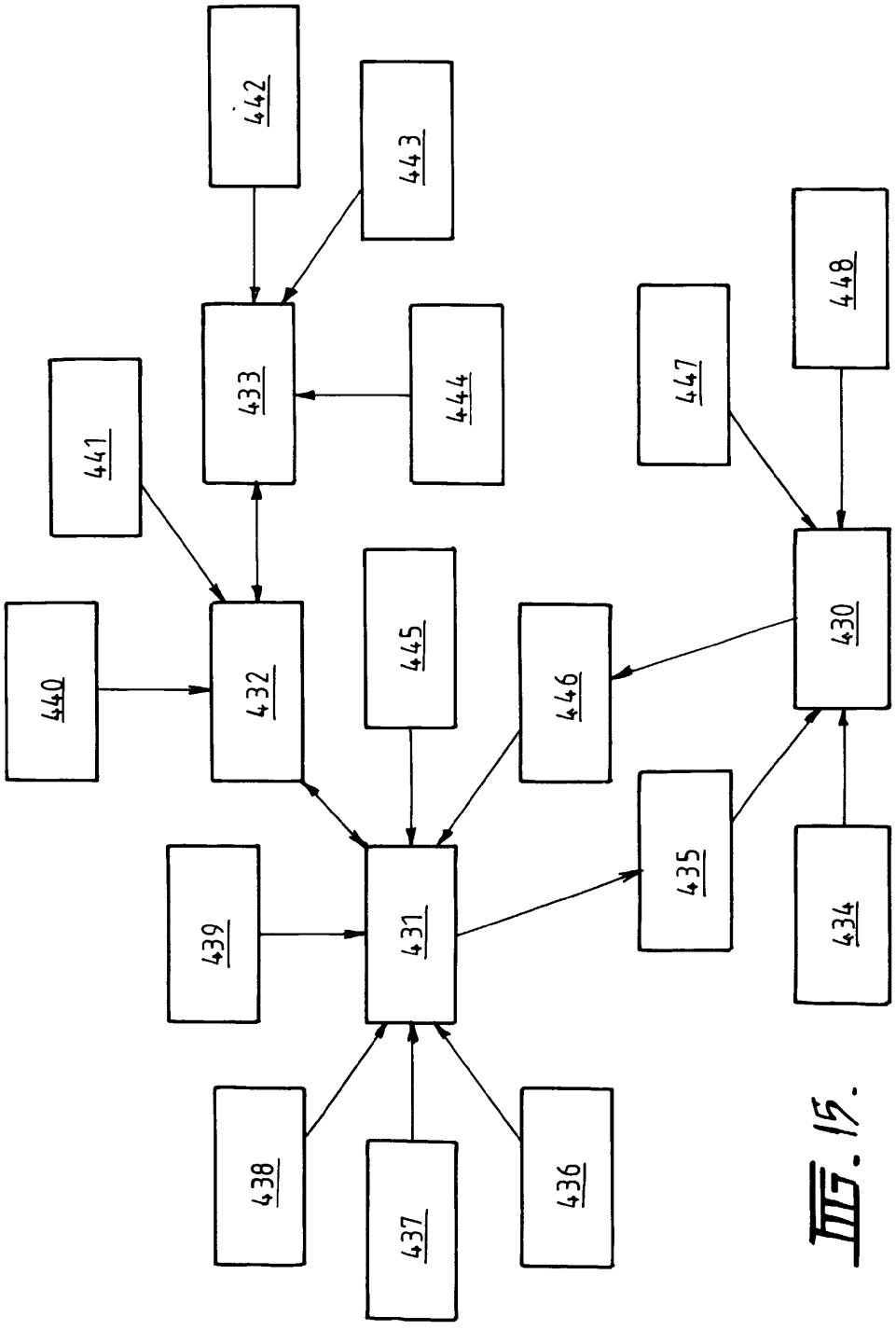


FIG. 15.

Amazon/AlmondNet
Exhibit 1006
Page 408

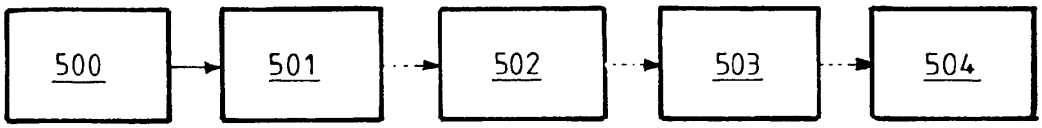


FIG. 16.

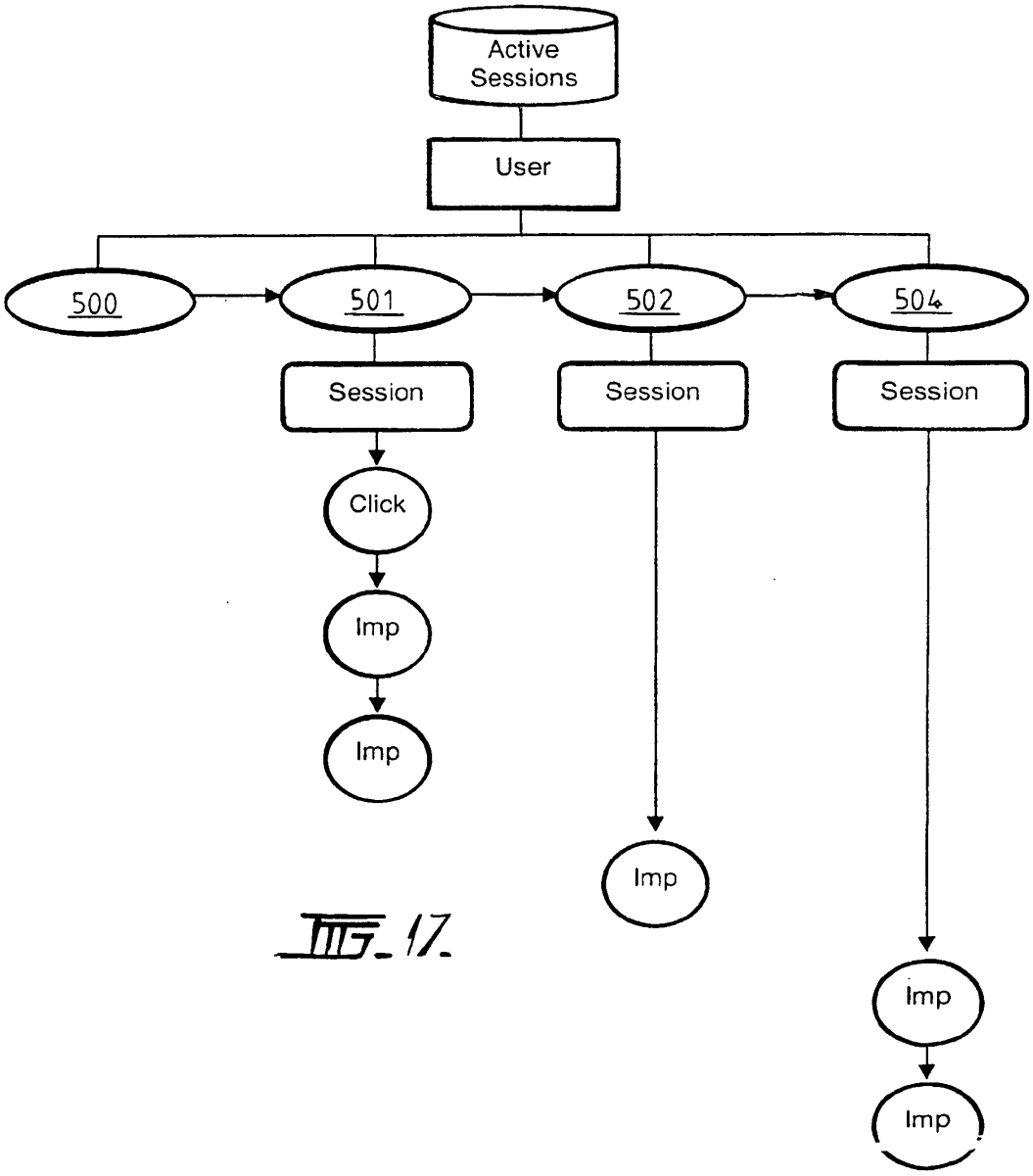


FIG. 17.

Amazon/AlmondNet
Exhibit 1006
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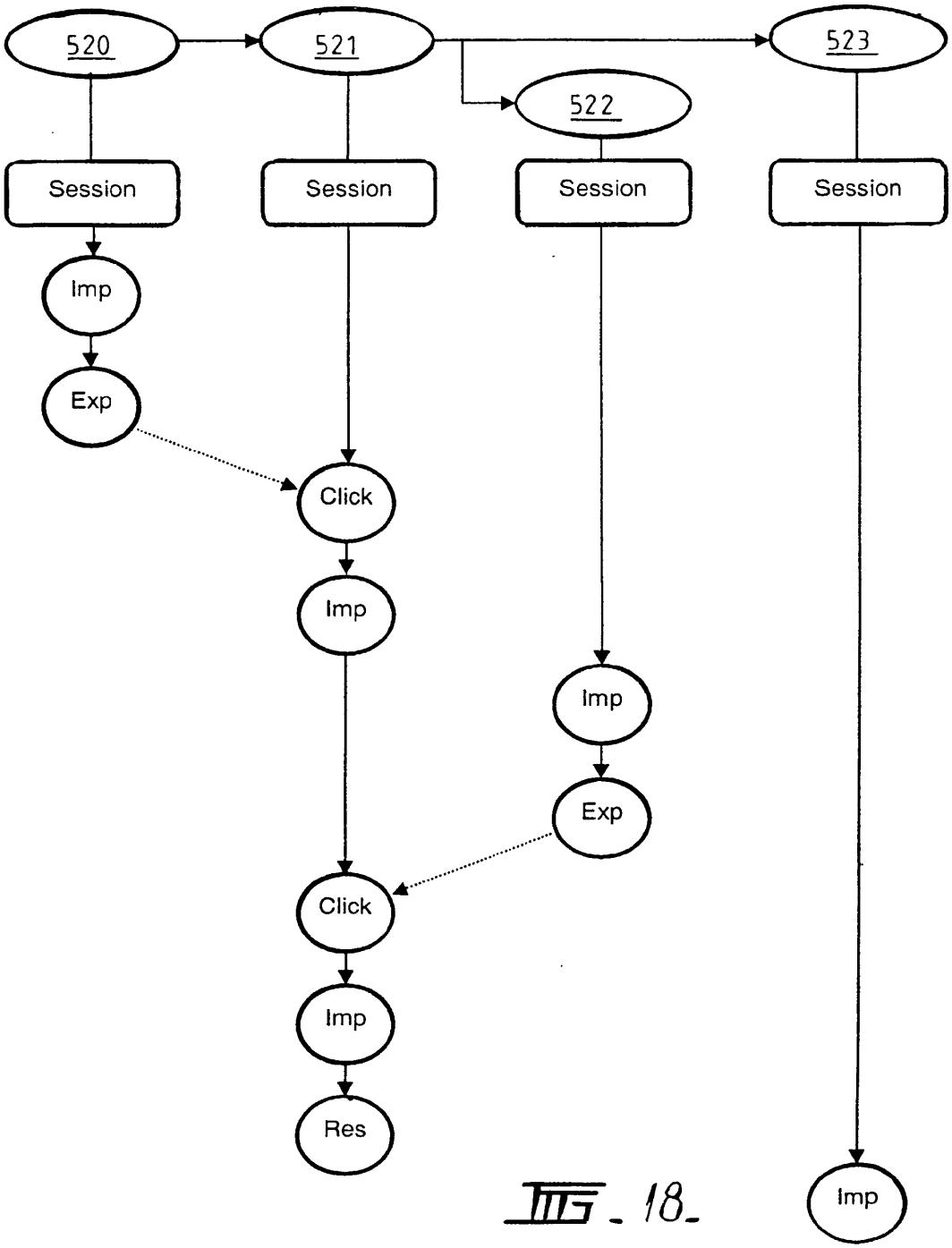

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FIG. 18.

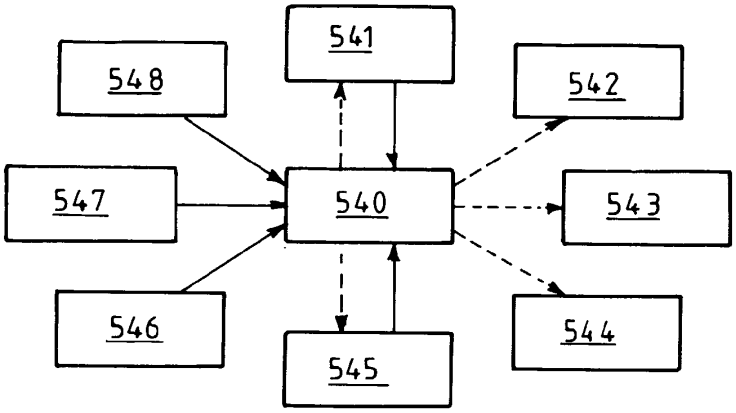


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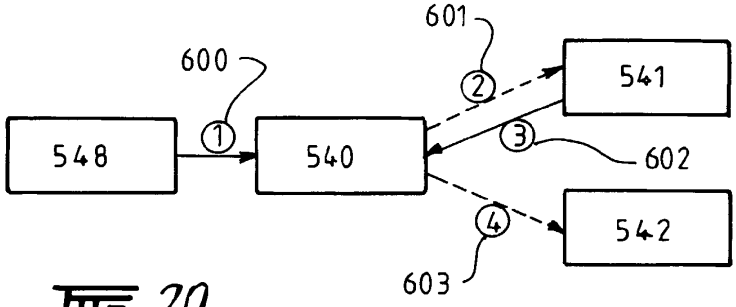


FIG. 20.

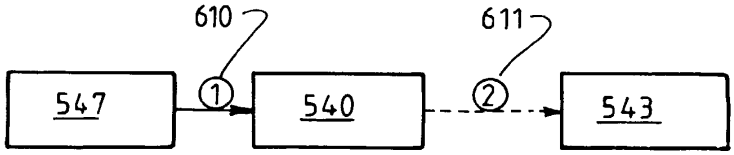


FIG. 21.

Amazon/AlmondNet
Exhibit 1006
Page 411

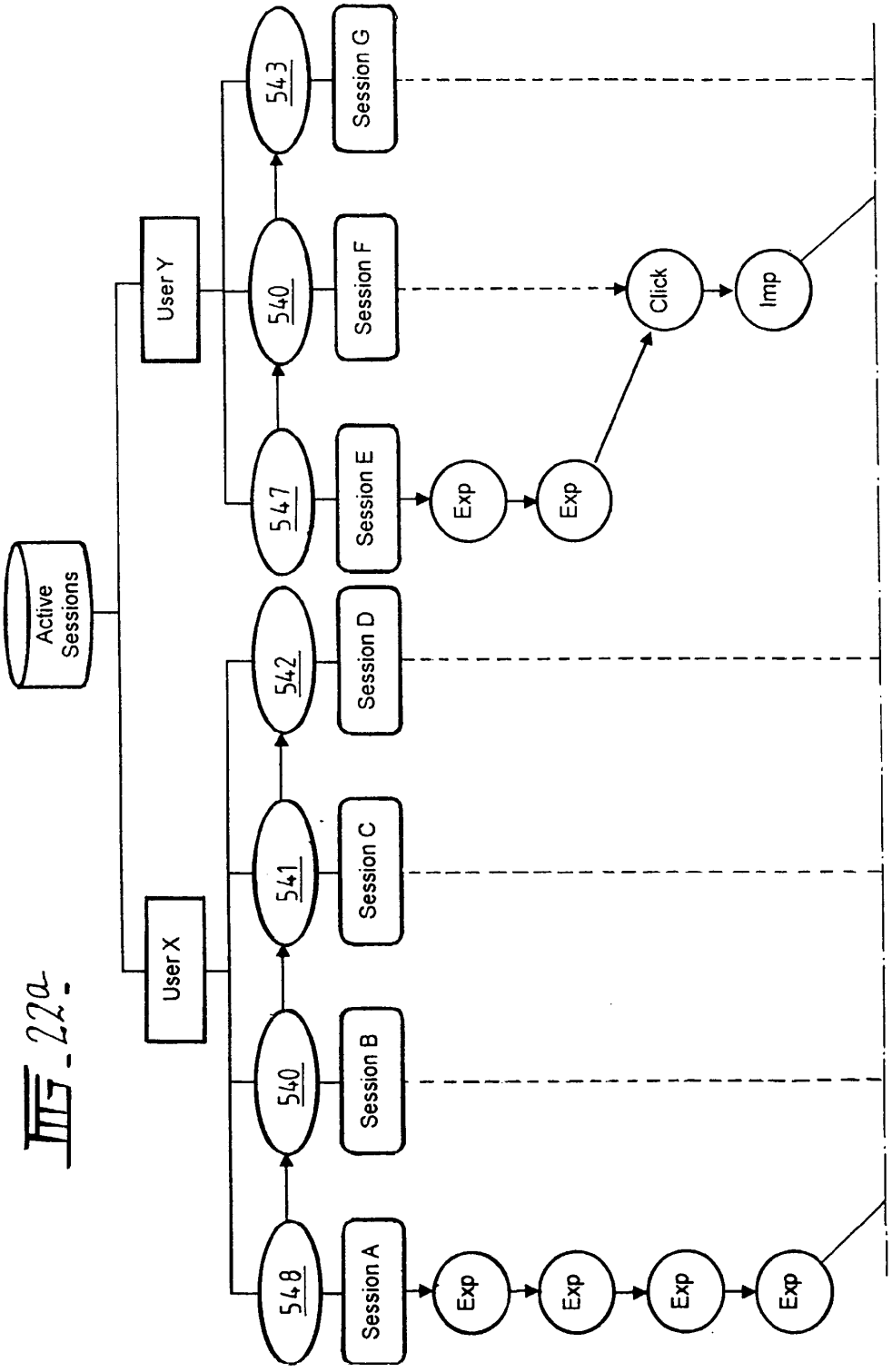


FIG. 22a

Amazon/AlmondNet
Exhibit 1006
Page 412

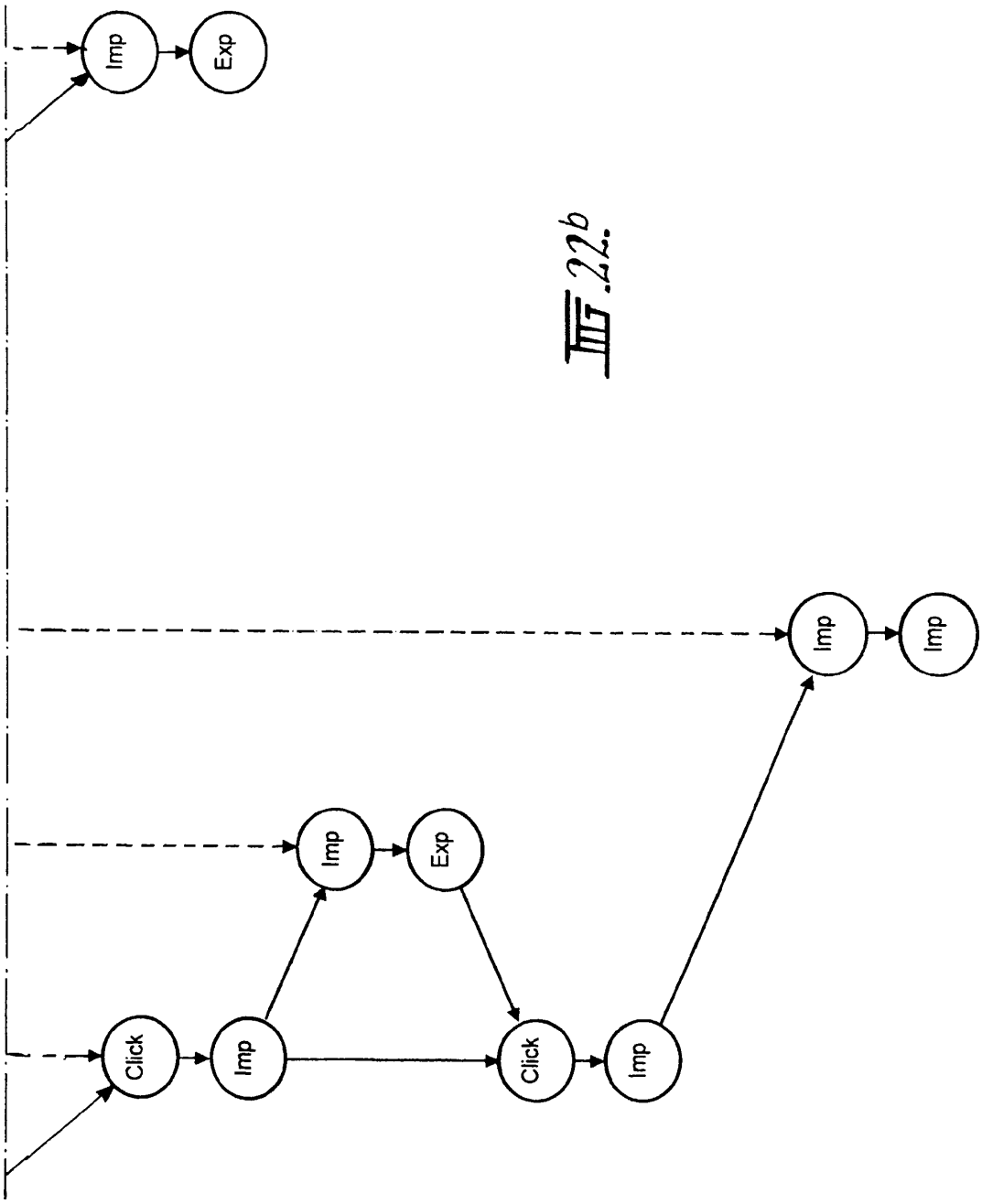


FIG. 22b

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Exhibit 1006
Page 413

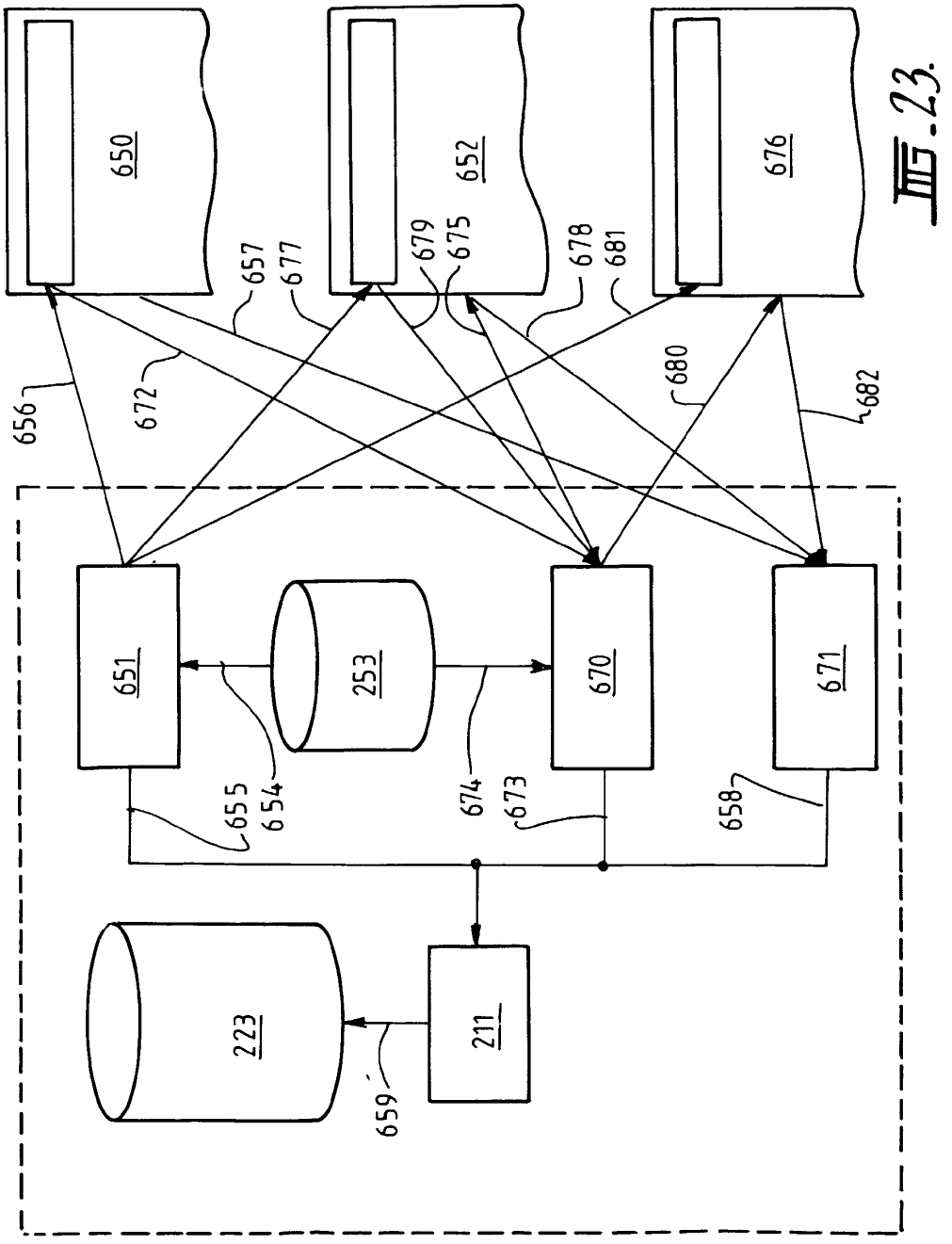


FIG. 23.

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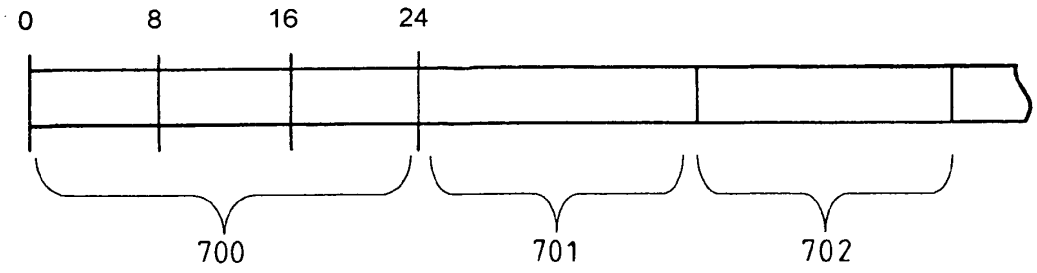


FIG. 24.

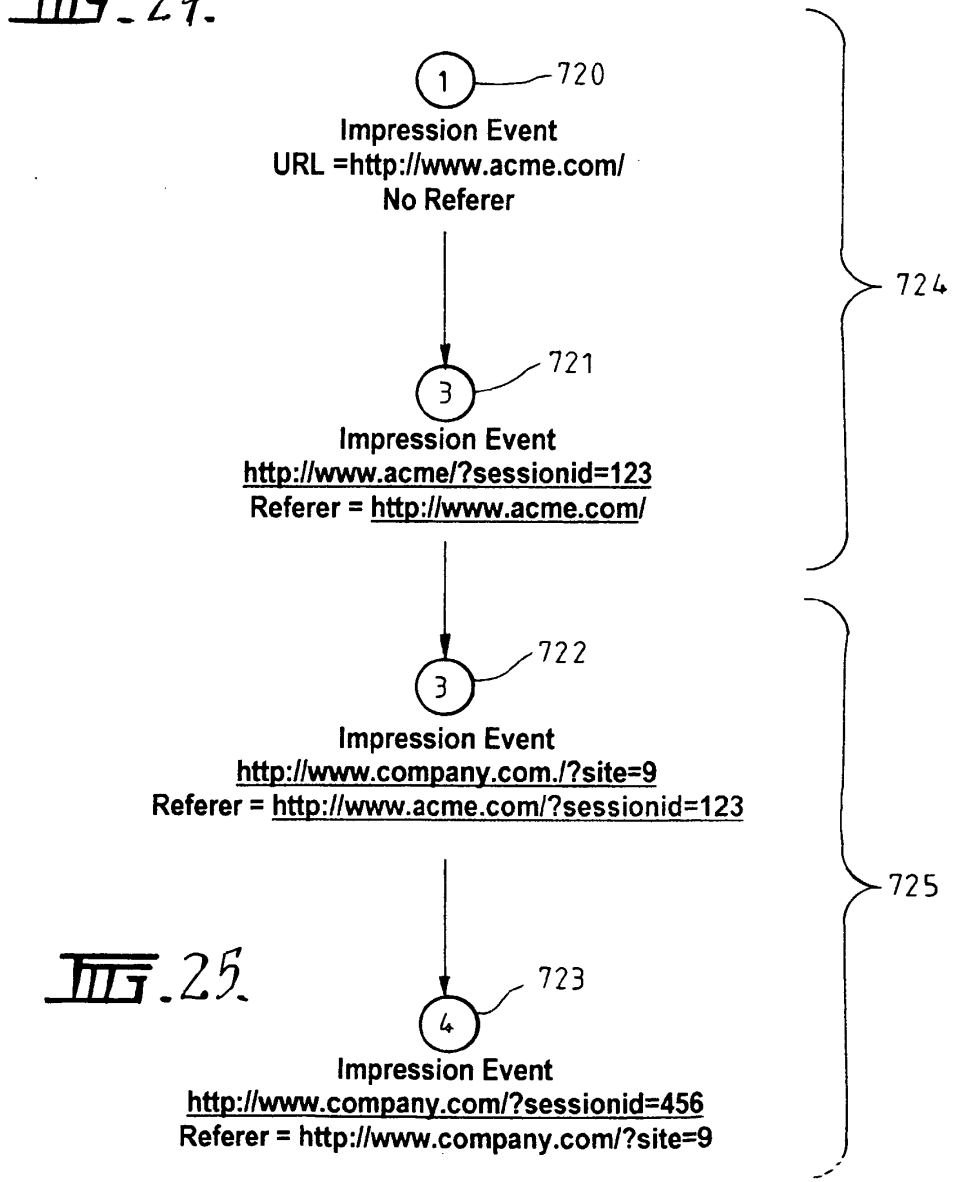
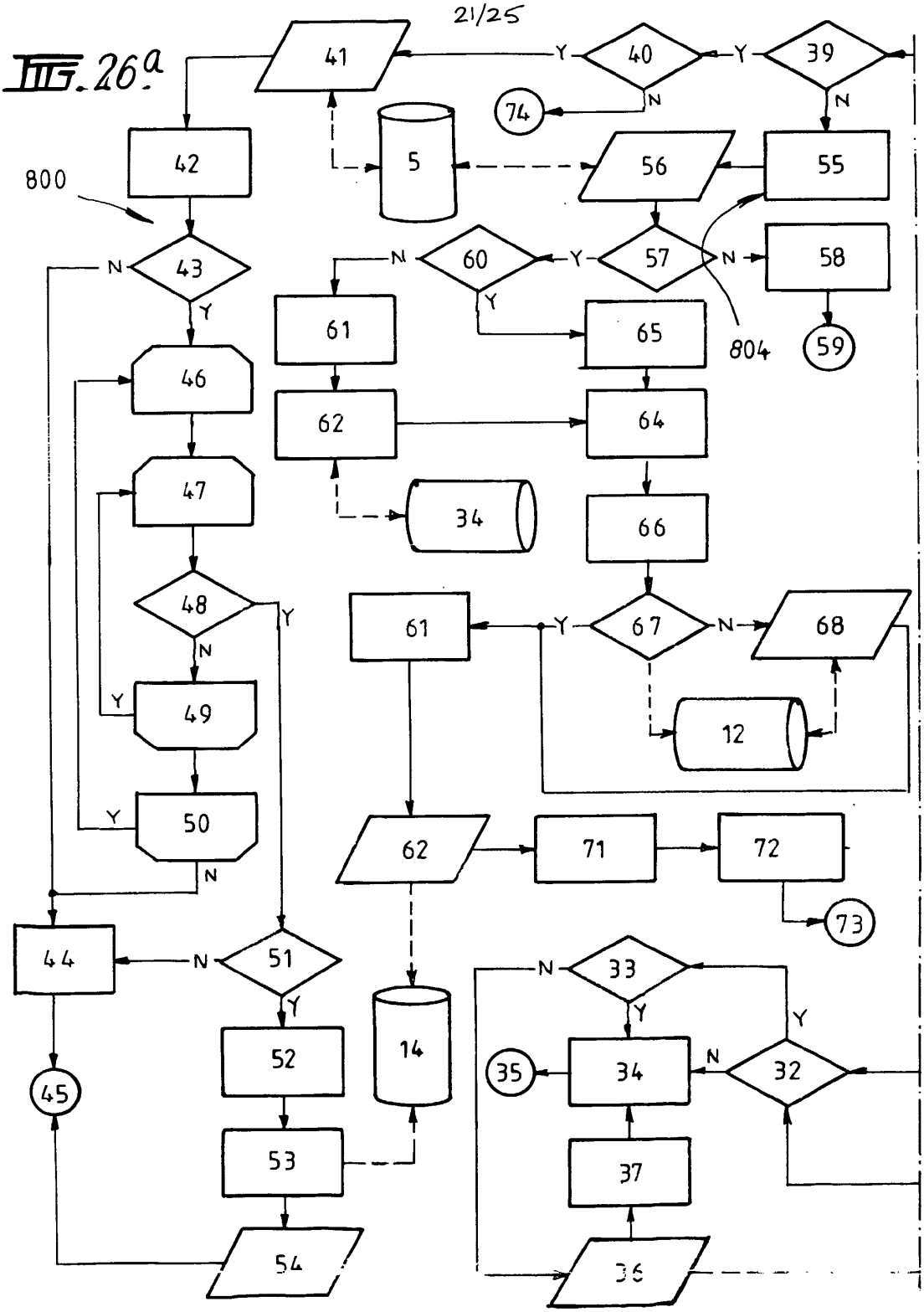


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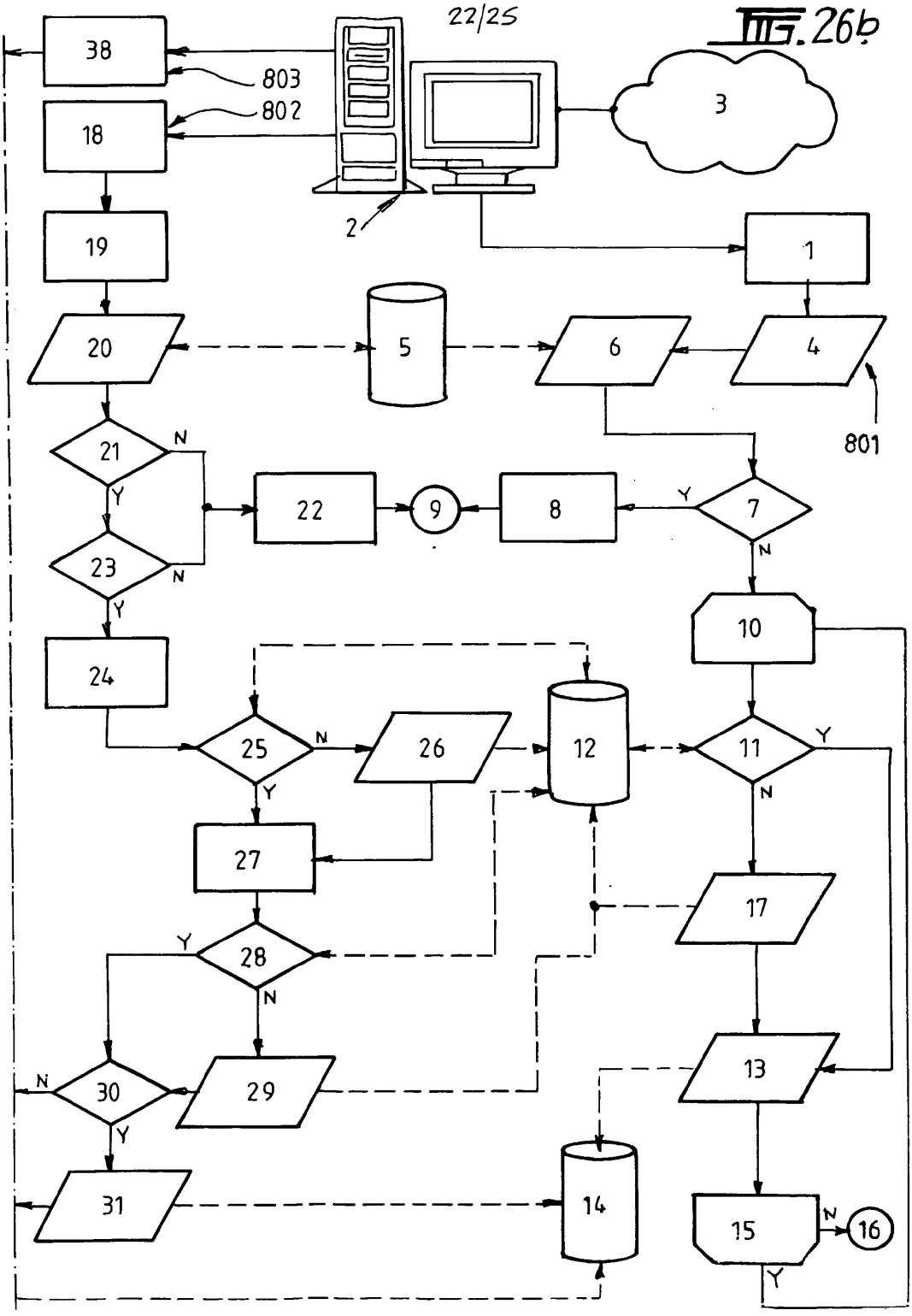
Amazon/AlmondNet
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FIG. 26a



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FIG. 26b



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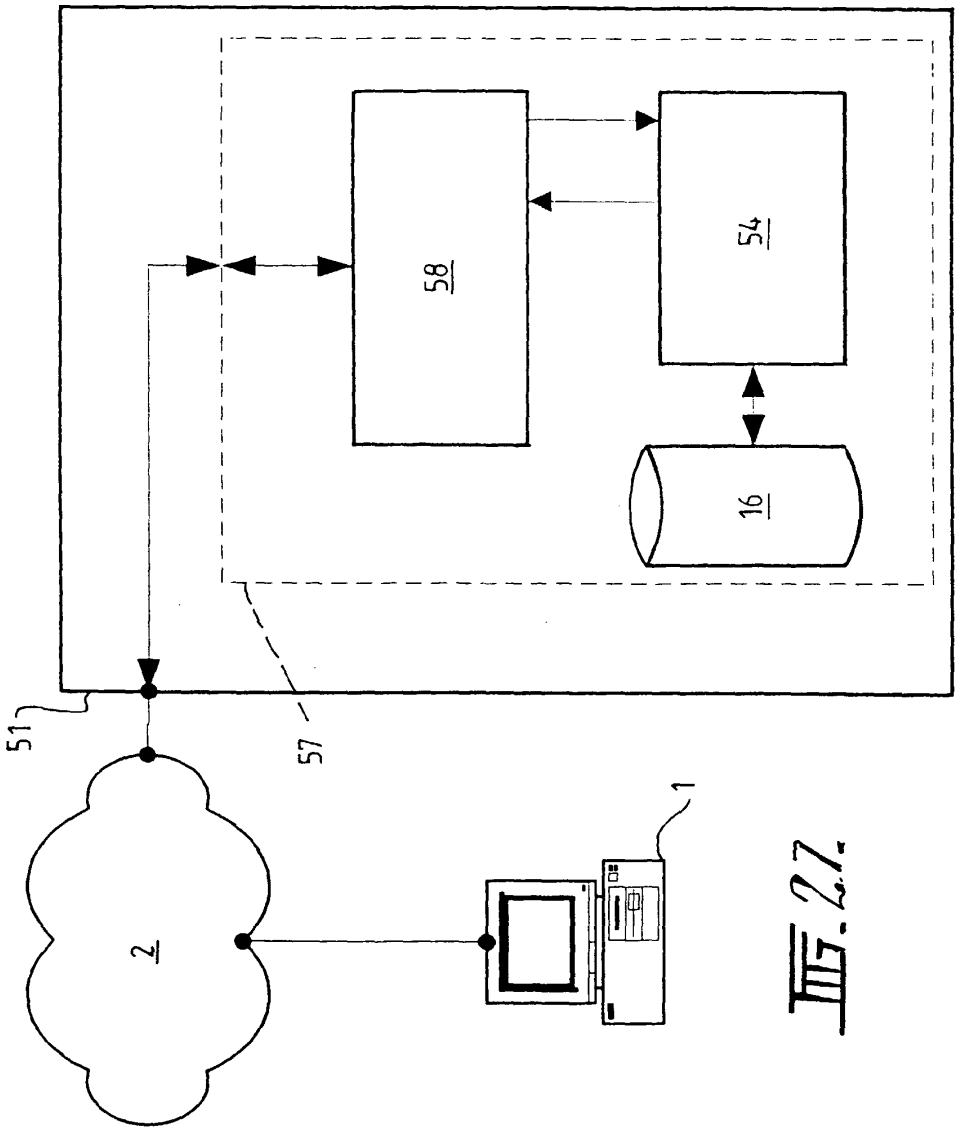


FIG. 27

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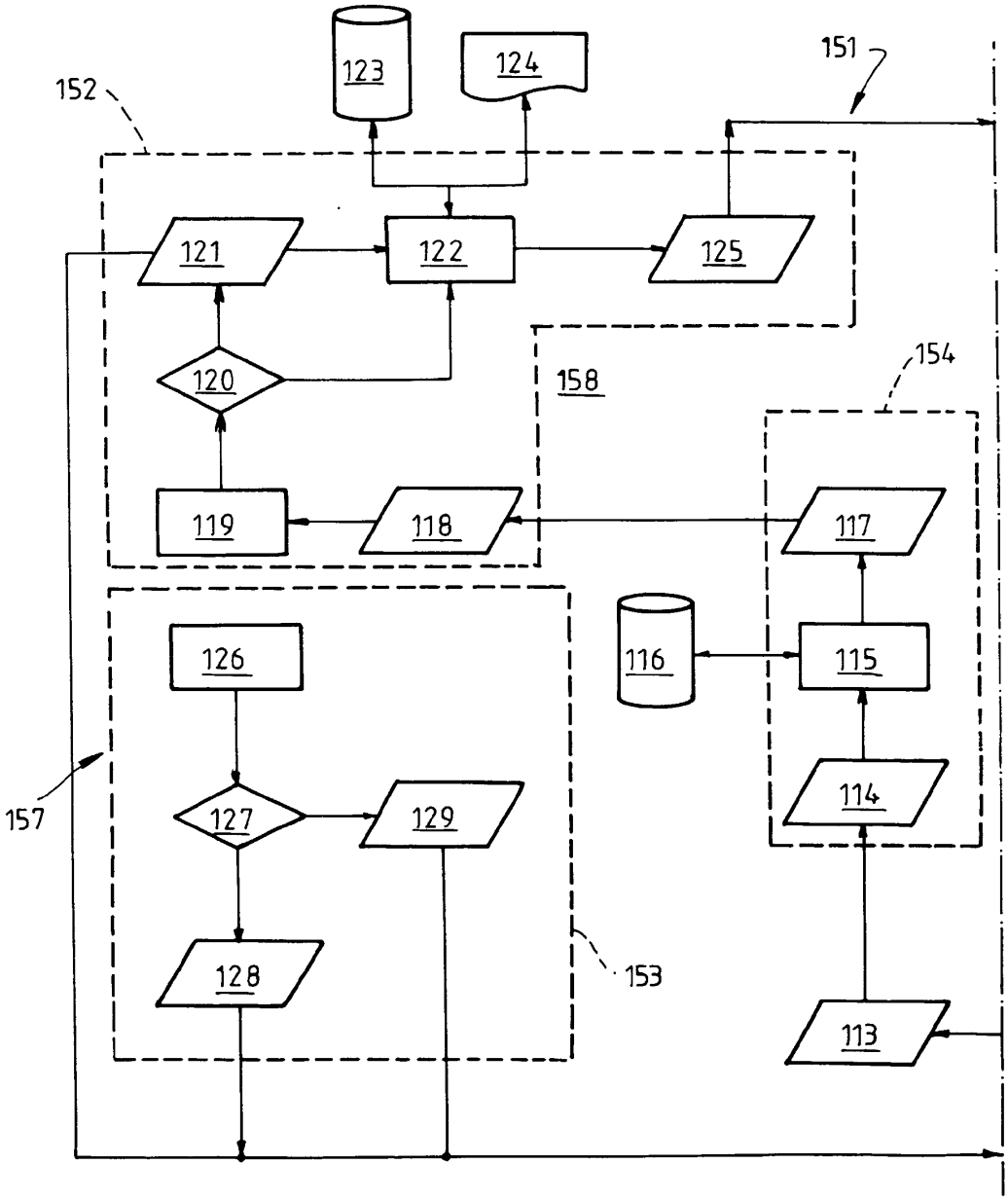


Fig. 28a

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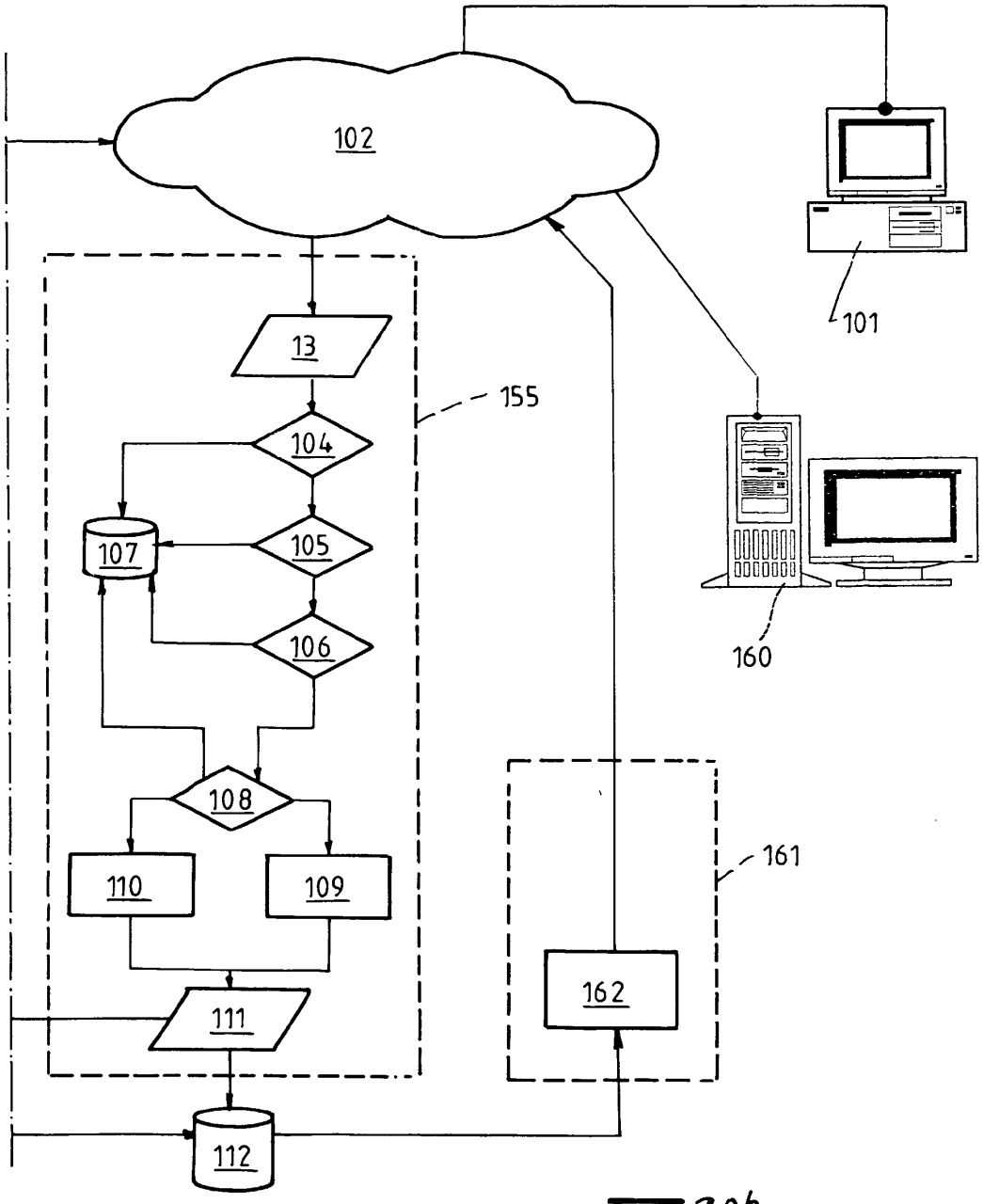


FIG. 28b

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU01/01629

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. [7]: G06F 15/173

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
WPAT with keywords

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2000/75827 A (WEBSIDESTORY, INC) 14 December 2000	1 - 37
X	US 6052730 A (FELCIANO et al) 18 April 2000	1 - 37
X	US 5717860 A (GRABER et al) 10 February 1998	1 - 37

[X] Further documents are listed in the continuation of Box C [X] See patent family annex

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
12 February 2002	22 FEB 2002
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized officer **J.W. THOMSON** Telephone No : (02) 6283 2214

Form PCT/ISA/210 (second sheet) (July 1998)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU01/01629

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5712979 A (GRABER et al) 27 January 1998	5 - 23, 34 - 37
X	US 5220655 A (TSUTSUI) 15 June 1993	5 - 23, 34 - 37

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/AU01/01629

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
WO	200075827	AU	200043569		
US	6052730	NONE			
US	5717860	AU	72404/96	WO	9711430
US	5712979	NONE			
US	5220655	JP	3260757		

END OF ANNEX

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Form PTO-1449 (Modified)
List of Patents and Publications For Information Disclosure Statement

Page 1 of 3

Serial No.:	14/080,999
Applicant:	Shkedi, Roy
Filed:	11/15/2013
Art Unit:	3622
Examiner:	Sittner, Michael J.
Docket No.:	14-PP-CON3
Conf. No.:	9158

U.S. PATENT DOCUMENTS

Examiner Initials	Item	Document Number	Publication Date MM/DD/YYY	Name of Patentee or Applicant
	1	5220655	06/15/1993	Tsutsui
	2	5359508	10/25/1994	Rossides
	3	5442633	08/15/1995	Perkins et al.
	4	5572643	11/05/1996	Judson
	5	5724424	03/03/1998	Gifford
	6	5751956	05/12/1998	Kirsch
	7	5819092	10/06/1998	Ferguson et al.
	8	5819285	10/06/1998	Damico et al.
	9	5835718	11/10/1998	Blewett
	10	5848396	12/08/1998	Gerace
	11	5870546	02/09/1999	Kirsch
	12	5870550	02/09/1999	Wesinger Jr. et al.
	13	5901287	05/04/1999	Bull et al.
	14	5933811	08/03/1999	Angles et al.
	15	5937390	08/10/1999	Hyodo
	16	5937392	08/10/1999	Alberts
	17	5959623	09/28/1999	van Hoff et al.
	18	5963915	10/05/1999	Kirsch
	19	5999912	12/07/1999	Wodarz et al.
	20	6014638	01/11/2000	Burge et al.
	21	6016504	01/18/2000	Arnold et al.
	22	6026369	02/15/2000	Capek
	23	6026374	02/15/2000	Chess
	24	6047310	04/04/2000	Kamakura et al.
	25	6049835	04/11/2000	Gagnon
	26	6128663	10/03/2000	Thomas
	27	6134532	10/17/2000	Lazarus et al.
	28	6188398	02/13/2001	Collins-Rector et al.
	29	6205432	03/20/2001	Gabbard et al.

Examiner: _____ Date Considered: _____

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance *and* not considered. Include copy of this form with next communication to applicant.

Serial No.: 14/080,999
Applicant: Shkedi, Roy
Filed: 11/15/2013
Art Unit: 3622
Examiner: Sittner, Michael J.
Docket No.: 14-PP-CON3
Conf. No.: 9158

U.S. PATENT DOCUMENTS

Examiner Initials	Item	Document Number	Publication Date MM/DD/YYY	Name of Patentee or Applicant
	30	6216112	04/10/2001	Fuller et al.
	31	6308202	10/23/2001	Cohn et al.
	32	6385592	05/07/2002	Angles et al.
	33	6401075	06/04/2002	Mason et al.
	34	6408278	06/18/2002	Carney et al.
	35	6415270	07/02/2002	Rackson et al.
	36	6449657	09/10/2002	Stanbach Jr. et al.
	37	6633850	10/14/2003	Gabbard et al.
	38	6654725	11/25/2003	Langheinrich et al.
	39	6804660	10/12/2004	Landau et al.
	40	6810527	10/26/2004	Conrad et al.
	41	6907566	06/14/2005	McElfresh et al.
	42	6985882	01/10/2006	Del Sesto
	43	7038637	05/02/2006	Eller et al.
	44	7580855	08/25/2009	Fernandes
	45	7693863	04/06/2010	Martin et al.
	46	7788358	08/31/2010	Martino
	47	7930252	04/19/2011	Bender et al.
	48	7930253	04/19/2011	Schoenhals
	49	20010042002	11/15/2001	Koopersmitch
	50	20080052392	02/28/2008	Webster et al.

Examiner: _____ Date Considered: _____

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance *and* not considered. Include copy of this form with next communication to applicant.

Serial No.: 14/080,999
Applicant: Shkedi, Roy
Filed: 11/15/2013
Art Unit: 3622
Examiner: Sittner, Michael J.
Docket No.: 14-PP-CON3
Conf. No.: 9158

FOREIGN PATENT DOCUMENTS

Examiner Initials		Document Number	Publication Date MM/DD/YYYY	Name of Patentee	Translation Yes / No
_____	51	WO1997021183A1	06/12/1997	Bell Communications Research Inc.	No
_____	52	WO1999057660A1	11/11/1999	IWEB LTD.	No
_____	53	WO2001054034A1	07/26/2001	Angara E-commerce Services, Inc.	No
_____	54	WO2002050694A1	06/27/2002	Traffion Technologies Pty. Ltd.	No

OTHER ART

Examiner Initials	Item	AUTHOR, Title, Date, Pertinent Pages, Etc.
_____	55	Baseview.com website (ClassManagerPro) from www.archive.org, archived January 16, 1997
_____	56	S-1/A SEC Filing, filed by FlyCast Communications Corp. on April 30, 1999

Examiner: _____ Date Considered: _____

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance *and* not considered. Include copy of this form with next communication to applicant.

Electronic Acknowledgement Receipt

EFS ID:	28601574
Application Number:	14080999
International Application Number:	
Confirmation Number:	9158
Title of Invention:	Providing collected profiles to media properties having specified interests
First Named Inventor/Applicant Name:	Roy Shkedi
Customer Number:	26362
Filer:	Louis J. Hoffman/Donald Hertz
Filer Authorized By:	Louis J. Hoffman
Attorney Docket Number:	14-PP-CON3
Receipt Date:	10-MAR-2017
Filing Date:	15-NOV-2013
Time Stamp:	18:41:19
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	17-03-10-DAT-PP_CON3-Supp_IDS_Cover-Yahoo1.pdf	37070 90f8a8566f2f8d28e327215f818f87c7f05c1d12	no	1
Warnings:					

Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	17-03-10-DAT-PP_CON3-1449-Yahoo1.pdf	101417 3ea764456534481fdc999ed99c3d113379b12ca2	no	3
Warnings:					
Information:					
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3	Foreign Reference	WO9721183A1-Bell_Comm.pdf	3512235 58aad5a4bb410866cc4e5af1d5f9dfab123619ac	no	78
Warnings:					
Information:					
4	Foreign Reference	WO9957660A1-IWEB.pdf	1834524 b798b626a35f0a26427285e7c9d0259469e1b581	no	42
Warnings:					
Information:					
5	Foreign Reference	WO0154034A1-Angara.pdf	2189095 d070076b7bab377b9f29e0044ff963c8e8e4e613	no	46
Warnings:					
Information:					
6	Foreign Reference	WO0250694A1-Traffion.pdf	3641057 74562ae2b93225967398aba5776454d5e5746239	no	95
Warnings:					
Information:					
7	Non Patent Literature	Baseview_ClassManagerPro-01_16_97-ALL.pdf	216102 71fbcb5798aa80544928bc1ef70e587fc0bc93c0	no	7
Warnings:					
Information:					
8	Non Patent Literature	S-1_A-FlyCast-04_30_1999-ALL.pdf	631395 79e5c45c46639bfa7d141aac4bc316b6d3cdfd42	no	106
Warnings:					
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Total Files Size (in bytes):	12162895

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor	:	Shkedi, Roy	Art Unit	:	3622
Serial No.	:	14/080,999	Examiner	:	Sittner, Michael J.
Filing Date	:	11/15/2013	Conf. No.	:	9158
Title	:	Providing collected profiles to media properties having specified interests			

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Filed via EFS-Web on March 10, 2017

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Dear Sir:

Applicant discloses references listed on form PTO-1449 attached, received from defendant in Case No. 1:16-cv-01557-ILG-SMG (E.D.N.Y.). Applicant has not confirmed the dates nor that every cited reference qualifies as prior art, and has not concluded that each are more material to patentability than references cited earlier.

To the knowledge of the undersigned attorney after making reasonable inquiry, no new item of information contained in this IDS was either (1) cited in a communication from a foreign patent office in a counterpart foreign application, or (2) known to any individual designated in 37 CFR § 1.56(c), more than three months ago.

If there are any questions, please contact applicant's undersigned attorney.

Respectfully submitted,

DATONICS, LLC

by its attorney

Dated: March 10, 2017

/Louis J. Hoffman/
Louis J. Hoffman
Reg. No. 38,918

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor	:	Shkedi, Roy	Art Unit	:	3622
Serial No.	:	14/080,999	Examiner	:	Sittner, Michael J.
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P.O. Box 1450
Alexandria, VA 22313-1450

Filed via EFS-Web – March 15, 2017

RESPONSE TO OFFICE ACTION

Dear Sir:

In response to the Office Action dated September 15, 2016, assignee requests entry of the following amendments and consideration of the following remarks.

Amendments to the claims begin on page 2.

Remarks begin on page 10.

An interview is requested on page 34 of this paper, per MPEP 713.01.

A fee for the requested three-month extension of time is submitted concurrently.

Amendments

IN THE CLAIMS:

Please amend the claims as follows:

1.-33. (Canceled)

34. (Previously presented) A method of causing delivery of electronic advertisements based on provided profiles comprising:

(a) with a computer system automatically arranging storage of a tag associated with a visitor device following receipt from a profile owner computer of indicia of a profile associated with the visitor, for a profile of the visitor matching a profile or kind of profiles desired by an entity controlling the computer system;

(b) wherein the profile owner computer is programmed:

(i) to automatically select an electronic-advertising-space-controlling entity based on a comparison of (A) profile information about a visitor who electronically accessed electronic apparatus of a profile supplier with (B) a plurality of stored requests from different entities, each stored request being for requested profiles or kinds of profiles, which plurality of stored requests includes the desired profile or kind of profiles, and

(ii) to automatically arrange for electronic storage of a tag that is associated with the visitor and that is readable by an electronic-advertising-space-controlling equipment controlled by the selected entity, which equipment is part of the computer system of part (a) when the selected entity is the entity controlling the computer system; and

(c) later, when the visitor device is available to receive an advertisement, with the computer system, using the tag to automatically cause

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delivery of an electronic advertisement to the visitor device, wherein the electronic advertisement is dependent on the profile associated with the visitor.

35. (Previously presented) The method of claim 34 wherein the profile associated with the visitor is derived from the visitor's activity using a first device, and wherein the visitor device that is available to receive an advertisement is a second device of the visitor.

36. (Previously presented) The method of claim 35 wherein the first device is a computer of the visitor and the second device is a mobile phone of the visitor.

37. (Previously presented) The method of claim 36 wherein the tag identifies the mobile phone.

38. (Previously presented) The method of claim 36 wherein the profile owner computer is programmed to automatically select an electronic-advertising-space-controlling entity using profile information about the visitor that was derived from the visitor's activity using the computer of the visitor, which profile information was received by the profile-owner computer as a result of URL redirection from a website that is served by the electronic apparatus of the profile supplier, which website is accessed by the computer of the visitor.

39. (Currently amended) The method of claim 35 wherein the second device is a computer and further comprising, after parts (a) and (c), with the computer system electronically reporting information about delivery of the advertisement to the second device, which report is provided to a profile owner controlling the profile owner ~~company~~ computer.

40. (Previously presented) The method of claim 39 wherein electronically reporting comprises automatically placing the second device in communication with computer equipment controlled by the profile owner, via URL redirection from the computer system, when the computer system utilizes the tag to cause delivery of the advertisement.

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41. (Currently amended) The method of claim 34 further comprising, after parts (a) and (c), with the computer system electronically reporting information about delivery of the advertisement to the visitor device that is available to receive an advertisement, which report is provided to a profile owner company controlling the profile owner ~~company~~ computer.

42. (Previously presented) The method of claim 41 wherein reporting further comprises automatically electronically identifying to the profile owner company one of a plurality of profiles or kind of profiles used in association with delivery of the advertisement.

43. (Previously presented) The method of claim 34 wherein the profile owner computer is programmed to automatically select an electronic-advertising-space-controlling entity using profile information about the visitor that was derived from the visitor's activity using the visitor device.

44. (Previously presented) The method of claim 43 wherein the profile information was received by the profile-owner computer as a result of URL redirection from a website that is served by the electronic apparatus of the profile supplier, which website is accessed by the visitor device.

45. (Currently amended) The method of claim 34 further comprising, after parts (a) and (c), with the computer system automatically creating electronic data used to identify a payment amount due to a profile owner controlling the profile owner ~~company~~ computer as a result of delivery of the electronic advertisement to the visitor device that is available to receive an advertisement.

46. (Previously presented) The method of claim 34 wherein the tag comprises personally identifiable information identifying the visitor.

47. (Previously presented) The method of claim 34 wherein automatically arranging storage of the tag comprises arranging for electronic storage of the profile information in the tag.

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48. (Previously presented) The method of claim 34 wherein automatically arranging storage of the tag comprises arranging for electronic storage of the profile information in a database locatable through the tag.

49. (Currently amended) The method of claim 34 wherein automatically arranging storage of the tag comprises automatic redirection to [[the]] a URL provided by the selected entity to place the visitor device in communication with computer equipment controlled by the selected entity to enable storage of the tag in association with the visitor device.

50. (Previously presented) The method of claim 34 wherein the equipment of the profile supplier operates in the Internet and the equipment of the selected entity utilizes the profile data to cause delivery of the electronic advertisements on a television of the visitor.

51. (Previously presented) A computer system comprising one or more computers, wherein the one or more computers are programmed and connected:

(a) to automatically arrange storage of a tag associated with a visitor device following receipt from a profile owner computer of indicia of a profile associated with the visitor, for a profile of the visitor matching a profile or kind of profiles desired by an entity controlling the computer system;

(b) wherein the profile owner computer is programmed:

(i) to automatically select an electronic-advertising-space-controlling entity based on a comparison of (A) profile information about a visitor who electronically accessed electronic apparatus of a profile supplier with (B) a plurality of stored requests from different entities, each stored request being for requested profiles or kinds of profiles, which plurality of stored requests includes the desired profile or kind of profiles, and

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(ii) to automatically arrange for electronic storage of a tag that is associated with the visitor and that is readable by an electronic-advertising-space-controlling equipment controlled by the selected entity, which equipment is part of the computer system of part (a) when the selected entity is the entity controlling the computer system; and

(c) later, when the visitor device is available to receive an advertisement, with the computer system, to use the tag to automatically cause delivery of an electronic advertisement to the visitor device, wherein the electronic advertisement is dependent on the profile associated with the visitor.

52. (Previously presented) The computer system of claim 51 wherein the profile associated with the visitor is derived from the visitor's activity using a first device, and wherein the visitor device that is available to receive an advertisement is a second device of the visitor.

53. (Previously presented) The computer system of claim 52 wherein the first device is a computer of the visitor and the second device is a mobile phone of the visitor.

54. (Previously presented) The computer system of claim 53 wherein the tag identifies the mobile phone.

55. (Previously presented) The computer system of claim 53 wherein the profile owner computer is programmed to automatically select an electronic-advertising-space-controlling entity using profile information about the visitor that was derived from the visitor's activity using the computer of the visitor, which profile information was received by the profile-owner computer as a result of URL redirection from a website that is served by the electronic apparatus of the profile supplier, which website is accessed by the computer of the visitor.

56. (Currently amended) The computer system of claim 52 wherein the second device is a computer and wherein the computer system is further programmed to, after

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parts (a) and (c), electronically report information about delivery of the advertisement to the second device, which report is provided to a profile owner controlling the profile owner ~~company~~ computer.

57. (Currently amended) The computer system of claim 51 wherein the one or more computers are further programmed to, after parts (a) and (c), electronically report information about delivery of the advertisement to the visitor device that is available to receive an advertisement, which report is provided to a profile owner company controlling the profile owner ~~company~~ computer.

58. (Previously presented) The computer system of claim 57 wherein the one or more computers are programmed to electronically report by further automatically electronically identify to the profile owner company one of a plurality of profiles or kind of profiles used in association with delivery of the advertisement.

59. (Previously presented) The computer system of claim 51 wherein the profile owner computer is programmed to automatically select an electronic-advertising-space-controlling entity using profile information about the visitor that was derived from the visitor's activity using the visitor device.

60. (Previously presented) The computer system of claim 59 wherein the profile information was received by the profile-owner computer as a result of URL redirection from a website that is served by the electronic apparatus of the profile supplier, which website is accessed by the visitor device.

61. (Currently amended) The computer system of claim 51 wherein the one or more computers are further programmed to, after parts (a) and (c), automatically create electronic data used to identify a payment amount due to a profile owner controlling the profile owner ~~company~~ computer as a result of delivery of the electronic advertisement to the visitor device that is available to receive an advertisement.

62. (Previously presented) The computer system of claim 51 wherein the tag comprises personally identifiable information identifying the visitor.

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63. (Previously presented) The computer system of claim 51 wherein the one or more computers are programmed to automatically arrange storage of the tag by arranging for electronic storage of the profile information in the tag.

64. (Previously presented) The computer system of claim 51 wherein the one or more computers are programmed to automatically arrange storage of the tag by arranging for electronic storage of the profile information in a database locatable through the tag.

65. (Previously presented) The computer system of claim 51 wherein the equipment of the profile supplier operates in the Internet and the equipment of the selected entity utilizes the profile data to cause delivery of the electronic advertisements on a television of the visitor.

66. (Previously presented) An article comprising a non-transitory tangible medium encoding computer-readable instructions that, when applied to a computer system comprising one or more computers, instruct the computer system to perform a method of causing delivery of electronic advertisements based on provided profiles comprising:

(a) automatically arranging storage of a tag associated with a visitor device following receipt from a profile owner computer of indicia of a profile associated with the visitor, for a profile of the visitor matching a profile or kind of profiles desired by an entity controlling the computer system;

(b) wherein the profile owner computer is programmed:

(i) to automatically select an electronic-advertising-space-controlling entity based on a comparison of (A) profile information about a visitor who electronically accessed electronic apparatus of a profile supplier with (B) a plurality of stored requests from different entities, each stored request being for requested profiles or kinds of profiles, which

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plurality of stored requests includes the desired profile or kind of profiles, and

(ii) to automatically arrange for electronic storage of a tag that is associated with the visitor and that is readable by an electronic-advertising-space-controlling equipment controlled by the selected entity, which equipment is part of the computer system of part (a) when the selected entity is the entity controlling the computer system; and

(c) later, when the visitor device is available to receive an advertisement, using the tag to automatically cause delivery of an electronic advertisement to the visitor device, wherein the electronic advertisement is dependent on the profile associated with the visitor.

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Although the undersigned is quite sympathetic to the plight of time-constrained examiners and mindful of the Office's backlog, nonetheless, the solution does not reside in writing a remark suggesting that the examiner has or will blithely ignore the duty to do a proper examination under current rules and practices.

In sum, to the extent that it is true that this examiner has in fact given only "cursory review" to the references cited, applicant hereby respectfully requests that the examiner go back and perform his duty fully, by giving full review of all cited references in their entirety. Absent further comment, applicant will assume that the examiner has done more after reading this response to perform his duty, if required, as set forth in the rules and the MPEP, fully and to the extent described in the MPEP.

Interview Request

Applicant respectfully requests the examiner to telephone the undersigned before issuance of the next Office Action to arrange a suitable time for an interview to discuss the matter, including any new issues identified by the examiner as of concern, so that the application can be handled most efficiently and passed to allowance.

For the above reasons, assignee respectfully requests a prompt indication of allowance.

Respectfully submitted,
DATONICS, INC.

by its attorney

Dated: March 15, 2017

/Louis J. Hoffman/
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Electronic Acknowledgement Receipt	
EFS ID:	28643098
Application Number:	14080999
International Application Number:	
Confirmation Number:	9158
Title of Invention:	Providing collected profiles to media properties having specified interests
First Named Inventor/Applicant Name:	Roy Shkedi
Customer Number:	26362
Filer:	Louis J. Hoffman/Donald Hertz
Filer Authorized By:	Louis J. Hoffman
Attorney Docket Number:	14-PP-CON3
Receipt Date:	15-MAR-2017
Filing Date:	15-NOV-2013
Time Stamp:	20:58:14
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$1400
RAM confirmation Number	031617INTEFSW20590500
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	