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FILING DATE: ***April 06, 2005***
PATENT NUMBER: ***7428493***
ISSUE DATE: ***September 23, 2008***

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UTILITY PATENT APPLICATION TRANSMITTAL

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

Attorney Docket No.	
First Inventor	Shkedi, Roy
Title	A Descriptive-Profile Mercantile Method
Express Mail Label No.	EV528551510US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. [X] Fee Transmittal Form (e.g., PTO/SB/17) *(Submit an original and a duplicate for fee processing)*
2. [X] Applicant claims small entity status. See 37 CFR 1.27.
3. [X] Specification [*Total Pages* 45]
   (preferred arrangement set forth below)
   - Descriptive title of the invention
   - Cross Reference to Related Applications
   - Statement Regarding Fed sponsored R & D
   - Reference to sequence listing, a table, or a computer program listing appendix
   - Background of the Invention
   - Brief Summary of the Invention
   - Brief Description of the Drawings *(if filed)*
   - Detailed Description
   - Claim(s)
   - Abstract of the Disclosure
4. [X] Drawing(s) *(35 U.S.C. 113)* [*Total Sheets* 3
5. Oath or Declaration [*Total Pages* 2]
   a. [ ] Newly executed (original or copy)
   b. [X] Copy from a prior application (37 CFR 1.63 (d)) *(for continuation/divisional with Box 18 completed)*
      i. [ ] DELETION OF INVENTOR(S)
      Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. [ ] Application Data Sheet. See 37 CFR 1.76

ADDRESS TO: Box Patent Application
Washington, DC 20231

7. [ ] CD-ROM or CD-R in duplicate, large table or Computer Program *(Appendix)*
8. Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all necessary)*
   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

ACCOMPANYING APPLICATION PARTS

9. [X] Assignment Papers (cover sheet & document(s))
10. [ ] 37 CFR 3.73(b) Statement *(when there is an assignee)* [ ] Power of Attorney
11. [ ] English Translation Document *(if applicable)*
12. [X] Information Disclosure Statement (IDS)/PTO-1449 [ ] Copies of IDS Citations
13. [ ] Preliminary Amendment
14. [X] Return Receipt Postcard (MPEP 503) *(Should be specifically itemized)*
15. [ ] Certified Copy of Priority Document(s) *(if foreign priority is claimed)*
16. [ ] Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. [X] Other: Express mail certif., Credit card payment form

18. If a CONTINUING APPLICATION, *check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:*

[X] Continuation [ ] Divisional [ ] Continuation-in-part (CIP) of prior application No.: 09/593,993

Prior application information: Examiner Ouellette, Jonathan P. Group Art Unit: 3629

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS

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Address					
City		*State*		*Zip Code*	
Country		*Telephone*		*Fax*	

Name (Print/Type)	John A. Galbreath	*Registration No. (Attorney/Agent)*	46718
Signature		*Date*	04/06/2005

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FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 1915

Complete if Known	
Application Number	CONTINUATION of 09/593,993
Filing Date	
First Named Inventor	Shkedi, Roy
Examiner Name	
Art Unit	
Attorney Docket No.	

METHOD OF PAYMENT *(check all that apply)*

☐ Check ☒ Credit card ☐ Money Order ☐ Other ☐ None

☐ Deposit Account:

Deposit Account Number
Deposit Account Name

The Commissioner is authorized to: *(check all that apply)*

☒ Charge fee(s) indicated below ☒ Credit any overpayments

☐ Charge any additional fee(s) during the pendency of this application

☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1001	750	2001	375	Utility filing fee	$500
1002	330	2002	165	Design filing fee	
1003	520	2003	260	Plant filing fee	
1004	750	2004	375	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) ($) 500

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

		Extra Claims		Fee from below	Fee Paid
Total Claims	39	-20** =	19	x $25	= $475
Independent Claims	12	-3** =	9	x $100	= $900
Multiple Dependent					=

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	84	2201	42	Independent claims in excess of 3
1203	280	2203	140	Multiple dependent claim, if not paid
1204	84	2204	42	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 1375

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for *ex parte* reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	410	2252	205	Extension for reply within second month	
1253	930	2253	465	Extension for reply within third month	
1254	1,450	2254	725	Extension for reply within fourth month	
1255	1,970	2255	985	Extension for reply within fifth month	
1401	320	2401	160	Notice of Appeal	
1402	320	2402	160	Filing a brief in support of an appeal	
1403	280	2403	140	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,300	2453	650	Petition to revive - unintentional	
1501	1,300	2501	650	Utility issue fee (or reissue)	
1502	470	2502	235	Design issue fee	
1503	630	2503	315	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	$40
1809	750	2809	375	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	750	2810	375	For each additional invention to be examined (37 CFR 1.129(b))	
1801	750	2801	375	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) ($) 40

SUBMITTED BY				(Complete *if applicable*)	
Name (Print/Type)	John A. Galbreath	Registration No. (Attorney/Agent)	46718	Telephone	410-666-7274
Signature	John A. Galbreath			Date	04/06/2005

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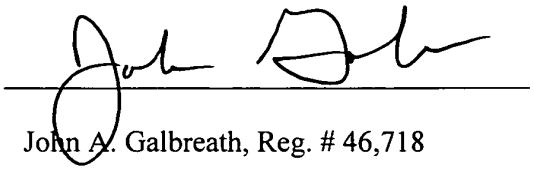
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6 April 2005



John A. Galbreath, Reg. # 46,718

A Descriptive-Profile Mercantile Method

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of application Ser. No. 09/593,993, filed 06/14/2000 and entitled A Descriptive-Profile Mercantile Method, which itself claims priority from Israel Application No. 133,489 filed on 12/13/1999. The disclosures of said application and its entire file wrapper (included all prior art references cited therewith) are hereby specifically incorporated herein by reference in their entirety as if set forth fully herein. Furthermore, a portion of the disclosure of this patent document contains material, which is subject to copyright protection. The copyright owner has no objection to the facsimile reproduction by anyone of the patent document or the patent disclosure, as it appears in the Patent and Trademark Office patent file or records, but otherwise reserves all copyright rights whatsoever.

FIELD OF THE INVENTION

The present invention generally relates to a mercantile method.

More specifically, the present invention relates to a mercantile method directed to brokerage of attributes of information.

BACKGROUND OF THE INVENTION

Advances in database technology have given rise to commerce in records, files and databases, per se. For example, paying for a database credit check for an

individual or buying a mailing list have become common practice. These well-known systems do not address the problems of how the database is to collect all of the attributes of information that are contained therein. Often, the contents of a database are the result of massive clerical efforts, which usually represent the product of many calendar years of transactional accumulations.

Sometimes, whole databases are merged to form higher precision data clusters. For example, voting turnout lists may be integrated with census data to produce a register from which a statistical profile of voters may be derived. Another example relates to merging the records of a credit card company with the records of a mortgage company. For those persons having an entry in each of the constituent record sets, the result is a credit profile of more precise resolution. In this example, the actual economic value of merged records exceeds the combined values of constituent records. This would likewise be true for the inclusion of any additional attribute of information to any record.

Unfortunately, the current state of information commerce is focused on the sales of whole databases, whole records, or evaluations based on single or clusters of records. In commercial applications where specific attributes of information strongly affect the value of evaluations, there is a need in the art for commerce in such attributes. For example, in targeted advertising, every attribute, which substantially affects the probability of that advertisement's success, innately has a discrete economic value. Likewise, in actuarial calculations, how precisely a client can be profiled determines what the probability of profiting from such a client.

More specifically, there remains a need in the art for assigning values to information attributes or for managing value assignments to information attributes. In the absence of such assignments or management, the commerce in information attributes, per se, is substantially precluded; especially in client-specific advertisement profiling, client-specific actuarial targeting, and the like.

NOTICES

The present invention will forthwith be described with a certain degree of particularity, however those versed in the art will readily appreciate that various modifications and alterations may be carried out without departing from either the spirit or scope, as hereinafter claimed.

In describing the present invention, explanations are presented in light of currently accepted theories and models; be they scientific, economic, sociological, etc. Such theories and models are subject to changes, both adiabatic and radical. Often these changes occur because representations for fundamental component elements are innovated, because new transformations between these elements are conceived, or because new interpretations arise for these elements or for their transformations. Therefore, it is important to note that the present invention relates to specific technological actualization in embodiments. Accordingly, theory or model dependent explanations herein, related to these embodiments, are presented for the purpose of teaching, the current man of the art or the current team of the art, how these embodiments may be substantially realized in practice. Alternative or equivalent explanations for these embodiments may neither deny nor alter their realization.

GLOSSARY

Profile: A collection of attributes that describe a person or an organization or any other entity that can be described by a combination of data. For example, a person profile could be a collection of the following attributes: the person's gender, the person's age, the person's education, the person's interests as reflected in his behavior or as reported by the person or as reflected from his membership in a specific club and so forth. An organization profile could be a collection of the following attributes: number of employees, activities the organization maintain whether business activities or other activities, the organization's revenues, the organization's gross profit, the organization's operating profit, the organization's net profit, the organization's

equity and so forth. It should be mentioned that profile attributes include, among other things, attributes that enable the identification of the entity described by the profile such as name, address, URL, cookie. In addition, profile attributes may include information learned about the entity described by the profile from a communication protocol such as the information learned about the visitor to a web site from its http header.

User: any entity that owns attributes contained in at least one partial profile. The entity could be a web site that has a database of its visitor profiles, an organization with a database of partial profiles or the subject described by the profile itself.

Cookie: A text (or alphanumeric) string that is put on a computer hard disk of a visitor to a web site by the web site's server. The cookie enables the identification of the specific computer on its future visits to the web site. Each cookie is reported (by the computer browser) only to the web site server that installed that cookie. Therefore, it should be clearly understood that the only way for a third party to acquire cookie data is to receive that data from the server that installed that cookie, or from another third party who so acquired the data from a chain of parties going back to that cookie setting server, etc.

Contract: An agreement between a user and a system incorporating the method of the present invention wherein ownership of an attribute or a right to represent an attribute is transferred from one party to another for an agreed consideration. Generally, examples include a purchase of an attribute for cash or credit, or an acceptance of an attribute according to a brokerage fee schedule. More specifically, since there are many problems in assigning the value of an attribute, the system of the present invention may simply agree to store new attributes with the proviso that users wishing to acquire a copy of these attributes will transfer a payment specified by the original attribute

provider (the royalty payment) to that provider and a brokerage fee for providing this service payable to the system's account. Alternatively, the attribute provider or the system may elect to assign a value to an attribute using a formula which factors in such parameters as newness of the attribute, geographical extent wherein the attribute is of presumable value, veracity of the attribute, etc.

SUMMARY OF THE INVENTION

The present invention generally relates to a descriptive-profile mercantile method, for use at a juncture in a data-communications topology having associated therewith a maintained databank of partial profiles, the method including the steps of:

(a) from a user, receiving a transaction having therein a first partial profile;

(b) using the first partial profile, searching a databank having a plurality of second partial profiles, wherein is included in said databank at least one null profile so that said searching will always yield at least one proximate second partial profile to the first partial profile;

(c) between the user and the databank, contracting:

i. for the databank to own or represent a right to a first mutually agreed portion of the first partial profile, and substantially thereafter said databank incorporating the agreed portion of the first profile into at least one second partial profile; or

ii. for the user to own or represent a right to a second mutually agreed portion of at least one said proximate second partial profile, and substantially thereafter the databank transmitting to the user the second mutually agreed portion of the second profile.

The present invention comes to provide a means for making viable the economic commerce in information attributes. Since the value of such attribute will

only become well understood with the implementation of the present method in the electronic commerce marketplace, the present best enabling mode for the present invention operates on a brokerage representation model. According to this model, a typical use of the present invention may be according to the following scenario.

An electronically facilitated visitor to an Internet web-site presents his credentials. These credentials could be the visitor profile itself or a cookie or a user name and so forth that enables the site to retrieve the visitor profile or any combination of the above. Of course, it could be that the site does not have a profile of the visitor to that web-site. The web-site may make better profit from the visitation if it were to know more about the visitor. The web-site forwards particulars from the visitor's credentials (a partial profile), as well as (optionally) a redirect to a portion of the visitor's page to a server located in cyberspace (at a juncture in a data communications topology). By redirecting a portion of the visitor's page to the server, the visitor's browser reports to the server a cookie the server put on the visitor's computer in the past, if any. This server interconnects the user's transactions and the server own cookie (if used) with a computer having therein software for running the method of the present invention. Associated with the computer is a databank, having therein an organized ensemble of information attributes.

The computer uses the forwarded visitor credentials with its server cookie (if any) to search the associated databank. Either or both of two possible mercantile events are set into motion thereby.

Firstly, it may be the case that the credentials contain new information attributes which were not heretofore known in the databank. According to a simple model of evaluating the value of these attributes, the database incorporates these new attributes and the computer assigns a user selected micro-payment royalty for each elected use of these attributes by any other user. Stated simply, if the user provides a date of birth for a known named person in the data bank, then the user is the owner of that date of birth attribute, and a user designated micro payment royalty (or credit) is assigned to the user for each purchase of that attribute by

another user. The owner of the databank may likewise collect for itself a brokerage commission for each use of the attribute.

Secondly, the databank may contain new attributes that were not in the initial visitor credentials. In this case, the user is told that such attributes exist for purchase, what these new attributes describe (e.g. education level associated with the visitor), and the micro-payment royalty plus brokerage fee that is charged for each respective attribute. If the user is interested in any of these attributes, then a contract is agreed to, resulting in a micro-payment transfer from the user to the broker and to the royalty owner, and a transfer of a copy of the attribute to the user (the buyer).

Other types of contracts and other types of pricing structures are available for the user in his interactions with the "system of the present invention" (e.g. the computer with its associated databank); as will be describes in subsequent sections.

BRIEF DESCRIPTION OF THE FIGURES AND APPENDICES

In order to understand the invention and to see how it may be carried out in practice, embodiments including the preferred embodiment will now be described, by way of non-limiting example only, with reference to the accompanying drawings, in which:

Figure 1 illustrates a schematic view of an Internet data-communications topology;

Figure 2 illustrates a schematic view of a system using the descriptive-profile mercantile method;

Figure 3 illustrates a schematic view of a computer program product;

Figure 4 illustrates a schematic view of a program storage device; and

Figure 5 illustrates a schematic view of an installed computer system for facilitating a descriptive-profile mercantile method.

DETAILED DESCRIPTION OF THE INVENTION

In Figure 1 there is presented a schematic illustration of a data-communications topology as a wide area network (e.g. the Internet) (1) having interconnected thereto a visitor (2), a user (3), and a system (4) embodying the method of the present invention.

The present invention relates to a descriptive-profile mercantile method (further presented in figure 2), for use at a juncture in a data-communications topology having associated therewith a maintained databank of partial profiles, the method including the steps of:

(a) from a user (3), receiving (5) a transaction having therein a first partial profile;

(b) using the first partial profile, searching (6) a databank (7) having a plurality of second partial profiles, wherein is included in said databank at least one null profile so that said searching will always yield at least one proximate second partial profile to the first partial profile;

(c) between the user and the databank, contracting:

i. (10) for the databank to own or represent a right to a first mutually agreed portion of the first partial profile, and substantially thereafter said databank incorporating the agreed portion of the first profile into at least one second partial profile; or

ii. (9) for the user to own or represent a right to a second mutually agreed portion of at least one said proximate second partial profile, and substantially thereafter the databank transmitting to the user the second mutually agreed portion of the second profile.

According to an embodiment of the present invention, receiving a transaction includes extracting at least one predetermined key portion of the first partial profile,

wherein at least one of these extracted predetermined key portions is then used as the first partial profile for the searching of the databank. According to a variation of this embodiment, extracting includes constructing at least one composite key for the searching of the databank using a combinatorial of at least two of the predetermined key portions of the first partial profile.

According to another embodiment of the present invention, contracting includes selecting a pricing structure according to a rating of the user.

According to a different embodiment of the present invention, contracting a right includes accepting an obligation to pay for substantially each use or transfer of the agreed portion.

According to a further embodiment of the present invention, incorporating the agreed portion includes assigning a credibility weighting to the agreed portion of the first profile. According to a variation of this embodiment, incorporating includes convoluting the assigned credibility weighting of the first profile with a pre-existing credibility weighting of a substantially like agreed portion of a proximate second profile; and storing the convoluted new credibility weighting for the agreed portion in the databank. According to a further refinement of this variation, contracting includes selecting a pricing structure according to a result of a computation comparing the new credibility weighting with the pre-existing credibility weighting.

According to an additional embodiment of the present invention, **receiving** a transaction includes **consulting** an external database (11).

According to an extension embodiment of the present invention, the method furthermore includes:

i) **searching** at least one external database (11) for a partial profile or portion thereof which complements a at least one second partial profile of the databank, and

ii) between the database and the databank, **contracting** for the databank to own or represent a right to a first mutually agreed portion of the complementing first partial profile, and substantially thereafter said databank **incorporating** the agreed portion of the first profile into at least one second partial profile.

The present invention also relates to a computer program product (see figure 3) including a computer usable medium having computer readable program code embodied therein for facilitating descriptive profile mercantile activities, the computer readable program code including:

a) first computer readable program code (20) for causing a computer to **receive** a transaction from a user, the transaction having therein a first partial profile;

b) tied to the first computer readable program code, second computer readable program code (21) for causing the computer to use the first partial profile to **search** a databank having a plurality of second partial profiles, wherein is included in said databank at least one null profile so that said searching will always yield at least one proximate second partial profile to the first partial profile; and

c) tied to the second computer readable program code, third computer readable program code (22) for causing the computer to **contract** between the user and the databank:

i) for the databank to own or represent a right to a first mutually agreed portion of the first partial profile, and substantially thereafter for said databank to **incorporate** the agreed portion of the first profile into at least one second partial profile; or

ii) for the user to own or represent a right to a second mutually agreed portion of at least one said proximate second partial profile, and substantially thereafter for the databank to **transmit** to the user the second mutually agreed portion of the second profile.

Furthermore, as illustrated in figure 4, the present invention relates to a program storage device (30) readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for a descriptive-profile mercantile method, for use at a juncture in a data-communications topology having associated therewith a maintained databank of partial profiles, said method steps including:

a) from a user, **receiving** a transaction having therein a first partial profile;

b) using the first partial profile, **searching** a databank having a plurality of second partial profiles, wherein is included in said databank at least one null profile so that said searching will always yield at least one proximate second partial profile to the first partial profile;

c) between the user and the databank, **contracting**:

i) for the databank to own or represent a right to a first mutually agreed portion of the first partial profile, and substantially thereafter said databank **incorporating** the agreed portion of the first profile into at least one second partial profile; or

ii) for the user to own or represent a right to a second mutually agreed portion of at least one said proximate second partial profile, and substantially thereafter the databank **transmitting** to the user the second mutually agreed portion of the second profile.

The present invention also relates to a computer system for facilitating a descriptive-profile mercantile method (see figure 5), the system including:

a) a computer (40) installed at a juncture in a data-communications topology (1);

b) associated with said computer, a storage device (42) for keeping a maintained databank of partial profiles; and

c) associated with the internal functionality components of the computer, appurtenances (41) for performing method steps including:

i) from a user, **receiving** a transaction having therein a first partial profile;

ii) using the first partial profile, **searching** a databank having a plurality of second partial profiles, wherein is included in said databank at least one null profile so that said searching will always yield at least one proximate second partial profile to the first partial profile;

iii) between the user and the databank, **contracting**:

(1) for the databank to own or represent a right to a first mutually agreed portion of the first partial profile, and substantially thereafter said databank **incorporating** the agreed portion of the first profile into at least one second partial profile; or

(2) for the user to own or represent a right to a second mutually agreed portion of at least one said proximate second partial profile, and substantially thereafter the databank **transmitting** to the user the second mutually agreed portion of the second profile.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

In the context of the preferred embodiment of the present invention, "attribute" relates to an information particular (or attribute) that is aggregated with other particulars to form a partial profile. Examples of attributes may be: name, address, income, age, education, details of product purchase transaction over the Internet, credit rating, etc.

In the context of the preferred embodiment of the present invention, "data" relates to knowledge concerning a visitor.

In the context of the preferred embodiment of the present invention, "data-communications topology" relates to a virtually interconnected collection of communications facilities including at least one mutually agreed protocol between any directly communication facilities in the collection.

In the context of the preferred embodiment of the present invention, "information" relates to the collection of all attributes known by a user about a visitor.

In the context of the preferred embodiment of the present invention, "pricing structure" relates to the price and payments for data exchanged by the user and the system.

In the context of the preferred embodiment of the present invention, all profiles are, by definition, partial. A profile may describe aspects of a person, or an organization, or of a corporation. It is logically impossible to have complete information about any of these. However, any particular of information about any of these may have an economic value for a customer of profile information.

In the context of the preferred embodiment of the present invention, a "databank" relates to an accessible searchable aggregation of records or like data structure units wherein "partial" profiles are stored.

In the context of the preferred embodiment of the present invention, "system" relates to a computer embodying the descriptive profile mercantile method according to the present invention.

In the context of the preferred embodiment of the present invention, "transaction" relates to a process to complete a communicative activity between the parties that reciprocally affects or influences the other party. It may include an acquisition provision of a partial profile, an identification of the user, a reference to a contractual mechanism related to the acquisition, screening, and/or distribution of new data and a pricing structure.

In the context of the preferred embodiment of the present invention, "user" relates to an individual, web site, search-robot and/or other type of software agent that interacts with the system by virtue of their contacting a juncture in the data-

communications topology where the method is installed in order to acquire, trade, dispose of and/or broker some attribute data for the purpose of acquiring some potential economic or other value in connection with that attribute data.

In the context of the preferred embodiment of the present invention, "visitor" relates to an entity the user has access to or is interested in. The visitor could be a consumer or potential customer of an offering of goods, services, or information.

INTRODUCTION

This invention relates to gaining an ability to buy, sell, broker, and trade specific pieces of data between two disjoint parties within the context of a system that may include a databank and that may include a micro-payment royalty arrangement as a pricing structure in connection with the aforesaid exchange of data.

The specific pieces of data that may be involved in the exchange are known as attributes. The attributes relate to details of a particular profile. The profile can be a collection of descriptive information as used by an advertiser for generating targeted advertising or used by an insurer for finding a more specific actuarial rate. It is noted that a secondary type of profile that is also contained in another embodiment of the invention is a form of a collective profile that is an aggregate that is based on a pre-structured analysis of the existing individual profiles such as average or typical.

In the normal course of a transaction between a user and an embodiment of a system according to the present invention a typical scenario ensues:

1. A visitor arrives at a web site of the user. The web site of the user collects a variety of specific data about the visitor that may include the visitor's cookie and any other information that the visitor voluntarily disclosed to the web site.
2. The web site has a number of interests in the visitor and the information that the web site possesses about the visitor. In connection to a profile of the visitor, there would be a benefit to the web site if the web site could acquire additional information as to the specific visitor or at least acquire typical profile information about a class of individuals possessing similar profiles relative to the specific visitor. Possession of such additional information will enable the web site to engage in potentially more successful product offering and/or targeted advertising to the visitor. Another independent benefit that

can accrue to the web site is the gain of some economic remuneration for and as a function of the information itself that the web site possesses about the visitor.

In order for the web site to progress and to potentially achieve either or both of the above mentioned benefits (the improved targeted advertising (or improved product offering) to the visitor as well as the gain of some economic remuneration of the information itself about the visitor); the web site now becomes a user of the system of the present invention. The web site as a user of the present invention constructs a transaction that contain those portions of the information it possesses about the visitor that it is allowed to diverge to third parties.

The transaction includes:

1. Information that the user is allowed to disclose to third parties about the visitor.
2. Contract terms about the user, typically including but not limited to: identity, pre-determined rate structures per transaction type, and information type, pre-determined contractual relations with the system as to what each party - the user and the system can do with information exchanged between them.
3. Instructions as to the type of transaction - buy, sell, broker, and/or trade information to be conducted between the user and the system.

Thus, the user sends a transaction in the data communication topology where the system is installed; as for example, via the Internet, Intranet, LAN, WAN, wireless packet communications system, etc. Thereupon, the system receives the transaction, identifies the user, interprets instructions sent concerning the transaction's contractual terms and type, i.e. the applicable contract and structure for using all or some of the attributes contained in the information (hereinafter, "First Visitor Profile Data") includes the profile of the visitor as known to the site,

visitor information included in the communication protocol such as the information in the http header, profile attributes that enable the identification of the entity described by the profile by the databank such as name, address, URL, cookie put by the server connected to the databank and so forth. It should be noted that the profile of the visitor known to the site mentioned above might not include certain attributes the user is not interested in exposing to the databank or attributes that are of no interest to the databank. For example, a databank that identifies web site visitors by the cookie its server puts on their computers, could decide not to take 'real world identifying attributes' such as name, address and e-mail in order to give web surfers a level of anonymity

The system searches a databank according to what is contained in the First Visitor Profile Data (contained in the transaction) in order to find either: at least one profile in the databank that matches the information in the visitor profile (that includes the information dispatched by the user related to the visitor, visitor information included in the communication protocol such as the information in the http header, profile attributes that enable the identification of the entity described by the profile by the databank such as name, address, URL, cookie put by the server connected to the databank and so forth) or to find at least one aggregate profile that describes a profile of a group that the visitor might belong to.

If it is the intent of the user, as contained in the transaction instructions, to purchase additional attributes that may relate to the First Visitor Profile Data, then the system examines the profiles it has found in its search, determines if it has any new attributes not sent by the user. In the event that the system has found new attributes that were sent by the user, the system reviews the contract instructions of the transaction in order to determine the relevance of the new attributes found to the intent of the user. If the system finds the new attributes relevant, then the system will debit the user's account in accordance with a pre-agreed pricing structure in connection with additional attributes related to the First Visitor Profile Data that are delivered as data to the user.

A non-limiting example of the principle of data release in accordance with the user's contractual instructions is herein provided. It may be that in the contract with the user, the user has instructed that it is never interested in receiving any data that does not specifically relate to the visitor, meaning the user is not interested in information about an average profile of a group that the visitor might belong to. Another example could be that the user has instructed that it is not interested in the habits of a visitor, but specifically, only in information about his age, gender, education and income. The reason may be to preclude the system from disclosing the name of the visitor since the user always knows the name of the visitor and has no interest in paying to re-learn what it already knows. Thus, in accordance with the contractual instructions, no attribute data relating to information the user specified it is not interested in receiving will either be sent, and since such information was not sent, it will not be debited to the user's account.

An alternative example is the case where the user only has an interest in a pre-defined - within the transactional instructions - set of attributes. For example, the user may only be interested in what type of car the visitor drives, or what the visitor's current credit rating is, or, what may be the most interesting example, what category of goods have been purchased by the visitor over a pre-defined period. It is noted that elements of this last example may typically be a piece of information that other typical users trade with or sell to the system.

It should be noted that a user may restrict the use of attributes it sells to the databank. The restrictions could be of number of usages, to whom the databank has the permission to sell, and so forth.

A second class of data that is found by the system as it searches may equally be of value to the user. This is the search result that demonstrates discrepancies between the disclosure of information by the user to the system and the results of the search by the system. The fact that there is a discrepancy, as well as the nature of the discrepancy, may be of value to the user, the system, or both.

A third category is the example where there are pieces of information relating to the user in the descriptive portion of the transaction that describes the

visitor which the search by the system failed to disclose. For example, the make and model of the car driven by the visitor, recently purchased from the user's web site might be the new information otherwise unknown to the system. In this instance, the system would go through an appropriate contractual arrangement in order to credit the user for the new attribute which the user has delivered to the system.

The various kinds of contracts available in a transaction between the system and the user are: buy, sell, broker, and trade. Where new information is disclosed to the system a royalty arrangement (or, alternatively, an outright purchase or sale) comprised of micro payments may be employed. In addition to the various kinds of contracts, there are various types of users. A user may be a large scale commercial web site or an individual small scale web page. Furthermore, there may be different types of rate structures. An audited user which may have taken efforts to verify information regarding a user, for example a credit bureau, would have a different payment rate for new information that it discloses to the system than a user with information that is neither audited nor verified but which is causal.

Thus the value of information in a databank can change as a function of its credibility and source. Accordingly, the royalty payment rate for said information could be enhanced or reduced as a function of its value.

In addition to profiles of a visitor it may be of interest to allow an embodiment of the invention to create a type of secondary market for the information consisting of a predetermined class of profiles about all visitors. For example it may be of interest to know what type of individuals, including their profession, income, gender, and geographic location, buy a certain model of vehicle. The purchase, sale, trade, and/or brokerage of this class of data can than enter a mercantile model and may be of significant interest to advertisers.

DESCRIPTION

The preferred embodiment of the present invention relates to the use of a procedure on a computer attached to a network, Internet, Intranet, LAN, WAN, wireless packet communication system or hybrid composite of any of the above whereby data is exchanged by purchase, sale, trade, or brokerage and micro payments of royalties as a pricing structure that may accompany the data exchange.

This procedure begins with the introduction to the system of data that contains a partial profile that will be used in the establishment, supplementation, or improvement of a descriptive profile. The partial profile will often itself contain certain predetermined identified commercial attributes, demographic attributes, or behavioral attributes or combinations thereof or the like. These attributes then allow construction of a descriptive profile that resides as existing information in a databank. However, inherent design characteristics of the descriptive profile result in the descriptive profile always being partial. This means that data within the profile relates to one or more attributes of the item, business, service, data characteristic, advertisement, or person that is being profiled. The descriptive profile is then methodically employed in an activity that verifies or contradicts, maintains, modifies, updates or downgrades, and/or enhances the databank of previously existing partial profiles. Thereafter, the system may retain, market, and/or exchange with the user new resultant (of the process described) data that contains further descriptive profile attributes for further usage.

Since the present invention is directed to the value of details of a profile, it is an object of the present invention to facilitate the transfer of rights to such particulars. For example, a visitor may arrive at a commercial Internet web-site. The visitor may disclose his cookie and may provide the web-site with other facts about him/herself on a non-confidential basis. The web site may then contact a juncture in a data-communications topology where the present method is installed. According to one scenario, the web-site is a familiar user of the present method, and has pre-arranged the terms and conditions of what information he may wish to

transfer rights to. For example, after considering the web-site transmission containing the non-confidential disclosed information, the system may find that all of the information already recorded in its databank with the single exception of the visitor's annual income. By prearranged contract details, the web-site is given a predetermined micro-payment credit for providing this detail. Alternatively, by prearranged contract the databank agrees to store this user attribute and to credit the providing web-site with a micro-payment royalty for each use of this attribute "purchased" from the databank by each interested party.

Likewise, according to the same prearranged contractual arrangement between the user and the databank, the databank may find that it represents a right to an attribute that has not been disclosed to it by the user. In this example, the system's databank may then transmit a query to the user in the form: "for the identified visitor (detail from original transaction inserted), are you interested in the following attributes according to the associated payment conditions: (education level, micro-payment price schedule 1), (gender, micro-payment price schedule 2), etc.?"

The systematic procedure described in the preceding paragraph includes various steps that can be better illustrated by example. However, the reader should be aware that all examples which are given in this document are limiting examples that are expressed in this document solely for the purpose of explanation and not for the purpose of limitation.

Initially a user will interface with the system by providing the system's databank with a partial profile consisting of at least one attribute which will enable the identification of the entity described by the profile in the system's databank (the attribute could be for example, the cookie installed on the visitor's computer (the visitor to a web site which is a user of the system of course) by the server attached to the databank. The user enables the server attached to the databank to receive the cookie it installed by redirecting a portion of the visitor page to the databank's server) . For example a company might provide the system with a name of one of its customers. This step sets the process in motion.

For once there is an initiation by contribution of an initial attribute list by the user, the system will search existing data in the databank.

It should be recognized that the existing databank would have the characteristics that when it is approached by the user it will already contain or have the ability to acquire or generate a multiplicity of other partial profiles and room for at least one null profile; since it is the business of the databank to consider representing any new item of profile information. For example the databank might contain a list of geographic addresses of individuals. Then, once the user provides a name, the system will provide either a corresponding address or the message address unknown.

An alternative example has the user, in this case a web portal, providing the computer with a list of the previously monitored search habits of one of the portal's visitors. The system's databank might then suggest to the portal other web sites that contain text and/or graphics of similar type which the portal might then suggest to the visitor, presuming that the system maintains profiles on portals or web sites or surfing habits. If the web sites provided by the portal are provided on a fee basis, then a mechanism may be included in the contractual basis between the portal and the system whereby partial remuneration in the form of a micro payment would be made for any click through activity on the part of the visitor to a web site suggested by the system to the portal and then suggested by the portal to the visitor. It is noted that the click itself would be of further interest to both the portal and the system in the building by the system of a profile related to the behavioral characteristics or psychological makeup or predisposition of the visitor.

Once there is a coupling of the first partial profile of the user with a second partial profile existing in the databank, a contract can be formed between the user and the system related to the new information set which has resulted. The contract should provide that the system will own or acquire a license to utilize an agreed portion of the first partial profile which has been confirmed and at some time

thereafter the system will incorporate the agreed portion of the first profile into at least one second partial profile in the system's databank.

For example the name of an individual (an initial partial profile provided by the user) when coupled with age (a second partial profile provided by another use, inherent in the system's databank, or acquired by the system searching other databases will provide a partial second profile of certain demographic value consisting of name and age. If, for example, other partial profiles are found to correspond to gender, geographic address, and/or general income, there is a further enhancement of the partial second profile which results in a gain in the value of the information residing or incorporated from other databases into the system's databank and offered for exchange in accordance with the terms and instructions existing between the user and the system.

Alternatively, rather than the system acquiring by ownership or license an agreed portion of the first profile; the user itself might desire to acquire a right to own or license to use at least a part of an agreed portion of the second partial profile which has been confirmed by the system by its coupling with the first partial profile. Thus it would be an agreed function of the system to provide to the user an agreed portion of the second profile

For example the user might have the name and car model owned by a driver; the system's databank might have or have acquired the driving record of the driver and the safety record of the particular car model. The result of the coupling is the ability to refine an appropriate insurance rate for the particular driver and his car.

Alternatively the descriptive profile mercantile method might do both of the above by providing ownership or license to use certain information gleaned by the coupling of an initial partial profile with a second partial profile to both the system and the user. For example the system's databank might retain the use of the names and addresses and actuarial calculations of insurance agents residing in a geographical area proximate to the driver mentioned in the above paragraph, while a user (in this case the driver himself) might retain the name and address of the insurance agents willing to offer him insurance.

Inherent in the above examples is that the system that receives an input or exchange of data consisting of a first partial profile from a user will distill from that information at least one predetermined attribute. This attribute is then utilized by the system for searching the system's databank. Thus, the system, when receiving data, will, within the parameters of the transaction, extract at least one predetermined key portion of the first partial profile, wherein at least one of these extracted predetermined key portions is then used as the first partial profile for the searching of the system's databank. When the system extracts data it also constructs at least one composite key for the searching of the databank using a combinatorial of at least two of the predetermined key portions of the first partial profile. For example, a combination of the name and address of a person described in a profile will be used to search the databank. The combinatorial use is of importance to differentiate between partial profiles of people with the same name that do not allow cookies, for example. Continuing the example, in addition to whether the advertisement is for automobiles, it may be important to couple that information with advertisements only for home utility vans such that the first partial profile will now consist of car advertisements only for home utility vans.

An "interest" expressed by a user and the system, as to what these parties define between them as relevant data, may be expressed by the user and the system in a pricing structure. The pricing structure will include a contract between the user and the system that will include an obligation by the party which utilizes the information flowing to the system's databank to pay the other for substantially each use or transfer of the agreed information transferred between them. Instant data may or may not be ephemeral, and the profiles themselves may have either a limited or an unlimited shelf live. This means that information becomes currency and is treated by the parties in a manner similar to currency. To own or utilize certain information, there is a price associated with it either as a sales price or a rental price. In the event that the information is re-useable, in part or in whole then a certain predetermined royalty may be associated with each use of the portion of the

information which is reused. Let an example be provided at this juncture to further illustrate the operation of the preferred embodiment.

Normative market research consists of an array of information that is gleaned from answers provided to a questioner. However, the market research contains within itself not only the ability to provide truthful responses but also the ability to provide sampling errors due to either wrong answers, wrongly recorded answers, an error in the framing of the questions themselves, and/or an error in the population base which is being questioned. Clearly the larger and more diverse (or more homogeneous) the sample population (depending on the type of responses required), the larger number of similar questions answered, and the ability to better refine the questions all assist in increasing the value of the market analysis performed.

In the embodiment of the invention described, the user provides either a question or an answer, i.e. the initial partial profile. Thereupon, the system thereupon takes the initial partial profile and extracts from it a predetermined data that is then used for searching the databank. Depending on the contract between the user and the system, the system will or will not pay the user for the initial partial profile, or parts thereof. The search of the databank, results in the construction of a new profile that contains at least two predetermined parts of the first partial profile. For example, both the user and the system may be interested in screening the responses to a market survey of an individual respondent in order to ascertain whether on previous or similar questionnaires the respondent's answers were identical or deviant. This will allow both the user and the system to value the truthfulness of the current responses. The aforesaid quality value will have a predetermined monetary or other agreed "barter" value between the parties.

In addition, since the upgrading or downgrading of the credibility of the respondent has qualitative value in and of itself for other market surveys; to the extent that the user's information contributed to the new evaluation of the respondent, a payment might flow to the user. Similarly, to the extent that the upgrading or downgrading of the credibility of the respondent is based on existing information in the system's databank, the system may provide a royalty payment to

the initiator of the existing information in the system's databank. Thus, to the extent that the information inherent in the initial partial profile and in existing partial profiles have value and to the extent that participants who utilize the system (including the system's databank itself) have agreed on the value rating of the information and the amount to be paid between them an exchange of predetermined economic value will flow between the participants. In addition, to the extent there is further information and further participants, the continuing re-evaluation by the participants of a market valuation of the information as a function of the expected utility value of the information may further drive over time the price evaluation of both the information and the payments to be made between users and the system.

Furthermore, the preferred embodiment may embrace a further possible variations, i.e. an assignment by the contracting participants and/or the databank, per se, of a credibility rating to the agreed portion of the first partial profile. Coupling of the first partial profile with a second partial profile result in verification/confirmation of the first partial profile and second partial profile or contradiction/down grading of the credibility of the first partial profile and/or the second partial profile. By example, the first partial profile contains the name of Joe Blue, the information that he is male, and the information that he lives in Mississippi. However, the corresponding second partial profile associated with Joe Blue contains the information that he is a she (real name Josephine) and that she lives in Mississippi. The verification - perhaps- of the name is of dubious value in and of itself. However, in the event that for a certainty it can be established that Joe Blue is really Josephine Blue and that the gender is female rather than male, then, to a user of the information, the validation or disqualification of the information has significant value. Assume that the user of the information is an advertiser of beauty care products. The fact that Joe is male or female can result in an advertisement of beauty care products specifically targeted to the profile - in this case, male or female. In this instant case, the user (the advertiser) will assign a value to the credibility of the information.

Intrinsic to the example immediately above is the ability of the participants either individually or collectively to either raise or lower the rated utility value assigned to the first partial profile consistent with the pre-determined (but perhaps equally dynamic) credibility weighting system of the second partial profile. Thereafter the newly rated utility value of the partial profile incorporated in the database is stored for future usage. Lets see how this works in the case of Joe (Josephine) Blue. The first partial profile indicated that Joe was male; however all subsequent partial profiles which could be assigned to Joe (Josephine) Blue render to a statistical certainty that Joe (Josephine) Blue is actually female. This, combined with other attributes like geographical address, income level, and even spending patterns, when stored in the databank, results in an increasingly higher utility value rating for the (credible) information associated with Joe (Josephine) Blue. Thus, the raising or lowering of the credibility rating of an attribute due to the interaction between the associated attribute of the first partial profile and the second partial profile results in a corresponding change in the rating of the anticipated utility value of the attributes and profile themselves.

A further variation of the preferred embodiment incorporates an agreed portion of the data and assigns a credibility rating to the agreed portion of the first profile. This is accomplished by assigning a credibility rating of the first profile with a pre-existing credibility rating of a substantially like agreed portion of a proximate second profile; and storing the convoluted new credibility weighting for the agreed portion in the system's databank. This may result in an interesting result. When the participants select a pricing structure in accordance with a predetermined corresponding rating of the utility value of the partial attributes, the result is the continuous re-calibration of new information with existing information and a predetermined agreement by the parties as to the various value rating of an attribute.

If, for example, Ms. Blue's credit rating were confirmed as bankrupt, the desire of an advertiser to send her advertisements for the purchase of a pleasure craft would be seriously impacted notwithstanding the fact that other information in the databank related to Ms Blue indicates that she is a water skiing enthusiast and

otherwise fits both demographic, behavioral, and/or psychological profiles (which might reside in the databank) associated with candidates for potential purchasers of pleasure craft.

Another particularly useful variation of the preferred embodiment of the invention includes within it the possibility of consultation by the system with an external database or external databases. For example, the system is not restricted to searching the existing attributes residing within its own databank. Rather, the system is capable of acting as a first partial profile user to other databases, searching them, trading information with them or borrowing, renting, or purchasing other attributes with them. Thus the information related to credit worthiness attributes of Ms. Blue of the previous example might reside in a database owned by a credit company. Nonetheless, as per the example, the system would be able to utilize the information resident in the credit company's database for its own purposes related to the transaction with the user.

Furthermore the preferred embodiment may embrace other possible variations, including an ability to search one or more external databases for a partial profile, or part thereof, which complements at least one second partial profile of the system's databank. In the example of Ms. Blue, the name may be resident in the databank as well as a number of different external databases. Other attributes may reside as well either in the databank or in one or more external databases. Nonetheless, the result by search, correlation, and rating of the information in the databank and the databases results in both an expanded profile and a higher rating as to credibility of the partial profile existing both in the databank and in the other databases.

Thus, both system and owners of other databases may themselves contract between themselves for the right to own, use, license, or rent the other's partial profile and for the right to sublicense others to further use the other's partial profile. Since the information may very well have a shelf life - even as its credibility and rating may change over time - the result is a corresponding velocity of the value of the information in that not only is the more the information used is the more

valuable it is and becomes; but the more the information can be used the greater the potential value it has to its owners of licensors (with a right to sublicense). If we return to our example of Ms. Blue, the fact that she is female (information from the system's databank), is interested in water skiing (a partial attribute contributed by the first partial profile user), and has a restored credit rating (provided by an external credit service database) means that another user looking at its own profiles of young, single, sports minded women, would desire to provide her with advertisements related to scuba diving in the Gulf of Mexico, for example. This other user would pay the system for the information it has stored or accessed. The system itself would pay the initial provider of the verification of the gender of Ms. Blue, to the user who contributed that Ms. Blue is interested in water skiing and might share a fee associated with the clarification of Ms. Blues' actual credit worthiness.

As an alternative embodiment to a process that has previously been described is the ability to embody the invention not as a process but as a computer useable program, i.e. a software product, which allows the exchange of descriptive profiles between users, databanks, and/or computers. Another alternative is usage as a computer program storage device.

CLAIMS

I/We claim:

1. A descriptive-profile mercantile method, for use at a juncture in a data-communications topology having associated therewith a maintained databank of partial profiles, the method including the steps of:

a) from an entity who owns or represents a right to multiple profiles, electronically receiving a transaction having therein a first partial profile of a single visitor to the entity, said transaction including real-time access to the single visitor wherein an identifier is recognized or placed on the single visitor;

b) using the first partial profile, electronically searching a databank having a plurality of second partial profiles, wherein is included in said databank at least one null profile so that said electronic searching will always yield at least one proximate second partial profile to the first partial profile;

c) i) between the entity and the databank, electronically contracting for a purchase-payment or a trade or a brokerage payment in exchange for the databank to own or represent a right to a first mutually agreed portion of the first partial profile, and substantially thereafter said databank incorporating the agreed portion of the first profile into at least one second partial profile; or

ii) between the entity and the databank, electronically contracting for a purchase-payment or a trade or a brokerage-payment in exchange for the entity to own or represent a right to a second mutually agreed portion of at least one said proximate second partial profile, and substantially thereafter the databank transmitting to the user-entity the second mutually agreed portion of the second profile.

2. The method according to claim 1 wherein electronically receiving a transaction includes extracting at least one predetermined key portion of the first partial profile, wherein at least one of these extracted predetermined key portions is then used as the first partial profile for the electronic searching of the databank.

3. The method according to claim 2 wherein extracting includes constructing at least one composite key for the electronic searching of the databank using a combinatorial of at least two of the predetermined key portions of the first partial profile.

4. The method according to claim 1 wherein electronically contracting includes selecting a pricing structure according to a rating of the entity.

5. The method according to claim 1 wherein electronically contracting a right includes accepting an obligation to pay for substantially each use or transfer of the agreed portion.

6. The method according to claim 1 wherein incorporating the agreed portion includes assigning a credibility weighting to the agreed portion of the first profile.

7. The method according to claim 6 wherein incorporating includes convoluting the assigned credibility weighting of the first profile with a pre-existing credibility weighting of a substantially like agreed portion of a proximate second profile; and storing the convoluted new credibility weighting for the agreed portion in the databank.

8. The method according to claim 7 wherein electronically contracting includes selecting a pricing structure according to a result of a computation comparing the new credibility weighting with the pre-existing credibility weighting.

9. The method according to claim 1 wherein electronically receiving a transaction includes consulting an external database.

10. The method according to claim 1 further including i) electronically searching at least one external database for a partial profile or portion thereof which

complements a at least one second partial profile of the databank, and ii) between the database and the databank, electronically contracting for the databank to own or represent a right to a first mutually agreed portion of the complementing first partial profile, and substantially thereafter said databank incorporating the agreed portion of the first profile into at least one second partial profile.

11. A computer program product including a computer usable medium having computer readable program code embodied therein for facilitating descriptive profile mercantile activities, the computer readable program code including:

a) first computer readable program code for causing a computer to receive a transaction from an entity who owns or represents a right to multiple profiles, the transaction having therein a first partial profile of a single visitor to the entity, said transaction including real-time access to the single visitor wherein an identifier is recognized or placed on the single visitor;

b) tied to the first computer readable program code, second computer readable program code for causing the computer to use the first partial profile to search a databank having a plurality of second partial profiles, wherein is included in said databank at least one null profile so that said searching will always yield at least one proximate second partial profile to the first partial profile; and

c) tied to the second computer readable program code, third computer readable program code: i) for causing the computer to contract for a purchase-payment or a trade or a brokerage payment between the entity and the databank for the databank to own or represent a right to a first mutually agreed portion of the first partial profile, and substantially thereafter for said databank to incorporate the agreed portion of the first profile into at least one second partial profile; or ii) for causing the computer to contract for a purchase-payment or a trade or a brokerage payment between the entity and the databank for the entity to own or represent a right to a second mutually agreed portion of at least one said proximate second partial profile, and substantially thereafter for the databank to transmit to the entity the second mutually agreed portion of the second profile.

12. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for a descriptive-profile mercantile method, for use at a juncture in a data-communications topology having associated therewith a maintained databank of partial profiles, said method steps including:

a) from an entity who owns or represents a right to multiple profiles, receiving a transaction having therein a first partial profile of a single visitor to the entity, said transaction including real-time access to the single visitor wherein an identifier is recognized or placed on the single visitor;

b) using the first partial profile, searching a databank having a plurality of second partial profiles, wherein is included in said databank at least one null profile so that said searching will always yield at least one proximate second partial profile to the first partial profile;

c) i) between the entity and the databank, contracting for a purchase-payment or a trade or a brokerage payment in exchange for the databank to own or represent a right to a first mutually agreed portion of the first partial profile, and substantially thereafter said databank incorporating the agreed portion of the first profile into at least one second partial profile; or ii) between the entity and the databank, contracting for a purchase-payment or a trade or a brokerage payment in exchange for the entity to own or represent a right to a second mutually agreed portion of at least one said proximate second partial profile, and substantially thereafter the databank transmitting to the entity the second mutually agreed portion of the second profile.

13. A computer system for facilitating a descriptive-profile mercantile method, the system including:

a) a computer installed at a juncture in a data-communications topology;

b) associated with said computer, a storage device for keeping a maintained databank of partial profiles; and

c) associated with the internal functionality components of the computer, software for performing method steps including:

i) from an entity who owns or represents a right to multiple profiles, receiving a transaction having therein a first partial profile of a single visitor to the entity, said transaction including real-time access to the single visitor wherein an identifier is recognized or placed on the single visitor;

ii) using the first partial profile, searching a databank having a plurality of second partial profiles, wherein is included in said databank at least one null profile so that said searching will always yield at least one proximate second partial profile to the first partial profile;

iii) (1) between the entity and the databank, contracting for a purchase-payment or a trade or a brokerage payment in exchange for the databank to own or represent a right to a first mutually agreed portion of the first partial profile, and substantially thereafter said databank incorporating the agreed portion of the first profile into at least one second partial profile; or (2) between the entity and the databank, contracting for a purchase-payment or a trade or a brokerage payment in exchange for the entity to own or represent a right to a second mutually agreed portion of at least one said proximate second partial profile, and substantially thereafter the databank transmitting to the entity the second mutually agreed portion of the second profile.

14. A descriptive-profile mercantile method, for use at a juncture in a data-communications topology having associated therewith a maintained databank of partial profiles, the method including the steps of:

a) establishing a data rights contract agreement between an entity and a databank,

b) from the entity, who owns or represents a right to multiple profiles, electronically receiving a transaction having therein a first partial profile of a single visitor to the entity, said transaction including real-time access to the single visitor wherein an identifier is recognized or placed on the single visitor;

c) using the first partial profile, electronically searching the databank having a plurality of second partial profiles, wherein is included in said databank at least one null profile so that said electronic searching will always yield at least one proximate second partial profile to the first partial profile;

d) i) between the entity and the databank, electronically affirming the agreement for a royalty payment or a purchase-payment or a trade or a brokerage payment in exchange for the databank to own or represent a right to a first mutually agreed portion of the first partial profile, and substantially thereafter said databank incorporating the agreed portion of the first profile into at least one second partial profile; or ii) between the entity and the databank, electronically affirming the agreement for a royalty payment or a purchase-payment or a trade or a brokerage-payment in exchange for the entity to own or represent a right to a second mutually agreed portion of at least one said proximate second partial profile, and substantially thereafter the databank transmitting to the user-entity the second mutually agreed portion of the second profile.

15. The method according to claim 14 wherein electronically receiving a transaction includes extracting at least one predetermined key portion of the first partial profile, wherein at least one of these extracted predetermined key portions is then used as the first partial profile for the electronic searching of the databank.

16. The method according to claim 15 wherein extracting includes constructing at least one composite key for the electronic searching of the databank using a combinatorial of at least two of the predetermined key portions of the first partial profile.

17. The method according to claim 14 wherein electronically contracting includes selecting a pricing structure according to a rating of the entity.

18. The method according to claim 14 wherein electronically contracting a right includes accepting an obligation to pay for substantially each use or transfer of the agreed portion.

19. The method according to claim 14 wherein incorporating the agreed portion includes assigning a credibility weighting to the agreed portion of the first profile.

20. The method according to claim 19 wherein incorporating includes convoluting the assigned credibility weighting of the first profile with a pre-existing credibility weighting of a substantially like agreed portion of a proximate second profile; and storing the convoluted new credibility weighting for the agreed portion in the databank.

21. The method according to claim 20 wherein electronically contracting includes selecting a pricing structure according to a result of a computation comparing the new credibility weighting with the pre-existing credibility weighting.

22. The method according to claim 14 wherein electronically receiving a transaction includes consulting an external database.

23. The method according to claim 14 further including i) electronically searching at least one external database for a partial profile or portion thereof which complements a at least one second partial profile of the databank, and ii) between the database and the databank, electronically contracting for the databank to own or represent a right to a first mutually agreed portion of the complementing first partial profile, and substantially thereafter said databank incorporating the agreed portion of the first profile into at least one second partial profile.

24. A computer program product including a computer usable medium having computer readable program code embodied therein for facilitating descriptive profile mercantile activities, the computer readable program code including:

a) first computer readable program code for causing a computer to receive a transaction from an entity who owns or represents a right to multiple profiles, the transaction having therein a first partial profile of a single visitor to the entity, said transaction including real-time access to the single visitor wherein an identifier is recognized or placed on the single visitor;

b) tied to the first computer readable program code, second computer readable program code for causing the computer to use the first partial profile to search a databank having a plurality of second partial profiles, wherein is included in said databank at least one null profile so that said searching will always yield at least one proximate second partial profile to the first partial profile; and

c) tied to the second computer readable program code, third computer readable program code: in accordance with an

i) for causing the computer to affirm an aspect of an established data rights contract agreement, between the entity and the databank, for a royalty-payment or a purchase-payment or a trade or a brokerage payment between the entity and the databank for the databank to own or represent a right to a first mutually agreed portion of the first partial profile, and substantially thereafter for said databank to incorporate the agreed portion of the first profile into at least one second partial profile; or

ii) for causing the computer to affirm an aspect of an established data rights contract agreement, between the entity and the databank, for a royalty-payment or a purchase-payment or a trade or a brokerage payment between the entity and the databank for the entity to own or represent a right to a second mutually agreed portion of at least one said proximate second partial profile, and substantially thereafter for the databank to transmit to the entity the second mutually agreed portion of the second profile.

25. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for a descriptive-profile mercantile method, for use at a juncture in a data-communications topology having associated therewith a maintained databank of partial profiles, said method steps including:

a) from an entity who owns or represents a right to multiple profiles, receiving a transaction having therein a first partial profile of a single visitor to the entity, said transaction including real-time access to the single visitor wherein an identifier is recognized or placed on the single visitor;

b) using the first partial profile, searching a databank having a plurality of second partial profiles, wherein is included in said databank at least one null profile so that said searching will always yield at least one proximate second partial profile to the first partial profile;

c) i) between the entity and the databank, affirming an aspect of an established data rights contract agreement, between the entity and the databank, for a royalty-payment or a purchase-payment or a trade or a brokerage payment in exchange for the databank to own or represent a right to a first mutually agreed portion of the first partial profile, and substantially thereafter said databank incorporating the agreed portion of the first profile into at least one second partial profile; or

ii) between the entity and the databank, affirming an aspect of an established data rights contract agreement, between the entity and the databank, for a royalty-payment or a purchase-payment or a trade or a brokerage payment in exchange for the entity to own or represent a right to a second mutually agreed portion of at least one said proximate second partial profile, and substantially thereafter the databank transmitting to the entity the second mutually agreed portion of the second profile.

26. A computer system for facilitating a descriptive-profile mercantile method, the system including:

a) a computer installed at a juncture in a data-communications topology;

b) associated with said computer, a storage device for keeping a maintained databank of partial profiles; and

c) associated with the internal functionality components of the computer, software for performing method steps including:

i) from an entity who owns or represents a right to multiple profiles, receiving a transaction having therein a first partial profile of a single visitor to the entity, said transaction including real-time access to the single visitor wherein an identifier is recognized or placed on the single visitor;

ii) using the first partial profile, searching a databank having a plurality of second partial profiles, wherein is included in said databank at least one null profile so that said searching will always yield at least one proximate second partial profile to the first partial profile;

iii) (1) between the entity and the databank, affirming an aspect of an established data rights contract agreement, between the entity and the databank, for a royalty-payment or a purchase-payment or a trade or a brokerage payment in exchange for the databank to own or represent a right to a first mutually agreed portion of the first partial profile, and substantially thereafter said databank incorporating the agreed portion of the first profile into at least one second partial profile; or (2) between the entity and the databank, affirming an aspect of an established data rights contract agreement, between the entity and the databank, for a royalty-payment or a purchase-payment or a trade or a brokerage payment in exchange for the entity to own or represent a right to a second mutually agreed portion of at least one said proximate second partial profile, and substantially thereafter the databank transmitting to the entity the second mutually agreed portion of the second profile.

27. Transaction of Profile Information Attributes; the attributes being derived from using of a descriptive-profile mercantile method substantially as hereinbefore described and illustrated and said method operating at a juncture in a data-

communications topology having associated therewith a maintained databank of profiles, the method including the steps of establishing a data rights contract agreement between a user-entity and a databank-entity, and in accordance with the agreement either (a) assigning to the databank-entity to own or represent a right to a mutually agreed portion of a profile, and substantially thereafter the databank-entity electronically incorporating the agreed portion; or (b) assigning to the user-entity to own or represent a right to a mutually agreed portion of a profile, and substantially thereafter the databank-entity electronically transmitting to the user-entity the agreed portion; the transaction comprising:

using an electronic procedure on a computer attached to a data-communications topology wherein the procedure is facilitating, between two disjoint parties, a data exchange of said attributes by an accompanying pricing structure selected from the list: purchase, sale, trade, brokerage, and payment of royalties.

28. The transaction according to claim 27 wherein the data-communications topology having the computer attached thereto is selected from the list: a network, Internet, Intranet, LAN, WAN, wireless packet communication system, and a hybrid composite of any of the aforesaid.

29. The transaction according to claim 27 wherein the computer has therein an organized ensemble of information attributes.

30. The transaction according to claim 27 wherein said attributes enable identification of an entity described by a profile and the attributes are selected from the list: name, address, URL, cookie, information learned from a communication protocol about a visitor to a web site from an http header, the visitor's credentials, a redirect to a portion of the visitor's page to a server located in cyberspace, name, address, income, gender, age, education, details of a person's or organization's product purchase transaction over the Internet, credit rating, web portal search

habits, a questionnaire response, a person's interests as reflected in his behavior or as reported by the person or as reflected from his membership in a specific club, an organization's number of employees, an organization's activities, an organization's revenues, an organization's gross profit, an organization's operating profit, an organization's net profit, an organization's equity, descriptive information as used by an advertiser for generating targeted advertising or used by an insurer for finding a more specific actuarial rate, and an average or typical aggregate based on a pre-structured analysis of an existing individual profiles.

31. The transaction according to claim 27 wherein the user-entity is selected from the list: an individual, web site, search-robot, and software agent.

32. The transactions according to claim 27 wherein the computer installs a method to acquire, trade, pay royalty for use of, dispose of, or broker attribute data.

33. The transaction according to claim 27 wherein the data exchange includes articles of information commerce selected from the list: information the user-entity is allowed to disclose to third parties about a visitor; contract terms about the visitor; instructions as to type of transaction; visitor demographic attributes; visitor behavioral attributes; and a predetermined class of profiles for a plurality of visitors.

34. The transaction according to claim 27 wherein the procedure includes a databank-entity activity selected from the list: verification, contradiction, maintenance, modification, update, downgrade, enhancement, and credibility rating.

35. A computer useable program protocol between two entities allowing an electronic transaction of Profile Information Attributes substantially as hereinbefore described and illustrated; and the transactions includes an activity selected from the list: assigning values to information attributes, managing value assignments to

information attributes, commerce in information attributes, client-specific advertisement profiling of information attributes, and client-specific actuarial targeting of information attributes; and the entities are selected from the list: users, databanks, and computers; and the attributes are characterized by their respective derivation from a descriptive-profile mercantile method substantially as hereinbefore described and illustrated.

36. A Transaction of Profile Information Attributes user-side software for use in a descriptive-profile mercantile method data-communications protocol operating at a juncture in a data-communications topology having associated therewith a maintained databank of profiles wherein the method includes the step of establishing a data rights contract agreement between a user-entity and a databank-entity for a royalty payment or a purchase-payment or a trade or a brokerage-payment, and in accordance with the agreement the software facilitates either (a) the user-entity assigning to the databank-entity to own or represent a right to a mutually agreed portion of a profile; or (b) the user-entity accepting an assignment from the databank-entity to own or represent a right to a mutually agreed portion of a profile.

37. A Transaction of Profile Information Attributes databank-side software for use in a descriptive-profile mercantile method data-communications protocol operating at a juncture in a data-communications topology having associated therewith a maintained databank of profiles wherein the method includes the step of establishing a data rights contract agreement between a user-entity and a databank-entity for a royalty payment or a purchase-payment or a trade or a brokerage-payment, and in accordance with the agreement the software facilitates either (a) the databank accepting from the user-entity to own or represent a right to a mutually

agreed portion of a profile, and substantially thereafter the databank electronically incorporating the agreed portion; or (b) the databank assigning to the user-entity to own or represent a right to a mutually agreed portion of a profile, and substantially thereafter the databank electronically transmitting the agreed portion to the user-entity.

38. A maintained databank of partial profiles including therein a data-article selected from the list: a transacted partial profile according to claim 1, and a transacted attribute derived from using of a descriptive-profile mercantile method substantially as hereinbefore described and illustrated and said method operating at a juncture in a data-communications topology having associated therewith a maintained databank of profiles, the method including the steps of establishing a data rights contract agreement between a user-entity and a databank-entity, and in accordance with the agreement either (a) assigning to the databank-entity to own or represent a right to a mutually agreed portion of a profile, and substantially thereafter the databank-entity electronically incorporating the agreed portion; or (b) assigning to the user-entity to own or represent a right to a mutually agreed portion of a profile, and substantially thereafter the databank-entity electronically transmitting to the user-entity the agreed portion; where in said transaction is comprising using an electronic procedure on a computer attached to a data-communications topology wherein the procedure is facilitating, between two disjoint parties, a data exchange of said attributes by an accompanying pricing structure selected from the list: purchase, sale, trade, brokerage, and payment of royalties.

39. A maintained databank of partial profiles including therein a data-article selected from the list: a transacted partial profile according to claim 14, and a transacted attribute derived from using of a descriptive-profile mercantile method substantially as hereinbefore described and illustrated and said method operating at a juncture in a data-communications topology having associated therewith a

maintained databank of profiles, the method including the steps of establishing a data rights contract agreement between a user-entity and a databank-entity, and in accordance with the agreement either (a) assigning to the databank-entity to own or represent a right to a mutually agreed portion of a profile, and substantially thereafter the databank-entity electronically incorporating the agreed portion; or (b) assigning to the user-entity to own or represent a right to a mutually agreed portion of a profile, and substantially thereafter the databank-entity electronically transmitting to the user-entity the agreed portion; where in said transaction is comprising using an electronic procedure on a computer attached to a data-communications topology wherein the procedure is facilitating, between two disjoint parties, a data exchange of said attributes by an accompanying pricing structure selected from the list: purchase, sale, trade, brokerage, and payment of royalties.

ABSTRACT

A descriptive-profile mercantile method, for use at a juncture in a data-communications topology having associated therewith a maintained databank of partial profiles, is disclosed. The method includes the steps of: from a user, receiving a transaction having therein a first partial profile; using the first partial profile, searching a databank having a plurality of second partial profiles, wherein is included in said databank at least one null profile so that said searching will always yield at least one proximate second partial profile to the first partial profile; and between the user and the databank, contracting: (I) for the databank to own or represent a right to a first mutually agreed portion of the first partial profile, and substantially thereafter said databank incorporating the agreed portion of the first profile into at least one second partial profile; or (II) for the user to own or represent a right to a second mutually agreed portion of at least one said proximate second partial profile, and substantially thereafter the databank transmitting to the user the second mutually agreed portion of the second profile. The present invention operates best on a brokerage representation model; and thereby provides a means for making viable the economic commerce in information attributes.

Fig. 1

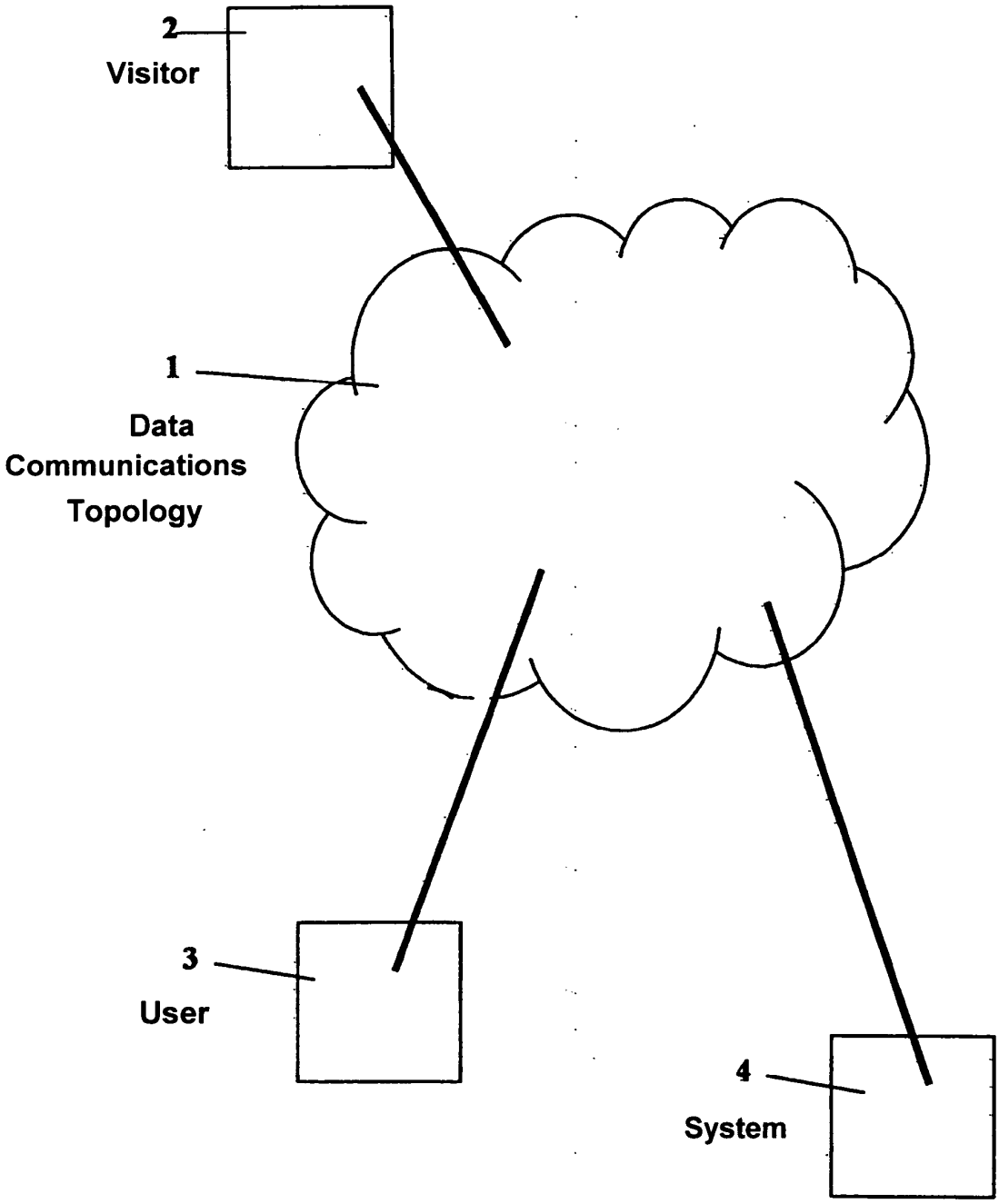


Fig. 2

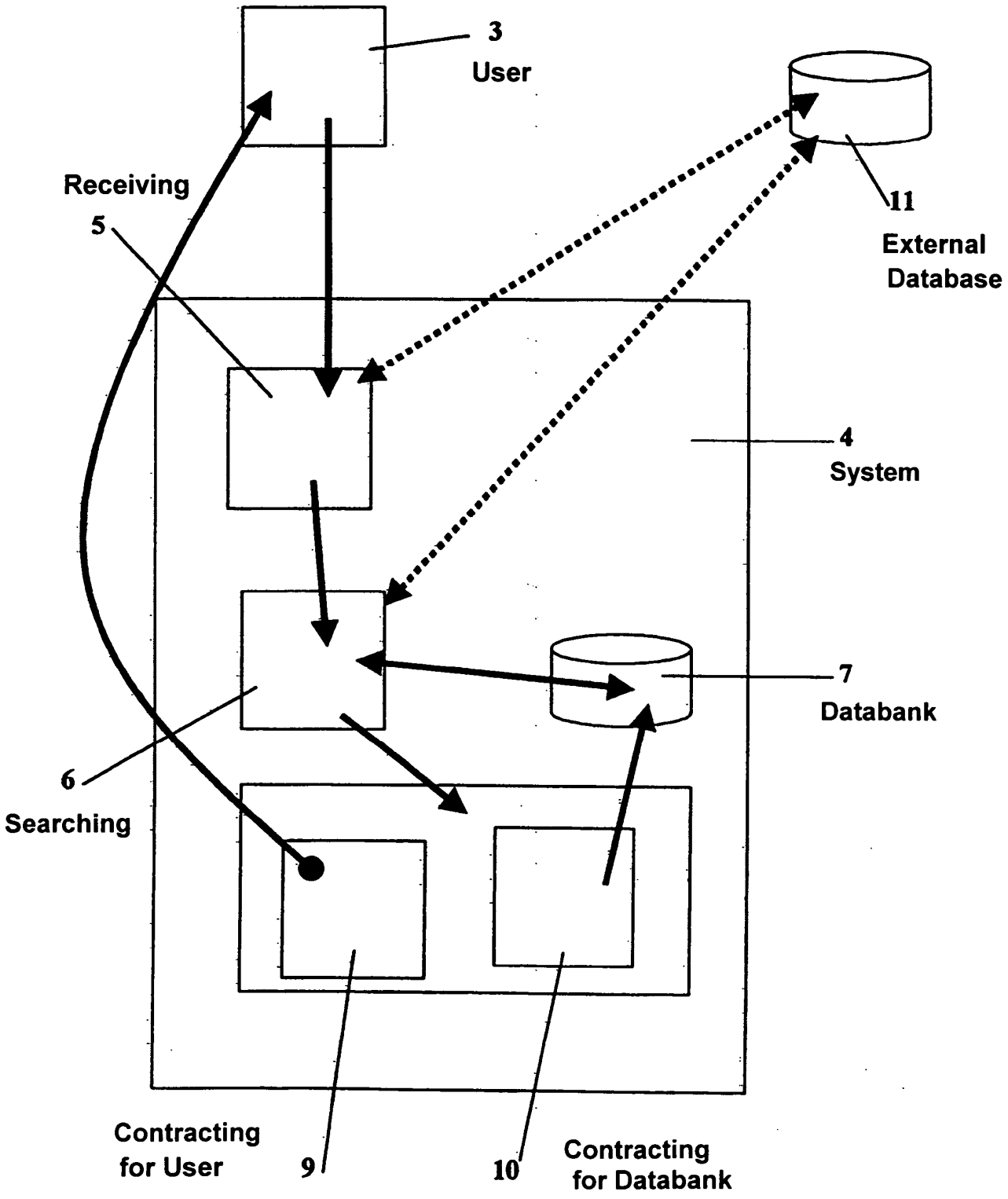

3
User
11
External
Database
Receiving
5
4
System
7
Databank
6
Searching
Contracting
for User
9
10
Contracting
for Databank

Fig. 3

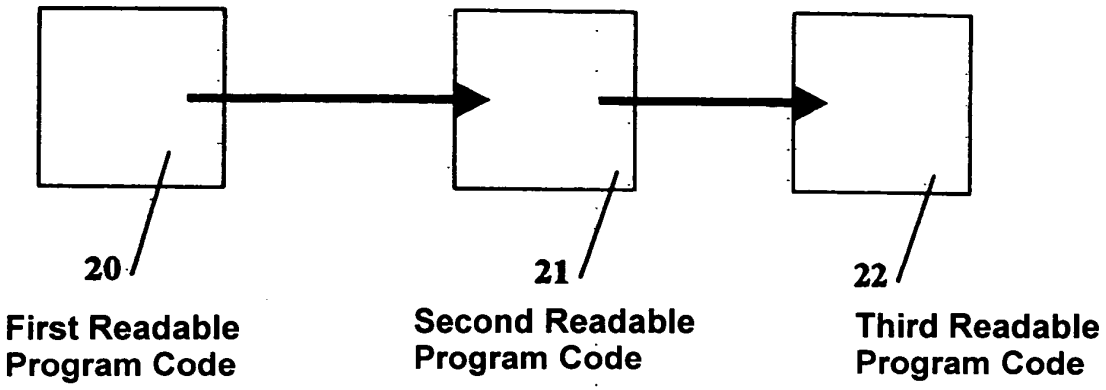


Fig. 4

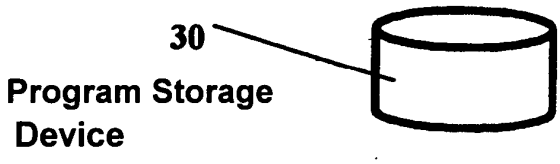
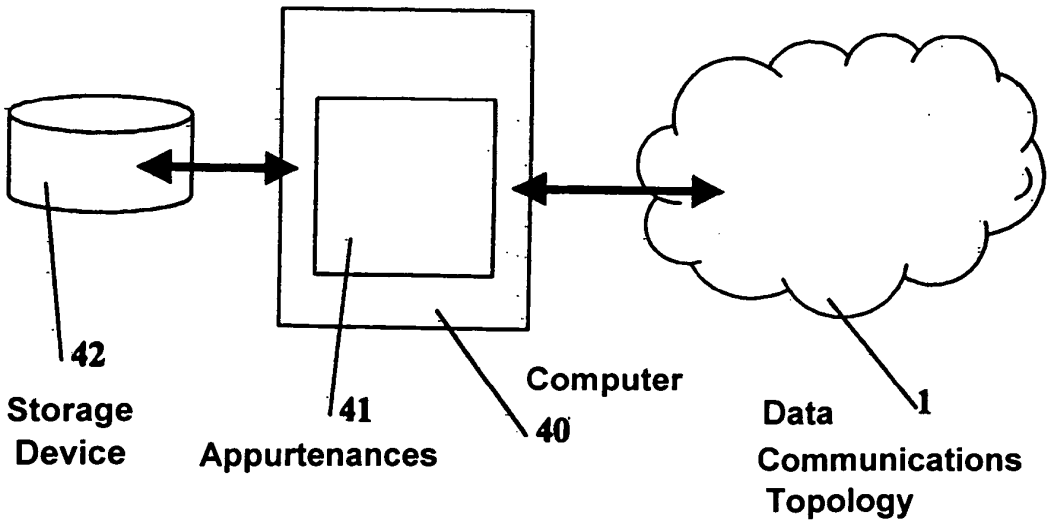


Fig. 5



Attorney Docket No.: JMB 2 0005

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below inventor, I hereby declare that:
My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor(if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

A DESCRIPTIVE-PROFILE MERCANTILE METHOD

the specification of which:

[X] is attached hereto

[ ] was filed on _____
as Application Serial No. _____
and was amended on _____
(if applicable)

[ ] was filed as PCT_____ on _____

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, ∋ 1.56 (a).

I hereby claim foreign priority benefits under Title 35, United States Code, ∋ 119 or 365(b) of any foreign application(s) for patent or inventor=s certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed above and have also identified below, by check the box, any foreign application(s) for patent or inventor=s certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed:

Prior Foreign Application

133489	Israel	13 December 1999	
(Number)	(Country)	(Day/Month/Year Filed)	Certified Copy Attached?

I hereby claim the benefit under 35 U.S.C. 119(e) of an United States provisional application(s) listed below.

		[ ]additional provisional application numbers are
Application No(s)	(Day/Month/Year Filed)	listed on a supplemental priority data sheet attached

I hereby claim the benefit under Title 35, United States, ∋ 120 of any United States application(s) or any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, ∋ 112, I acknowledge the duty to disclose material information which is material to patentability as defined in Title 37, of Federal Regulations Code, ∋ 1.56(a) which became available between the filing date of the prior application and the national or PCT international filing date of this application:

U.S. Parent Application or PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number *(If Applicable)*

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POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under § 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Full name of sole inventor: **Roy SHKEDI**

Inventor's Signature: _____ Date: 6/5/00

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PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

04/08/2005 EHAILE1 00000010 11099861

01 FC:2011	150.00	OP
02 FC:2111	250.00	OP
03 FC:2311	100.00	OP
04 FC:2201	900.00	OP
05 FC:2202	475.00	OP

PTO-1556
(5/87)

*U.S. Government Printing Office: 2002 — 489-267/69033

PATENT APPLICATION FEE DETERMINATION RECORD
Effective December 8, 2004

11099861

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	39	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	39 minus 20=	* 19
INDEPENDENT CLAIMS	12 minus 3 =	* 9
MULTIPLE DEPENDENT CLAIM PRESENT		☐

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐		OR	OTHER THAN SMALL ENTITY	
RATE	FEE		RATE	FEE
BASIC FEE	150.00	OR	BASIC FEE	300.00
X$ 25=	475	OR	X$50=	
X100=	900	OR	X200=	
+180=		OR	+360=	
TOTAL	1475	OR	TOTAL	

CLAIMS AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 25=		OR	X$50=	
X100=		OR	X200=	
+180=		OR	+360=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 25=		OR	X$50=	
X100=		OR	X200=	
+180=		OR	+360=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT C

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 25=		OR	X$50=	
X100=		OR	X200=	
+180=		OR	+360=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. 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.

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PTO/SB/08A (10-01)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	CONTINUATION of 09/593,993
Filing Date	
First Named Inventor	Shkedi, Roy
Art Unit	
Examiner Name	
Attorney Docket Number	

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-6855008	12/29/1998	Goldhaber et al.	
		US-6055513	04/25/2000	Katz et al.	
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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		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.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

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Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet | | of | |

Complete if Known	
Application Number	
Filing Date	
First Named Inventor	
Group Art Unit	
Examiner Name	
Attorney Docket Number	

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	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, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
		"Their Time Has Come", Direct, v11, n8, p1+, June 1999.	
		www.acxiom.com, www.archive.org, date range: 2/24/1999-11/14/1999.	
		Barrett, Jennifer, "Databasing in the 90s: data and what we're doing with it!" Direct Marketing, v58, n4, p40, August 1995.	
		Odell, Patricia, "Sweetening the pot." Direct, v10, n9, p91, July 1998.	
		Hatch, Denny, "Co-op databases", Target Marketing, v21n5, pp:38-42, May 1998.	

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] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

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Galbreath Law Offices, P.C.
2516 Chestnut Woods Ct. Reisterstown, MD 21136-5523 U.S.A.
Telephone: 410-628-7770 Fax: 410-666-7274 Email: info@galbreath-law.com
Web: www.galbreath-law.com

Confidential

To: USPTO	From: John A. Galbreath
Company:	
Fax Number: 1-571-273-8300	Fax Number: 1-410-666-7274

Message:

8 August 2005

Dear Sir or Madam:

Please enter the attached Powers of Attorney for Patent Appls. 11/177,184; 10/969,288; and 11/099,861. If you have any questions, just give me a call.

Best regards,

John A. Galbreath
Reg. # 46,718

Cust. # 24,271

PAGE 1/9 * RCVD AT 8/8/2005 10:17:14 AM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/30 * DNIS:2738300 * CSID:410-666-7274 * DURATION (mm-ss):04-00

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PTO/SB/81 (04-05)
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POWER OF ATTORNEY and CORRESPONDENCE ADDRESS INDICATION FORM

Application Number	11/099,861
Filing Date	6 April 2005
First Named Inventor	Shkedi, Roy
Title	Descriptive-Profile Mercantile Method
Art Unit	
Examiner Name	
Attorney Docket Number	

I hereby revoke all previous powers of attorney given in the above-identified application.

I hereby appoint:

[X] Practitioners associated with the Customer Number: 24271

OR

[ ] Practitioner(s) named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:

[X] The address associated with the above-mentioned Customer Number:

OR

[ ] The address associated with Customer Number: 24271

OR

[ ] Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the:

[ ] Applicant/Inventor.

[X] Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

SIGNATURE of Applicant or Assignee of Record

Signature	/Roy Shkedi/	Date	8/8/05
Name	Roy Shkedi	Telephone	212-219-5153
Title and Company	CEO, AlmondNet		

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

[X] *Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. 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 3 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.**

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PTO/SB/96 (08-04)
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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: AlmondNet, Inc.

Application No./Patent No.: 11/099,861 Filed/Issue Date: 6 April 2005

Entitled: Descriptive-Profile Mercantile Method

AlmondNet, Inc., a corporation
(Name of Assignee) (Type of Assignee: e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. [X] the assignee of the entire right, title, and interest, or

2. [ ] an assignee of less than the entire right, title and interest.
The extent (by percentage) of its ownership interest is _____%

in the patent application/patent identified above by virtue of either:

A. [X] An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached. Assignment recordation request submitted with application filing;

OR have not yet received Notice of Recordation.

B. [ ] A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

3. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

[ ] Additional documents in the chain of title are listed on a supplemental sheet.

[ ] Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Roy Shkedi — Signature — 8/8/05 — Date

Roy Shkedi — Printed or Typed Name — 212-219-5153 — Telephone Number

CEO — Title

This collection of information is required by 37 CFR 3.73(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.

ASSIGNMENT

FOR and in consideration of One Dollar ($1.00) to me/us in hand paid and other valuable considerations, the receipt and sufficiency whereof are hereby acknowledged and confessed, the undersigned hereby sell, assign, transfer and set over unto AlmondNet Inc., a corporation of Delaware, having an office at 134 Spring St., Suite 302, New York, NY 10012, the entire right, title and interest in and to my/our invention or improvement in

"A Descriptive-Profile Mercantile Method" (Continuation Appl.)

as set forth in my/our application for United States Letters Patent therefor executed of even date herewith, when issued, together with all improvements thereon and betterments thereof; all divisions, continuations and reissues thereof and substitutions of or for said application, and all foreign rights, including the right to make application for Letters Patent for said inventions in any and all foreign countries and the right to claim priority as to filing date under the International Convention on the basis of the aforesaid application for United States Letters Patent; and I/we hereby authorize and direct the Commissioner of Patents to issue the patent for said invention, when granted, in accordance with this Assignment and sale.

FOR the same consideration, I/we hereby agree that I/we will promptly communicate to the aforesaid assignee or its assigns full and complete information concerning improvements or betterments of the inventions disclosed in said application, and I/we will cooperate at any time upon request of said assignee or its assigns, at its or their expense, in the procurement of patent protection to cover the inventions herein assigned and to be assigned, including the execution of new, divisional, continuing and reissue applications; I/we will make all rightful oaths, will testify in any proceedings in the Patent Office or in the Courts, and generally will do everything lawfully possible to aid said assignee, its successors, assigns, and nominees to obtain, enjoy and enforce proper patent protection for the invention embraced within the terms of this document.

IN WITNESS WHEREOF, I/we have hereunto subscribed my/our name(s):

Date: 4/5/2005 Signature: Roy Shkedi

Roy Shkedi

PTO/SB/82 (01-06)
Approved for use through 12/31/2008. OMB 0651-0035
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REVOCATION OF POWER OF ATTORNEY WITH NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS

Application Number	11/099,861
Filing Date	04/06/2005
First Named Inventor	Shkedi, Roy
Art Unit	3629
Examiner Name	Ouellette, Jonathan P.
Attorney Docket Number	14

I hereby revoke all previous powers of attorney given in the above-identified application.

☐ A Power of Attorney is submitted herewith.

OR

☑ I hereby appoint the practitioners associated with the Customer Number: 26362

☑ Please change the correspondence address for the above-identified application to:

☑ The address associated with Customer Number: 26362

OR

☐ Firm *or* Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the:

☑ Applicant/Inventor.

☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

SIGNATURE of Applicant or Assignee of Record

Signature	Roy Shkedi		
Name	Roy Shkedi		
Date	September 29, 2006	Telephone	

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☑ *Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.36. 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 3 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 Acknowledgement Receipt

EFS ID:	1235105
Application Number:	11099861
Confirmation Number:	2082
Title of Invention:	Descriptive-profile mercantile method
First Named Inventor:	Roy Shkedi
Customer Number:	24271
Filer:	Louis J. Hoffman/Donald Hertz
Filer Authorized By:	Louis J. Hoffman
Attorney Docket Number:	
Receipt Date:	04-OCT-2006
Filing Date:	06-APR-2005
Time Stamp:	14:41:39
Application Type:	Utility
International Application Number:	

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part	Pages
1	Power of Attorney	POA.pdf	44487	no	1

Warnings:	
Information:	
Total Files Size (in bytes):	44487

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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

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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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/099,861	04/06/2005	Roy Shkedi	14

CONFIRMATION NO. 2082

OC000000020977818

26362
LOUIS J. HOFFMAN, P.C.
14614 NORTH KIERLAND BOULEVARD, SUITE 300
SCOTTSDALE, AZ 85254

Date Mailed: 10/25/2006

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/04/2006.

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.

SYED AREEBUDDIN
PTOSS (703) 308-9150 EXT 148

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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/099,861	04/06/2005	Roy Shkedi	

CONFIRMATION NO. 2082

OC000000020977778

24271
JOHN ALEXANDER GALBREATH
2516 CHESTNUT WOODS CT
REISTERSTOWN, MD 21136

Date Mailed: 10/25/2006

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/04/2006.

- The Power of Attorney to you in this application has been revoked by the applicant. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

SYED AREEBUDDIN
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Roy Shkedi	Art Unit	:	3629
Serial No.	:	11/099,861	Examiner	:	Ouellette, J.P.
Filed	:	04/06/2005			
Title	:	Descriptive-Profile Mercantile Method			

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

PRELIMINARY AMENDMENT

Dear Sir:

Assignee requests entry of the following amendments and submits fees for six (6) excess claims (26 total claims – 20 = 6 excess claims).

IN THE CLAIMS

1-38. (Canceled)

39. (New) A method of updating profiles of Internet-using entities, the method comprising:

(a) electronically receiving, from an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network, which partial profile contains at least one profile attribute related to the entity; and

(b) automatically electronically determining whether the received partial profile contains any new profile attributes about the entity, and if so, in accordance with a predetermined arrangement, creating an electronic credit identifying a payment to the unaffiliated third party as a result of using any of the new profile attributes in targeting advertisements to the entity's computer over the global computer network.

40. (New) The method of claim 39 wherein part (a) comprises receiving the partial profile along with an identifier of the entity.

41. (New) The method of claim 40 wherein receiving the partial profile along with an identifier of the entity comprises reading a cookie previously stored in a memory device associated with the entity's computer.

42. (New) The method of claim 40 wherein part (a) comprises receiving from the entity's computer a redirected request to display at least a portion of a web page.

43. (New) The method of claim 41 wherein part (a) further comprises receiving the partial profile information while receiving from the entity's computer the redirected request to display at least a portion of a web page.

44. (New) The method of claim 39 further comprising electronically determining whether the profile attributes received in part (a) appear to relate to an entity associated with previously collected profile attributes and, if so, storing the profile attributes received in part (a) with an identifier associated with the previously collected profile attributes.

45. (New) The method of claim 44 further comprising creating a new identifier if, as a result of said electronically determining step, the profile attributes received in part (a) do not appear to relate to any entity associated with previously collected profile attributes.

46. (New) The method of claim 39 wherein the new profile attributes about the entity in part (b) comprises information about actions the entity performed online over a pre-defined recent time period.

47. (New) The method of claim 39 wherein the new profile attributes about the entity in part (b) comprises one or more demographic attributes.

48. (New) The method of claim 39 wherein the new profile attributes about the entity in part (b) comprises one or more behavioral attributes.

49. (New) The method of claim 39 wherein the new profile attributes includes previously monitored search requests by the entity.

50. (New) The method of claim 39 wherein part (b) includes determining whether one of the received profile attributes is new only if the attribute is among a predetermined set of desired profile attributes.

51. (New) The method of claim 39 wherein part (b) is done just after and in response to receipt of the partial profile in part (a).

52. (New) The method of claim 39 wherein part (b) comprises recording a specific payment amount for the new profile attribute, provided that the new profile attribute is used in targeting advertisements.

53. (New) The method of claim 39 wherein part (b) comprises recording a royalty payment on account of use of the new profile attribute in targeting advertisements.

54. (New) The method of claim 53 wherein the royalty payment is determined using a formula that factors in the newness of the attribute.

55. (New) The method of claim 53 wherein the payment is triggered by click-through activity by the entity to a site advertised by the targeted advertisement.

56. (New) The method of claim 55 wherein part (a) comprises receiving the partial profile information and reading a cookie previously stored in a memory device associated with the entity's computer, while receiving from the entity's computer a redirected request to display at least a portion of a web page.

57. (New) A method of profiting from collecting profiles of Internet-using entities, the method comprising:

(a) electronically transmitting, to an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network,

(b) which partial profile contains at least one profile attribute related to the entity,

(c) in accordance with a predetermined agreement involving an electronic credit identifying a payment from the third party as a result of:

(i) the third party automatically electronically determining that the transmitted partial profile contains any new profile attributes about the entity, and

(ii) the new profile attributes being used in targeting advertisements to the entity's computer over the global computer network.

58. (New) The method of claim 57 wherein part (a) comprises redirecting a request from the entity's computer to display at least a portion of a web page maintained by the transmitting party.

59. (New) The method of claim 58 wherein part (a) comprises transmitting the partial profile along with an identifier of the entity.

60. (New) The method of claim 57 wherein the new profile attributes about the entity in part (c)(i) comprises information about actions the entity performed at a site maintained by the transmitting party.

61. (New) The method of claim 60 wherein the new profile attributes includes previously monitored search requests by the entity.

62. (New) The method of claim 57 wherein the electronic credit identifies a royalty payment on account of use of the new profile attribute in targeting advertisements.

63. (New) The method of claim 62 wherein the electronic credit is triggered by click-through activity by the entity to a site advertised by the targeted advertisement.

64. (New) A data storage medium comprising indicia of instructions for a processor to perform a method of updating profiles of Internet-using entities, the method comprising:

(a) electronically receiving, from an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network, which partial profile contains at least one profile attribute related to the entity; and

(b) automatically electronically determining whether the received partial profile contains any new profile attributes about the entity, and if so, in accordance with a predetermined arrangement, creating an electronic credit identifying a payment to the unaffiliated third party as a result of using any of

the new profile attributes in targeting advertisements to the entity's computer over the global computer network.

Remarks

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

Respectfully submitted,

ALMONDNET INC.
by its attorney

Dated: March 2, 2007

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

LOUIS J. HOFFMAN, P.C.
11811 North Tatum Boulevard
Suite 2100
Phoenix, Arizona 85028
(480) 948-3295

Electronic Patent Application Fee Transmittal

Application Number:	11099861
Filing Date:	06-Apr-2005
Title of Invention:	Descriptive-profile mercantile method
First Named Inventor/Applicant Name:	Roy Shkedi
Filer:	Louis J. Hoffman/Donald Hertz
Attorney Docket Number:	14
Filed as Small Entity	

Utility Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	2202	6	25	150
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**150**

Electronic Acknowledgement Receipt

EFS ID:	1561057
Application Number:	11099861
International Application Number:	
Confirmation Number:	2082
Title of Invention:	Descriptive-profile mercantile method
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
Receipt Date:	02-MAR-2007
Filing Date:	06-APR-2005
Time Stamp:	16:34:42
Application Type:	Utility

Payment information:

Submitted with Payment	yes
Payment was successfully received in RAM	$150
RAM confirmation Number	509
Deposit Account	

File Listing:

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

1	Preliminary Amendment	PrelimAmend-07-03-02.pdf	32609	no	6
Warnings:					
Information:					
2	Fee Worksheet (PTO-06)	fee-info.pdf	8130	no	2
Warnings:					
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		Total Files Size (in bytes):	40739		

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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.

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

Applicant	:	Roy Shkedi	Art Unit	:	3629
Serial No.	:	11/099,861	Examiner	:	Ouellette, J.P.
Filed	:	04/06/2005			
Title	:	Descriptive-Profile Mercantile Method			

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

REPLACEMENT PRELIMINARY AMENDMENT

Dear Sir:

Assignee submits this replacement Preliminary Amendment to cure a claim numbering error in the Preliminary Amendment filed on March 2, 2007. Please disregard the Preliminary Amendment filed March 2 and enter this document in its place. No fees are due.

IN THE CLAIMS

1-39. (Canceled)

40. (New) A method of updating profiles of Internet-using entities, the method comprising:

(a) electronically receiving, from an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network, which partial profile contains at least one profile attribute related to the entity; and

(b) automatically electronically determining whether the received partial profile contains any new profile attributes about the entity, and if so, in accordance with a predetermined arrangement, creating an electronic credit identifying a payment to the unaffiliated third party as a result of using any of the new profile attributes in targeting advertisements to the entity's computer over the global computer network.

41. (New) The method of claim 40 wherein part (a) comprises receiving the partial profile along with an identifier of the entity.

42. (New) The method of claim 41 wherein receiving the partial profile along with an identifier of the entity comprises reading a cookie previously stored in a memory device associated with the entity's computer.

43. (New) The method of claim 41 wherein part (a) comprises receiving from the entity's computer a redirected request to display at least a portion of a web page.

44. (New) The method of claim 43 wherein part (a) further comprises receiving the partial profile information while receiving from the entity's computer the redirected request to display at least a portion of a web page.

45. (New) The method of claim 40 further comprising electronically determining whether the profile attributes received in part (a) appear to relate to an entity associated with previously collected profile attributes and, if so, storing the profile attributes received in part (a) with an identifier associated with the previously collected profile attributes.

46. (New) The method of claim 45 further comprising creating a new identifier if, as a result of said electronically determining step, the profile attributes received in part (a) do not appear to relate to any entity associated with previously collected profile attributes.

47. (New) The method of claim 40 wherein the new profile attributes about the entity in part (b) comprises information about actions the entity performed online over a pre-defined recent time period.

48. (New) The method of claim 40 wherein the new profile attributes about the entity in part (b) comprises one or more demographic attributes.

49. (New) The method of claim 40 wherein the new profile attributes about the entity in part (b) comprises one or more behavioral attributes.

50. (New) The method of claim 40 wherein the new profile attributes includes previously monitored search requests by the entity.

51. (New) The method of claim 40 wherein part (b) includes determining whether one of the received profile attributes is new only if the attribute is among a predetermined set of desired profile attributes.

52. (New) The method of claim 40 wherein part (b) is done just after and in response to receipt of the partial profile in part (a).

53. (New) The method of claim 40 wherein part (b) comprises recording a specific payment amount for the new profile attribute, provided that the new profile attribute is used in targeting advertisements.

54. (New) The method of claim 40 wherein part (b) comprises recording a royalty payment on account of use of the new profile attribute in targeting advertisements.

55. (New) The method of claim 54 wherein the royalty payment is determined using a formula that factors in the newness of the attribute.

56. (New) The method of claim 54 wherein the payment is triggered by click-through activity by the entity to a site advertised by the targeted advertisement.

57. (New) The method of claim 56 wherein part (a) comprises receiving the partial profile information and reading a cookie previously stored in a memory device associated with the entity's computer, while receiving from the entity's computer a redirected request to display at least a portion of a web page.

58. (New) A method of profiting from collecting profiles of Internet-using entities, the method comprising:

(a) electronically transmitting, to an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network,

(b) which partial profile contains at least one profile attribute related to the entity,

(c) in accordance with a predetermined agreement involving an electronic credit identifying a payment from the third party as a result of:

(i) the third party automatically electronically determining that the transmitted partial profile contains any new profile attributes about the entity, and

(ii) the new profile attributes being used in targeting advertisements to the entity's computer over the global computer network.

59. (New) The method of claim 58 wherein part (a) comprises redirecting a request from the entity's computer to display at least a portion of a web page maintained by the transmitting party.

60. (New) The method of claim 59 wherein part (a) comprises transmitting the partial profile along with an identifier of the entity.

61. (New) The method of claim 58 wherein the new profile attributes about the entity in part (c)(i) comprises information about actions the entity performed at a site maintained by the transmitting party.

62. (New) The method of claim 61 wherein the new profile attributes includes previously monitored search requests by the entity.

63. (New) The method of claim 58 wherein the electronic credit identifies a royalty payment on account of use of the new profile attribute in targeting advertisements.

64. (New) The method of claim 63 wherein the electronic credit is triggered by click-through activity by the entity to a site advertised by the targeted advertisement.

65. (New) A data storage medium comprising indicia of instructions for a processor to perform a method of updating profiles of Internet-using entities, the method comprising:

(a) electronically receiving, from an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network, which partial profile contains at least one profile attribute related to the entity; and

(b) automatically electronically determining whether the received partial profile contains any new profile attributes about the entity, and if so, in accordance with a predetermined arrangement, creating an electronic credit identifying a payment to the unaffiliated third party as a result of using any of

the new profile attributes in targeting advertisements to the entity's computer over the global computer network.

Remarks

With its March 2, 2007, Preliminary Amendment, assignee intended to cancel all of the claims that were filed with this continuation application and add a set of new claims. Due to a typographic error, assignee mistakenly canceled claims 1-38 instead of 1-39. As a result of that error, the newly added claim set was numbered incorrectly as claims 39-64 instead of claims 40-65. In addition, the dependency of claim 43 was incorrect, and that has also been corrected in this version. Assignee submits this Replacement Preliminary Amendment to cure the numbering errors and requests that the Office disregard the original paper.

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

Respectfully submitted,

ALMONDNET INC.
by its attorney

Dated: March 7, 2007

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

LOUIS J. HOFFMAN, P.C.
11811 North Tatum Boulevard
Suite 2100
Phoenix, Arizona 85028
(480) 948-3295

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Roy Shkedi	Art Unit	:	3629
Serial No.	:	11/099,861	Examiner	:	Ouellette, J.P.
Filed	:	04/06/2005			
Title	:	Descriptive-Profile Mercantile Method			

Mail Stop 16
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

REQUEST FOR REFUND

Dear Sir:

With the March 2, 2007, Preliminary Amendment, assignee mistakenly paid $150.00 in fees for six (6) excess claims. Because Assignee had previously paid for a total of thirty-nine (39) claims with the initial application, and the total number of new claims after entry of the preliminary amendment would be twenty-six (26), no additional fees were due.

A refund is requested in the amount of $150.00, which the undersigned requests to be credited to the credit card used in the 3/2/2007 transaction.

Respectfully submitted,

ALMONDNET INC.
by its attorney

Dated: March 7, 2007

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

LOUIS J. HOFFMAN, P.C.
11811 North Tatum Boulevard
Suite 2100
Phoenix, Arizona 85028
(480) 948-3295

Electronic Acknowledgement Receipt

EFS ID:	1573737
Application Number:	11099861
International Application Number:	
Confirmation Number:	2082
Title of Invention:	Descriptive-profile mercantile method
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
Receipt Date:	07-MAR-2007
Filing Date:	06-APR-2005
Time Stamp:	18:49:04
Application Type:	Utility

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part /.zip	Pages (if appl.)
1	Preliminary Amendment	DescProfile_replaceprelimamend-07-03-07.pdf	33849	no	6
Warnings:					

Information:					
2	Refund Request	DescProfile_refundrequest-07-03-07.pdf	19140	no	1
Warnings:					
Information:					
		Total Files Size (in bytes):	52989		

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.

PATENT APPLICATION FEE DETERMINATION RECORD
Effective December 8, 2004

11099861

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	39	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	39 minus 20=	* 19
INDEPENDENT CLAIMS	12 minus 3 =	* 9
MULTIPLE DEPENDENT CLAIM PRESENT		☐

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐		OR	OTHER THAN SMALL ENTITY	
RATE	FEE		RATE	FEE
BASIC FEE	150.00	OR	BASIC FEE	300.00
X$ 25=	475	OR	X$50=	
X100=	900	OR	X200=	
+180=		OR	+360=	
TOTAL	1425	OR	TOTAL	

CLAIMS AS AMENDED - PART II

AMENDMENT A	(Column 1)		(Column 2)	(Column 3)
3-2-07	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	* 26	Minus	** 39	= —
Independent	* 3	Minus	*** 12	= —
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 25=		OR	X$50=	
X100=		OR	X200=	
+180=		OR	+360=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT B	(Column 1)		(Column 2)	(Column 3)
3-2-07	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	* 26	Minus	** 39	= —
Independent	* 3	Minus	*** 12	= —
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 25=		OR	X$50=	
X100=		OR	X200=	
+180=		OR	+360=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT C	(Column 1)		(Column 2)	(Column 3)
	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 25=		OR	X$50=	
X100=		OR	X200=	
+180=		OR	+360=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. 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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Roy Shkedi	Art Unit	:	3629
Serial No.	:	11/099,861	Examiner	:	Ouellette, J.P.
Filed	:	04/06/2005			
Title	:	Descriptive-Profile Mercantile Method			

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

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Dear Sir:

Assignee discloses the references listed on form PTO/SB/08A attached to this document. Pursuant to Office rules, copies of the U.S. Patent references are not included.

Assignee also wishes to advise the Examiner of the existence of two other pending applications it owns, namely application Serial Nos. 10/996,491, filed November 24, 2004, and 11/479,832, filed June 30, 2006.

If the Examiner has any questions concerning these matters, please contact assignee's undersigned attorney.

Respectfully submitted,

ALMONDNET INC.
by its attorney

Dated: April 12, 2007

/Louis J. Hoffman/
Louis J. Hoffman
Reg. No. 38,918
LOUIS J. HOFFMAN, P.C.
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(480) 948-3295

PTO/SB/08A (09-06)
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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 3

Complete if Known	
Application Number	11/099,861
Filing Date	04/06/2005
First Named Inventor	Shkedi, Roy
Art Unit	3629
Examiner Name	Ouellette, J.P.
Attorney Docket Number	14-DPCON

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- 4863384	09-05-1989	Slade	
		US- 5099422	03-24-1992	Foresman, et al.	
		US- 5446891	08-29-1995	Kaplan, et al.	
		US- 5710884	01-20-1998	Dedrick	
		US- 5717923	02-10-1998	Dedrick	
		US- 5724521	03-03-1998	Dedrick	
		US- 5752238	05-12-1998	Dedrick	
		US- 5848396	12-08-1998	Gerace	
		US- 5956693	09-21-1999	Geerlings	
		US- 6055573	04-25-2000	Gardenswartz, et al.	
		US- 6128624	10-03-2000	Papierniak, et al.	
		US- 6134532	10-17-2000	Lazarus, et al.	
		US- 6141010	10-31-2000	Hoyle	
		US- 6151601	11-21-2000	Papierniak, et al.	
		US- 6216129	04-10-2001	Eldering	
		US- 6269361	07-31-2001	Davis, et al.	
		US- 6393471	05-21-2002	Kobata	
		US- 6415322	07-02-2002	Jaye	
		US- 6832207	12-14-2004	Shkedi	

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.

PTO/SB/08A (09-06)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2 of 3

Complete if Known	
Application Number	11/099,861
Filing Date	04/06/2005
First Named Inventor	Shkedi, Roy
Art Unit	3629
Examiner Name	Ouellette, J.P.
Attorney Docket Number	14-DPCON

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- 6868389	03-15-2005	Wilkins, et al.	
		US- 6925440	08-02-2005	Shkedi	
		US- 6973436	12-06-2005	Shkedi	
		US- 6993590	01-31-2006	Gauthier, et al.	
		US- 7065500	06-20-2006	Singh, et al.	
		US- 7072853	07-04-2006	Shkedi	
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		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]
		WO 98/59481	12-30-1998	Buckland		
		WO 00/08583	02-17-2000	Keen		
		EP 1 024 437 A2	08-02-2000	Chen		

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.**

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PTO/SB/08B (09-06)
Approved for use through 03/31/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 3 of 3

Complete if Known	
Application Number	11/099,861
Filing Date	04/06/2005
First Named Inventor	Shkedi, Roy
Art Unit	3629
Examiner Name	Ouellette, J.P.
Attorney Docket Number	14-DPCON

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	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, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
		Brody, R.; "The Conditions and Consequences of Profiling in Commercial and Governmental Settings"; IEEE; 1998.	
		"IntelliQuest, 24/7 Media Pair to Deliver Tech Household Database"; from webpage http://www.clickz.com; October 6, 1998.	
		"Internet Access: Intelliquest and 24/7 Media Team Up to Deliver 100 Million Household Database to Internet Marketers"; from website http://findarticles.com; October 12, 1998.	
		24/7 Real Media Inc. - TFSM; Form S-1A, filed with the SEC April 14, 1999 (portions).	
		Engage Technologies, Inc.; Form S-1A; filed with the SEC July 19, 1999; pp. 36-50.	
		"The e-Marketing Report"; Morgan Stanley Dean Witter; May, 2000 (portions).	

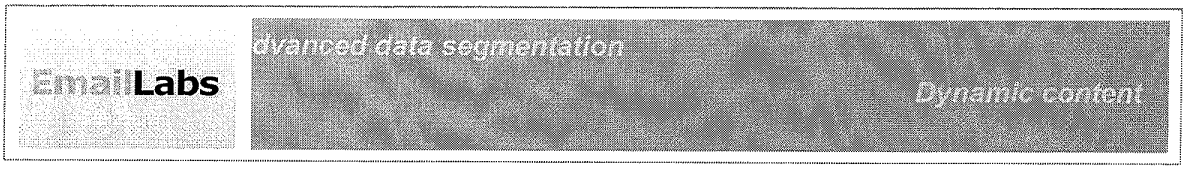
Examiner Signature		Date Considered	

*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 Applicant is to place a check mark here if English language Translation is attached.

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



IntelliQuest, 24/7 Media Pair to Deliver Tech Household Database

By

October 6, 1998
The Marketing Information Solutions division of IntelliQuest Information Group Inc. is teaming up with 24/7 Media Inc. to bring database marketing to the Web.

Under the terms of the agreement, IntelliQuest will license its High-tech Household file to 24/7 Media for two years to build the foundation of 24/7 Profilz, an online co-op database. Financial arrangements were not disclosed.

24/7 Profilz will leverage IntelliQuest's national database of high-tech households, 24/7's Adfinity ad serving system and 24/7's three Web ad networks.

The idea is to provide online advertisers the ability to execute highly targeted, database marketing campaigns based on consumers' lifestyles and interests, and track the effectiveness of the campaigns. Likewise, IntelliQuest's clients now have the ability to deliver personalized, one-to- one marketing messages to their customers via the Web, the firm said.

IntelliQuest in Austin, TX, is a provider of information and marketing services for companies targeting households of known technology purchasers. It marries technology-related product purchasers and usage history of specific households with comprehensive demographic and lifestyle information. Its databases house more than 200 demographic and lifestyle variables on over 100 million U.S. households.

To deliver the Profilz service, 24/7 Media announced the formation of the 24/7 Data Group, to be led by vice president Michael Rowsom and based in the company's New York headquarters.

The 24/7 Profilz database will be employed with 24/7's Adfinity ad-serving system, which was designed to deliver ads based on demographic profiles. IntelliQuest provides the means to profile Web user registration data. As Web sites within 24/7's three networks join the co-op database, their registration data will be matched against IntelliQuest's database to create a full demographic profile on each user.

Once a profile is captured, individual information is no longer used, 24/7 said.

Participating Web sites will be required to post and adhere to privacy statements that comply with the guidelines advocated by the Direct Marketing Association, the company added.

The demographic targeting, 24/7 said, will be able to deliver sports car ads to young singles and minivan ads to older marrieds with children. Had both people recently purchased a car, they would see ads for a product or service other than cars.

"Our agreement with 24/7 ushers in a whole new era of Internet advertising," said Charles Stryker, president of the Atlanta-based Marketing Information Solutions division of IntelliQuest. "With this partnership, the Web's promise of truly accountable, database marketing becomes a reality to the benefit of both advertisers and consumers."

"We are the only database marketing company focused exclusively on high technology, and this unique focus gives our partners an edge in marketing smarter, especially in new media. This is the future of online marketing. It provides our clients with the unprecedented ability to execute customized marketing programs for specific customers over the Web."

"24/7 is committed to fulfilling the promise of Internet database marketing, and our agreement with

IntelliQuest is an important milestone in that effort," said David J. Moore, CEO of 24/7 Media in New York "Together, we have established a powerful partnership that puts us both in an ideal position to serve the growing needs of advertisers and publishers."

IntelliQuest said it will work with 24/7 Media to design, develop and populate the Profilz database before scheduling an initial pilot program to test the system early next year. Once the pilot program is completed, 24/7 will make demographically targeted campaigns available to all advertisers.

24/7 Media said it reaches more than one out of three online users, operating The 24/7 Network of more than 85 high-profile Web sites, the CLIQNOW! network comprising more than 75 medium to large Web sites, and ContentZone, a network of over 2,000 small to medium sites.

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Internet Access: IntelliQuest and 24/7 Media Team Up to Deliver 100 Million Household Database to Internet Marketers - Company Business and Marketing

The Marketing Information Solutions division of IntelliQuest Information Group, Inc., a leading provider of data for interactive marketing, and 24/7 Media, Inc., one of the largest Internet media companies, Monday announced an exclusive agreement to bring database marketing to the Web.

Under the terms of the agreement, IntelliQuest will license its High-tech Household file to 24/7 Media for a period of two years to build the foundation of 24/7 Profilz, the first online co-op database. 24/7 Profilz will leverage IntelliQuest's rich national database of High-tech Households, 24/7's Adfinity ad serving system and 24/7's three networks of Web sites that collectively reach more than one-third of Internet users. 24/7 Profilz will provide online advertisers the ability to execute highly targeted, database marketing campaigns based on consumers' lifestyles and interests, and track the effectiveness of the campaigns. Likewise, IntelliQuest's clients now have the ability to deliver personalized, one-to-one marketing messages to their customers via the Web.

The two companies are uniquely positioned to deliver the benefits of targeted database marketing to online advertisers.

IntelliQuest is the premier provider of information and marketing services for companies targeting households of known technology purchasers. The Company is the only data provider marrying technology-related product purchase and usage history of specific households with comprehensive demographic and lifestyle information. The IntelliQuest databases house more than 200 demographic and lifestyle variables on over 100 million U.S. households.

24/7 Media provides Internet advertising solutions for advertisers and Web publishers. To deliver the Profilz service, 24/7 Media also announced the formation of the 24/7 Data Group, to be led by vice president, Michael Rowsom and based in the Company's New York headquarters.

Profilz Overview 24/7 Data Group will build the first online co-op database of Web user profiles from several sources. The 24/7 Profilz database will be employed with 24/7's Adfinity adserving system, the only adserving solution designed to deliver ads based on demographic profiles. IntelliQuest provides the means to profile Web user registration data. As Web sites within 24/7's three networks join the co-op database, their registration data will be matched against IntelliQuest's High-tech Household file in order to create a full demographic profile on each user. Since advertisers simply want to reach consumers who fit their demographically-profiled target markets, once a profile is captured, individual information is no longer used. Participating Web sites will be required to post and adhere to privacy statements that comply with the strict guidelines advocated by the Direct Marketing Association.

An Example of Advertiser and Consumer Benefits A single man, aged 25 with an income of more than $75,000, and a married man, aged 45 with an income of $120,000 and two children, both visit the front page of the same news Web site at the same time. Based on their demographic profiles, both men anticipate buying a new car in the next six months. The single man is served an ad for a new, two-seater sports car while the married man, who is looking at the same Web page, sees an ad for a mini-van. Each man sees the ad that fits his demographic profile and needs. Had both men recently purchased a car, they would see ads for a product or service other than cars. In this way, demographic targeting makes advertising more effective and efficient for advertisers while providing consumers with advertising that meets their interests and needs.

"Our agreement with 24/7 ushers in a whole new era of Internet advertising. With this partnership, the Web's promise of truly accountable, database marketing becomes a reality - to the benefit of both advertisers and consumers," said Dr. Charles Stryker, president of the Marketing Information Solutions division of IntelliQuest. "We are the only database marketing company focused exclusively on high technology, and this unique focus gives our partners an edge in marketing smarter, especially in new media. This is the future of online marketing. It provides our clients with the unprecedented ability to execute

customized marketing programs for specific customers over the Web."

"24/7 is committed to fulfilling the promise of Internet database marketing, and our agreement with IntelliQuest is an important milestone in that effort," said David J. Moore, CEO for 24/7 Media. "Together, we have established a powerful partnership that puts us both in an ideal position to serve the growing needs of advertisers and publishers."

IntelliQuest will work with 24/7 Media to design, develop and populate the Profilz database before scheduling an initial pilot program to test the system early next year. Once the pilot program is completed, 24/7 will make demographically targeted campaigns available to all advertisers. Advertisers interested in participating in the pilot program should send email to pilot@247media.com prior to December 1, 1998.

As a division of IntelliQuest Information Group, Inc., IntelliQuest Marketing Information Solutions provides effective marketing information solutions to the global technology market. IQ MKIS is focusing its efforts on delivering "best-of-breed" products and services aimed at the marketing information needs of high technology, telecommunications, utility and cable companies. The division offers a unique combination of complete, accurate data, world-class analytical research and best practice expertise in database marketing. The division provides the fuel to drive a true one-to-one marketing engine on the Internet as well as in traditional media. IQ MKIS provides products and services that support the complete marketing process - from customer identification through data enhancement, analysis and segmentation, and marketing program development. IQ MKIS helps technology marketers maximize the overall effectiveness of their customer identification, acquisition, retention, cross-sell and up-sell activities to create a closed-loop marketing solution. IntelliQuest MKIS is headquartered in Atlanta, GA, (770) 612-8008 Fax: (770) 612-9008; Internet: http://www.intelliquest.com.

IntelliQuest Information Group, Inc. Headquartered in Austin, Texas with offices in Atlanta, Silicon Valley, New York and London, England, IntelliQuest provides information-based marketing services to the technology industry. IntelliQuest uses its proprietary databases and software to help technology companies track product performance and customer satisfaction, measure advertising effectiveness, assess brand strength and competitive position, determine price sensitivity and evaluate new products, markets or other business opportunities. Zona Research, a wholly owned subsidiary of IntelliQuest, provides qualitative and quantitative information and advice to the Internet and online services industries. IntelliQuest has over 400 employees worldwide. Internet: http://www.intelliquest.com.

Reaching more than one out of three online users, 24/7 Media, Inc. provides Internet advertising and online direct marketing solutions for advertisers and Web publishers. The Company operates The 24/7 Network of more than 85 high-profile Web sites, the CLIQNOW! networks comprising more than 75 medium to large Web sites anchored by flagship sites, and ContentZone, a network of over 2,000 small to medium sites. In addition, 24/7 Media develops its networks' underlying ad serving technology. FMI: http://www.247media.com. or http://www.cliqnow.com.

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FORM S–1/A

24/7 REAL MEDIA INC – TFSM

Filed: April 14, 1999 (period:)

Amended Registration statement for face–amount certificate companies

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You should rely only on the information contained in this prospectus. We have not, and the underwriters have not, authorized any other person to provide you different information. If anyone provides you different or inconsistent information, you should not rely on it. We are not, and the underwriters are not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate as of the date on the front cover of this prospectus only. Our business, financial condition, results of operations and prospects may have changed since that date.

Source: 24/7 REAL MEDIA INC, S-1/A, April 14, 1999

We depend upon our CEO and principal sales managers and other senior managers to grow

Our success depends upon our senior management and key sales and technical personnel, particularly David J. Moore, Chief Executive Officer, and Jacob I. Friesel, Executive Vice President. The loss of the services of one or more of these persons could materially adversely affect our business. Our success also depends on our ability to attract and retain qualified technical, sales and marketing, customer support, financial and accounting, and managerial personnel. Competition for such personnel in the Internet industry is intense, and we cannot be certain that we will be able to retain our key personnel or that we can attract, integrate or retain other highly qualified personnel in the future. We have experienced in the past, and may continue to experience in the future, difficulty in hiring and retaining candidates with appropriate qualifications, especially in sales and marketing positions. Although we have not experienced any material impact from the difficulty in hiring and retaining qualified employees, we may be materially impacted in the future from such hiring difficulties.

We rely on proprietary rights that may not adequately protect our intellectual property and we may be held liable for infringing the rights of others

We rely upon patent, trademark, copyright and trade secret laws to protect our intellectual property. We have pursued the protection of our trademarks by applying to register them in the United States and internationally. We own a registration for the 24/7 Media trademark in the United States. Our trademark registrations or patent applications may not be approved or granted or may be successfully challenged by others or invalidated through administrative process or litigation. If our trademark registrations are not approved or granted due to the prior issuance of trademarks to third parties or for other reasons, we may be unable to enter into arrangements with such third parties on commercially reasonable terms to allow us to continue to use such trademarks. Such patent, trademark, copyright and trade secret protection may not be available in every country in which our services are distributed or made available.

In addition, we protect our proprietary rights through the use of confidentiality agreements with employees and affiliates. We also license proprietary rights to third parties. There is a risk that:

- these agreements and licenses may not provide adequate protection of our proprietary rights;
- our employees and affiliates may not keep such information confidential; and
- this proprietary information will otherwise become known, or be independently developed by competitors.

Legal standards relating to the validity, enforceability and scope of protection of certain proprietary rights in Internet-related industries are uncertain and still evolving, and we cannot be certain as to the future viability or value of any of our proprietary rights within the industry. The steps we take to protect our proprietary rights may not be adequate and third parties may infringe or misappropriate our proprietary rights. Claims of alleged infringement of the trademarks and other intellectual property rights of third parties by us and our business partners could subject us to significant liability for damages and could result in invalidation of our proprietary rights and, even if not meritorious, could be time-consuming and expensive to defend, and could result in the diversion of management time and attention.

Privacy concerns may prevent us from selling demographically targeted advertising

We are developing our Profilz database to collect data derived from user activity on our networks and from other sources. We cannot be certain that any trade secret, copyright or other protection will be available for such data or that others will not claim rights to such data. We must also keep information regarding Web publishers confidential under our contracts with Web publishers.

Ad serving technology enables the use of "cookies," in addition to other mechanisms, to deliver targeted advertising, to help compile demographic information, and to limit the frequency with which an advertisement is shown to the user. Cookies are bits of information keyed to a specific server, file pathway or directory location that are stored on a user's hard drive and passed to a Web site's server through the user's browser software. Cookies are placed on the user's hard drive without the user's knowledge or consent, but can be removed by the user at any time. Due to privacy concerns, some Internet commentators, advocates and governmental bodies have suggested that the use of cookies be limited or eliminated. Any limitation on our ability to use cookies could impair our targeting capabilities and adversely affect our business.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

General

We are the result of several mergers and acquisitions, and the combination of these entities resulted in an integrated Internet advertising company with both media sales and technology expertise. We were incorporated in January 1998 to consolidate three Internet advertising companies:

- Petry Interactive, Inc., which established the network business model and contributed its network of Web sites which became the foundation for the 24/7 Network.
- Advercomm, Inc., which folded several high profile Web sites into the 24/7 Network, which increased the breadth of content available on the 24/7 Network and accelerated our ability to organize our 24/7 Network into channels of Web sites with similar content.
- Interactive Imaginations, Inc., which contributed the ContentZone, a network that offers advertising solutions for small to medium-sized Web sites.

We subsequently acquired Intelligent Interactions, a developer of ad serving and targeting technology, and CliqNow!, a network of over 75 medium to large Web sites. We believe that the combination of these predecessor entities has enabled us to offer advertisers and Web publishers comprehensive advertising solutions and to pursue our objective of becoming the leading Internet advertising and direct marketing firm.

We generate substantially all of our revenues by delivering advertisements and promotions to Affiliated Web sites on our networks. We typically sell our advertisements under purchase order agreements with advertisers which are short-term in nature or subject to cancellation. We sell our products and services through our sales and marketing staff located in New York, Atlanta, Boston, Chicago, Dallas, Detroit, Los Angeles, San Francisco, Seattle and the Washington, D.C. area and 12 offices in Europe.

The pricing of ads is based on a variety of factors, including the gross dollar amount spent on the advertising campaign and whether the campaign is delivered on a specific Web site, a channel of Web sites or across the entire 24/7 Network. We strive to sell 100% of our inventory through the combination of advertisements sold on a "CPM" basis, which is the cost to the advertiser to run 1,000 ads, and a "cost-per-action" basis whereby revenues are generated if the user responds to the ad with an action, such as an inquiry or a purchase of the product advertised.

We recognize advertising revenues in the period that the advertisement is delivered, provided that no significant obligations remain. In nearly all cases, we recognize revenues generated from advertising sales, net of any commissions paid to advertising agencies on behalf of their clients. We pay our Affiliated Web sites a service fee calculated as a percentage of revenues generated by advertisements run on the Web site, which amount is included in cost of revenues. In addition, we are generally responsible for billing and collecting for advertisements delivered to our networks. We expect to generate the majority of our revenues for the foreseeable future from advertisements delivered to Affiliated Web sites on our networks.

We recently started to sell sponsorship advertising, which involves a greater degree of coordination among us, the advertiser and Affiliated Web sites. These sponsorships are generally priced based on the length of time that the sponsorship runs, rather than on a CPM basis. Revenues relating to sponsorship advertising are recognized ratably over the sponsorship period.

One of our key strategies is to aggressively recruit Web sites of all sizes for our networks in order to extend our reach and to provide advertisers with a broad base of page views and online content. We added a number of high-profile Web sites during the third and fourth quarters of 1998, including cars.com, Cybershop, New York Mets, Real Cities, Reuters Health, San Francisco Giants, Server.com, and Sports Network.com. For the years ended December 31, 1997 and 1998, approximately 68% and 47%, respectively, of the 24/7 Network's pro forma advertising revenues were derived from advertisements on the top ten Affiliated Web sites on the 24/7 Network. For the year ended December 31, 1998, one Affiliated Web site accounted for approximately 14% of our total advertising revenue.

In addition, for the years ended December 31, 1997 and 1998, our top ten advertisers and ad agencies accounted for an aggregate of approximately 48% and 38%, respectively, of the 24/7 Network's pro forma advertising revenues.

Source: 24/7 REAL MEDIA INC, S-1/A, April 14, 1999

On December 29, 1998, we acquired an initial 67% interest, on an as converted basis, in CardSecure, a company which provides e-commerce enabling technology as well as Web site hosting services. In January 1999, we acquired a 60% interest in 24/7 Media Europe Ltd., formerly known as InterAd Holdings Limited, which operates the 24/7 Media Europe Network. Finally, in March 1999, we acquired Sift, Inc., a full-service e-mail management company.

The period-to-period comparisons of our historical operating results should not be relied upon as indicative of future performance. Our prospects should be considered in light of the risks, expenses and difficulties encountered by companies in the early stages of development, particularly companies in the rapidly evolving Internet market. Although we have experienced revenue growth in recent periods, we anticipate that we will incur operating losses for the foreseeable future due to a high level of planned operating and capital expenditures. In particular, we expect to increase our operating expenses and capital expenditures in order to expand our sales and marketing organization and to develop, integrate and scale our Profilz database and proprietary ad serving technologies.

Results of Operations

Quarterly Results of Operations (Unaudited)

Our 1998 results of operations were significantly affected by inclusion of acquired companies' activities, as well as our growth. The following table presents our quarterly results of operations for 1998. We believe that all necessary adjustments, consisting of normal recurring adjustments, have been included in the amounts stated below.

	Three Months Ended			
	March 31, 1998	June 30, 1998	Sept. 30, 1998	Dec. 31 1998
	(In thousands, except for share and per share amounts)			
Consolidated Statements of Operations Data:				
Revenues:				
Advertising	$ 1,076	$ 3,661	$ 5,462	$ 9,545
Consulting and license fees	--	40	66	13
Total revenues	1,076	3,701	5,528	9,558
Cost of revenues	930	3,098	4,616	7,326
Gross profit	146	603	912	2,232
Operating expenses:				
Sales and marketing	654	1,629	2,524	3,164
General and administrative	1,288	1,801	2,119	3,484
Product development	--	515	487	900
Write-off of acquired in-process technology	--	5,000	--	--
Amortization of goodwill	335	1,531	1,883	1,973
Total operating expenses	2,277	10,476	7,013	9,521
Operating loss	(2,131)	(9,873)	(6,101)	(7,289)
Interest (expense) income:				
Interest income	26	50	250	560
Interest expense	(193)	(15)	(5)	(2)
Total interest (expense) income	(167)	35	245	558
Net loss	$ (2,298)	$ (9,838)	$(5,856)	$(6,731)

Revenues. Our revenues increased each quarter primarily due to an increase in advertising revenue on the 24/7 Network. In particular, this increase in revenue was due to increases in the number of Web sites on the 24/7 Network, the number of advertisers using our advertising solutions and the number of advertisements delivered to the 24/7 Network. We expect the 24/7 Network to continue to account for a significant portion of our total advertising revenue.

In addition to advertising revenues, we generated revenues through consulting and license fees from licensing our Adfinity ad serving system to third parties. This revenue represented less than 2% of our total revenues in any quarter, and for the full year. We no longer offer new licenses for Adfinity to third parties and we do not currently expect to recognize any meaningful revenues from the licensing of Adfinity in the future.

Overview

We are an Internet advertising and direct marketing firm that enables both advertisers and Web publishers to capitalize on the many opportunities presented by Internet advertising, direct marketing and electronic commerce. We generate revenue by selling advertisements and promotions for our Affiliated Web sites. In particular, we operate:

- the 24/7 Network, a network of over 150 high profile Affiliated Web sites to which we delivered an aggregate of more than 900 million advertisements in December 1998;
- the ContentZone, a network of over 2,500 small to medium-sized Affiliated Web sites to which we delivered an aggregate of more than 50 million advertisements in December 1998; and
- the 24/7 Media Europe Network, a network of over 60 Web sites that generated an aggregate of more than 200 million page views in December 1998, through our recently acquired 60% owned subsidiary, 24/7 Media Europe.

In addition, we are supporting the development of the 24/7 Media Asia Network through an agreement with China.com Corporation.

We operate in the rapidly growing Internet advertising industry. International Data Corp. estimates that at the end of 1998 there were over 51 million Web users in the United States and over 97 million Web users worldwide and that by the end of 2002 the number of Web users will increase to over 135 million in the United States and to over 319 million worldwide. Forrester Research estimates that the dollar value of Internet advertising worldwide will increase from $1.5 billion in 1998 to $15.3 billion in 2003. There can be no assurance that such rapid industry growth rates will be achieved or that we will experience similar rates of growth.

We believe that advertisers seek to place Internet ads in ways to maximize unduplicated reach. In February 1999 we delivered an aggregate of approximately one billion impressions and, according to Media Metrix, our networks reached 52.9% of all U.S. Internet users. We believe that this reach figure is among the highest in the Internet advertising industry. We plan to aggressively recruit Web sites for our networks to:

- further extend our reach;
- provide advertisers with a broad and diverse base of online content and page views; and
- improve our brand awareness and visibility with media buyers.

In addition, as online advertisers and direct marketers increase their use of the Internet, they seek solutions and technologies that allow them to efficiently deliver highly targeted messages. Our customized solutions allow advertisers and direct marketers to tailor their ad campaigns to reach desired audiences, while reducing costs, easing time pressures and alleviating the need to purchase a series of ad campaigns from numerous Web publishers. Advertisers and direct marketers can achieve their objectives by buying ad space on a specific Web site, within a particular content channel or across an entire network. We are currently working on several initiatives to increase our targeting capabilities, including the development of our Profilz database.

As Internet traffic grows, Web publishers increasingly seek to maximize the value of their online inventory. Our extensive sales and marketing experience provides Web publishers access to media buyers at large ad agencies and enables them to sell advertisement space without incurring the costs and challenges associated with building and maintaining an ad sales force.

Our senior management team includes several individuals each of whom has over fifteen years of experience in advertising sales in the television and proprietary online network industries. Other members of senior management contribute extensive knowledge of ad serving technology and database targeting. We leverage our media sales and technology expertise to maximize the value of ad campaigns for both advertisers and Affiliated Web sites.

Source: 24/7 REAL MEDIA INC, S-1/A, April 14, 1999

trade publication advertisements, public relations, direct mail, ongoing customer communications programs, promotional activities, trade shows and online advertisements over our networks and on third party Web sites.

International

Our international strategy consists of acquiring or entering into strategic alliances with existing Internet advertising networks in foreign countries. In January 1999, we acquired a 60% interest in 24/7 Media Europe Ltd., formerly known as InterAd Holdings Limited, which operates the 24/7 Media Europe Network. In October 1998 we entered into an agreement with China.com Corporation to jointly develop the 24/7 Media Asia Network. We collaborate with China.com on expanding and training its China and Hong Kong-based sales force as well as recruiting Web sites for the network. We will receive royalties from all sales through the 24/7 Media Asia Network for a period of between seven and ten years and we acquired a 10% equity stake in China.com in exchange for $3.0 million in cash and approximately 204,000 shares of common stock. We also have mutual sales agreements with both the 24/7 Media Europe Network and the 24/7 Media Asia Network. Additionally, ClickThrough Interactive of Canada has the exclusive third party right to sell page views on the 24/7 Network when such pages are accessed by Canadian Internet users, and we have the exclusive third party right to sell page views on the ClickThrough network when accessed by U.S. Internet users.

Intellectual Property

Intellectual property is critical to our success, and we rely upon patent, trademark, copyright and trade secret laws in the United States and other jurisdictions to protect our proprietary rights and intellectual property. Although we do not currently have any patents, we have filed applications with the United States Patent and Trademark Office to protect aspects of our Adfinity technology. We have also applied to register our trademarks both domestically and internationally. These trademark registrations and patent applications may not be approved or granted and may be challenged by others or invalidated through administrative process or litigation. Patent, trademark, copyright and trade secret protection may not be available in every country in which our services are distributed or made available. In addition, we protect our proprietary rights through the use of confidentiality agreements with employees, consultants and affiliates.

Profilz will collect demographic profiles of Internet users and the ad serving technology we employ collects and uses data derived from user activity on our networks and Affiliated Web sites. This data is intended to be used for advertisement targeting and for predicting advertisement performance. Although we believe that we have the right to use such data, trade secret, copyright or other protection may not be available for such information or others may claim rights to such information. Further, under our contracts with Web publishers using our services, we are obligated to keep information regarding the Web publisher confidential.

Competition

The markets for Internet advertising and related products and services are intensely competitive and we expect competition to increase.

We compete for Internet advertising revenues with large Web publishers and Web portals, such as America Online, Excite, GeoCities, Go Network, Infoseek, Lycos, Microsoft Network and Yahoo!. Our networks compete for Web site clients with a variety of Internet advertising networks, including DoubleClick, AdSmart, Flycast, Real Media and Link Exchange. We also encounter competition from a number of other sources, including content aggregators, companies engaged in advertising sales networks, advertising agencies, and other entities that facilitate Internet advertising. Many of our existing competitors, as well as a number of potential new competitors, have longer operating histories, greater name recognition, larger customer bases and significantly greater financial, technical and marketing resources than we do.

Employees

As of December 31, 1998, we employed approximately 200 persons, including 130 in sales, marketing and customer support, 35 in technology and product development, and 35 in accounting, human resources and administration. We are not subject to any collective bargaining agreements and believe that we enjoy a good relationship with our employees.

Source: 24/7 REAL MEDIA INC, S-1/A, April 14, 1999

CROSS PROMOTION AGREEMENT

THIS CROSS PROMOTION AGREEMENT, dated April 5, 1999 (the "Agreement"), is made between 24/7 Media, Inc. ("24/7"), a Delaware corporation with an address at 1250 Broadway, 27th floor, New York, NY 10001 and TechWave Inc. ("TW"), a Washington corporation with an address at 411 First Avenue South, Suite 200 N, Seattle, WA 98104.

WHEREAS, 24/7 operates networks of Internet Web sites (collectively, the "24/7 Network") for which it solicits advertising, promotions and direct marketing to generate revenues for the Web sites affiliated with the 24/7 Network (the "24/7 Affiliates"), places advertising, promotions and direct marketing on the 24/7 Network for advertisers and agencies (the "24/7 Advertisers") and, through its Sift, Inc. subsidiary, offers customer relationship management and other e-mail based services (collectively, the "24/7 Services");

WHEREAS, TW currently provides e-commerce technology and enabling services; online store development, creative design services, product fulfillment and online sales and marketing to third parties ("TW Affiliates") for the establishment and promotion of transactional capabilities through the Internet (the "TW Services");

WHEREAS, 24/7 and TW wish to cross promote each other's services to their customer bases on a most favored nation basis and to jointly promote their services to prospective new customers; for purposes of this Agreement, "Most Favored Nation" shall mean that services are offered to a party on terms and conditions, including price, that are at least as favorable as those offered to other parties that are comparable in size and scope;

NOW, THEREFORE, in consideration of the foregoing, the mutual covenants and agreements contained herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, 24/7, and TW agree as follows:

1. Promotion and Provision of TW Services

A. 24/7 agrees to promote to 24/7 Affiliates the TW Services. 24/7 shall make an initial direct marketing solicitation of the 24/7 Affiliates and shall provide reasonable additional support as may be requested by TW from time to time;

B. TW agrees to provide special incentives to 24/7 Affiliates in order to induce them to avail themselves of the TW Services; these special incentives will be mutually agreed upon by both 24/7 and TW and are contemplated to be discounts and similar arrangements;

C. TW shall be solely responsible for development of marketing materials relating to TW Services.

D. 24/7 shall be responsible for the mailing costs associated with the TW Services as it is offered to 24/7 Affiliates.

E. TW shall be solely responsible for providing all TW Services, including customer service in respect of the TW Services;

F. TW shall be deemed the seller of TW Services pursuant hereto and shall be solely responsible for collecting and remitting to the appropriate jurisdiction any and all

applicable sales or use or other taxes and shall fully indemnify and hold 24/7 harmless for any sales, use or similar transaction taxes that are assessed, whether against 24/7 or TW, with respect to the sale of TW Services;

G. TW agrees to pay 24/7 20% of all gross revenue generated and collected by TW during the term of this Agreement from the sale of TW Services to 24/7 Affiliates and 24/7 Advertisers. TW agrees to provide 24/7 within 45 days after the end of each month with (i) a report showing all 24/7 Affiliates for which TW provided TW services in the prior month and the revenue generated from such TW Services and (ii) payment equal to 24/7's appropriate share of all revenue collected in the prior month.

H. The revenue sharing payment contemplated by Section 1.G. shall apply only in respect of existing and after acquired 24/7 Affiliates and 24/7 Advertisers who are not currently also TW Affiliates at the time they are acquired by 24/7. A list of all current 24/7 Affiliates is attached hereto as Exhibit 1. A list of all current TW Affiliates is attached hereto as Exhibit 2. TW agrees not to solicit any current or future 24/7 Affiliate or 24/7 Advertiser except pursuant to a joint promotion prepared by both parties pursuant hereto.

2. Promotion and Provision of 24/7 Services

A. TW agrees to promote to TW Affiliates the 24/7 Services. TW shall make an initial direct marketing solicitation of the TW Affiliates and shall provide reasonable additional support as may be requested by 24/7 from time to time;

B. 24/7 agrees to provide special incentives to TW Affiliates in order to induce them to avail themselves of the 24/7 Services; these special incentives will be mutually agreed upon by both 24/7 and TW and are contemplated to be discounts and similar arrangements.

C. 24/7 shall be solely responsible for development of marketing materials relating to 24/7 Services.

D. TW shall be responsible for the mailing costs associated with the 24/7 Services as it is offered to TW Affiliates.

E. 24/7 shall be solely responsible for providing all 24/7 Services, including customer service in respect of the 24/7 Services;

F. 24/7 shall be deemed the seller of 24/7 Services pursuant hereto and shall be solely responsible for collecting and remitting to the appropriate jurisdiction any and all applicable sales or use or other taxes and shall fully indemnify and hold TW harmless for any sales, use or similar transaction taxes that are assessed, whether against 24/7 or TW, with respect to the sale of 24/7 Services;

G. 24/7 agrees to pay TW a percentage of all revenue generated and collected during the term of this Agreement from the sale of 24/7 Services to TW Affiliates as follows: (i) E-mail services - 15% of gross revenue; (ii) advertising and sponsorship placements - 10% of gross advertising spending (only in instances where no advertising agency commission is earned) per Affiliate; (iii) Sale of product by TW Affiliates in transactional banners or equivalents run on 24/7 networks - 15% of gross spread, defined as gross revenue minus cost of product and other third party costs; (iv) Transactions for sale of product not by TW Affiliates in transactional

banners or equivalents run on 24/7 networks - $.40 per transaction with limited fraud check service; additional amounts will be paid for enhanced fraud check services, on a per transaction basis, which will be determined on an as needed basis with most favored nation pricing for 24/7; this provision begins at the time that TW begins providing back-end transaction processing services; (v) Advertising Representations of Network Sites - a finder's fee of (a) $500 per Web site that generates at least 1mm ad impressions per month; (b) $250 per Web site that generates between 500K - 1mm ad impressions per month; and (c) $50 per Web site that generates between 100k - 500K ad impressions per month. This will be determined after Affiliate is represented by 24/7 for a period of 30 days to verify impression levels. 24/7 agrees to provide TW within 45 days after the end of each month with (i) a report showing all TW Affiliates for which 24/7 provided 24/7 services in the prior month and the revenue generated from such 24/7 Services and (ii) payment equal to TW's appropriate share of all revenue collected in the prior month.

H. The revenue sharing payment contemplated by Section 2.G. shall apply only in respect of existing and after acquired TW Affiliates who are not currently also 24/7 Affiliates or 24/7 Advertisers at the time they are acquired by TW. A list of all current TW Affiliates is attached hereto as Exhibit 2. A list of all current 24/7 Affiliates and 24/7 Advertisers is attached hereto as Exhibit 1. 24/7 agrees not to solicit any current or future TW Affiliate except pursuant to a joint promotion prepared by both parties pursuant hereto.

3. Branding.

A. 24/7 agrees to co-brand its Click2Buy transactional banner service with the "ShopNow" logo in a manner to be mutually agreed upon and to direct traffic to ShopNow.com upon completion of the Click2Buy transaction.

B. TW agrees to co-brand ShopNow.com with a Click2Buy logo (or other branding as 24/7 chooses) in a manner to be mutually agreed upon.

4. Additional Covenants.

A. 24/7 agrees to make available to TW and to TW Affiliates reasonable amounts of advertising inventory on the 24/7 Network, on a cpm, cpc and "default" basis, at "most favored nation" rates, and to make available at least the amount of the guaranteed spend by TW pursuant to 4.B. on a non pre-emptible basis.

B. TW agrees to purchase advertising on the 24/7 Networks at an aggregate minimum cost of $1,000,000 during each twelve (12) month period of this Agreement (reduced proportionately for any partial period due to early termination of this Agreement);

5. Marketing Programs. 24/7 and TW will jointly define marketing programs and budgets through written marketing plans updated no less frequently than every six (6) months. In the event of a disagreement, 24/7 shall have the final controlling rights on all marketing and promotion of the joint services (including but not limited to presentation, copy, format, design, script development, etc.) subject to non-contravention of existing agreements, laws or regulations, and subject to reasonable limits on costs to be incurred by TW.

6. Participation in Profilz and other Co-op Databases.

A. 24/7 agrees to grant TW access, on a most favored nation price basis, to 24/7 Profilz to enable TW to use Profilz for its own internal purposes or to offer Profilz to TW Affiliates to enhance their online advertising campaigns;

B. 24/7 also agrees to offer TW access on a most favored nation pricing basis to any other database services or technology that 24/7 develops during the Term;.

C. Subject to contractual and legal restrictions between TW and TW Affiliates, TW agrees to provide all available registration and transactional information to the Profilz database; 24/7 shall compensate TW for such registration data on a Most Favored Nation basis; TW will have access to contributed names and information that has been appended to it; TW will be able to participate in Profilz and other 24/7 Co-op Database initiatives that are created during the Term of this Agreement.

7. Exclusivity

A. TW hereby grants 24/7 the sole third party right to sell advertising, sponsorships and promotions on all web sites operated by TW (Buysoftware.com, shopnow.com, etc.) during the Term. This exclusivity shall expire with respect to any one web site operated by TW (Buysoftware.com, shopnow.com, etc.) in the event 24/7 fails to achieve an overall CPM of $2 or more on such web site for three consecutive months. TW may continue to sell advertising on up to 50% of the advertising inventory on the sites using internal sales force. 24/7 and TW will mutually agree on what part of the sites represent the 50% and may adjust minimum CPM accordingly.

B. TW hereby grants 24/7 the sole third party right to sell advertising, sponsorships and promotions on all TW affiliate sites. 24/7 agrees and TW acknowledges that TW cannot prohibit TW affiliates from directly engaging other third parties for ad representations.

C. TW hereby grants to 24/7 the sole third party right to offer ad placement services to TW affiliates. 24/7 agrees and TW acknowledges that TW cannot prohibit TW affiliates from engaging other third parties for ad placements.

D. TW hereby appoints 24/7 as the premier provider of email services on a service bureau, CRM and list rental basis to TW and TW Affiliates. Such exclusivity is based on TW receiving business terms substantially equivalent to those offered by third parties and shall not preclude TW from sending emails itself; 24/7 acknowledges that TW is party to existing agreements that shall be phased out over 180 days;

E. 24/7 agrees not to engage any of the following direct competitors of TW as a co-marketing partner for e-commerce technologies offered by TW: Digital River, Cybersource, PaymentTech, Go2Net, Imall, CyberCash, First USA. Also, TW shall have a right of first refusal on any other partnership with 24/7 for e-commerce technology or services from other third parties assuming TW provides similar products and services in terms of functionality and quality;

F. 24/7 agrees to extend this Agreement to include non-U.S. networks affiliated with 24/7, provided that 24/7 has substantial control of such non-U.S. networks and presuming that TW establishes non-U.S. operations that are on a par in terms of quality with the TW U.S. operations.

8. Term and Termination

A. The term of this Agreement (the "Term") shall commence on the Effective Date and shall continue until terminated by either party pursuant to this Section 8.

B. Either party may terminate the Agreement by giving written notice no earlier than two years and eight months after the Effective Date. Termination will be effective four (4) months after the date on which written notice is given, as determined under the provisions of Section 19 below, to the other party.

C. Notwithstanding Section 8.B. above, this Agreement may be terminated by either party on 60 days' prior written notice to the other party upon the occurrence of a material breach by the other party of any covenant, duty or undertaking herein, which material breach continues without cure for a period of 30 days after written notice of such breach from the non-breaching party to the breaching party.

D. Notwithstanding 8.B above, in the event (i) of a sale or distribution of all or substantially all of the assets of TW or a sale to a single party of more than 50% of the voting stock of TW or (ii) that TW or its affiliates begins to compete directly with the 24/7 Services, 24/7 may, in its sole discretion, terminate this Agreement immediately. In the event that 24/7 terminates this Agreement pursuant to the preceding sentence of this Section, TW shall reimburse 24/7 for reasonable out-of-pocket expenses incurred in transferring the Agreement, at 24/7's election, to another e-commerce vendor. With 24/7's approval, which shall not be unreasonably withheld, TW may negotiate transfer expenses on behalf of 24/7 with another e-commerce vendor of 24/7's choosing to ensure the reasonableness of the expenses. With 24/7's approval, TW may provide components of the transfer.

E. Either party may terminate this Agreement with immediate effect: (i) upon the institution by the other party of proceedings to be adjudicated a bankrupt or insolvent, or the consent by the other party to institution of bankruptcy or insolvency proceedings against it or the filing by the other party of a petition or answer or consent seeking reorganization or release under the Federal Bankruptcy Code, or any other applicable Federal or state law, or the consent by the other party to the filing of any such petition or the appointment of a receiver, liquidator, assignee, trustee, or other similar official of the other party or of any substantial part of its property, or the making by the other party of an assignment for the benefit of creditors, or the admission in writing by the other party of an assignment for the benefit of creditors, or the admission in writing by the other party of its inability to pay its debts generally as they become due or the taking of corporate action by the other party in furtherance of any such actions; (ii) if, within 60 days after the commencement of an action against the other party seeking any bankruptcy, insolvency, reorganization, liquidation, dissolution or similar relief under any present or future law or regulation, such action shall not have been dismissed or all orders or proceedings thereunder affecting the operations or the business of the other party stayed, or if the stay of any such order or proceeding shall thereafter be set aside; or if, within 60 days after the appointment without the consent or acquiescence of the other party of any trustee, receiver or liquidator or similar official of the other party, or of all or any substantial part of the property of the other party, such appointment shall not have been vacated.

F. Notwithstanding Section 8.A above, this Agreement will terminate if the Equity Exchange set forth in Section 9 of this Agreement is not closed within 10 days of execution of this Agreement.

9. Stock Purchase.

A. Pursuant to the Equity Exchange Agreement, a copy of which is attached hereto, within 10 days after the Effective Date, TW shall issue to 24/7 4,300,000 shares of preferred stock of TW with a market value of $30,100,000 (based on a pre-investment fully diluted value of TW of approximately $150,000,000). The number of all shares issued shall represent approximately 19.8% of outstanding stock of TW after issuance.

B. On the effective date of the Equity Exchange Agreement, TW shall deliver to 24/7 shares of preferred stock of TW with a value of $22,850,000 and shall hold the remainder in escrow (the "First Closing"). As consideration for this issue, on the effective date of the Equity Exchange Agreement, 24/7 shall deliver to TW, pursuant to a separate Equity Exchange Agreement, shares of 24/7 with a fair market value of $22,850,000, with such fair market value to be determined by reference to the closing price per share of common stock of 24/7 reported by Nasdaq for the five trading days preceding the date of this agreement.

C. Should 24/7 complete its public offering of shares of common stock currently in registration or prior to May 14, 1999 (which date may be extended by mutual consent), then within five business days of the closing of such public offering, 24/7 shall transfer to TW the sum of $5,000,000 and shall receive in exchange $5,000,000 worth of preferred stock of TW (based on the valuation on the date of this agreement) held in escrow. Should 24/7 not complete such public offering prior to May 14, 1999, then 24/7 and TW shall promptly schedule a second closing at which 24/7 shall issue to TW shares of common stock of 24/7 with a market value of $5,000,000 (based on the closing price for the five trading days preceding the date of this agreement) and TW shall issue to 24/7 shares of preferred stock of TW with a market value of $5,000,000 (based on the valuation on the date of this agreement).

D. Promptly after the execution hereof, 24/7 and TW shall commence due diligence and negotiations of an acquisition of Card Secure, Inc. (a majority owned subsidiary of 24/7) by TW. By May 31, 1999, TW and 24/7 shall determine whether or not the transaction shall occur and the relevant terms. Should the parties agree not to consummate the Card Secure transaction or consummate it with an agreed upon valuation for 24/7's interest in Card Secure of less than $2,250,000, then TW shall issue to 24/7 shares of preferred stock of TW with a market value of $2,250,000 (based on the valuation on the date of this agreement) and 24/7 shall issue to TW shares of common stock of 24/7 with a market value of $2,250,000 (based on the closing price for the five trading days preceding the date of this agreement) minus the agreed upon valuation of Card Secure, Inc. in any transaction.

E. In addition, TW shall issue to 24/7 five-year warrants to purchase shares of common stock of TW equal to 20% of the shares of common stock issuable upon conversion of the preferred stock that it receives pursuant to paragraphs B, C and D hereof at an exercise price equal to the conversion price per share. Such warrants shall contain a "net exercise" feature.

F. 24/7 Media, upon the execution of the Equity Exchange Agreement, achieving an ownership interest in TW, 24/7 Media will receive one (1) seat on the TW Board of Directors.

10. Intellectual Property Ownership.

Source: 24/7 REAL MEDIA INC, S-1/A, April 14, 1999

In the event any inventions, methods, techniques, works of authorship, computer software, computer upgrades, computer programs, service providers, vendor information, training materials, telemarketing scripts, e-mail scripts, computer screens, reports, data, any other proprietary or confidential information is made, created, developed or written hereunder and other intellectual property created, developed or written in accordance with the activities contemplated hereunder ("Developed Material") is, (i) fully paid for by 24/7, such Developed Material shall be deemed the sole property of 24/7 and any use thereof by TW shall require consent thereto by 24/7; (ii) is substantially paid for by 24/7 and TW has had material creative or developmental input therein (including without limitation provision of proprietary or confidential information), then such Developed Material shall be deemed the property of 24/7 with TW having a perpetual non-exclusive, royalty-free right of use thereof; (iii) is substantially paid for by TW and 24/7 has had material creative or developmental input therein (including without limitation provision of proprietary or confidential information), then such Developed Material shall be deemed the property of TW with 24/7 having a perpetual non-exclusive, royalty-free right of use thereof; and (iv) is fully paid for by TW then such Developed Material shall be deemed the sole property of TW and any use thereof by 24/7 shall require consent thereto by TW. Nothing herein shall be construed to restrict, impair or deprive TW or 24/7 of any of their respective rights or proprietary interests in technology or products that existed prior to and independent of the performance of their respective obligations hereunder.

11. Intellectual Property Infringement.

Each party agrees to defend and/or handle at its own expense, any claim or action against the other party or its affiliates (including without limitation, its parent, subsidiaries, officers and directors) for any actual or alleged infringement of any intellectual or industrial property right, including, without limitation, trademarks, service marks, patents, copyrights, misappropriation of trade secrets or any similar proprietary rights, based upon the Agreement or any portion thereof furnished or utilized by such party or based on the other party's use thereof. Each party further agrees to indemnify and hold the other party and its affiliates harmless from and against any and all liabilities, losses, costs, damages and expenses (including reasonable attorneys' fees) associated with any such claim or action. Each indemnifying party shall have the sole right to conduct the defense of any such claim or action and all negotiations for its settlement or compromise, unless otherwise mutually agreed to in writing.

12. Publicity. Except as may be required by law, no party hereto shall issue advertising, promotional activity, press or publicity release relating to this Agreement without securing the prior written consent of such other party.

13. Confidentiality. 24/7 and TW covenant to each other that neither party shall disclose to any third party (other than its employees and directors, in their capacity as such, and the employees and directors of any affiliate on a need to know basis so long as they are bound by the terms of this Agreement) any information regarding the terms and provisions of this Agreement or any confidential information which has been identified as such by the other Party hereto except (i) to the extent necessary to comply with any law or valid order of a court of competent jurisdiction (or any regulatory or administrative tribunal), in which event the party so complying shall so notify the others as promptly as practicable (and, if possible, prior to making any disclosure) and shall seek confidential treatment of such information, if available; (ii) as part of its normal reporting or review procedure to its auditors or its attorneys, as the case may be, so long as they are notified of the provisions of this Agreement; (iii) in order to enforce its rights pursuant to this Agreement; (iv) in connection with any filing with any governmental body or as otherwise required by law, including the federal securities laws and any applicable rules and

regulations of any stock exchange or quotation system; and (v) in a confidential disclosure made in connection with a contemplated financing, merger, consolidation or sale of capital stock of 24/7 or TW. Information which is or should be reasonably understood to be confidential or proprietary includes, but is not limited to, information about the 24/7 Network, sales, cost and other unpublished financial information, product and business plans, projections, marketing data, and sponsors but shall not include information (a) already lawfully known to or independently developed by a party, (b) disclosed in published materials other than through a breach of these confidentiality provisions, (c) generally known to the public other than through a breach of these confidentiality provisions, (d) lawfully obtained from any third party or (e) required to be disclosed by law.

14. Indemnification. TW shall indemnify and hold harmless 24/7, its advertisers and other suppliers and any related third parties, against and in respect of any and all claims, suits, actions, proceedings (formal and informal), investigations, judgments, deficiencies, damages, settlements, liabilities, and legal and other expenses (including reasonable legal fees and expenses of attorneys chosen by 24/7) as and when incurred, arising out of or based upon any act or omission or alleged act or alleged omission by TW in connection with the acceptance of, or the performance or non-performance by TW of, any of its duties under this Agreement or arising from the breach by TW of its warranties, representations or covenants contained in this Agreement. 24/7 shall indemnify and hold harmless the TW, against and in respect of any and all claims, suits, actions, proceedings (formal and informal), investigations, judgments, deficiencies, damages, settlements, liabilities, and legal and other expenses (including reasonable legal fees and expenses of attorneys chosen by TW) as and when incurred, arising out of or based upon any act or omission or alleged act or alleged omission by 24/7 in connection with the acceptance of, or the performance or non-performance by 24/7 of, any of its duties under this Agreement or arising from the breach by 24/7 of its warranties, representations or covenants contained in this Agreement.

15. Representations, Warranties & Covenants

A. Each party hereto represents and warrants that it has full power and authority to execute this Agreement and to take all actions required by, and to perform the agreements contained in, this Agreement, and that the each party's respective obligations under this Agreement do not conflict with its obligations under any other agreement by which the such party is bound.

B. Each party represents, warrants and covenants that the performance of its respective obligations under this Agreement complies and will comply with all applicable federal, state, local and foreign laws and regulations.

16. No Poaching. TW agrees that, during the Term and for a period of one year from the end of the Term, neither it nor its affiliates will solicit or recruit the services of any 24/7 employees, or hire any such employees. 24/7 agrees that, during the Term and for a period of one year from the end of the Term, neither it nor its affiliates will solicit or recruit the services of any TW employees, or hire any such employees

17. No Waiver. This Agreement shall not be waived, modified, assigned or transferred except by a written consent to that effect signed by TW and 24/7. TW agrees that if it assigns or transfers this Agreement, it shall cause such successor, assignee, or transferee to assume all of the TW's obligations hereunder. Any assignment, transfer, or assumption shall not relieve the TW of liability hereunder.

Source: 24/7 REAL MEDIA INC, S-1/A, April 14, 1999

18. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of New York applicable to contracts made and performed therein, without regard to principles of conflicts of laws.

19. Notices. All notices required or permitted to be given hereunder shall be in writing and either hand-delivered, telecopied, mailed by certified first class mail, postage prepaid, or sent via electronic mail to the other party or parties hereto at the address(es) set forth below. A notice shall be deemed given when delivered personally, when the telecopied notice is transmitted by the sender, three business days after mailing by certified first class mail, or on the delivery date if delivered by electronic mail.

20. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same document.

21. Force Majeure. Neither party shall be held liable or responsible to the other party nor be deemed to have defaulted under or breached this Agreement for failure or delay in fulfilling or performing any term of this Agreement when such failure or delay is caused by or results from causes beyond the reasonable control of the affected party, including but not limited to fire, floods, failure of communications systems or networks, embargoes, war, acts of war (whether war is declared or not), insurrections, riots, civil commotion, strikes, lockouts or other labor disturbances, acts of God or acts, omissions or delays in acting by any governmental authority or the other party; provided, however, that the party so affected shall use reasonable commercial efforts to avoid or remove such causes of nonperformance, and shall continue performance hereunder with reasonable dispatch whenever such causes are removed. Either party shall provide the other party with prompt written notice of any delay or failure to perform that occurs by reason of force majeure. The parties shall mutually seek a resolution of the delay or the failure to perform as noted above.

22. Severability. Should one or more provisions of this Agreement be or become invalid, the parties hereto shall substitute, by mutual consent, valid provisions for such invalid provisions which valid provisions in their economic effect are sufficiently similar to the invalid provisions that it can be reasonably assumed that the parties would have entered into this Agreement with such valid provisions. In case such valid provisions cannot be agreed upon, the invalidity of one or several provisions of this Agreement shall not affect the validity of this Agreement as a whole, unless the invalid provisions are of such essential importance to this Agreement that it is to be reasonably assumed that the parties would not have entered into this Agreement without the invalid provisions.

23. Dispute Resolution. Any controversy or claim arising out of or relating to the Agreement, or the breach thereof, shall the subject of resolution efforts by the Chief Executive Officers and General Counsels of each party for at least 30 days prior to any action being commenced. Any unresolved disputes shall be settled exclusively by arbitration. Such arbitration shall be conducted before a single arbitrator in accordance with the Commercial Arbitration Rules of the American Arbitration Association then in effect. If arbitration is commenced by 24/7, it shall take place in Seattle, Washington. If arbitration is commenced by TW, it shall take place in New York, New York. Judgment may be entered on the arbitrator's award in any court having jurisdiction, and the parties irrevocably consent to the jurisdiction of the courts of Washington and New York for that purpose. The parties waive personal service in connection with any such arbitration; any process or other papers under this provision may be served outside Washington or New York by registered mail, return receipt requested, or by personal service, provided a reasonable time for appearance or response is allowed. All decisions

of the arbitrator shall be final and binding on the parties. The parties shall equally divide all costs of the American Arbitration Association and the arbitrator. Each party shall bear its own legal fees in any dispute. The arbitrator may grant injunctive or other relief.

24. Independent Contractors. 24/7 Media and TW shall each act as independent contractors. Neither party shall exercise control over the activities and operations of the other party. 24/7 Media and TW shall each conduct all of its business in its own name and as it deems fit, provided it is not in derogation of the other's interests. Neither party shall engage in any conduct inconsistent with its status as an independent contractor, have authority to bind the other with respect to any agreement or other commitment with any third party, nor enter into any commitment on behalf of the other.

25. Headings: Headings stated in this Agreement are for convenience of reference only and are not intended as a summary of such sections and do not affect, limit, modify, or construe the contents thereof.

26. Audit Rights. Upon request from any party, such requesting party shall be given reasonable access and audit and verification documentation as the requesting party may reasonably request on not less than 30 days' notice in order to assure the other party's compliance with the terms of this Agreement. Such requests shall be limited to the scope of this Agreement and shall not be made more frequently than twice in any twelve-month period.

27. Entire Agreement. This Agreement constitutes the entire agreement and supersedes all prior agreements of the Parties with respect to the transactions set forth herein and, except as otherwise expressly provided herein, is not intended to confer upon any other person any rights or remedies hereunder.

Source: 24/7 REAL MEDIA INC, S-1/A, April 14, 1999

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement this __ day of April 5, 1999 (the "Effective Date").

24/7 MEDIA, INC.

By: /s/ C. Andrew Johns

Name: C. Andrew Johns
Title: EVP & CFO

E-mail address: ajohns@247media.com

TECHWAVE INC.:

By: /s/ Alan Koslov

Name: Alan Koslov
Title: EVP Finance/General Counsel

E-mail address: alank@techwave.com

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ENGAGE INC
S-1/A filed on 07/19/1999

As filed with the Securities and Exchange Commission on July 19, 1999

Registration No. 333-78015

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

AMENDMENT NO. 5

to

FORM S-1

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

ENGAGE TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

Delaware	7372	04-3281378
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

Engage Technologies, Inc.
100 Brickstone Square
Andover, MA 01810 (978) 684-3884
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Paul L. Schaut
President and Chief Executive Officer
Engage Technologies, Inc.
100 Brickstone Square
Andover, MA 01810 (978) 684-3884
(Name, address, including zip code, and telephone number, including area code, of agent for service)

. the purchasing and other activities of users while at a Web site; and

. the responses of visitors to specific advertisements and promotions.

While the Internet offers the opportunity to collect a wide variety of information that could be used to improve audience targeting, Web users are increasingly concerned about the potential for loss or abuse of their privacy. Although Web site visitors can obtain significant benefits from a Web publisher's or merchant's ability to personalize content and target e-commerce offerings based on the user's tastes and preferences, many consumers do not want specific identifiable information about themselves, such as their name, home or e-mail address, made available to third parties.

To balance the desires of marketers and consumers, there is a need for a solution that will enable Internet marketers to tailor offerings effectively to each user while at the same time preserving the privacy and anonymity available to individuals on the Internet.

The Engage Solution

Engage provides products and services that enable customers to create and use profiles of individual Web visitors to target advertisements, content and e-commerce offerings.

The following table shows the products and services offered by Engage:

Products and Services	Description	Benefits
Profiling		
Engage Knowledge Data Service(1)	Service providing real-time access to database of anonymous global profiles of Web users	Allows targeted online advertising, content and e-commerce offerings, which can improve response rates, brand awareness and customer loyalty and reduce marketing costs
Engage ProfileServer	Software to create and deliver site-specific local profiles of Web users	Permits customization of interest categories to track preferences specific to the customer's business. Can be used alone or together with profiles delivered as part of the Engage Knowledge data service
Advertising Management		
Accipiter AdManager	Automated online advertising delivery and management software	Automates online advertising management for Web sites, including scheduling, targeting and serving of ads and reporting of campaign results
Accipiter AdBureau	Outsourced online advertising management service using AdManager technology	Delivers the capabilities of Accipiter Admanager without requiring the customer to make the investment needed to create an advertising management infrastructure
Web Site Traffic Measurement, Auditing and Analysis		
I/PRO NetLine Service	Outsourced Web site traffic measurement and analysis service	Enables Web sites to better understand user traffic and behavior and thereby improve their Web sites
Nielsen I/PRO I/Audit Services	Outsourced service providing audits of site traffic and ad campaign results	Allows media sellers to prove Web site traffic volume and campaign results to media buyers
I/PRO Research Services	Custom consulting services providing audience behavior analysis	Provides customized analysis and interpretation of visitor behavior to help customers formulate their Web strategies
Engage DecisionSupportServer	Site-based data warehouse software for audience analysis	Allows customers to perform sophisticated analysis of the behavior and profiles of their Web site visitors
Engage Knowledge Research Services(2)	Consulting services based on global profile database	Allows customers to gain valuable market research by analyzing Web-wide user behavior, interest trends and patterns across the Engage Knowledge data service

(1) Currently being tested with customers and expected to be implemented on a commercial basis in July 1999.
(2) Expected to be introduced in July 1999.

An Engage profile is an anonymous collection of information about an individual Web user's consumer interests, demographic characteristics and geographic location. These profiles are developed through a combination of a user's browsing behavior on participating sites on the Internet and information the user has voluntarily declared at these sites, such as information provided on an online registration form. Each anonymous profile omits information that would permit the personal identification of the user, such as name, address and e-mail address.

Based on its proprietary technology, Engage has built a database containing more than 30 million anonymous consumer profiles, which it has created from data drawn from multiple, diverse Web sites. Customers can use these profiles to target relevant advertisements, content and e-commerce offerings to individual Web users based on each user's particular preferences, demographic characteristics and geographic location.

Engage's profiling technology can create local and global user profiles. Local profiles, which are created and maintained by Engage's customers, contain data derived from the customer's own Web site and typically map preferences based on particular interest categories designed by the customer and demographic characteristics. Global profiles, which are compiled from data contributed to the centralized Engage Knowledge database from the Web sites of all participating Engage customers, are provided to customers on a subscription basis and provide a broader and more detailed description of users' interests. These global profiles do not contain personally identifiable information of individual users, such as name, home or e-mail address, IP address or domain name.

Each Engage global profile contains a series of numerical scores reflecting each Web user's inferred preference level in hundreds of standard categories and subcategories, such as books, business, computers, fashion, sports and travel as well as demographic and geographic information. Categories can be further customized to meet the needs of a specific customer or market. Engage software uses sophisticated proprietary algorithms and methodologies to continuously update and refine these global profiles based on a visitor's browsing behavior across multiple Web sites, including pages selected by the user, the duration of the user's visits and the responses of the user to specific advertisements and promotions. Engage global profiles also incorporate anonymous demographic and geographic information reported voluntarily by a visitor, such as data from an onsite registration form.

When a user visits a Web site of any customer subscribing to the Engage Knowledge data service, Engage matches that visitor with his or her profile in the global profile database. The profile is transmitted in real-time to the subscribing Engage Knowledge customer site, which can then use the profile to target advertisements, content and e-commerce offerings to that visitor. Based on past user behavior at other Web sites, an Engage customer can determine the interests and tailor the experience of even first-time visitors to its Web site.

Engage believes that its profiling technology provides a significantly more meaningful picture of Web user preferences than other available targeting solutions because:

. Engage builds and constantly updates its profiles based on a user's Web browsing behavior, resulting in more detailed and current profiles than could be created with registration or other declared data only;

. Engage profiles classify visitor information across hundreds of interest categories and subcategories, allowing Web publishers, advertisers and merchants to identify more precisely their target audience;

. Engage global profiles are developed from data gathered from many diverse Web sites, generating more detailed and comprehensive information about Web users than could be gathered from any single site; and

. The Engage Knowledge database currently contains more than 30 million user profiles, enabling the use of targeting applications for a significant proportion of Web site visitors.

Engage believes, based on preliminary results of a study conducted for Engage by a market research organization, Ipsos-ASI, that the use of Engage profiles to target advertisements can achieve click-through rates greater than those achieved by untargeted advertisements. Click-through rates represent the proportion of viewers who click on an advertisement. Engage also believes, based on this study, that the use of Engage profiles to target advertisements on Web pages whose content is unrelated to the advertisement can achieve click-through rates comparable to those achieved by the targeting of advertisements based on the content of the Web page.

Engage profiles are designed to work with other Engage applications, third- party software or customers' internally developed solutions, allowing customers flexibility as the uses of profiling and related applications develop and evolve.

The following is an example of what a portion of an anonymous user profile might contain:

Anonymous Web User Profile--ID#: 23987CKF87E99

Interest Categories	Score(1)
Automobile	.75
Automobile--Auto Types--Sport Utility Vehicle	.73
Automobile--Type of Need--Accessories	.23
Entertainment	.35
Entertainment--Music	.35
Entertainment--Music--Classical	.21
Fashion	.39
Fashion--Footwear	.26
Fashion--Business Clothing	.38
Major Events	.44
Major Events--Move within State	.44
Money & Finance	.64
Money & Finance--Type of Need--Online Banking	.59
Money & Finance--Investment Types--IRA/401K	.34
Response Tendency	.81
Response Tendency--Commerce	.60
Response Tendency--Commerce--Online Purchases	.76
Demographic Data	
Gender--Female	.91
Age--35-44 years	.75
Geographic Data	
Metro Statistical Areas (MSA)--Atlanta, GA	.97

(1)Interest level, based on a scale from 0 to 1.00.

Building upon its profiling capabilities, Engage offers the following profile-based marketing solutions:

Targeted Delivery of Advertising

Engage's advertising management software and services allow Web publishers and advertising networks to target advertising campaigns using either local profiles or global profiles from the Engage Knowledge data service. Engage also offers a turnkey outsourced advertising management service that allows Web sites to gain the advantage of profile-based advertising without making a significant upfront investment of cash and personnel. By allowing advertisers to target advertisements based not only on the content of the Web page being viewed, but also on the visitor's profile, these advertising solutions are designed to enable Web publishers and advertising networks to sell more of their advertising inventory and to allow advertisers to improve their return on investment. Engage's advertising management products, when used in conjunction with its profiling products and services, can schedule and serve advertisements in real-time while simultaneously optimizing the impact of a message by, for example, showing a minivan advertisement to a visitor interested in family subjects and a sport utility vehicle advertisement to an outdoor enthusiast. In addition, if it is known that a user is a likely minivan buyer, specific ads can be served when the visitor is in an unrelated site or section of a site.

Targeted Delivery of Content and Commerce Offerings

Engage's profiling software and global profiles allow Web publishers and merchants to customize the content of Web pages and target e-commerce offerings and promotions based on each individual user's interests. By providing Web site visitors information that is more relevant to them, Web publishers and merchants can strengthen visitor loyalty and increase the likelihood that a visitor will stay at the site and make a purchase. A Web site focusing on music can dynamically alter a Web page to present, for example, a special offer on a jazz CD only to those visitors whose profiles indicate strong interests in jazz and offer a different promotion to visitors with classical music interests.

Web Site Traffic Measurement, Auditing and Analysis

Engage's analysis and traffic measurement products and services allow Web publishers and merchants to collect, manage and analyze data about visitors and their behavior. By analyzing how users behave and react to specific advertising, pages or specific content areas, Web publishers can better understand their visitors and improve the effectiveness of their Web sites. Engage offers a range of solutions, from a basic outsourced reporting service to sophisticated software enabling analysis of large amounts of data. Engage also offers a comprehensive range of auditing services, including total site traffic audits and internal reporting verification. Engage's auditing services allow Web publishers to provide advertising buyers with the standardized verification from an independent third party that these buyers increasingly require before they will purchase Internet advertising inventory.

Strategy

Our objective is to enhance our position as a leading provider of profile- based Internet marketing solutions for Web publishers, advertisers and merchants. Our strategy to achieve this objective includes the following key elements:

Establish Engage as a Recognized Brand for Internet Profiling

We believe that we have the opportunity to establish Engage as the recognized brand for profile-based marketing solutions on the Internet. To capitalize on this opportunity, we are creating a family of "Engage-enabled" products and services that incorporate our profiling technology to serve a broad array of customer targeting needs on the Internet. Expanding from the initial use of our profiling technology in targeting the delivery of advertisements through our Accipiter advertisement management software, we plan to integrate our profiling technology with our I/PRO market intelligence services so that customers can better measure and analyze audience

behavior at their Web sites. We also plan to develop solutions that will allow Web publishers, advertisers and merchants to more effectively reach customers in specific markets, such as automotive and retail and other industry-specific markets. By implementing our solutions across a broad spectrum of customers and customer applications, we will seek to establish our profiling technology as the most widely-used platform for the targeting of advertisements, content and e-commerce offerings on the Web.

Offer Multiple Products Based on Open Standards

We offer multiple products and services based on open standards that facilitate the use of Engage's solutions with third-party applications. For example, our customers can use Engage Knowledge to target advertisements in conjunction with either our own Accipiter products or advertising management software provided by other vendors. By enabling customers to choose applications from third-party vendors, we believe we will be able to broaden the market for Engage-enabled solutions and increase the quantity and quality of the profiles compiled in the Engage Knowledge database.

[Graphic consists of a box at bottom labelled "Engage profiles" with arrows immediately above it pointing upward at a box labelled "Engage or Third-Party Applications" and within this box are subheadings labelled "Advertising Delivery", "Content Publishing" and "E-Commerce Server". This box has arrows immediately above it pointing toward three boxes labelled "Targeted Ad", "Personalized Content" and "Customized Offer".]

Continue to Enhance Engage Global Profile Database

Each user visit to the Web site of a participating subscriber to the Engage Knowledge data service contributes to the depth of the global profile database and enhances its value to all customers. We will continue to increase the quality and usefulness of Engage Knowledge profiles by:

. expanding the number of consumer profiles through an increase in our installed base of subscribers and contributors to the Engage Knowledge data service;

. developing new profiling algorithms to glean additional knowledge about Web users from data compiled for each profile; and

. refining our interest categories and subcategories to provide more detailed and market-specific user profiles.

Focus on Specific Markets

We plan to develop and sell specific Internet marketing solutions for different markets. We are initially focusing on Web publishers and advertising networks that derive revenue from advertising on the Web. For this market, we are enhancing our Accipiter advertising management software and services to allow Web publishers and advertising networks to use global profiles to optimize utilization of their advertising space. In addition, we will seek to increase our customers' advertising revenue by allowing them to offer a new program to advertisers in which an advertiser will pay for the delivery of advertising impressions only to those Web site visitors whose Engage profile matches designated criteria. Our fees for this program will consist of a portion of the advertising revenue generated when one of our profiles is used.

We also plan to focus on the automotive and retail and other industry- specific markets. For each market, we plan to develop and market tailored versions of our Engage Knowledge database that will measure interest levels in categories specific to those markets. For the automobile market, we will work with key automotive sites to capture specific and detailed information about automotive users presently in the purchase cycle and to provide manufacturers the ability to study consumer preferences for specific automobiles or features. For the retail market, we will continue to refine geographic-targeting

capabilities so that national retailers can address specific needs and preferences within each local audience through the Internet.

We also will aggressively pursue distribution arrangements with companies that install and integrate hardware and software systems for third parties and with independent software vendors who can deploy our profiling technologies for specific markets. Through these indirect channels, we will seek to extend the deployment of Engage technology and expand our customer base.

Offer Family of Engage Products and Services

We will seek to increase our sales to our installed base of customers by offering a range of software and services that utilize common Engage profiling technology. For example, if a customer uses Accipiter AdManager software to deliver Web advertisements, we will seek to sell a subscription to the Engage Knowledge data service to enable the customer to improve advertising response rates and brand awareness. We may also offer the customer a subscription to our I/PRO services to measure and better understand visitor behavior. Using our complementary line of software and services, a customer can rely upon Engage Knowledge profiles to perform a wide range of functions and thus avoid the time and expense otherwise required to collect, process and store large volumes of user data multiple times for multiple functions.

Maintain Position as Advocate for Internet Privacy

We believe that concerns about loss of privacy are increasingly important to Internet users and therefore have designed the Engage Knowledge database with the goal of being a leader in the protection of the privacy of individuals. We have been an active participant in the establishment of technology, industry and regulatory frameworks for Internet privacy and plan to continue to be aggressive in promoting our commitment to privacy.

Expand into International Markets

We currently market our products and services worldwide through a sales office in London, our U.S. headquarters and through a joint venture in Japan established with Sumitomo in July 1998. In addition, we plan to open an office in Germany in 1999. As of April 30, 1999, we had 22 customers in Europe and seven elsewhere outside the United States. We plan to expand our penetration of the international market primarily through joint ventures with partners abroad.

Products and Services

Engage offers a range of software and services that enable Web publishers, advertisers and merchants to target and deliver advertisements, content and e- commerce offerings to their audiences and to measure their effectiveness.

Engage Knowledge Data Service

The Engage Knowledge data service uses a database which contains user profiles collected from participating sites across the Web. Engage's database has been designed to create, refine and deliver millions of profiles in real- time to meet the demands of multiple Web sites. The global profiles used in the delivery of the Engage Knowledge data service omit personally identifiable information of individual users such as name, home or e-mail address, IP address or domain name. The database assigns a computer-generated identifier to distinguish each Web visitor. This identifier is currently stored as a browser cookie on the Web user's computer. This Engage Knowledge identifier is correlated with site-specific identifiers using a proprietary technique called "dual blind" identification. This technique protects the privacy of the individual because the participating Web site cannot access the Engage Knowledge identifier and Engage does not maintain any personally identifiable information that may have been gathered at the Web site.

Engage Knowledge global profiles contain a series of numerical ranking codes, as well as demographic and geographic information, with

scores that indicate the level of the consumer's interest in a category or the accuracy of a demographic or geographic attribute. The categories are hierarchical, with the top level representing a broad interest area such as "Books", and lower levels representing increased specificity, such as "Children's Books". Engage also maintains demographic and geographic information for each profile by using computer algorithms that infer demographic characteristics or geographic locations based on Web browsing behavior at participating sites and by using declared information reported voluntarily by the visitor, such as data provided by a user on an online registration form. Engage does not retain any of the personally identifiable information that may have been provided on the registration form, and therefore the identity of the Web user cannot be derived from the information contained in the global profile. Each Web page at a customer site is classified to indicate the interest categories that will be attributed to visitors to that page.

When a user visits a Web site of any customer subscribing to the Engage Knowledge data service, Engage matches that visitor to his or her profile in the global profile database. The profile is then transmitted in real-time to the subscribing Engage Knowledge customer site, which can then use the profile to target advertisements, content and e-commerce offerings to that visitor.

As a Web visitor browses through any Engage-enabled Web site, Engage's software dynamically updates and refines the profile of that visitor based on the recency, frequency and duration of the consumer's browsing behavior in each interest category. The Engage Knowledge database can be integrated with third- party data sources, such as geographic databases, to further enhance the consumer profiles. Unlike profiles based solely on static registration data, Engage Knowledge profiles are constantly changing to more accurately reflect the current interests of an individual.

Engage Knowledge profiles can be used to enhance third-party software applications by providing targeting capabilities. These applications include advertising management, content delivery and e-commerce offerings. Engage provides software tools and services to facilitate the integration of Engage Knowledge profiles with these third-party applications.

An Engage Knowledge subscription is combined with a license to the Engage software modules necessary to identify visitors, collect and transfer behavior records and access profile information. Periodic subscriptions are usually offered on a quarterly basis and the fees vary depending on traffic to the customer's site and the application with which the service is used. Engage expects that fees in the future will also vary based on the number of profiles used. Engage believes that most customers will contribute their clickstream data to the Engage Knowledge data service in exchange for reduced subscription rates and to enhance the quality of future global profiles. Although data contribution is not required, customers who do not contribute their site clickstream data to Engage Knowledge are required to pay significantly higher fees for use of the Engage Knowledge profiles. Monthly fees can range from a few thousand dollars for a low volume Web site to hundreds of thousands of dollars for a large customer with multiple Web sites.

In March 1999, Engage introduced GeoKnowledge, a data service that features multiple types of geographic data combined with profiles from the Engage Knowledge database.

As of April 30, 1999, Engage had implemented the Engage Knowledge data service with customers on a test basis. Engage expects to implement the Engage Knowledge data service on a commercial basis in July 1999.

Engage ProfileServer

Engage ProfileServer software collects Web visitor behavior data at the customer's Web site and declared user information reported voluntarily by a visitor to create and deliver profiles of individual Web site visitors. The system enables customers to create their own local profile database, which is maintained at the customer's site, and to use these local profiles to target advertisements, content and e-commerce offerings. The ProfileServer system

permits customers to customize the interest categories in the local profiles so that they track preferences specific to the customer's market. For example, a clothing retailer could create size and style subcategories. Customers can also use the system to collect proprietary user data, including identifying information supplied voluntarily by visitors to their sites. The local databases created with ProfileServer, which do not become part of the Engage Knowledge database, can be used by customers either alone or in conjunction with the Engage Knowledge data service.

ProfileServer is offered to customers under perpetual or annual subscription licenses with fees that vary based on the volume of visitor activity on the customer's sites. ProfileServer software typically ranges in price from $12,000 for a basic configuration at a small Web site to up to $100,000 for a complete feature installation at a high volume site.

Online Advertising Systems and Services

Engage's Accipiter ad management systems and services are designed to manage and deliver advertising and direct marketing promotions on individual Web sites and networks of Web sites.

Accipiter AdManager. Accipiter AdManager automates online advertising management for Web sites by scheduling and targeting ads, automatically rotating ad inventory and generating up-to-the-minute, customized reports. AdManager tracks all active advertising campaigns and Web site visitors and optimizes scheduling of advertisements in real-time to ensure that each campaign is delivered on schedule to qualified visitors or to the specified content areas of a site.

AdManager allows sites to deliver relevant advertising to individual visitors using a wide range of targeting criteria, including:

. Engage global and local profiles;

. area of content that a visitor is viewing;

. geographic location of users;

. key-word or key-phrase searches; and

. time of day or day of week.

AdManager provides versatile easy-to-use scheduling features. Advertisements within a campaign can be scheduled by the total number of impressions or clicks, by specific time frames specified by the advertiser or any combination of counts and date ranges. The campaign reservation system can lock in portions of available inventory for upcoming campaigns.

Customers can access a variety of reports to see how well a campaign is performing. Reports can detail, for example, how many impressions and clicks were generated both from the entire site and by each ad and advertiser. AdManager also enables customers to securely assign access privileges for specific functions or information to a variety of users at different levels from different organizations. For example, a single system can provide different levels of access to advertising agencies, web site advertising sales representatives, and third party advertising sales representatives. AdManager can be distributed across multiple servers to expand ad serving capacity and provide high availability to handle the volume requirements of the largest Web sites.

AdManager is offered to customers under perpetual licenses or annual subscription licenses, with fees that vary based on the number of advertisements served. A typical AdManager installation ranges in cost from $12,000 to more than $100,000, with an additional monthly fee for access to the Engage Knowledge database.

Accipiter AdBureau. Accipiter AdBureau is Engage's turnkey, outsourced advertisement management service based on AdManager technology. By subscribing to AdBureau, a customer can obtain the advertisement management capabilities of AdManager without the need to invest in on-site and management hardware, server and administrative software or databases.

AdBureau is marketed primarily to start-up and mid-sized Web sites, as well as advertising networks. AdBureau is offered to customers under an annual agreement providing for fees based on the number of advertisements served, with a $3,500 one-time set up fee and monthly fees based on the number of advertisments

served, ranging from $1,000 per month for the smallest Web sites to more than $15,000 per month for high volume sites.

Web Site Traffic Measurement, Auditing and Analysis

Engage offers products and services that provide Web site traffic measurement and analysis and verification of site traffic and advertising results. Through its I/PRO services, Engage currently measures over seven billion page views per month across over 350 Web sites.

I/PRO NetLine. I/PRO NetLine is an outsourced traffic measurement service that continuously measures Web site traffic and delivers results on a daily basis to the customer. This service enables customers to access reports immediately, combine data from multiple sites and standardize information for meaningful comparisons. I/PRO provides a wide range of standard reports and enables users to customize their reports and the data to be tracked. I/PRO provides standard reports that contain key data about traffic at a Web site, including information about the number of users to visit a Web site, the duration of user visits and the most frequently visited pages of the site. Customized reports can include information regarding specific pages, directories and clicks and other in depth data. I/PRO NetLine is priced based on the volume of traffic at the sites being measured and the number of reports that are requested, and fees typically range from $2,500 to $5,000 per month. I/PRO also offers extensive support by professional service account managers and custom research capabilities.

Engage plans to offer I/PRO NetLine in conjunction with Engage Knowledge services for global audience analysis. Using profile information from the Engage Knowledge database, customers of I/PRO NetLine will be able to customize reports to include more detailed and comprehensive user information, which will enhance the I/PRO NetLine traffic measurement service.

Nielsen I/PRO I/Audit. Nielsen I/PRO I/Audit outsourced services include audits of circulation on total audience, specific advertisements or advertising campaigns, internal management systems and co-operative marketing arrangements. Nielsen I/PRO I/Audit verifies information directly at the specific Web site rather than relying on a sample from a panel or other indirect methods. Engage believes that I/PRO was the first company to offer Web site specific audits of Web site traffic and advertising campaigns. Engage believes that over 70% of the 50 most visited sites currently use Nielsen I/PRO I/Audit. Nielsen I/PRO I/Audit reports are guaranteed to be delivered within ten days of I/PRO's receipt of the necessary data. Nielsen I/PRO I/Audit services are priced based on the volume of traffic at the sites being audited and fees typically range from $2,000 to $4,000 per month. I/PRO has a co-branding and reselling agreement with Nielsen Media Research and pays royalties to Nielsen on sales of I/PRO services.

I/PRO Research Services. I/PRO offers custom consulting services to help clients meet their Web marketing goals. These services combine analysis of Web audience data with customized research. Consultants produce in-depth reports and detailed analyses that allow customers to measure audience behavior, monitor results against strategic objectives and more effectively manage their Web strategies. Clients contract for research services on a project basis or at a stated daily rate.

Engage DecisionSupportServer. Engage DecisionSupportServer is a data warehouse management and analysis solution that is implemented at the customer's site. DecisionSupportServer supports a complex, visitor-focused marketing analysis of Web site usage details and profiles. Web marketers can monitor standard Web site usage and visitor reports or use Engage's Web marketing analysis application to answer critical and sophisticated business questions about visitors, their behavior and their profiles. For example, a marketer could configure DecisionSupportServer to determine the percentage of a Web site's repeat visitors who initially visited the Web site from the major portal sites and who have an interest in sports. DecisionSupportServer can be used in conjunction with a variety of decision support applications from Business Objects and other

data warehousing vendors. In addition, customers with unique requirements can retain professional services from Engage or one of its system integration partners to customize the data warehouse.

Engage DecisionSupportServer is offered to customers under perpetual licenses or annual subscriptions with fees that vary based on the volume of visitor activity on the customer's sites. Engage customizes and operates DecisionSupportServer in-house for specific market segments and customer- specific analytic consulting engagements. The license fee for DecisionSupportServer typically ranges from $40,000 to more than $100,000.

Engage Knowledge Research Services. Engage plans to offer Engage Knowledge Research Services, consisting of custom analysis, research and consulting services that use information contained in Engage's profile database. Using this service, customers can obtain analysis of Web-wide user behavior to identify emerging trends.

Consulting, Maintenance and Support Services

Engage offers comprehensive services and product support to its customers. Engage's service and support organization, consisting of 46 service professionals as of April 30, 1999, assists customers in implementing, administering and maintaining Engage products and services.

Professional Services. Engage's team of service professionals provides customers with consulting services, project implementation and integration services and training. Engage's service professionals assist customers with strategic site assessments and deployment planning in order to optimize each customer's use of Engage products. These professionals also help customers implement Engage products and integrate them into the customer's existing technology infrastructure. Engage's professional services are generally billed at a daily rate for each consultant employed on a project.

Maintenance and Support Services. Engage provides maintenance and support services to customers pursuant to annual maintenance agreements. These services include software version updates and maintenance, as well as telephone and on- site support. Engage provides regular functional releases to its customers, as well as maintenance releases as needed. Engage offers a variety of support services, including "help desk" telephone support on a 14 hours per day, five days per week basis and a dedicated technical support Web site on a 24 hours per day, seven days per week basis. Engage's maintenance and support activities are supplemented by training programs for customers, including introductory training courses for new users and custom designed seminars for experienced users of Engage products.

Engage's annual fees for maintenance and support services are based on a percentage of the list price for the customer's software license fee, typically ranging from 18% to 25%. To date, substantially all of Engage's customers have entered into maintenance contracts.

Customers

Engage licenses its software products to Web publishers and merchants for use at their Web sites. Engage also offers customers outsourced services through its AdBureau advertising management service and its I/PRO NetLine traffic measurement service. Engage had approximately 300 customers as of April 30, 1999, including the following customers:

Advertising Management Solutions (1)	Profiling Solutions (2)	Web Site Traffic Measurement, Auditing and Analysis (3)
	Digital Entertainment Network	Chicago Tribune
1+1	Drug Emporium	Dell
AdSmart	Lycos	Macromedia
CNET	Magnitude Network	MediaOne
Lycos	National Computer Board (Singapore)	News Corporation (Fox)
LookSmart	Net.genesis	Quokka Sports
Microsoft	Planet Direct	Road Runner
Naspers	Theglobe.com	Weather.com
National Westminster Bank (XCo)	TicketMaster	WhoWhere
Sumitomo	Ulysses (MusicLand)	USA Today
WebTV		

(1) Includes customers of Engage as of April 30, 1999 that each accounted for an aggregate of $75,000 or more of revenue to Engage during the period from the beginning fiscal 1998 through the end of the first nine months of fiscal 1999.
(2) Includes customers of Engage as of April 30, 1999 that each accounted for an aggregate of $20,000 or more of revenue to Engage during the period from the beginning fiscal 1998 through the end of the first nine months of fiscal 1999.
(3) Includes customers of Engage as of April 30, 1999 that each accounted for an aggregate of $63,000 or more of revenue to Engage in calendar year 1998.

Customer Case Studies

The following customer case studies illustrate the selection, use and implementation of Engage products and services by three customers that Engage believes represent typical customers for its products.

Ancestry.com -- Profile Based Advertising and Analysis

Ancestry.com, an affiliate of CMGI, is a comprehensive genealogy resource on the Web, providing users with a large online repository of family and historic data. Site visitors have free access to genealogical records online. For a nominal fee, subscribers have complete access to the site's 1,500 databases.

Ancestry.com needed a set of integrated tools for the analysis of Web traffic collected at its site, user profiling and ad management to enhance the online experience for site visitors and to increase the effectiveness of promotions and advertising at its site. Specifically, the site wanted to understand more about its visitors, convert unregistered visitors to registered visitors and deliver personalized advertising to its online audience. Ancestry.com installed Engage Accipiter AdManager advertising management software to serve online ads and intends to deliver personalized offers through Engage ProfileServer. To expand its targeting capabilities beyond site-specific customer information, the site has also subscribed to the Engage Knowledge data service. In addition, Ancestry.com is installing Engage DecisionSupportServer, Engage's strategic market intelligence tool, to analyze the collected local profile data, and uses the Nielsen I/PRO I/Audit services for third-party verification of its site traffic data.

Through the use of Engage products and services, Ancestry.com will own a growing proprietary database of local user profiles which it expects will enable it to better understand the behavioral patterns of its online visitors. Ancestry.com plans to use the Engage Knowledge data service to deliver targeted advertising to its online audience.

Ticketmaster -- Profile Based Targeting of Electronic Commerce and Content

Ticketmaster Online is an automated ticketing services company. Ticketmaster uses Engage ProfileServer to personalize online retailing based on declared profiles and to target advertising based on both declared and observed behavior online. In July 1998, Ticketmaster was seeking to address the personalization requirements of its MyTicketmaster site, and needed a solution that permitted profiles to drive other vendors' personalization applications. Ticketmaster selected Engage because it offered application-independent profiling technology that could meet its targeting requirements. Engage worked with Ticketmaster to integrate a third party's content management application with Engage's ProfileServer software. Ticketmaster currently

has plans to integrate another third party's advertising managment system. Engage ProfileServer software captures registration details at the MyTicketmaster area of the site and the clickstream behavior of visitors throughout its site. Engage ProfileServer creates user profiles based on declared and behavior data and maintains them in a centralized proprietary repository for visitor data. In addition, Ticketmaster installed Engage's DecisionSupportServer strategic market intelligence tool to analyze the collected data.

With its growing proprietary database of local user profiles, Ticketmaster expects to be able to enhance the online experience of its repeat site visitors by recommending events and providing customized offers that appeal to them individually, thereby increasing the revenue potential of its site.

Weather.com -- Web Site Traffic Measurement, Auditing and Analysis

Weather.com is the online arm of The Weather Channel. Weather.com uses I/PRO NetLine to increase advertising revenue, to make resource allocation decisions and to drive strategic partnerships. By understanding the total circulation of different areas of the site, weather.com is able to charge a premium for high traffic areas. I/PRO NetLine reports user requests for weather information by zip codes allowing weather.com to sell these impressions as highly targeted advertising opportunities at a premium. I/PRO NetLine's ability to report activity at the most detailed level facilitates resource allocation decisions by allowing weather.com to understand the resources required to maintain different parts of its site and the revenue each part generates. Weather.com also uses I/PRO NetLine to help assess the opportunities for marketing relationships that will increase traffic at its site and to monitor the performance of these arrangements on an ongoing basis.

Weather.com also subscribes to the monthly Nielsen I/PRO I/Audit. The audit report is used in sales presentations to existing and new advertisers to prove traffic volumes and campaign results.

Sales and Marketing

United States

Our sales and marketing strategy in the United States is to sell:

. directly to prominent Web publishers, large advertisers and Web site networks;

. through original equipment manufacturer, reseller and co-marketing arrangements to reach other customers; and

. through Web design and systems integration firms.

As of April 30, 1999, our sales and marketing organization consisted of 66 employees. Our field sales organization is supported by sales representatives and systems engineers located throughout the United States. Sales representatives handle incoming calls, help generate qualified leads and generally advance the sales process. Systems engineers provide comprehensive pre-sales technical services and support, including creating and delivering technical and architectural presentations, product demonstrations and product training, as well as post-sales telephone support, problem escalation management, patch distribution and publication of technical notes. Our sales and marketing employees are located in Andover, Massachusetts; Raleigh, North Carolina; Redwood City, California; and San Francisco, California.

The sales teams for our Accipiter ad management systems and I/PRO services are organized as dedicated groups focused on sales in specific geographic regions. A subset of the sales force for Engage Knowledge and Engage profiling products are targeted to specific industry groups, thereby enabling them to develop an in-depth understanding of the evolving needs of a particular industry and the Web publishers, advertising networks and Web sites focused on that industry. In addition, each sales force identifies cross-selling opportunities for other Engage products.

An important element of our sales strategy is to form business relationships with third parties to assist us in marketing and selling our

products. We will seek to enter into original equipment manufacturer relationships that permit us to embed our software products within products sold by other vendors, such as e-commerce and Web serving software and hardware systems. In addition, some of our indirect sales channels will consist of either reseller arrangements, in which our partner resells and possibly customizes our products, or co-marketing arrangements, in which we will work together with our partner to promote and generate sales referrals for each others' respective products. We also expect to develop relationships with Internet systems integrators who often recommend advertising and marketing management and other Internet solutions to their clients as part of their design, procurement and deployment work.

To support our sales efforts and actively promote the Engage brand, we conduct comprehensive marketing programs, including public relations, print advertisements, online advertisements, seminars, trade shows and ongoing customer communications programs.

International

We maintain a sales office in London and expect to open an additional office in Germany in 1999. We intend to expand our operations outside the United States primarily by partnering with locally-based third parties, including entering into joint ventures and distribution arrangements. We have formed a joint venture for the Japanese market with Sumitomo Corporation. As part of this joint venture, Sumitomo markets a Japanese language version of Engage software products and the Engage Knowledge data service throughout Japan.

Privacy

The Web offers the potential for privacy by allowing parties to communicate one-to-one without knowing each others' identity. However, Web users are increasingly concerned about privacy and the ability of third parties to gather personal data about them from their activities on the Web. For this reason, the Engage Knowledge global database of profiles does not store personal information of individual users such as name, home or e-mail address, IP address or domain name.

We maintain this level of privacy through a proprietary methodology known as "dual blind" identification. We assign an anonymous numerical identifier to each Web visitor and match this "blind" identifier only with information relating to online usage of a specific computer and do not store or otherwise use any personally identifying information. This identifier is currently stored as a browser cookie on the Web user's computer. Each Web visitor also is assigned a different identifier for each Engage-enabled Web site visited. This technique is known as "dual blind" identification because a Web site does not have access to the Engage Knowledge identifier and cannot correlate the information it may have with information from other Web sites. Conversely, we do not maintain any information identifying particular users that a Web site may have correlated with a visitor's local Web site identifier.

We also protect Web user privacy by contractually prohibiting Web sites subscribing to Engage Knowledge from using global profiles other than for the purpose of tailoring the experience of the visitor. Customers may not store the information, correlate it to personal information or use it to try to infer the physical identity of the visitor. In addition, since October 1998, Engage has required all contributors to Engage Knowledge to post a privacy policy statement on their Web sites disclosing that the site provides non-personally identifiable information to Engage. The policy statement must include a link to the Engage Web site where a Web user may opt out of the Engage Knowledge database by clicking on a link that automatically replaces the Engage Knowledge identifier on the user's computer. We believe that these protections and our dual blind identification technology are essential to allow sites to responsibly use global anonymous profiles for their own enterprise applications.

We actively participate in the development of privacy standards for the Internet and are a key contributor to industry groups that are developing industry standards for privacy. For example, we are a co-author of several of the specifications of the World Wide Web Consortium's Platform for Privacy Preferences Project, supported by AOL/Netscape, AT&T, IBM, Microsoft and others, which seeks to

develop an industry standard that will allow Web users to express their privacy preferences about the type and amount of information they are willing to share with Web applications. We believe our products will support the standards that are ultimately produced by this project. We have also authored a proposed protocol for the distribution of privacy labels for Web cookies as part of privacy standards developed by the Internet Engineering Task Force. We are a participant on the board of advisors of TRUSTe, of which we are a corporate sponsor. TRUSTe is a non-profit organization with the goal of promoting the adoption of fair information practices on the Web through a program which permits Web sites to display a seal representing compliance with TRUSTe privacy guidelines. Engage is also a member of the Online Privacy Alliance, which is an organization dedicated to improving the protection of individuals' privacy online through self regulatory efforts. We actively monitor proposed privacy laws and regulations and seek to comply with all applicable privacy requirements, both in the United States and throughout the world.

Operating Infrastructure

Engage's operating infrastructure has been designed to support the combined volumes of its largest Web site customers. Engage's data center operations are provided by NaviSite, an affiliate of CMGI, and are located in Andover, Massachusetts. Engage's infrastructure is designed for maximum reliability, including redundant network access, backup power pools and advanced network security. NaviSite provides comprehensive facilities management services, including monitoring and support 24 hours per day, seven days per week.

Engage operations are run by a variety of Sun Enterprise servers of various sizes to support its AdBureau and Engage Knowledge operations. All of Engage's production data is archived nightly to offline, offsite storage.

NaviSite's facilities are powered by multiple uninterruptible power supplies and contain smoke and heat detection, fire suppression, fluid detection and other disaster protection systems. Engage's data center operations are controlled using strict password management and physical security measures.

Intellectual Property

We have filed for patents covering our profiling algorithm and our dual- blind methodology for protecting end-user privacy. The profiling algorithm patent application covers the process and algorithm for creating user interest profiles from behavioral data. The dual-blind methodology patent application covers the process of identifying visitors uniquely at each Web site while maintaining a central database of cross-referenceable identifiers and allowing Web sites to access globally-derived data only via their local identifier. There can be no assurance that any of our patent applications will be granted. Even if they are granted, these patents may be successfully challenged by others or invalidated.

The Engage Knowledge database contains detailed information about millions of Web users. We believe we have rights to this database's entire data content, all records and all derived information from the database as a whole, all updating routines and quality assurance processes and all underlying data warehousing technology. However, there can be no assurance that any patent, trade secret or other intellectual property protection will be available for such information.

We rely upon a combination of patent, trade secret, copyright and trademark laws to protect our intellectual property. We also limit access to and distribution of our proprietary information. However, the steps we take to protect our intellectual property may not be adequate to deter misappropriation of our proprietary information. In addition, we may be unable to detect unauthorized uses of and take appropriate steps to enforce our intellectual property rights.

Although we believe that our services and products do not infringe on the intellectual property rights of others, we are subject to the risk that such a claim may be asserted against us in the future.

Competition

The market for Internet marketing solutions, including consumer profiling, online advertising services and systems, and Web site

traffic analysis is new, rapidly evolving and intensely competitive. Engage expects competition to increase both from existing competitors and new market entrants for various components of its services. Engage competes primarily on the basis of its product features and performance, such as its scalable, application-independent technology and the anonymity and quality of its global database of profiles, level of service and, to a lesser extent, on price.

Profiling Solutions

Engage competes directly with providers of profiling technology, such as Personify, and indirectly with applications that include more limited profiling capability integrated into their solution, such as BroadVision and Vignette. NetGravity, through a partnership with Aptex and MatchLogic, and businesses that offer cash or other incentives to users to voluntarily provide profile data have indicated their intent to compete in the global profiling solutions market. Engage also competes with companies such as DoubleClick and MatchLogic that have the ability to aggregate large quantities of customer behavior data across the Web.

Online Advertising Systems and Services

The primary competitors to Engage's Accipiter AdManager software are providers of ad serving systems, such as NetGravity and Real Media. In the outsourced ad serving market, Engage's Accipiter AdBureau service competes with providers of ad serving services, such as those offered by Adforce and DoubleClick.

Web Site Traffic Measurement, Auditing and Analysis

The primary competitors for I/PRO's NetLine Web measurement service and the Engage DecisionSupportServer product are companies offering outsourced solutions or software solutions, such as Accrue, Andromedia, net.Genesis and WebTrends. Nielsen I/PRO I/Audit service competes with auditing services from ABC Interactive, BPA and PricewaterhouseCoopers.

Many of Engage's current competitors, as well as a number of potential new competitors, have longer operating histories, greater name recognition and substantially greater financial, technical and marketing resources than Engage. Engage's current and potential competitors also may have more extensive customer bases and larger proprietary databases. In addition, current and potential competitors have established or may establish cooperative relationships among themselves or with third parties to more effectively distribute their products or to enhance their product and service offerings.

In addition to these current and potential commercial competitors, Engage also faces competition from the internal capabilities of some potential customers. Some of the largest Web publishers use internally developed interactive marketing solutions rather than the commercial solutions offered by Engage and its competitors. There can be no assurance that Engage will be able to compete successfully with these internally developed solutions.

Increased competition may result in price reductions, reduced gross margins and loss of market share, any of which could have a material adverse effect on Engage's business, financial condition and results of operations. There can be no assurance that Engage will be able to compete successfully against existing or potential competitors or that competitive pressures will not have a material adverse effect on Engage's business, financial condition and results of operations.

Employees

As of April 30, 1999, Engage had 209 employees and 40 contractors. Employees included 57 in development, 63 in customer support and operations, 66 in selling and marketing, and 23 in administration. Of these, 203 employees were located in the United States and 6 in Europe. Included in the 40 contractors are 11 offshore contract developers in India.

Engage believes that its future success is dependent on attracting and retaining highly skilled engineering, sales and marketing, and

The Conditions and Consequences of Profiling in Commercial and Governmental Settings

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Abstract: The results of profiling bring individuals' civil liberties and privacy into conflict with apparently legitimate applications of data collection, manipulation and filtering. This paper considers certain aspects of the information environment that enable the accession, collection, collation and analysis of large databases containing personal information from public and private sources. It describes some of the current types of profiling in both commercial and governmental settings and the stated purpose of such activities. Some implications and consequences of such collection, manipulation and analyses are then presented.

I. Introduction

The problem of enabling access to knowledge through information systems predates most technologically based information delivery systems [1],[2]. The accelerating change in the technological environment may do no more than create or enable opportunities for applying methods and strategies that were already in place but could not be applied with ease or rapidity. Yet the impact of such systems, when they enhance the application of certain information access, collection and analysis strategies can be considerable, as can be illustrated in the case of contemporary profiling techniques and strategies that analyze large electronic databases of personal information.

Profiling has been defined as a "technique whereby a set of characteristics of a particular class of person is inferred from past experience, and data-holdings are then searched for individuals with a close fit to that set of characteristics" [3] It is a process that uses raw data in the form of information about individuals which is classified, sorted and scored and which is then compared to a model or profile. The model contains a target set of personal characteristics. Accompanying that model may be a system of scoring or ranking of the relative importance of the profile characteristics individually or in relation to each other. The profile may represent a positive image, such as a potential customer or a good credit risk, or may represent a model of a undesired image, such as a potential criminal or a poor insurance risk.

Profiling may be triggered by a transaction, such as an application for credit or for insurance; by an incident, such as a crime; or as a matter of procedure, such as in target marketing practices. The latter is an example of file-analysis or data mining while the first two examples are focused on screening or filtering.

Strategies for profiling potential criminals or potential customers include pattern recognition, classification, sorting and scoring methodologies. When applying such strategies was a labor-intensive endeavor, the cost and the time needed to produce profiles acted as a damper on widespread profiling activities. Profiling was either performed on smaller populations or it was accomplished by using either less complex methods or fewer variables, or both. Common forms of profiling that predate technology based information delivery systems are risk analysis performed by insurance companies and criminal behavior profiling by law enforcement agencies.

In contrast, today it is relatively easy to obtain large databases of data from database vendors and from public agencies, combine these databases and manipulate their content. Profiling has become a commonplace strategy in criminal investigations, targeted marketing, and business intelligence. Currently, profiling is largely performed by combining and matching data in large electronic databases and applying classification, sorting and scoring techniques to raw data to extract meaningful patterns. In some cases, these patterns are used to determine the model profile; in other cases the model profile already exists. The profile is then compared to target populations or other raw data using algorithms that apply statistical or analytical pattern extraction methods. Techniques that are used in profiling may include statistical data-mining techniques, decision tree analysis, artificial intelligence,

Although these techniques are sometimes used for profiling archived legacy data, for the most part, the primary value is in the predictive applications that involve the comparison of a prototype set of characteristics to individuals within a population. Profiling is used in both the private and public sector.

II. Information and Public Contexts

The ability of organizations to gather data, exchange it, combine it with other data and analyze it is facilitated by the current information environment. An important factor in creating an informational climate that fosters the aggregation of personal data into databases and the distribution of that data is the limited nature of privacy protection that exists in the United States. Our Constitution

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does not explicitly mention privacy as a protected right. Therefore, privacy rights are grounded in state constitutions, federal and state statutes, and in judicial interpretations.[4, p. 13].

A. A Panoptic View

Such conditions make fertile ground for a system of power described by Gandy as the "panoptic sort." This power system is one which sees profiling as the inevitable outgrowth of an underlying system of "complex technology that involves the collection, processing, and sharing of information about individuals and groups that is generated through their daily lives as citizens, employees and consumers and is used to coordinate and control their access to the goods and services that define life in the modern capitalist economy." The panoptic sort focuses on three functions "identification, classification and assessment." [5, p.15]. These three functions are essentially the three main processes involved in generating profiles from collected data.

1) Panoptic profiling: Examples of profiling that are practiced by government agencies in the United States include the Federal Aviation Administration (FAA) profiling of airline passengers to detect potential terrorists. The Internal Revenue Service (IRS) profiles taxpayers in an effort to identify potential tax underpayment. The Federal Bureau of Investigation (FBI) profiles criminals. State and local governments use profiling to identify community needs and police deployment. All of these practices seem reasonable constructive applications of a powerful technological process. But the results are not always quite as reasonable.

The FAA will require the installation of Computer-Assisted Passenger Screening (CAPS) systems in all major U.S. airline terminals during the current year. A security system intended to help identify potential terrorists, it was first recommended for use after the explosion of TWA flight 800 in July 1996. From the inception of its pilot stages in 1997 and as it is being deployed currently, the program is being roundly criticized for its discriminatory practices, as disproportionately high numbers of people of color have been detained [6]. Certain local law enforcement agencies use profiling strategies that have had similar results. A notorious example was the use of profiling by some police officers in Maryland. Young African-American drivers have been stopped along highways in disproportionate numbers. Claims are being made by the community that there appear to be no other apparent reasons for such intrusions other than D-W-B, "driving while black" [7].

Quasi-governmental organizations collect personal data, as well. E-Z Pass, an automated vehicle identification (AVI) system used by the Triborough Bridge and Tunnel Authority and other highway authorities in the New York City metropolitan area, allows expedited passage through toll booths that records usage and bills the usage to the customer's credit card. The monthly statement lists the time, date and location of each toll plaza through which the vehicle passes. Despite reassurances by the Bridge and Tunnel Authority, many users feel vaguely uneasy about the personal information that is collected by the chips in E-Z Pass vehicle tags.

2) Monitoring the Panopticon: Political thinkers and political organizations, from every location in the political spectrum in the United States, have concerned themselves with the issue of building large databases of personal information and with the consequences of profiling. For example, the American Civil Liberties Union, a non-profit organization whose name includes its stated purpose, monitors several issues in this sphere. The ACLU has a program called "Take Back Your Data", whose main focus seems to be to raise the awareness of individuals as to their privacy rights[8]. Among the many resources it provides in connection with this program, are informational pamphlets on issues of data protection and privacy and a pocket guide that specifically itemizes when it is and is not necessary for an individual to reveal his social security number. In addition to this campaign, the ACLU has been monitoring the FAA's practice of profiling airline passengers to reduce air terrorism.

B. Dissemination and Disclosure

No doubt, it is possible to build systems that will surveill and classify individuals. But, it does not necessarily follow that the purpose of *all* large collections of information gathered by governments is to enable such sorting and surveillance. While recognizing that this is, in fact, what is occurring, it is also important to consider why and how it occurs — the conditions under which such data is aggregated and the purposes attached to its collection and aggregation.

In contrast to the dystopian "Big Brother" visions of a future, certain conditions suggest that not all public entities collect and disseminate data to fulfill an mission of control and surveillance

1) Dissemination: Many public agencies have, as their mission, or part of their mission, the dissemination and disclosure of collected information to the public. When governments use information technologies and technological delivery systems, their intent may only be to facilitate their mission. These missions are mostly concerned with administrative and management issues. The representatives of these public agencies may not consider larger issues relating to civil liberties and surveillance. The idea that their data could be utilized by others and combined with other data to build profiling systems may not always be obvious to them. While it is clear that some public agencies collect data

and shape profiles from that data, the panoptic model of public agencies is not the only one existent.

1)Unacknowledged consequences: In a study of the conceptualization and construction of a local government geographic information system (GIS), a contrary phenomenon emerged from the data. In the agencies that were studied, side by side with the plans for the construction of a sophisticated information system was the of denial of uncomfortable or problematic issues which were either dismissed as inconsequential or remained pointedly unacknowledged. This phenomenon was referred to as "unacknowledged consequences" and defined as the result of problems that remain "publicly undefined or are defined but dismissed as inconsequential" [9, p.145].

In this case study, the planners within the various agencies taking part in the construction of a cooperative multi-participant municipal GIS dismissed issues relating to the dissemination of databases of public information which had previously been accessible only as individual records but not as whole databases. The system was designed to address the needs of the local government and while there was a grudging recognition that once public information was assembled in one place, the databases would be then be available for public consumption; their approach was to claim that every request would be screened for its appropriateness.

Less than denial, "unacknowledgement" permits agendas to continue being implemented even when they contain problematic aspects. The planners of this system believed that information relating to criminal activities was the only information collected by the municipality which required pre-screening. The idea that the change in access implied a change in content — that the aggregation of the information into databases provided different content and context was foreign to their understanding and to their conceptualization of the purpose and nature of information within the system. This behavior enabled them to move on with their agenda, deal with the problems in hand and dismiss information policy issues as inconsequential. Kuhn recognized a similar phenomenon in the shaping of scientific paradigms.

> One of the things a scientific community acquires with a paradigm is a criterion for choosing problems that, while the paradigm is taken for granted, can be assumed to have solutions. To a great extent these are the only problems that the community will admit as scientific or encourage its members to undertake. Other problems, including many that had previously been standard, are rejected as metaphysical, as the concern of another discipline, or sometimes as just too problematic to be worth the time [10, p. 37]

No information system and no social system can address all problems that might present itself within its framework. And no framework can possibly address all problems equally. Some issues, as Kuhn indicated, may be so problematic that one would rather not acknowledge them publicly. The consequences of such thinking create the conditions and the opportunities for both public and commercial entities to gather detailed databases from local governments and combine them with other databases.

III. Commercial Profiling

In recent years, commercially available data mining software that does not require statisticians to deploy has put complex profiling strategies within the reach of many organizations in the private sector. Companies selling mass market consumer goods are among those who are interested in identifying market segments and tailoring their marketing strategies accordingly. Companies offering consumer credit are interested identifying and avoiding poor credit risks. A long term consequence of this is that targeted marketing may result in the consumer being less aware of his options in the marketplace.

Mass marketing informs us all of the availability of a product; targeted marketing approaches a selected group. By targeting a group, the marketer excludes other groups. This is less apparent to us than the discriminatory practices of governments, but it is no less discriminatory. An extreme example of this occurs when mail order catalogs containing identical products, but with different sets of prices, are sent to customers based on profiling. It is hard to garner the same kind of public concern for overpriced ladies garments sold to middle class women as one might for profiling-based discrimination by law enforcement officials, and rightfully so. Still, the results are the same — discrimination based on an abstract set of undisclosed criteria. Yet, in certain commercial settings, profiling may be an integral part of the business. Long before the technology that currently exists enabled mass profiling, insurance companies had profiled their potential customers.

A. Institutionalized profiling

Profiling, in the form of risk analysis and management, is the basic strategy of underwriters in the insurance industry. Underwriters make predictions about expected losses and risks and based on these predictions, insurance is sold or denied. They perform risk analyses to determine insurability and to set levels of premiums. Risk analysis involves calculating the chances that various occurrences will happen; whether it is mortality, disease, accidents, or acts of nature.

Some of the information that is used in the process is external information purchased from data collectors and statistical agencies. Much of the information used to make these predictions are drawn from internal sources; experiences with current or former customers.

In addition to collecting information about customers for **underwriting** purposes, insurers also collect information about their customers when they are processing claims. This information, much of which is confidential, may be sought, in turn, by others. Thus, insurance companies find themselves in the unenviable position of being concerned with privacy rights of their customers in certain situations — such as those which involve medical records [11] — and with their desire to collect as much information about current or potential customers in other situations — such as driving records of potential automobile insurance customers. [12].

B. Trends

It is apparent that there is a trend towards the erosion of privacy and an increase in surveillance as a direct result of the collection of personal data and the resultant profiling in governmental and commercial settings. The ultimate form of target marketing is mass one-to-one marketing, which is currently being explored on the Web. [13] an apparent contradiction of terms, mass one-to-one marketing is the ultimate profiling where the marketing to one customer can be an iterative interactive and reactive process that changes as the needs or interests of the customer change.

An obvious example of such experimentation can be seen when a search is entered by a consumer using a commercial search engine with banner advertisements. Instead of cycling through a variety of mass market advertisements, when the search results are returned, the banner advertisement at the top of the web page of results reflects the content of the individual's search. One-to-one mass surveillance can operate on a similar level. By combining spending patterns and travel-related data stream such as AVI information individuals' daily activity patterns may be determined.

There are, however, trends that reflect a counterbalancing influence. Consumers are aware of some of the uses of their personal data and are worried about surveillance issues. In a study of online users, 76% of users expressed concern over sites monitoring their browsing on the Internet and in another study 40% claimed to have provided false information at least once while registering at a Web site [14].

In response to growing objections regarding the collection of profile data over the Internet in the form of registration data, cookies, web page view or usage logs, and other interactive forms of personal data collection in connection with Web site visits and electronic commerce over the Internet, various protocols have been developed. A non-profit organization called TRUSTe has developed an approach to privacy and disclosure issues for organizations conducting business over the Internet. A company that registers with TRUSTe can place its logo on its web pages to indicate that the company complies with TRUSTe's licensing program which requires participating Web sites to disclose their online information gathering and dissemination practices [15]. A protocol under development is Platform for Privacy Preferences Project (P3P) aims to set protocols for personal data handling on the web through explicit standards of practice relating to the access, collection, use, transfer and release of personal data [16]. Already in use is another developing protocol — OPS, Open Profiling Standards.

Not all of the activity concerning privacy rights in the commercial sector is Web-based. As consumers become increasingly aware of how their data is used, credit card companies and agencies have responded to their customers' by providing detailed disclosure notices indicating how data will be used and, at the same time, providing options to the consumer should she wish to prevent further distribution of her personal data. American Express, which apparently sells every morsel it collects now publishes details of what data it uses and discloses, in a general sense, some of its profiling practices. The privacy statement in its retail agreement, revised in April 1998, reads, in part, as follows:

> We may use information you have provided to us on your initial application and in surveys, information derived from how you use the Card and information from external sources, including consumer reports, for marketing activities (including mailing lists), by us and our affiliates. We may also use information from how you use the Card and non-credit information available from public sources to develop mailing lists which are used by companies with whom we work to develop offers you may receive through the mail [17].

The agreement then lists a telephone number that can be called so that its customers may remove their names from such lists. This permits the customer to control the profiling and dissemination of personal information closer to its source, in this instance. In other situations, a consumer must wait until a solicitation is made by mail or phone before he can ask various direct marketing clearinghouses to remove his name from a mailing list or a telemarketing list.

The attempts at reckoning with individuals' privacy needs both by consumer credit companies and by the electronic commerce community cause one to speculate that perhaps, in the end, commercial concern over the potential loss of consumer confidence may prompt solutions to privacy and civil liberties issues in the private sector more promptly than legislation.

IV. The Information Environment

Among the problems inherent in popular mechanistic or technologically deterministic views of organic structures like information systems and information flow, is a dismissal of the complexity of the cultural and organizational context within which any information system is situated. This dismissal permits for presumptions about the nature of information systems and, it would appear, it permits for presumptions about the content of these systems — the nature of information itself, the decisions that shape it, and the social world in which it is set. As a result, it may encourage a mythology about the uses and accessibility of information in the public sphere and, in doing so, may limit the vision of those who construct such systems [18],[19]. One of these myths that may be playing out in our environment is the notion that all organizations are equally sophisticated consumers of data.

Keeping in mind the larger realm of data protection and privacy in which profiling takes place in the U.S., some insight may be gained by stepping back and examining the way information and information-bearing documents are conceptualized within this culture and how that affects the process and product of profiling.

A. Data As A Discrete Commodity

The shape of access and the shape of the profiling that is enabled through access is reflected in the social construction of the nature of information. Information and the technological environment that enables access to knowledge has often been looked upon as a commodity. This commodity may be presumed to have some worth, though its exact worth as a commodity may be debated [20],[21],[22],[23]. Regardless of the outcome, it is worth noting that the debate focuses on the worth of individual objects or collections of objects, *not the results of the relationship between these objects.* Yet, it would appear that it is the relationships among data that generate conditions and consequences discussed here and, perhaps by extension, define the real value information.

B. Documents As Discrete Entities

If data is seen as discrete commodities, it should not be surprising that, despite the obvious differences between paper and electronic formats, that documents are still considered discrete entities. Perhaps this is because technology and the products of technology can sometimes "recede into the background of everyday experience" [24, p.94] in a way that can make them transparent or invisible. This appears to be the case with electronically created and transmitted documents. Electronic formats have enabled fundamental changes in the nature of documents and our ability to access and retrieve them yet, somehow these changes are sometimes overlooked or minimized as peripheral to the issue in hand.

1) The immutable object: In the recent past, documents were immutable objects; they could not be changed without visible cross-outs, white-outs, retyping, etc. Analysis of information and extraction of patterns were labor intensive operations. However, when documents were put in an electronic environment, manipulating the text became a more fluid and less obvious process. Thus, when the text of these electronic documents were disassembled, word by word, and put in indexed files, the fundamental nature of the documents themselves changed.

2) The transformed document: when documents were immutable, one could not disassemble them through technological means. Any analysis of its contents that occurred took place outside the documents, not within them. However, just as the strategies of profiling are not new, so too the concept of deconstructed texts is not an entirely new phenomenon; it simply a more prevalent one.

For example, biblical concordances, which list the relative position of every word in the Bible, were constructed using pre-technological sweat-of-brow manpower. Concordances were arranged in key-word-out-of-context (KWOC) format long before computer programs were used to assemble them. However, the manpower necessary to analyze large bodies of text made such endeavors rare in the past while the ease and speed at which such tasks may be accomplished make indexed documents commonplace now.

Once documents could be easily disassembled into words with proximity and frequency relationships, their basic nature was altered irrevocably. This change did not only apply to documents being created at the present time but to older documents well. The result is that stable documents that were essentially flat files can now be converted into text that can be fragmented analyzed and reassembled using other governing principles than the ones used in their original creation. With that ability comes the ability to alter the function and potential utility of such documents.

Once information is in electronic form, it ceases to be a static; it becomes instead, dynamic and multidimensional in that discrete pieces of the documents may be removed, shifted, and reassembled with other parts of other documents. The information, by virtue of its setting, has changed its content. Even if there are no new relationships present in the reassembled data, there are implied relationships or possible relationships that can be created in the future because of its potential electronic aggregation with other data. The consequences that are implied in this change, however, have gone largely unremarked, except when considering the process of profiling and other data aggregation and analysis operations using data mining or other similar strategies.

C. Historical context:

One might consider why the image of whole documents persists, given the current electronic information-generating environment. Perhaps it is because the historical context in which knowledge-bearing information developed, the historical context in which data bearing information developed, and the context in which analytical tools developed, have converged only in the last generation. If we look back to the earliest collections of documents and to the patterns of information dissemination, we see one tradition emerging from education and scholarship; another emerging from the development of commerce and industry, and a third emerging from the military and defense agencies.

1)Preservation of knowledge: Until the advent of the printing press, the collection and preservation of knowledge-bearing information was carried out by wealthy individuals and by religious institutions. As a consequence of the invention of movable type, literacy became a social tool [25] and knowledge could be maintained across distance and time by the preservation of ideas and know-how in documentary form.

2) Information commerce: The industrial revolution brought with it differing needs for information. As industry and commerce expanded, systems of regulation and control were needed [26],[27]. Information, then was a part of the creation and regulation of products. Data streams of information were necessary to manage and control industrial systems and governments.

3) Text analysis: During World War II, machines were used to create and break code. During and after the war, the government supported the development of the precursors to the computer, as well as the early computers [28]. After the war, the United States government financed efforts to create machines that would enhance pattern matching of words in documents. With the advent of the computer, they redoubled their efforts. Information retrieval engines using pattern matching techniques were then used to construct proprietary and commercial databases. What had begun as a military application became an information solution for business, education and government.

4) The paper paradigm folds: Despite recent dramatic shifts in many organizations from traditional databases to intranet environments and despite the growth of individuals who use the Internet and build electronic documents for it, the paper paradigm — with the image of a database as a large document and the image of that document as indivisible in its content — may still be the underlying paradigm in thinking about access to information contained in a database. Of course, the power and the value in any text database is not so much the physical accessibility or replicability of the data as it is the accessibility in a form that allows for analysis. And, although we may sell database contents by the field or by the record and price its contents as piece-work, we mostly speak of databases as documents.

V. Conclusion

Many of us cling to the image of the database as whole document and many of us deny that our personal information and "our" databases could be used in a way that would not be what we would intend; despite a growing awareness that in our contemporary information environment neither of these beliefs is serviceable. But both of these beliefs are comfortable in that they permit us to continue to act in the same ways that we have acted in the past, relative to our understanding of information, information flow and information usage.

As suggested above, the consequences of profiling are considerable. The opportunities for both individual and group surveillance and control by governmental agencies are plentiful. Discrimination by commercial and governmental organizations can be enhanced by the predictive nature of profiling — enabling models and prototypes to become stereotypes of institutionalized prejudice. At its most personalized level, one-to-one marketing can narrow the scope of prejudicial action to be both intense and undetectable. Do-it-yourself profiling on this scale could result in the prevalence of identity theft and stalking.

Profiling in the same environments can lead to other, more positive consequences, as well. Governmental agencies could deploy community resources more equitably; targeting populations and predicting service needs more accurately. Consumers could, by defining their own profile, increase the likelihood that they would be aware of the products and services that would suit them best. In addition, the predictive nature of profiling could enable improved systems of distribution of goods and services, thus reducing waste and costs.

Technological systems that involves many organizations or entities as contributors and users seems to take on a life of its own that may be different from the intent of its designers and proposers. As the input becomes more diffused by its varied and sometimes differing sources, the system appears increasingly less like its original conception, less like the creation of any one organization or individual. Instead, it develops a dynamic and organic quality. Since profiling is practiced by many diverse groups in the public and private sector, it, like many other technological processes and products, will take on a shape of its own. Whether, in the United States, that shape becomes part of the repressive mechanism of the panoptic sort or the spearhead of a personal privacy movement is, as yet, unclear.

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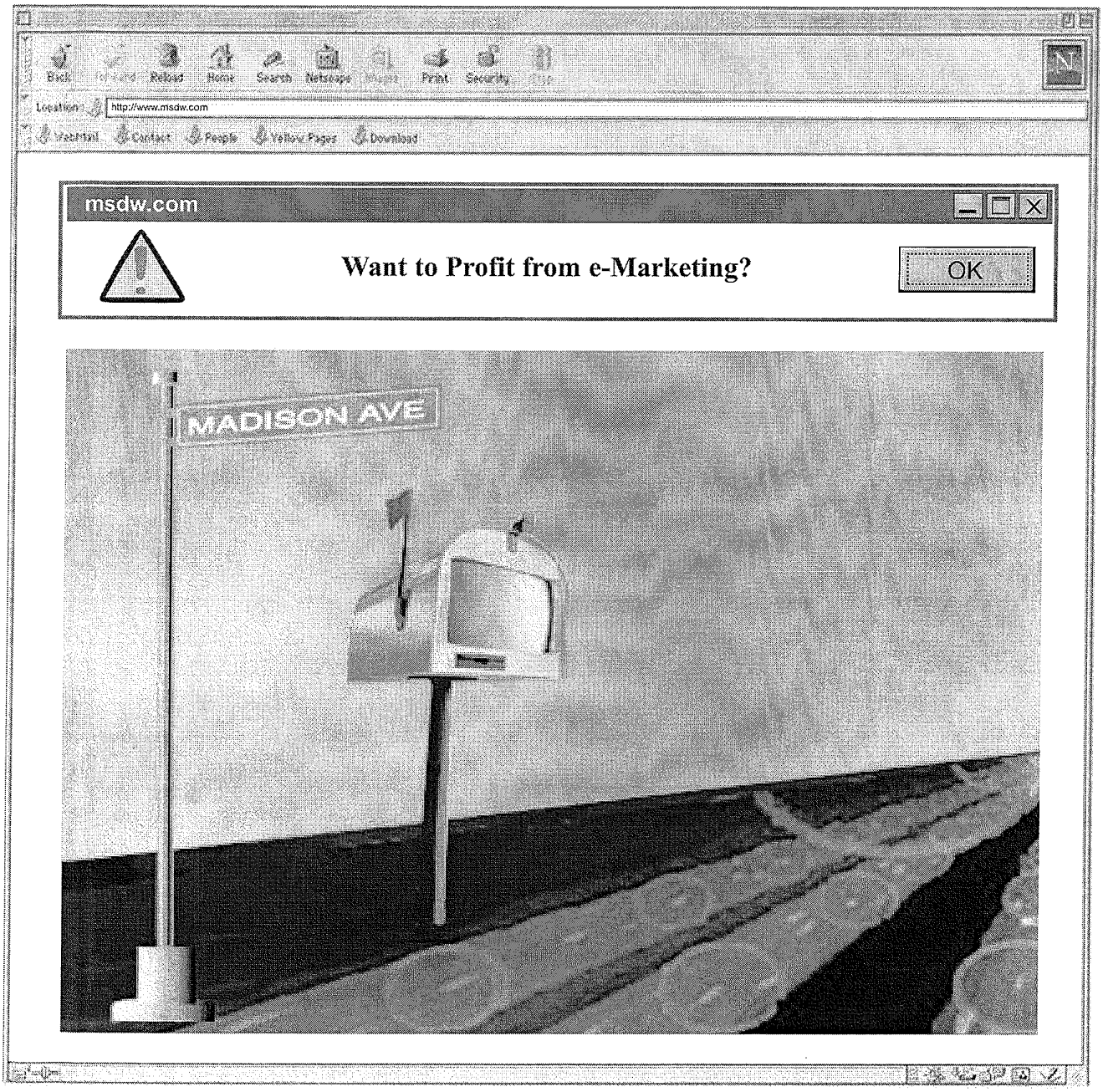
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MORGAN STANLEY DEAN WITTER

Equity Research
Global

May 2000

The e-Marketing Report



Morgan Stanley Dean Witter

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The Online Advertising Prize Fight — Round Two: Targeting

KEY POINTS:

- **Content targeting — as done on television — is the least valuable form of targeting for advertisers. Demographic targeting — as done in direct mail and some magazines — is more valuable.**
- **Behavioral targeting — now possible in real-time on the Internet — is the most valuable form of targeting to advertisers. The sources of the largest, most robust databases will likely be the winners.**
- **Companies are now trying to marry online and offline data to better target their messages and media to "the right person, at the right place, at the right time."**

Round Two of the Internet advertising battle is in the process of being played out. The key elements of this battle have already been established, however. Targeting, targeting, and more targeting is the key to Round Two.

Classical Targeting —
Targeting via Site Content

Targeting based on the content of a television show, a magazine, or an Internet site is what we will call elementary demographic targeting. This type of targeting has been done for years by television (based on the likely demographics of viewers of a particular show or channel), radio, magazines, and other forms of media. As such, it was a logical way for the Internet to develop; e.g., sites containing financial news would serve financial advertising.

Neoclassical Targeting —
Demographic Targeting via Registration

Web sites soon developed an enhanced form of targeting. Rather than assuming what type of user would show up, many sites have taken the next step to actually ask users about their interests through the use of registration questionnaires.

The information about the user is stored in the form of "cookies" that are imbedded in the browser and contain electronic codes that allow publishers to identify them. Each time a user comes back to a site on which they have previously registered, the site immediately determines what advertising that user will be most receptive to based on the initial questionnaire.

Generally, the incentive of greater access to a site's offerings is the carrot that is held out to encourage users to give up personal information in the form of a registration. Additionally, sites requiring passwords often ask users for information. The added value here is that users are able to have the site remember his/her password if they go through the registration. Any site that conducts commerce gains information on users. Each time a user purchases something, at the bare minimum, the site receives credit card, location, and product interest information.

The newest trend in gathering demographic information on users is via free Internet service registration. NetZero, Alta Vista, Excite, and other "Free ISPs" plan to gain all of their revenue from advertising (and any commerce that might occur on their sites). In return for receiving free Internet access, users are required to fill out a detailed questionnaire. This questionnaire allows advertisers to tailor their marketing to particularly receptive users.

There are many ways of obtaining demographic information on users, but it is all still demographic. Advertisers are only able to use statistics to forecast what type of ad a user with certain characteristics might be receptive to. The key tool for advertisers is behavioral data.

Credit card companies are the ultimate gatherers of behavioral targeting information.

New Age Targeting — Online Behavioral Profiling

Advertisers have known for some time that behavioral targeting (a.k.a. profiling) is vastly superior to simple demographic targeting. Knowledge of a consumer's past purchases, interests, likes/dislikes, and behavior in general allows an advertiser to target an ad much more effectively.

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Department stores have long kept track of consumers' past purchases. They are thus able to project what other types of products a consumer might be interested in and then send an appropriate coupon or sale offer. Credit card companies are the ultimate gatherers of behavioral targeting information. They maintain vast databases of cardholders' past transactions, and they sell lists of this data to advertisers.

The same type of behavioral model is forming on the Internet. Publishers and ad networks monitor the items that a consumer has expressed interest in or purchased on a site (or network of sites) in the past and target ads based on this information. The Internet can take it one step further than the offline world, however. For example, through a network of sites, an advertiser is able to serve an ad for a Toyota 4Runner to a user who is currently on the *New York Times*' Web site. Why is this important? Because that user was on Toyota's Web site several hours, or days, before and checked out that exact model of vehicle. No such ability exists offline. It's as if advertisers could see what pages of a catalog a consumer had dog-eared and then sent the consumer an ad for those exact products.

A network can track user behavior across its own network, but cannot do so once the consumer leaves to enter another network. For instance, Yahoo! cannot track a user's behavior once that individual enters the America Online network of sites. For this reason, the scale of the network is critical.

Future Targeting — On/Offline Behavioral

The future of Internet ad targeting may lie in combining online and offline behavioral data. Several Web networks have already formed relationships with, or purchased, offline database companies. AdForce has a relationship with Experion, which has an offline database of about 120 million households in North America; likewise, DoubleClick purchased Abacus Direct, a shared catalog database with information on over 90 million U.S. households. 24/7 Media has also formed an alliance to link online and offline data. These relationships will allow online advertisers to focus their ads with even more precision because they are receiving both on- and offline consumer behavior data. For example, if a consumer purchased a set of pots and pans through a catalog, s/he may receive an ad for a set of silverware when next going online.

The critical step in merging off- and online behavior is matching an offline identity with an online identity. This requires that a consumer who is in an offline database make an online purchase in such a manner that the offline and online data can be linked. This matching could be accomplished through a name, address, or some other uniquely identifying characteristic. **We believe that the size and richness of the database will be incredibly important going forward. Those with large, deep databases will be very attractive to advertisers.**

To date, none of the companies mentioned above have linked their online and offline data. DoubleClick announced plans to link its data, but soon withdrew these plans amid investigations by the Federal Trade Commission (FTC), the Michigan and New York Attorney Generals, and several class action lawsuits.

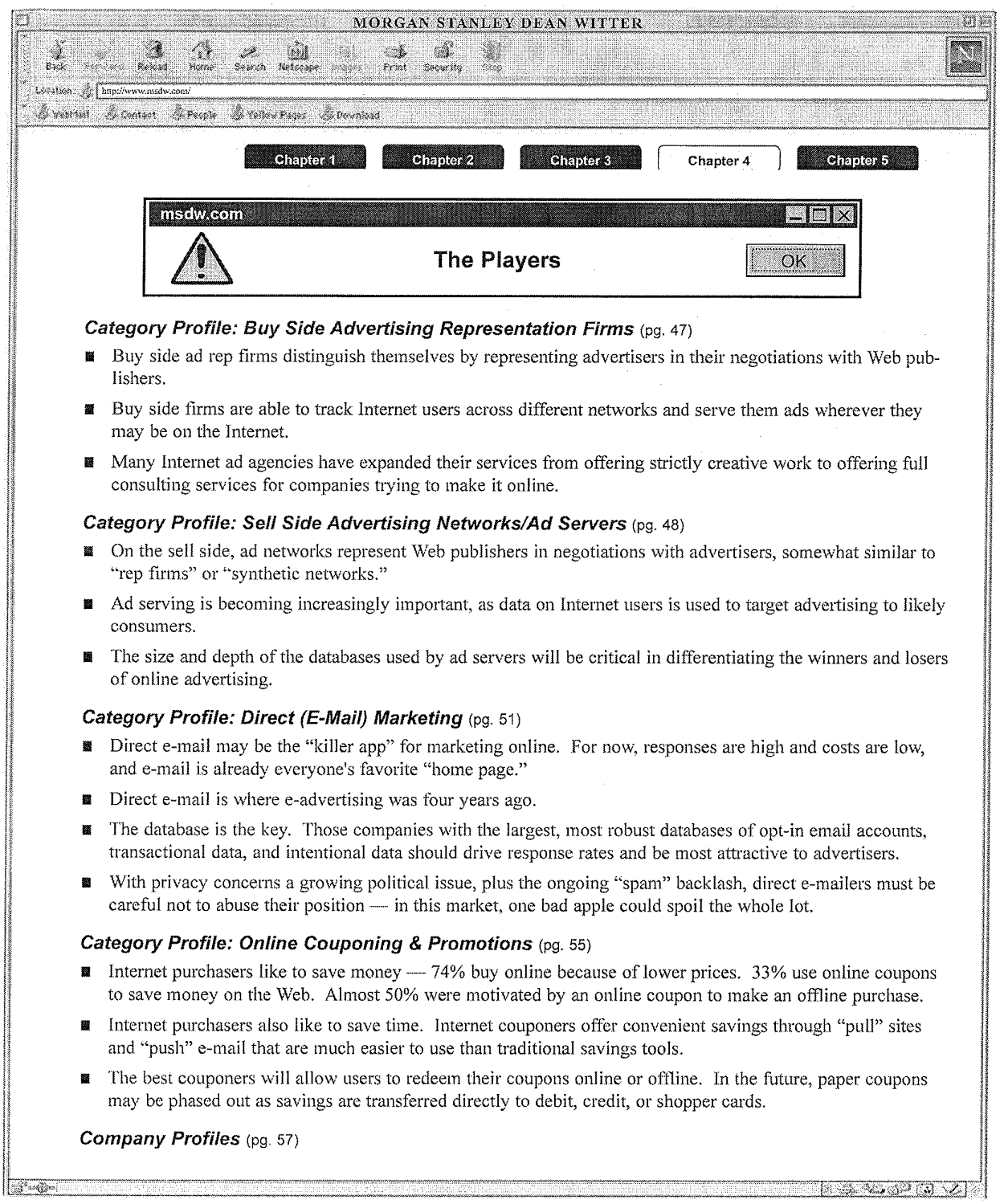
The Cookie File

A cookie is simply a text file. The cookie was invented in 1994 by Lou Montulli, a Netscape employee, as a means for Web sites to maintain a user's preferences. A unique identifier, it consists of numbers and letters. The sole purpose of the cookie is to act as an identifier for a browser. Web sites use cookies for just that purpose — to identify users on their sites. Cookies cannot pull information off of a user's hard drive.

The first time a user goes to a site, that site may place a cookie on the user's hard drive. This cookie is used to identify the user to the site. This allows for site customization (my Yahoo!), storage of a user's preferences (*The New York Times*), storage of payment information (Amazon), and targeted advertising.

Online advertising agencies also place a cookie on user's hard drives. These companies are then able to monitor the interaction of a user with their advertisements. Online agencies cannot monitor users across the entire Internet, they can only do this on their network of sites. By compiling data on users' interactions with advertisements and the content of the sites they visit online, agencies hope to be able to target more appropriate ads to that user and manage their frequency. Users can opt out of cookies by visiting the agency's Web site. Users can also set their browsers to reject all cookies, or to notify them when a site wants to place a cookie on their computer.

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Category Profile: Buy Side Advertising Representation Firms (pg. 47)

- Buy side ad rep firms distinguish themselves by representing advertisers in their negotiations with Web publishers.
- Buy side firms are able to track Internet users across different networks and serve them ads wherever they may be on the Internet.
- Many Internet ad agencies have expanded their services from offering strictly creative work to offering full consulting services for companies trying to make it online.

Category Profile: Sell Side Advertising Networks/Ad Servers (pg. 48)

- On the sell side, ad networks represent Web publishers in negotiations with advertisers, somewhat similar to "rep firms" or "synthetic networks."
- Ad serving is becoming increasingly important, as data on Internet users is used to target advertising to likely consumers.
- The size and depth of the databases used by ad servers will be critical in differentiating the winners and losers of online advertising.

Category Profile: Direct (E-Mail) Marketing (pg. 51)

- Direct e-mail may be the "killer app" for marketing online. For now, responses are high and costs are low, and e-mail is already everyone's favorite "home page."
- Direct e-mail is where e-advertising was four years ago.
- The database is the key. Those companies with the largest, most robust databases of opt-in email accounts, transactional data, and intentional data should drive response rates and be most attractive to advertisers.
- With privacy concerns a growing political issue, plus the ongoing "spam" backlash, direct e-mailers must be careful not to abuse their position — in this market, one bad apple could spoil the whole lot.

Category Profile: Online Couponing & Promotions (pg. 55)

- Internet purchasers like to save money — 74% buy online because of lower prices. 33% use online coupons to save money on the Web. Almost 50% were motivated by an online coupon to make an offline purchase.
- Internet purchasers also like to save time. Internet couponers offer convenient savings through "pull" sites and "push" e-mail that are much easier to use than traditional savings tools.
- The best couponers will allow users to redeem their coupons online or offline. In the future, paper coupons may be phased out as savings are transferred directly to debit, credit, or shopper cards.

Company Profiles (pg. 57)

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Category Profile: Buy-Side Advertising Representation Firms

KEY POINTS:

- **Buy-side ad rep firms distinguish themselves by representing advertisers in their negotiations with Web publishers.**
- **Buy-side firms are able to track Internet users across different networks and serve them ads wherever they may be on the Internet.**
- **Many Internet ad agencies have expanded their services from offering strictly creative work to offering full consulting services for companies trying to make it online.**

Sell Side vs. Buy Side

As in the offline media world, the online media business has both a buy side and a sell side. On the sell side, agencies and networks represent Web publishers in selling Internet ad inventory (the ad networks described earlier). It is the sell side's job to negotiate the best deal (i.e., most money) from advertisers for the publishers they represent. On the buy side, agencies try to get the best deal for their customers — the advertisers.

Sell-side ad networks can provide advertisers with access to only a limited number of sites — those in the network. For instance, DoubleClick cannot serve ads to or monitor users who are on AOL's sites. Thus, they are unaware of what ads a user has been served and how they have reacted. Nor can sell-side networks target advertisements to users who do not enter their network of sites.

Buy-side ad agents essentially produce a custom network for advertisers. This is possible because they represent *advertisers'* — not *publishers'* — interests in negotiations. Buy-side agencies are independent of any Web publisher or advertising network. Thus, they are able to focus on the needs of Internet advertisers, rather than Web sites that sell advertising or advertising networks representing sellers of Internet advertising.

Targeting

Targeting is based on data acquired from prior interactions with users. This comes from a user's interaction with the buy-side client's Web sites and from a user's responses to past advertisements. For instance, an Internet user who visits Jeep's Web site to look at the Jeep Wrangler could be served an advertisement for the Wrangler anywhere on the Web. Similarly, an Internet user who clicks through a Jeep ad to gain more information may be served a Jeep ad again.

Sell-side ad serving systems enable advertisers to control the frequency with which an ad is delivered — regardless of where the user sees the exposures. This is highly important, as it has been established that if a user is going to respond to an ad, it will be within the first several exposures. Except for branding value, additional exposures are wasted. If advertisers contract directly with publishers or sell-side ad networks (like DoubleClick, Engage, or 24/7 Media), they run the risk of wasting advertising, since publishers have no ability to control the frequency of ads outside their own networks. Sell-side ad shops track users at every exposure to a client's ad. They can thus control the frequency with which the user sees each ad. If a user has seen an ad three times on Yahoo!, then shows up on CNET, the company knows that s/he has already seen the ad, and will deliver a different creative at the fourth exposure.

Advertisers often design a sequence of ads intended to reinforce their brand, then request an action. Buy-side firms enable advertisers to determine the sequence in which they'd like users to see the ads, then execute this plan. The same goal cannot be guaranteed if advertisers contract directly with publishers or sell-side ad networks.

BUY-SIDE COMPETITORS:

- **Avenue A — AVEA**
- **DoubleClick — DCLK**
- **Engage — ENGA**
- **Mediaplex — MPLX**
- **24/7 Media — TFSM**

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Category Profile: Sell-Side Advertising Networks/Ad Servers

KEY POINTS:

- **On the sell side, ad networks represent Web publishers in negotiations with advertisers, somewhat similar to "rep firms" or "synthetic networks."**
- **Ad serving is becoming increasingly important, as data on Internet users is used to target advertising to likely consumers.**
- **The size and depth of the databases used by ad servers will be critical in differentiating the winners and losers of online advertising.**

Ad networks are basically groupings of sites that have banded together to present a united front when dealing with advertisers. In this way, they gain the benefits of a wide-reaching portal. Relatively obscure sites can bargain for media pricing from a position of strength when they are part of a network. Typically, ad networks conduct ad serving for their affiliated sites.

Ad serving is largely a technology job. When a user goes to a Web site, the site queries its ad-serving partner about which ads to deliver based on the user's profile. The ad-serving partner serves (sends) the selected ad back to the Web site. A few sites have chosen to do this on their own, but the vast majority outsource the serving job to third-party ad servers. We believe that as greater targeting ability is developed, third-party ad servers will be even more critical.

Today, 61% of sites use some combination of internal and external ad serving. We expect this number to continue to climb as more targeting comes online and more rich media is demanded by advertisers.

Tracking

Internet commerce trackers and marketers believe that every Internet transaction generates ten times as much information on consumers as an offline transaction. The good ad trackers are able to monitor this clickstream of data and assemble it into a user profile. With individual user profiles developed through clickstream tracking, targeters can better serve appropriate ads to consumers.

Tracking has been going on in the offline world for some time. Individual stores monitor consumers' purchases and try to target their specials to those consumers who may be interested. The online world takes tracking to a whole new level, particularly if the Internet bridges the online and offline data.

Data Is the Key!

For an advertisement to be targeted, there must be data on consumers behind it. The richer and more in-depth the data, the better the targeting. In general, data are divided into behavioral and demographic data, although geographic is also starting to enter the scene as local Internet advertising catches on. Behavioral data can be further broken into transactional and intent-to-purchase data.

- **Transactional Data**: The most important form of data is transactional data. A form of behavioral data, this is a history of what consumers have purchased in the past. Advertisers can then market complementary products to consumers with this information.

- **Intent to Purchase**: Data on a consumer's intent to purchase are nearly as important as the purchases themselves. Using this form of behavioral data, ad targeters are able to monitor what consumers have read about, requested more information about, or nearly purchased. With this information, they can offer special prices to consumers who turned back on a sale at the last moment because of the price or for other reasons.

- **Demographic**: Demographic data are based on a broad categorization of consumers. Ads are targeted at users based on their demographic group. For instance, males age 18–24 may receive football advertisements. Demographic-based advertising depends on broad assumptions, making it much less likely to generate a response than ads using behavioral data.

Targeting

Targeted advertising on the Internet is still in its initial stages. In our view, Internet advertisers are rich in data, but poor at using that data for targeting. We have di-

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Company Profile: Engage Technologies (ENGA)

Engage Technologies / Ticker: ENGA

Price as of 4/27/2000	$22.13
Market Capitalization ($MM)	2,392.91

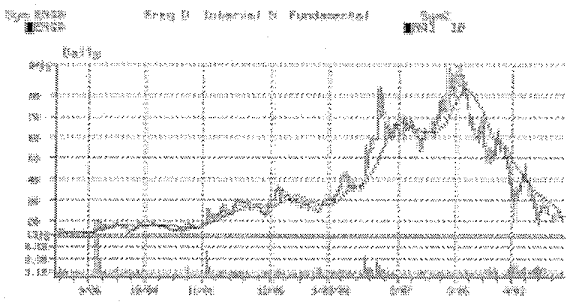
Table 30
Engage Offerings

Buy Side Advertising	✓	Direct E-mail	✓
Sell Side Advertising	✓	Online Couponing	
Ad Serving	✓	Promos/Sponsorships	

Engage Technologies is a provider of profile-based Internet marketing solutions. Engage is an approximately 87% owned subsidiary of CMGI. The company offers a range of products and services that enable Web publishers, advertisers and merchants to target the delivery of advertisements, content and e-commerce offerings to their audiences and to measure their effectiveness.

Engage has generated most of its revenue to date through sales of its local profiling and advertising management software and outsourced services, as well as its software and services for measuring and analyzing Web site traffic. Engage offers several services: 1) It operates the Flycast network of cost-per-click sites — advertisers pay only when their ads are clicked on, 2) it conducts profile-driven marketing for Web publishers, through its growing database of anonymous profiles, and 3) its AudienceNet offers profile-driven marketing for advertisers.

Table 31
Engage Technologies Stock Price Analysis



Source: ILX

Table 32
Engage Historical Financials

($ Millions, except EPS)	F1Q98	F2Q98	F3Q98	F4Q98	F1Q99	F2Q99	F3Q99	F4Q99	FY1997	FY1998	FY1999
Revenues	NA	2.2	1.6	2.7	4.7	7.0	8.3	12.8	NA	2.2	16.0
Sequential Growth	NA	NA	-28%	69%	77%	48%	18%	54%	NA	NA	NA
Year-over-Year Growth	NA	NA	NA	NA	NA	217%	423%	377%	NA	NA	623%
Cost of Goods Sold	NA	3.6	2.3	2.9	4.0	6.1	6.6	20.6	NA	3.6	15.3
Gross Margin	NA	-1.4	-0.7	-0.2	0.7	0.9	1.7	-7.9	NA	-1.4	0.7
Gross Margin as a % of Revenues	NA	-64%	-42%	-8%	15%	13%	20%	-62%	NA	-64%	5%
Operating Profit (Loss) (EBIT)	NA	(13.7)	(5.5)	(4.7)	NA	(10.8)	(10.5)	(28.2)	NA	(13.7)	(27.0)
Operating Margin	NA	-618%	-349%	-176%	NA	-154%	-127%	-221%	NA	-618%	-169%
Sequential Growth	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Year-over-Year Growth	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPS	NA	($0.83)	($0.17)	($0.15)	($0.31)	($0.26)	($0.22)	($0.52)	NA	($0.83)	($0.89)
Sequential Growth	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Year-over-Year Growth	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Source: FactSet Data

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Company Profile: 24/7 Media (TFSM)

24/7 Media / Ticker: TFSM

Price as of 4/27/2000	$17.88
Market Capitalization ($MM)	400.81

Table 69
24/7 Media Offerings

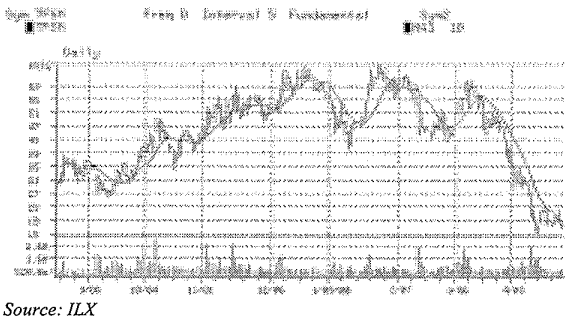
Buy Side Advertising	✓	**Direct E-mail**	✓
Sell Side Advertising	✓	**Online Couponing**	
Ad Serving	✓	**Promos/Sponsorships**	✓

24/7 Media is an Internet advertising and direct marketing firm that operates internationally. The company primarily generates revenue by representing Web publishers and selling advertisements and promotions for them. The company operates two ad networks, designed for different sized clients. 24/7 Media also conducts e-mail campaigns for advertisers.

24/7 Media's customized solutions allow advertisers and direct marketers to tailor their ad campaigns to reach desired audiences, while reducing costs, easing time pressures, and alleviating the need to purchase a series of ad campaigns from numerous Web sites. The company is increasing its ad targeting capabilities through the development of its Profilz database and proprietary ad serving technology.

24/7 Media has a cross-promotion agreement with ShopNow.com — 24/7 Media owns 15% of ShopNow.com. ShopNow.com provides e-commerce services, an online shopping network, creative design services, and product fulfillment to approximately 30,000 merchants.

Table 70
24/7 Media Stock Price Analysis



Source: ILX

Table 71
24/7 Media Historical Financials

($ Millions, except EPS)	F1Q98	F2Q98	F3Q98	F4Q98	F1Q99	F2Q99	F3Q99	F4Q99	FY1997	FY1998	FY1999
Revenues	1.2	4.0	5.8	9.6	11.5	17.2	24.3	37.1	3.1	20.9	90.0
Sequential Growth	NA	230%	46%	65%	20%	50%	42%	53%	NA	NA	NA
Year-over-Year Growth	NA	NA	NA	NA	851%	332%	319%	288%	NA	563%	331%
Cost of Goods Sold	1.3	4.7	6.5	9.3	11.1	15.2	22.0	26.4	1.7	16.1	65.7
Gross Margin	-0.1	-0.7	-0.7	0.3	0.4	2.0	2.4	10.7	1.5	4.7	24.3
Gross Margin as a % of Revenues	-7%	-18%	-13%	3%	3%	11%	10%	29%	47%	23%	27%
Operating Profit (Loss) (EBIT)	(2.2)	(4.9)	(6.0)	(6.7)	(7.2)	(7.1)	(11.7)	(14.8)	(4.2)	(25.7)	(43.1)
Operating Margin	-183%	-124%	-103%	-70%	-63%	-42%	-48%	-40%	-133%	-123%	-48%
Sequential Growth	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Year-over-Year Growth	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPS	($0.64)	($1.17)	($0.49)	($0.43)	($0.42)	($0.37)	($0.55)	($0.58)	($4.88)	($2.48)	($1.96)
Sequential Growth	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Year-over-Year Growth	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Source: FactSet Data

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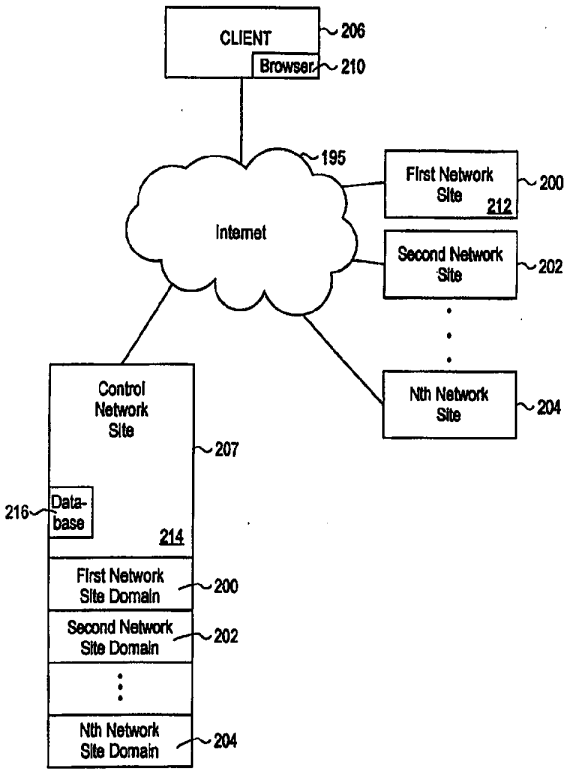
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(57) Abstract

An apparatus for identifying a client accessing a first network site utilizes a control site to maintain information relating to the client. To that end, in response to receipt of a request from the client to access the first network site, it is determined if the client includes a first site data block. If it is determined that the client does not include the first site data block, then the control site is controlled to produce a control site data block having both control site identification data and a client identifier. The control site data block then is transmitted from the control site to the client. In a similar manner, the client identifier is transmitted from the control site to the first network site. Upon receipt of the client identifier by the first network site, the first network site is controlled to transmit the first site data block to the client. The first site data block may have both the client identifier and first site identification data.



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APPARATUS AND METHOD FOR IDENTIFYING CLIENTS ACCESSING NETWORK SITES

FIELD OF THE INVENTION

The invention generally relates to computer networks and, more particularly, the invention relates to identifying and sharing information relating to computer devices accessing other computer devices in a computer network.

BACKGROUND OF THE INVENTION

The World Wide Web is a collection of servers connected to the Internet that utilize the Hypertext Transfer Protocol ("HTTP"). HTTP is a known application protocol that provides users with access to documents (*e.g.*, web pages at a web site) written in a standard mark-up page description language known as Hypertext Markup Language ("HTML"). HTTP is used to transmit HTML web pages between a remote computer (*e.g.*, a server) and a client computer in a form that is understandable to browser software (*e.g.*, Netscape Navigator™, available from Netscape Communications Corporation of Mountain View, California) executing on the client computer.

A web site can be customized to a specific user of a client computer (hereinafter "client") when information about that client is available to the site. For example, if a web site has access to a record indicating that a client is a sports fan, then the site may be specially configured to display a sports advertisement whenever that client accesses the site. Such functionality can encourage sports sponsors for the web site, consequently increasing site revenue.

To that end, the World Wide Web utilizes "cookies" to provide client information to a web site. As is known in the art, a cookie is a data block that is transmitted to a client browser by a web site. Upon receipt, the browser stores the cookie in a given manner such as, for example, in a text file called "cookie.txt." The cookie is transmitted back to the web site each time the browser requests access to a web page from the web site.

Among other things, cookies commonly include data identifying the client requesting access. When used in this manner, such data may be utilized to access a database at the web site to ascertain relatively large quantities of data about the client. Since the World Wide

Web includes many interconnected servers, many databases can have the same information relating to a single client. The art has responded to this unnecessary information duplication by locating information on shared central computer systems that may be accessed by two or more web sites. More particularly, whenever accessed by a client, any one of several web sites can access a single database on a shared central computer system to obtain stored information (if any) relating to the client. Information thus is shared by each web site that has access to the registration system.

One known method of implementing a shared central computer system as described above requires that the central computer system web site upload a cookie to a client while the client is accessing one of the member web sites (*i.e.*, while the client is in the member web site domain). One such system is the DOUBLE CLICK NETWORK™ system, available from DoubleClick Inc., of New York, New York. This type of system is ineffective, however, if a browser is configured to receive cookies from no other domains other than the domain in which the browser is currently accessing. For example, when accessing a web site in a domain "site.com", a browser configured to receive cookies from no more than one domain cannot receive cookies from a domain "registration.com." Use of a browser configured in such a manner undesirably eliminates the functionality of such a centralized client information system.

SUMMARY OF THE INVENTION

In accordance with one aspect of the invention, an apparatus for identifying a client accessing a first network site utilizes a control site to maintain information relating to the client. To that end, in response to receipt of a request from the client to access the first network site, it is determined if the client includes a first site data block. If it is determined that the client does not include the first site data block, then the control site is controlled to produce a control site data block having both control site identification data and a client identifier. The control site data block then is transmitted from the control site to the client. In a similar manner, the client identifier is transmitted from the control site to the first network site. Upon receipt of the client identifier by the first network site, the first network site is controlled to transmit the first site data block to the client. In preferred embodiments, the first

site data block has both the client identifier and first site identification data.

In some embodiments, the first network site is a World Wide Web site in a first network site domain, the client includes a browser, and the first site data block is a cookie. The client thus may be directed to the first network site domain to receive the cookie from the first network site. In other embodiments, the control site is a World Wide Web site in a control site domain, and the control site data block is a cookie. Similar to when receiving the cookie from the first network site, the client may be directed to the client site domain to receive the cookie from the control site. The client identifier may include an Internet protocol address ("IP address").

In another aspect of the invention, if it is determined that the client includes the first site data block, then a copy of the first site data block may be retrieved from the client. The client identifier then may be extracted from the first site data block, and transmitted from the first network site to the control site. The client identifier then may be used to retrieve client information from a storage medium associated with the control site. Once retrieved, the client information may be transmitted from the control site to the first network site.

In some embodiments of the invention, the first network site is in a first domain and the control site is in a control domain. In this embodiment, the first domain is distributed across at least two servers. Moreover, the control site is implemented on a server that also includes a portion of the distributed first network site. The control data block is transmitted when the client is in the control domain, and the first site data block is transmitted when the client is in the first domain.

In still other embodiments of the invention, if it is determined that the client includes the first site data block, then the first network site is controlled to retrieve a copy of the first site data block from the client. In this embodiment, however, the first site data block itself includes the client information. The client identifier and client identifier then may be extracted from the first site data block.

In other aspects of the invention, a second network site is in communication with the network and receives an access request from the client. In response to the access request, it is determined if the client includes a second site data block. If it is determined that the client does not include the second site data block, then a message with the client identifier is

transmitted to the control site. The control site then is controlled to utilize the identifier to locate client information. The located client information then is transmitted from the control site to the second network site.

In accordance with another aspect of the invention, an apparatus for identifying a client accessing a first network site also utilizes a control site to maintain information relating to the client. In this aspect of the invention, however, the apparatus generates messages that, when received by the first network site, enable certain processes to be performed by the first network site. To that end, the control site receives a first message from the first network site indicating the at the client does not include a first site data block. After receipt, the control site produces a control site data block having control site identification data and a client identifier. The control site data block then may be transmitted from the control site to the client. A second message then may be generated for transmission from the control site to the first network site. In preferred embodiments, the second message includes the client identifier and commands for execution by the first network site. The commands are selected so that after the commands are received by the first network site, the first network responsively transmits the first site data block to the client. The first site data block preferably has both the client identifier and first site identification data. In some embodiments, the commands include data that is utilized as input to a function at the first network site.

In a manner similar to the other aspects of the invention, yet another aspect of the invention identifies a client accessing a first network site by utilizing a control site to maintain information relating to the client. This aspect, however, generates messages that, when received by the control site, enable certain processes to be performed by the control site. To that end, a request from the client to access the first network site is received by the first network site. In response to the request, it is determined if the client includes a first site data block. If it is determined that the client does not include the first site data block, then an initial message is generated having control commands for execution by the control site. The control commands may be selected so that when executed by the control site, the control site first produces a control site data block having both control site identification data and a client identifier, and then, once produced, transmits the control site data block to the client. The

client identifier then is received, via the control site data block, from the control site. Upon receipt of the client identifier, the first site data clock is transmitted to the client. In preferred embodiments, the first site data block has both the client identifier and first site identification data.

Preferred embodiments of the invention are implemented as a computer program product having a computer usable medium with computer readable program code thereon. The computer readable code may be read and utilized by the computer system in accordance with conventional processes.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other objects and advantages of the invention will be appreciated more fully from the following further description thereof with reference to the accompanying drawings wherein:

Figure 1 schematically shows the system architecture of an exemplary computer system on which preferred embodiments of the invention may be implemented.

Figure 2 schematically shows a network arrangement that may be utilized with preferred embodiments of the invention.

Figure 3 generally shows the steps utilized in preferred embodiments to share information relating to clients accessing one or more network sites.

Figure 4 is a time diagram generally showing the steps shown in figure 3 in the embodiment in which the first network site is distributed across a first network site server and a control site server.

Figure 5 generally shows the steps utilized in preferred embodiments when a second network site is accessed by a client that has previously completed the process shown in figure 3.

Figure 6 generally shows the steps utilized in one embodiment of the invention to retrieve and transmit client information from the control site to a requesting network site.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Figure 1 illustrates the system architecture for an exemplary computer system 100,

such as an IBM THINKPAD 701® computer (distributed by International Business Machines of Armonk, New York), on which the disclosed method and apparatus for identifying clients accessing network devices may be implemented. The exemplary computer system of Figure 1 is discussed for descriptive purposes only, however, and should not be considered a limitation of the invention. Although the description below may refer to terms commonly used in describing particular computer systems, the described concepts apply equally to other computer systems, including systems having architectures that are dissimilar to that shown in Figure 1.

The computer 100 includes a central processing unit (CPU) 105 having a conventional microprocessor, random access memory (RAM) 110 for temporary storage of information, and read only memory (ROM) 115 for permanent storage of read only information. A memory controller 100 is provided for controlling system RAM 110. A bus controller 125 is provided for controlling a bus 130, and an interrupt controller 135 is provided for receiving and processing various interrupt signals from the other system components.

Mass storage may be provided by known non-volatile storage media, such as a diskette 142, a digital versatile disk (not shown), a CD-ROM 147, or a hard disk 152. Data and software may be exchanged with the computer system 100 via removable media, such as the diskette 142 and the CD-ROM 147. The diskette 142 is insertable into a diskette drive 141, which utilizes a diskette drive controller 140 to interface with the bus 130. Similarly, the CD-ROM 147 is insertable into a CD-ROM drive 146, which utilizes a CD-ROM drive controller 145 to interface with the bus 130. Finally, the hard disk 152 is part of a fixed disk drive 151, which utilizes a hard drive controller 150 to interface with the bus 130.

User input to the computer 100 may be provided by a number of devices. For example, a keyboard 156 and a mouse 157 may be connected to the bus 330 by a keyboard and mouse controller 155. An audio transducer 196, which may act as both a microphone and a speaker, is connected to the bus 130 by audio controller 197. It should be obvious to those reasonably skilled in the art that other input devices, such as a pen and/or tablet and a microphone for voice input, may be connected to computer 100 through bus 130 and an appropriate controller. A direct memory access (DMA) controller 160 is provided for performing direct memory access to system RAM 110. A visual display may be generated by

a video controller 165, which controls a graphics accelerator 167 and a display device 170.

A network adapter 190 also may be included to enable the computer system 100 to be interconnected to a network 195 via a network bus 191. The network 195, which may be a local area network (LAN), a wide area network (WAN), or the Internet, may utilize general purpose communication lines that interconnect a plurality of network devices.

The computer system 100 preferably is controlled and coordinated by operating system software, such as the WINDOWS NT® operating system (available from Microsoft Corp., of Redmond, Washington). Among other computer system control functions, the operating system controls allocation of system resources and performs tasks such as process scheduling, memory management, networking, and I/O services.

Figure 2 schematically shows a network arrangement that may be utilized with preferred embodiments of the invention. More particularly, a plurality of network sites (designated as first network site 200, second network site 202, and Nth network site 204) are in communication with a client computer system ("client 206") and a control network site ("control site 207") via the network 195 (*e.g.*, the Internet). The control site 207 preferably includes a control server 214 with non-volatile memory for maintaining a database 216 having information relating to the client 206 and each of the network sites 200-204. In a similar manner, each of the network sites 200-204 preferably includes respective network site servers.

In preferred embodiments, the network sites 200-204 and client 206 communicate via the World Wide Web (the "web"). Accordingly, the client 206 may be a computer system having browser software (*e.g.*, Netscape Navigator™, hereinafter "browser 210"), while each of the network sites may be web sites that each share a common sub-domain. For example, the first network site 200 defines a first domain 200, the second network site 202 defines a second domain 202, and the Nth network site 204 defines an Nth domain 204. In accordance with preferred embodiments of the invention, each network site may be distributed across more than one (hardware) server. For example, the first network site 200 preferably is located on a first server 212 and on the control server 214. In alternative embodiments, each network site is located on a single server. For clarity, each domain and their respective network sites are referred to herein by the same reference number. Accordingly, by way of example, the

first network site and first domain both are referred to by reference number 200.

Figure 3 generally shows the steps utilized by preferred embodiments to share information relating to clients 206 accessing one or more of the network sites 200-204. This process enables each network site to access information relating to the client 206 ("client information") from the database 216 (on the control server 214) in a manner that is not readily apparent to the user of the client 206. Each server may utilize the information in any number of ways such as, for example, to display a user specific greeting with the user's name on a web page, or to display advertisements for products or services that are related to known interests of the user.

The process begins at step 300 in which the client 206 requests access to the first network site 200. Although the first network site 200 is discussed, the principles relating to this process can be applied to such a request received by any of the other network sites. Once the request is received by the first network site 200, then the process continues to step 302 in which the first network site 200 interacts with the client 206, in a conventional manner, to determine if the browser 210 includes a first site cookie (*i.e.*, first network site data block) from the first network site 200. As is known in the art, the browser 210 may include a first site cookie if that browser 210 had accessed the first site at some earlier time and the first site transmitted (a/k/a "dropped") a cookie to the browser 210 for subsequent retrieval by the first network site 200.

If at step 302 it is determined that the browser 210 includes a first site cookie, then the process continues to step 304 in which a client identifier is extracted from the first site cookie. The client identifier may be any indicia, character string, or other identifying data that uniquely identifies the client 206. Based upon the client identifier, information may be ascertained about the client 206 from the database 216 (discussed in greater detail below with reference to step 318 and figure 6).

If, however, it was determined at step 302 that the browser 210 did not include a first site cookie, then the process continues to step 306 in which the browser 210 is redirected (also referred to as "relocated") from the first network site 200 to the control site 207 (*i.e.*, from the first domain 200 to the control site domain 207). This may be performed by transmitting a first message from the first network site 200 to the client 206 having a relocate

command, a "find_user" command that instructs the control site 207 to find information relating to the client 206, transient verification identifiers (passwords) negotiated between the first server 212 and the control server 214, and information indicating that the commands were issued by the first network site 200.

Receipt of the first message by the client 206 first causes the client 206 to relocate to the control site 207 (*i.e.*, the control domain) and then, when in the control site domain 207, to direct the find_user command and first network site information to the control site 207. Upon receipt of the find_user command and first network site information, the control site 207 responsively executes a plurality of steps (on behalf of the first network site 200) that further implement preferred embodiments of the invention. One of those steps causes the control site 207 to responsively interact with the client 206, in a conventional manner, to determine if the browser 210 includes a control site cookie (*i.e.*, control site data block) from the control site 207 (step 308).

If it is determined at step 308 that the client 206 includes a control site cookie, then the client identifier is extracted from the control site cookie. The process then continues to step 310, in which the client 206 is relocated to the first site domain, and the client identifier is dropped by the client browser 210 for transmission to the first network site 200. As discussed below, the client identifier preferably is transmitted via a direct Internet connection between the control site 207 and the first network site 200. Although not necessary, the connection may be encrypted by means of conventional encrypting techniques to ensure the security of the transmitted data, and to protect the identity of the client 206 if the case of information transmitted by relocation. A new control site cookie that is substantially identical to the control site cookie on the browser 210 may be transmitted and stored ("dropped") on the client browser 210 if the located control site cookie was not a permanent cookie.

In preferred embodiments, the client 206 is relocated to a web site in the first domain 200 (at step 310) that is delivered from the control server 214. To that end, the control site 207 transmits a second message to the client 206 with a client identifier identifying the client 206, other transient unique identifiers (*i.e.*, passwords) negotiated between the first site 212 and the control site 214 for security purposes, and the address of a web site in the first domain 200 that is delivered from the control server 214. For example, if the first network site 200 is

in a domain "first.com", then the control site 207 preferably directs the client 206 to a site at "control_server.first.com" which, in preferred embodiments, is delivered from the control server 214. This web site preferably includes additional functionality to drop a first network site cookie onto the browser 210 (step 316, discussed in greater detail below). Among other reasons, this web site preferably is delivered from the control server 214 so that the control server 214 can control the process of dropping a first network cookie onto the client 206. Additionally, implementing most of the functionality on the control server 214 simplifies system setup and operation of the network sites 200-204. For example, software malfunctions (*i.e.*, "bugs") that may develop typically can be fixed more easily by a service provider if the software is loaded onto a server that is accessible to the service provider. In addition, this arrangement significantly minimizes software complexity on the servers 200-204. In alternative embodiments, the client 206 is relocated to a web site (in the first site domain) that is delivered from the first server 212.

If at step 308 it is determined that the client 206 does not include a control site cookie, then the process continues to step 312 in which the control site cookie is dropped, in accord with conventional processes, onto the client 206 by the control site 207. The control site cookie preferably includes a client identifier identifying the client 206, and control site information indicating that the control cookie was dropped by the control site 207. The client identifier may be generated by the control site 207 after it is determined that the client 206 does not include a control site cookie. A plurality of client records then may be initialized in the database 216 and may be retrieved upon receipt of the client identifier. The records may include any information about the client 206 that is ascertained by the control site 207.

Once the control site cookie is dropped and the client identifier is generated, then the client 206 may register with the control site 207 (step 314). This step, however, may be performed either before, during, or after step 312. The client 206 may register by submitting information via a conventional template that is generated with common gateway interface scripts ("CGI scripts"). For example, the user of the browser 210 may complete fields of a form requesting the user's name, address, hobbies, etc. . . . Information retrieved in this manner may be stored in the database records that were created for the client 206. Any other additional data that can be retrieved by the control site 207 may be stored in the records. For

example, the browser 210 and version type of the client 206, or the background color of the client's display may be stored in the client records.

The process then continues to step 310 (discussed above), in which the client 206 is relocated to the first site domain (either on the control server 214 or the first server 212). Once in the first site domain, the process continues to step 316 in which a first site cookie is generated and dropped onto the client browser 210. As noted above, the first site cookie preferably is generated by the control site server. The first site cookie may include the client identifier and a first site identifier.

The process continues to step 318 in which information about the client 206 is shared between the control server 214 and the first network site 200. In preferred embodiments, this information is transmitted via an encrypted Internet connection between the control site 207 and the first network site 200. In other embodiments in which the control site 207 and the first network site 200 are connected via non-Internet means such as, for example, on the same server, in a local area network, or via a direct modem to modem connection, this information may be transmitted directly between the sites in a conventional manner without an Internet connection. Among the information that may be transmitted is the information in the database 216 (*e.g.*, the user's name and hobbies) accessed via the client identifier, and data retrieved by the first network site 200 relating to the client's use of the first network site 200. For example, the latter information may include web pages accessed by the client 206 while accessing the first network site 200, the length of time spent at such web pages, and answers to miscellaneous queries posed by the first network site 200. Upon receipt from the first network site 200, the control site 207 may access and store the information in the records for the client 206 in the database 216. It should be emphasized, however, that this information transfer preferably is two-directional in that information is transmitted to and from both sites 200 and 207. See figure 6 for a summary of the steps utilized by one embodiment of the invention to transfer data from the control site 207 to a requesting network site.

The process continues to step 320 in which the client 206 is relocated from the portion of the first network site 200 that drops the first network site cookie (*e.g.*, control_server.first.com) to an entry point in the first web site. This entry point preferably is the web page to which the client 206 initially requested access. This preferably is performed

by the control server 214 generating and transmitting a third message to the client 206 with commands that cause the client 206 to relocate to the first site entry point. As suggested above, information still may be shared between the control site 207 and the first network site 200 during and after the time that the client 206 is relocated to the first site entry point.

In the process shown in figure 3, cookies are dropped from each of the respective network sites only when the browser 210 is in such respective domains. For example, the control site cookie is dropped from the control site domain 207 and not from the first domain 200. In a similar manner, the first cookie is dropped from the first domain 200 and not from the control domain. Execution of the process shown in figure 3 thus enables each of the web sites to drop cookies onto the browser 210 even if the browser 210 is configured to receive cookies from no other domains other than the domain in which the browser 210 is currently accessing. Information therefore may be efficiently and reliably shared across multiple network sites in different domains via the control site 207. The process shown in figure 3 thus may be executed to maintain information relating to a plurality of clients 206 accessing any one of the network sites that include the disclosed information gathering and sharing functionality.

Under expected operating conditions, the time required to perform the steps between step 300 (receiving the access request) and step 320 (relocating to the first site entry point) should be relatively short such as, for example, less than one second. Accordingly, the process preferably is not readily apparent to the user of the client 206 who, in preferred embodiments, sees no indication that client information is being gathered.

Figure 4 is a time diagram generally showing many of the steps summarized in figure 3 in the embodiment in which the first network site 200 is distributed across the first server 212 and the control server 214. As can be deduced by merely inspecting the figure, the client 206 first makes the access request and is redirected to the control site server via the first message. Once at the control site server, then it is determined if the control site cookie is included in the browser 210. If the control site cookie is not included in the client 206, then the control site cookie is dropped onto the client 206. If the control site cookie is included on the client 206, then the second message is directed to the client 206 to relocate to the first domain 200 on the control server 214 so that the first network site 200 may drop its cookie

onto the client 206. After the first site cookie is dropped, then the third message is sent to the client 206 causing the client 206 to relocate to an entry point in the first domain 200 on the first site server. In the example shown in figure 4, the first network site 200 has ascertained the user's name ("Bruce", in this example) and includes the indicia "Welcome Bruce" in the HTML code of the accessed web page. It should be noted that although some of the steps of the process shown in figure 3 are omitted from figure 4, those steps still are performed by preferred embodiments of the invention.

Figure 5 generally shows the steps utilized in preferred embodiments when the second network site 202 is accessed by a client 206 that has previously completed the process shown in figure 3. The process begins at step 500 in which the client 206 requests access to the second network site 202. The second network site 202 then interacts with the client 206, in a conventional manner, and determines that the client 206 does not include a second site cookie (step 502). The second network site 202 consequently relocates the client 206 to the control site 207 via a relocate message having commands and second site information that is substantially identical to those in the first message to the first network site 200 (step 504). The control site 207 then locates the cookie in the client 206 (step 506) and consequently relocates the client 206 to the second site domain (step 508). In preferred embodiments, the client 206 is relocated to the second site domain that is delivered by the control site server.

Once in the second site domain 202, the second site cookie (which includes the client identifier received from the control site 207) is dropped onto the client 206 (step 510). The process then continues to step 512 in which information is shared between the control site 207 and the second network site 202. Finally, the client 206 is relocated to the entry point in the second site at step 514. Each of these steps in figure 5 preferably are implemented in a manner that is substantially identical to the implementation of the corresponding steps in the process shown in figure 3.

In alternative embodiments of the invention, the cookies are configured to include client information. Accordingly, this embodiment does not require use of the database 216 in the control site 207 since a network site being accessed can directly extract the client information from the its cookie. In yet other embodiments, the system is implemented across other types of networks that do not utilize the web.

As noted above, information preferably is transmitted between the control site 207 and the network site 200-204 to which access is requested (see, for example, step 318 in figure 3). Figure 6 generally shows the steps utilized in one embodiment of the invention to retrieve and transmit client information from the control site 207 to a requesting network site. The process begins at step 600 in which an information request is transmitted by one of the network sites being accessed to the control site 207. Among other data, the information request preferably includes the client identifier and a network site identifier identifying the network site making the request.

In response to receipt of the information request, both the client identifier and the network site identifier are extracted from the message by the control site 207 (step 602). The client identifier then may be used to locate all information stored in the database 216 relating to the client 206 (step 604). Once the information is located, it is transmitted to the requesting network site (step 606). In some embodiments, however, only selected information may be transmitted to certain network sites. In such embodiments, the network site identifier is utilized by the control site 207 to filter information that is directed to a requesting site. In particular, certain client records may be marked so that the data in those records can be transmitted to selected network sites only.

Preferred embodiments of the invention may be implemented in any conventional computer programming language. For example, some embodiments may be implemented in a procedural programming language (*e.g.*, "C") or an object oriented programming language (*e.g.*, "C++"). Preferred embodiments are programmed in the Oracle PL/SQL language. Portions of code may be programmed one either or both the control site 207 and the network sites 200-204. In preferred embodiments, aside from conventional code that is utilized with the preferred client identifying system, most of the functionality of the inventive system is programmed on the control server 214 except for the code for generating and transmitting the first message (redirecting the client 206 to the control site 207), and the code for processing information received by one of the network sites from the control site database 216. Other embodiments of the invention may be implemented as preprogrammed hardware elements, or other related components.

Alternative embodiments of the invention may be implemented as a computer

program product for use with a computer system. Such implementation may include a series of computer instructions fixed either on a tangible medium, such as a computer readable media (*e.g.*, a diskette, CD-ROM, ROM, or fixed disk), or transmittable to a computer system via a modem or other interface device, such as a communications adapter connected to a network over a medium. The medium may be either a tangible medium (*e.g.*, optical or analog communications lines) or a medium implemented with wireless techniques (*e.g.*, microwave, infrared or other transmission techniques). The series of computer instructions embodies all or part of the functionality previously described herein with respect to the system. Those skilled in the art should appreciate that such computer instructions can be written in a number of programming languages for use with many computer architectures or operating systems. Furthermore, such instructions may be stored in any memory device, such as semiconductor, magnetic, optical or other memory devices, and may be transmitted using any communications technology, such as optical, infrared, microwave, or other transmission technologies. It is expected that such a computer program product may be distributed as a removable media with accompanying printed or electronic documentation (*e.g.*, shrink wrapped software), preloaded with a computer system (*e.g.*, on system ROM or fixed disk), or distributed from a server or electronic bulletin board over the network (*e.g.*, the Internet 195 or World Wide Web).

Although various exemplary embodiments of the invention have been disclosed, it should be apparent to those skilled in the art that various changes and modifications can be made which will achieve some of the advantages of the invention without departing from the true scope of the

invention. These and other obvious modifications are intended to be covered by the appended claims.

I claim:

1. A method of identifying a client accessing a first network site, the client being in communication with the first network site and a control site via a network, the method comprising:

A. receiving a request from the client to access the first network site;

B. in response to receipt of the request, determining if the client includes a first site data block;

C. if it is determined that the client does not include the first site data block, then controlling the control site to produce a control site data block having control site identification data and a client identifier;

D. transmitting the control site data block from the control site to the client;

E. transmitting the client identifier from the control site to the first network site; and

F. upon receipt of the client identifier by the first network site, controlling the first network site to transmit the first site data block to the client, the first site data block having both the client identifier and first site identification data.

2. The method as defined by claim 1 wherein the first network site and is a World Wide Web site in a first network site domain and the first site data block is a cookie.

3. The method as defined by claim 2 wherein the control site is a World Wide Web site in a control site domain and the control site data block is a cookie.

4. The method as defined by claim 3 wherein step D comprises:

D1. directing the client to the control site domain.

5. The method as defined by claim 3 wherein step F comprises:

F1. directing the client to the first network site domain

6. The method as defined by claim 1 wherein the client identifier includes in IP address

of the client.

7. The method as defined by claim 1 wherein the client includes a browser.

8. The method as defined by claim 1 further including:

G. transmitting client information between the first network site and the control site.

9. The method as defined by claim 1 further including:

H. if it is determined at step B that the client includes the first site data block, then retrieving a copy of the first site data block from the client;

I. extracting the client identifier from the first site data block;

J. transmitting the client identifier from the first network site to the control site;

K. retrieving client information from a storage medium associated with the control site, the client information being retrieved by utilizing the received client identifier;

L. transmitting the retrieved client information from the control site to the first network site.

10. The method as defined by claim 1 wherein the first network site is in a first domain, and the control site is in a control domain, the first domain being distributed across at least two servers.

11. The method as defined by claim 10 wherein the control site is implemented on a server, the server further including the first network site, the control data block being transmitted when the client is in the control domain, the first site data block being transmitted when the client is in the first domain.

12. The method as defined by claim 1 further including:

M. if it is determined at step B that the client includes the first site data block, then controlling the first network site to retrieve a copy of the first site data block from the

client, the first site data block including client information;

I. extracting the client identifier and client information from the first site data block.

13. The method as defined by claim 1 wherein a second network site is in communication with the network, the method further comprising:

J. receiving a request from the client to access the second network site;

K. in response to receipt of the request, determining if the client includes a second site data block;

L. if it is determined that the client does not include the second site data block, then transmitting a message to the control site with the client identifier;

M. controlling the control site to utilize the client identifier to locate client information;

N. transmitting the located client information from the control site to the second network site.

14. The method as defined by claim 1 wherein the first site identification data includes an address of the first network site.

15. An apparatus for identifying a client accessing a first network site, the client being in communication with the first network site and a control site via a network, the apparatus comprising:

a receiver for receiving a request from the client to access the first network site;

means for determining, in response to receipt of the request, if the client includes a first site data block;

means for controlling the control site to produce a control site data block having control site identification data and a client identifier if it is determined that the client does not include the first site data block;

means for transmitting the control site data block from the control site to the

client;

means for transmitting the client identifier from the control site to the first network site; and

means for controlling the first network site to transmit the first site data block to the client after receipt of the client identifier by the first network site, the first site data block having both the client identifier and first site identification data.

16. The apparatus as defined by claim 15 wherein the first network site is a World Wide Web site in a first network site domain and the first site data block is a cookie.

17. The apparatus as defined by claim 16 wherein the control site is a World Wide Web site in a control site domain and the control site data block is a cookie.

18. The apparatus as defined by claim 17 wherein the means for transmitting the control site data block comprises:

means for directing the client to the control site domain.

19. The apparatus as defined by claim 17 wherein the means for controlling comprises:

means for directing the client to the first network site domain

20. The apparatus as defined by claim 15 wherein the client identifier includes in IP address of the client.

21. The apparatus as defined by claim 15 wherein the client includes a browser.

22. The apparatus as defined by claim 15 further including:

means for transmitting client information between the first network site and the control site.

23. The apparatus as defined by claim 15 further including:

means for retrieving a copy of the first site data block from the client if it is determined that the client includes the first site data block;

means for extracting the client identifier from the first site data block;

means for transmitting the client identifier from the first network site to the control site;

means for retrieving client information from a storage medium associated with the control site, the client information being retrieved by utilizing the received client identifier;

means for transmitting the retrieved client information from the control site to the first network site.

24. The apparatus as defined by claim 15 wherein the first network site is in a first domain, and the control site is in a control domain, the first domain being distributed across at least two servers, the control data block being transmitted when the client is in the control domain, the first site data block being transmitted when the client is in the first domain.

25. The method as defined by claim 24 wherein the control site is implemented on a server, the server further including the first network site.

26. The apparatus as defined by claim 15 further including:

means for controlling the first network site to retrieve a copy of the first site data block from the client if it is determined that the client includes the first site data block, the first site data block including client information;

means for extracting the client identifier and client information from the first site data block.

27. The apparatus as defined by claim 15 wherein a second network site is in communication with the network, the apparatus further comprising:

means for receiving a request from the client to access the second network site;

means for determining if the client includes a second site data block in

response to receipt of the request;

means for transmitting a message to the control site with the client identifier if it is determined that the client does not include the second site data block;

means for controlling the control site to utilize the client identifier to locate client information;

means for transmitting the located client information from the control site to the second network site.

28. The apparatus as defined by claim 15 wherein the first site identification data includes an address of the first network site.

29. A computer program product for use on a computer system for identifying a client accessing a first network site, the client being in communication with the first network site and a control site via a network, the computer program product comprising a computer usable medium having computer readable program code thereon, the computer readable program code comprising:

program code for receiving a request from the client to access the first network site;

program code for determining, in response to receipt of the request, if the client includes a first site data block;

program code for controlling the control site to produce a control site data block having control site identification data and a client identifier if it is determined that the client does not include the first site data block;

program code for transmitting the control site data block from the control site to the client;

program code for transmitting the client identifier from the control site to the first network site; and

program code for controlling the first network site to transmit the first site data block to the client after receipt of the client identifier by the first network site, the first site data block having both the client identifier and first site identification data.

30. The computer program product as defined by claim 29 wherein the first network site is a World Wide Web site in a first network site domain and the first site data block is a cookie.

31. The computer program product as defined by claim 30 wherein the control site is a World Wide Web site in a control site domain and the control site data block is a cookie.

32. The computer program product as defined by claim 31 wherein the program code for transmitting the control site data block comprises:

program code for directing the client to the control site domain.

33. The computer program product as defined by claim 31 wherein the program code for controlling comprises:

program code for directing the client to the first network site domain

34. The computer program product as defined by claim 29 wherein the client identifier includes in IP address of the client.

35. The computer program product as defined by claim 29 wherein the client includes a browser.

36. The computer program product as defined by claim 29 further including:

program code for transmitting client information between the first network site and the control site.

37. The computer program product as defined by claim 29 further including:

program code for retrieving a copy of the first site data block from the client if it is determined that the client includes the first site data block;

program code for extracting the client identifier from the first site data block;

program code for transmitting the client identifier from the first network site to the control site;

program code for retrieving client information from a storage medium associated with the control site, the client information being retrieved by utilizing the received client identifier;

program code for transmitting the retrieved client information from the control site to the first network site.

38. The computer program product as defined by claim 29 wherein the first network site is in a first domain, and the control site is in a control domain, the first domain being distributed across at least two servers.

39. The computer program product as defined by claim 38 wherein the control site is implemented on a server, the server further including the first network site, the control data block being transmitted when the client is in the control domain, the first site data block being transmitted when the client is in the first domain.

40. The computer program product as defined by claim 29 further including:

program code for controlling the first network site to retrieve a copy of the first site data block from the client if it is determined that the client includes the first site data block, the first site data block including client information;

program code for extracting the client identifier and client information from the first site data block.

41. The computer program product as defined by claim 29 wherein a second network site is in communication with the network, the computer program product further comprising:

program code for receiving a request from the client to access the second network site;

program code for determining if the client includes a second site data block in response to receipt of the request;

program code for transmitting a message to the control site with the client identifier if it is determined that the client does not include the second site data block;

program code for controlling the control site to utilize the client identifier to locate client information;

program code for transmitting the located client information from the control site to the second network site.

42. The computer program product as defined by claim 29 wherein the first site identification data includes an address of the first network site.

43. A method of identifying a client accessing a first network site, the client being in communication with the first network site and a control site via a network, the control site receiving a first message from the first network site, the first message indicating that the client does not include a first site data block, the method comprising:

after receipt of the first message, controlling the control site to produce a control site data block having control site identification data and a client identifier;

transmitting the control site data block from the control site to the client; and

generating a second message for transmission from the control site to the first network site, the second message having the client identifier and commands for execution by the first network site, the commands being selected so that after the commands are read by the first network site, the first network site transmits the first site data block to the client, the first site data block having both the client identifier and first site identification data.

44. The method as defined by claim 43 wherein both the first network site and the control site are World Wide Web sites.

45. The method as defined by claim 43 wherein the first network site is in a first domain, and the control site is in a control domain, the control site data block being transmitted to the client when the client is in the control domain.

46. The method as defined by claim 45 wherein the commands in the second message control the first network site to transmit the first site data block when the browser is in the

first domain.

47. The method as defined by claim 43 wherein a second network site is in communication with the network, the control site receiving a third message indicating that the browser does not include a second data block, the method comprising:

controlling the control site to confirm that the client includes the control site data block;

if it is confirmed that the client includes the control site data block, transmitting client information from the control site to the second network site.

48. The method as defined by claim 47 further comprising:

if it is confirmed that the client includes the control site data block, generating a forth message for transmission to the second network site, the forth message including commands that are selected so that after received by the second network site, the second network site transmits the second site data block to the browser, the second site data block having both the client identifier and second site identification data.

49. The method as defined by claim 43 wherein a fifth message is received by the control site, the fifth message including the client identifier and a request for client information from the first network site, the method comprising:

utilizing the client identifier to locate the client information; and

transmitting the located client information to the first network site.

50. An apparatus for identifying a client accessing a first network site, the client being in communication with the first network site and a control site via a network, the control site receiving a first message from the first network site, the first message indicating that the client does not include a first site data block, the apparatus comprising:

means for controlling the control site to produce a control site data block having control site identification data and a client identifier after receipt of the first message;

means for transmitting the control site data block from the control site to the client;

and

means for generating a second message for transmission from the control site to the first network site, the second message having the client identifier and commands for execution by the first network site, the commands being selected so that after the commands are read by the first network site, the first network site transmits the first site data block to the client, the first site data block having both the client identifier and first site identification data.

51. The apparatus as defined by claim 50 wherein both the first network site and the control site are World Wide Web sites.

52. The apparatus as defined by claim 50 wherein the first network site is in a first domain, and the control site is in a control domain, the means for transmitting the control site data block to the client including means for transmitting the control site data block when the client is in the control domain.

53. The apparatus as defined by claim 52 wherein the commands in the second message control the first network site to transmit the first site data block when the browser is in the first domain.

54. The apparatus as defined by claim 50 wherein a second network site is in communication with the network, the control site receiving a third message indicating that the browser does not include a second data block, the apparatus comprising:

means for controlling the control site to confirm that the client includes the control site data block;

means for transmitting client information from the control site to the second network site if it is confirmed that the client includes the control site data block.

55. The apparatus as defined by claim 54 further comprising:

means for generating a forth message for transmission to the second network site if it is confirmed that the client includes the control site data block, the forth message including

commands that are selected so that after received by the second network site, the second network site transmits the second site data block to the browser, the second site data block having both the client identifier and second site identification data.

56. The apparatus as defined by claim 50 wherein a fifth message is received by the control site, the fifth message including the client identifier and a request for client information from the first network site, the apparatus comprising:

means for utilizing the client identifier to locate the client information; and

means for transmitting the located client information to the first network site.

57. A computer program product for use on a computer system for identifying a client accessing a first network site, the client being in communication with the first network site and a control site via a network, the control site receiving a first message from the first network site, the first message indicating that the client does not include a first site data block, the computer program product comprising a computer usable medium having computer readable program code thereon, the computer readable program code comprising:

program code for controlling the control site to produce a control site data block having control site identification data and a client identifier after receipt of the first message;

program code for transmitting the control site data block from the control site to the client; and

program code for generating a second message for transmission from the control site to the first network site, the second message having the client identifier and commands for execution by the first network site, the commands being selected so that after the commands are read by the first network site, the first network site transmits the first site data block to the client, the first site data block having both the client identifier and first site identification data.

58. The computer program product as defined by claim 57 wherein both the first network site and the control site are World Wide Web sites.

59. The computer program product as defined by claim 57 wherein the first network site is

in a first domain, and the control site is in a control domain, the program code for transmitting the control site data block to the client including program code for transmitting the control site data block when the client is in the control domain.

60. The computer program product as defined by claim 59 wherein the commands in the second message control the first network site to transmit the first site data block when the browser is in the first domain.

61. The computer program product as defined by claim 57 wherein a second network site is in communication with the network, the control site receiving a third message indicating that the browser does not include a second data block, the computer program product comprising:

program code for controlling the control site to confirm that the client includes the control site data block;

program code for transmitting client information from the control site to the second network site if it is confirmed that the client includes the control site data block.

62. The computer program product as defined by claim 61 further comprising:

program code for generating a forth message for transmission to the second network site if it is confirmed that the client includes the control site data block, the forth message including commands that are selected so that after received by the second network site, the second network site transmits the second site data block to the browser, the second site data block having both the client identifier and second site identification data.

63. The computer program product as defined by claim 57 wherein a fifth message is received by the control site, the fifth message including the client identifier and a request for client information from the first network site, the computer program product comprising:

program code for utilizing the client identifier to locate the client information; and

program code for transmitting the located client information to the first network site.

64. A method of identifying a client accessing a first network site, the client being in communication with the first network site and a control site via a network, the method comprising:

receiving a request from the client to access the first network site;

in response to receipt of the request, determining if the client includes a first site data block;

if it is determined that the client does not include the first site data block, then generating an initial message with control commands for execution by the control site, the control commands being selected so that when executed by the control site, the control site first produces a control site data block having control site identification data and a client identifier, and then transmits the control site data block to the client;

receiving the client identifier from the control site; and

upon receipt of the client identifier, transmitting the first site data block to the client, the first site data block having both the client identifier and first site identification data.

65. The method as defined by claim 64 wherein when executed by the control site, the commands cause the control site to determine if the client includes the control site data block.

66. The method as defined by claim 64 wherein the control site is in a control site domain, and the first network site is in a first domain, the first domain and control site domain being different, further wherein the client is in the browser domain when the control site transmits the control site data block.

67. The method as defined by claim 66 wherein the client is in the first domain when the first site data block is transmitted to the client.

68. The method as defined by claim 64 wherein the network is the World Wide Web.

69. The method as defined by claim 64 further including:

coupling with the control site;

receiving client information from the control site.

70. The method as defined by claim 64 further including:

if it is determined that the client includes the first site data block, then retrieving a copy of the first site data block from the client;

extracting the client identifier from the first site data block;

transmitting a client identifier message to the control site, the client identifier message having the client identifier and retrieval commands,

when executed, the retrieval commands causing the control site to utilize the client identifier to retrieve client information from a storage medium; and

receiving an information message from the control site, the information message including the retrieved client information.

71. The method as defined by claim 64 further comprising:

retrieving a copy of the first site data block from the client if it is determined that the client includes the first site data block, the first site data block including client information;

extracting the client identifier and client information from the first site data block.

72. An apparatus for identifying a client accessing a first network site, the client being in communication with the first network site and a control site via a network, the apparatus comprising:

means for receiving a request from the client to access the first network site;

means for determining if the client includes a first site data block in response to receipt of the request;

means for generating an initial message with control commands for execution by the control site if it is determined that the client does not include the first site data block, the control commands being selected so that when executed by the control site, the control site first produces a control site data block having control site identification data and a client identifier, and then transmits the control site data block to the client;

means for receiving the client identifier from the control site; and

means for transmitting the first site data block to the client upon receipt of the client identifier, the first site data block having both the client identifier and first site identification data.

73. The apparatus as defined by claim 72 wherein when executed by the control site, the commands cause the control site to determine if the client includes the control site data block.

74. The apparatus as defined by claim 72 wherein the control site is in a control site domain, and the first network site is in a first domain, the first domain and control site domain being different, further wherein the client is in the browser domain when the control site transmits the control site data block.

75. The apparatus as defined by claim 74 wherein the client is in the first domain when the first site data block is transmitted to the client.

76. The apparatus as defined by claim 72 wherein the network is the World Wide Web.

77. The apparatus as defined by claim 72 further including:

means for coupling with the control site; and

means for receiving client information from the control site.

78. The apparatus as defined by claim 72 further including:

means for retrieving a copy of the first site data block from the client if it is determined that the client includes the first site data block;

means for extracting the client identifier from the first site data block;

means for generating a client identifier message for transmission to the control site, the client identifier message having the client identifier and retrieval commands,

when executed, the retrieval commands causing the control site to utilize the client identifier to retrieve client information from a storage medium; and

means for receiving an information message from the control site, the information

message including the retrieved client information.

79. The apparatus as defined by claim 72 further comprising:

means for retrieving a copy of the first site data block from the client if it is determined that the client includes the first site data block, the first site data block including client information; and

means for extracting the client identifier and client information from the first site data block.

80. A computer program product for use on a computer system for identifying a client accessing a first network site, the client being in communication with the first network site and a control site via a network, the computer program product comprising a computer usable medium having computer readable program code thereon, the computer readable program code comprising:

program code for receiving a request from the client to access the first network site;

program code for determining if the client includes a first site data block in response to receipt of the request;

program code for generating an initial message with control commands for execution by the control site if it is determined that the client does not include the first site data block, the control commands being selected so that when executed by the control site, the control site first produces a control site data block having control site identification data and a client identifier, and then transmits the control site data block to the client;

program code for receiving the client identifier from the control site; and

program code for transmitting the first site data block to the client upon receipt of the client identifier, the first site data block having both the client identifier and first site identification data.

81. The computer program product as defined by claim 80 wherein when executed by the control site, the commands cause the control site to determine if the client includes the control site data block.

82. The computer program product as defined by claim 80 wherein the control site is in a control site domain, and the first network site is in a first domain, the first domain and control site domain being different, further wherein the client is in the browser domain when the control site transmits the control site data block.

83. The computer program product as defined by claim 82 wherein the client is in the first domain when the first site data block is transmitted to the client.

84. The computer program product as defined by claim 80 wherein the network is the World Wide Web.

85. The computer program product as defined by claim 80 further including:

program code for coupling with the control site; and

program code for receiving client information from the control site.

86. The computer program product as defined by claim 80 further including:

program code for retrieving a copy of the first site data block from the client if it is determined that the client includes the first site data block;

program code for extracting the client identifier from the first site data block;

program code for generating a client identifier message for transmission to the control site, the client identifier message having the client identifier and retrieval commands,

when executed, the retrieval commands causing the control site to utilize the client identifier to retrieve client information from a storage medium; and

program code for receiving an information message from the control site, the information message including the retrieved client information.

87. The computer program product as defined by claim 80 further comprising:

program code for retrieving a copy of the first site data block from the client if it is determined that the client includes the first site data block, the first site data block including client information; and

program code for extracting the client identifier and client information from the first site data block.

88. The computer program product as defined by claim 80 wherein the first network site is in a first domain, and the control site is in a control domain, the first domain being distributed across at least two servers.

89. The computer program product as defined by claim 80 wherein the control site is implemented on a server, the server further including the first network site, the control data block being transmitted when the client is in the control domain, the first site data block being transmitted when the client is in the first domain.

90. A method of identifying a client accessing a first network site, the client being in communication with the first network site and a control site via a network, the first network site receiving a request to access the first network site and responsively determining that the client does not include a first network site data block, the method comprising:

A. determining if the client includes a control site data block;

B. if it is determined that the client does not include the control site data block, then controlling the control site to produce a control site data block having a client identifier, and then transmitting the control site data block from the control site to the client;

C. if it is determined that the client includes the control site data block, then extracting the client identifier from the control site data block;

D. transmitting the client identifier from the control site to the first network site; and

E. upon receipt of the client identifier by the first network site, controlling the first network site to transmit the first site data block to the client, the first site data block having the client identifier.

91. The method as defined by claim 90 wherein the first network site defines a first domain, and the control site defined a control domain, wherein step E comprises:

E1. directing the client to the first domain.

92. The method as defined by claim 91 wherein step B comprises:

B1. directing the client to the control domain.

93. A method of identifying a client accessing a first network site, the client being in communication with the first network site and a control site via a network, the first network site receiving a request to access the first network site and responsively determining that the client does not include a first network site data block, the method comprising:

A. determining if the client includes a control site data block;

B. if it is determined that the client does not include the control site data block, then controlling the control site to produce a control site data block having a client identifier, and then transmitting the control site data block from the control site to the client;

C. if it is determined that the client includes the control site data block, then extracting the client identifier from the control site data block;

D. transmitting a message from the control site to the first network site, the message including the client identifier and commands that, when executed by the first network site, control the first network site to transmit the first site data block to the client, the first site data block having the client identifier.

94. The method as defined by claim 93 wherein the first network site defines a first domain, and the control site defined a control domain, wherein step B comprises:

B1. directing the client to the control domain.

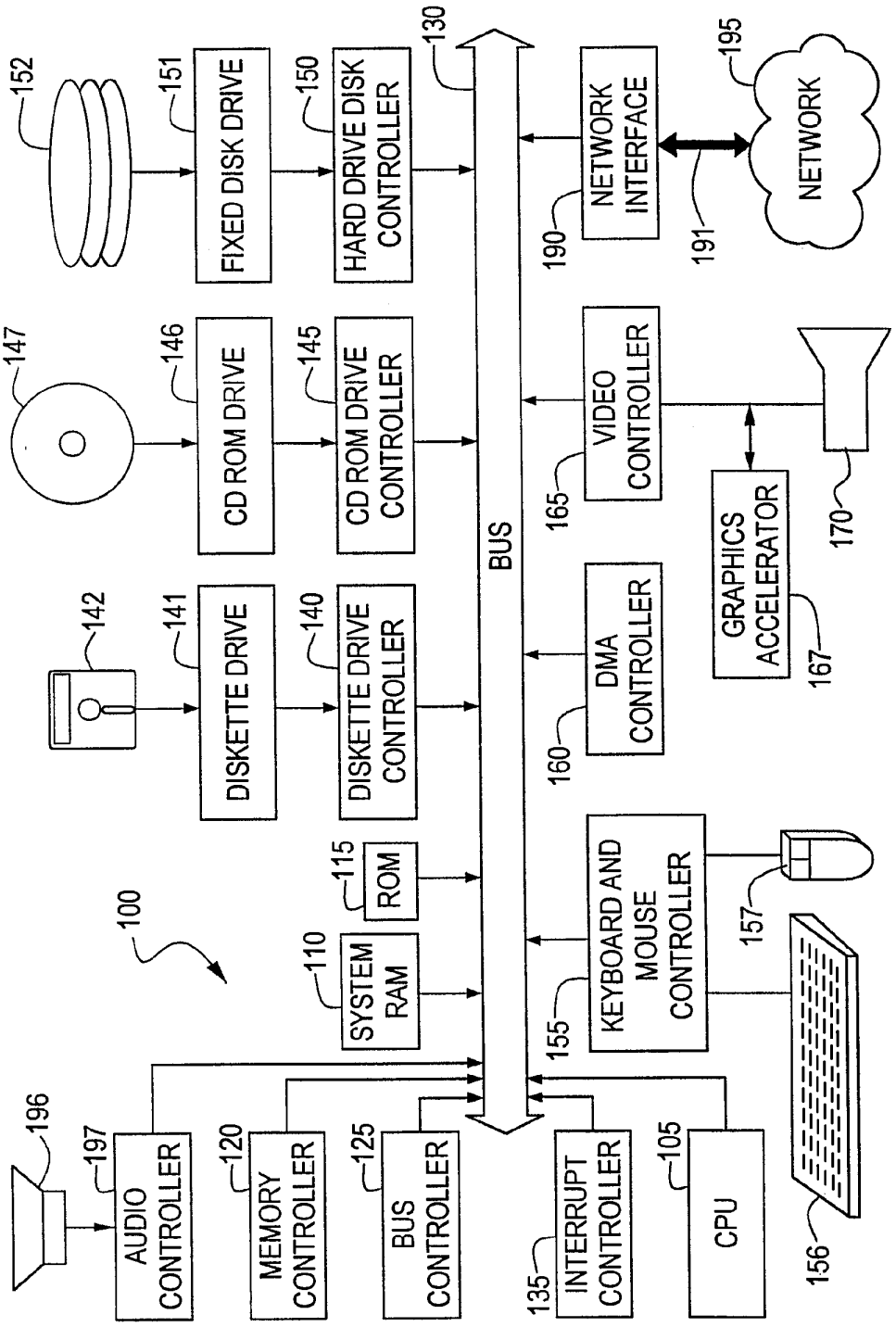

100
BUS
130
FIXED DISK DRIVE
151
HARD DRIVE DISK CONTROLLER
150
152
CD ROM DRIVE
146
CD ROM DRIVE CONTROLLER
145
147
DISKETTE DRIVE
141
DISKETTE DRIVE CONTROLLER
140
142
ROM
115
SYSTEM RAM
110
NETWORK INTERFACE
190
NETWORK
195
191
VIDEO CONTROLLER
165
GRAPHICS ACCELERATOR
167
170
DMA CONTROLLER
160
KEYBOARD AND MOUSE CONTROLLER
155
157
AUDIO CONTROLLER
197
196
MEMORY CONTROLLER
120
BUS CONTROLLER
125
INTERRUPT CONTROLLER
135
CPU
105
156

FIG. 1

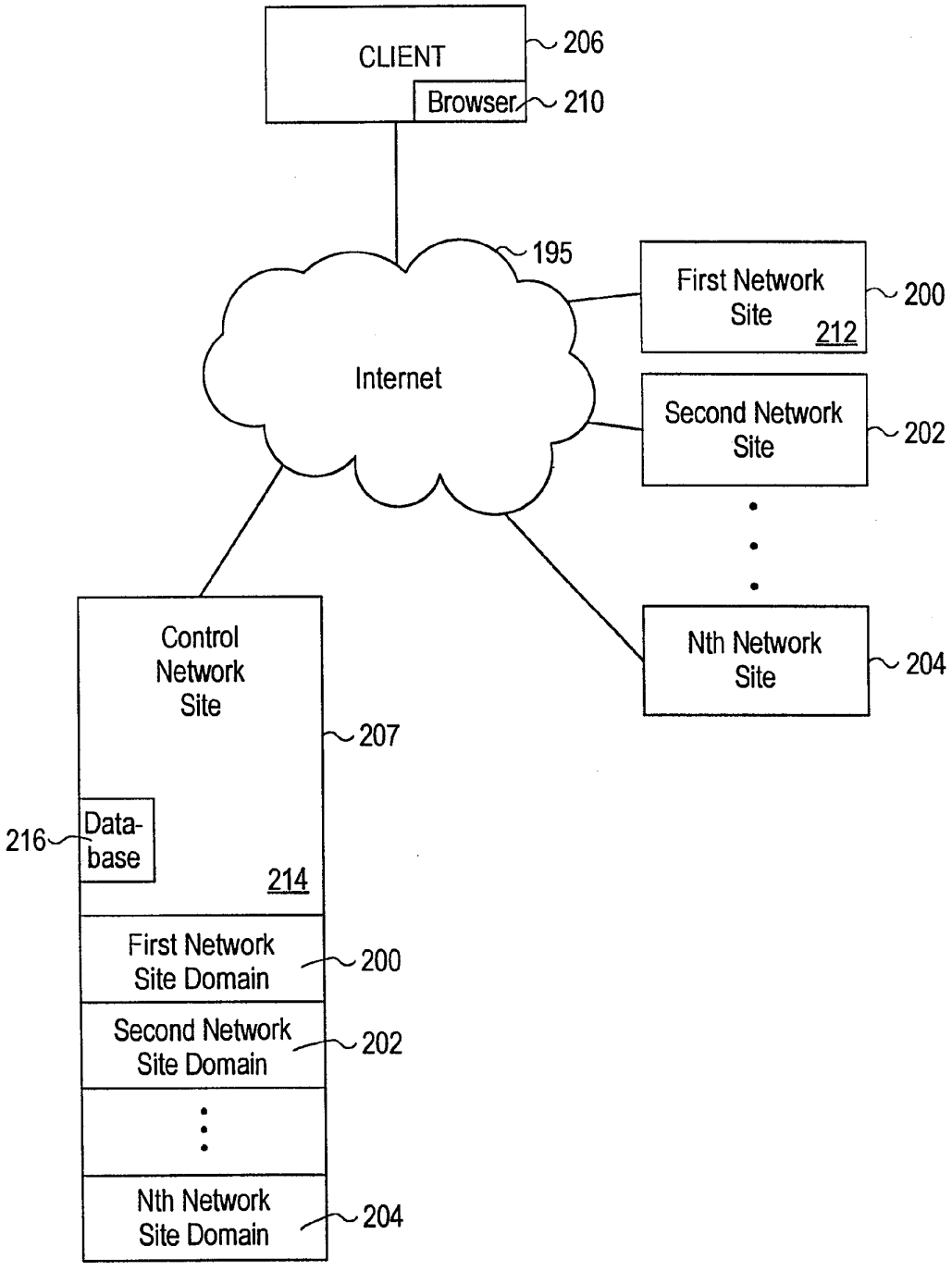

CLIENT
206
Browser
210
195
Internet
First Network Site
212
200
Second Network Site
202
Nth Network Site
204
Control Network Site
207
216
Data-base
214
First Network Site Domain
200
Second Network Site Domain
202
Nth Network Site Domain
204

FIG. 2

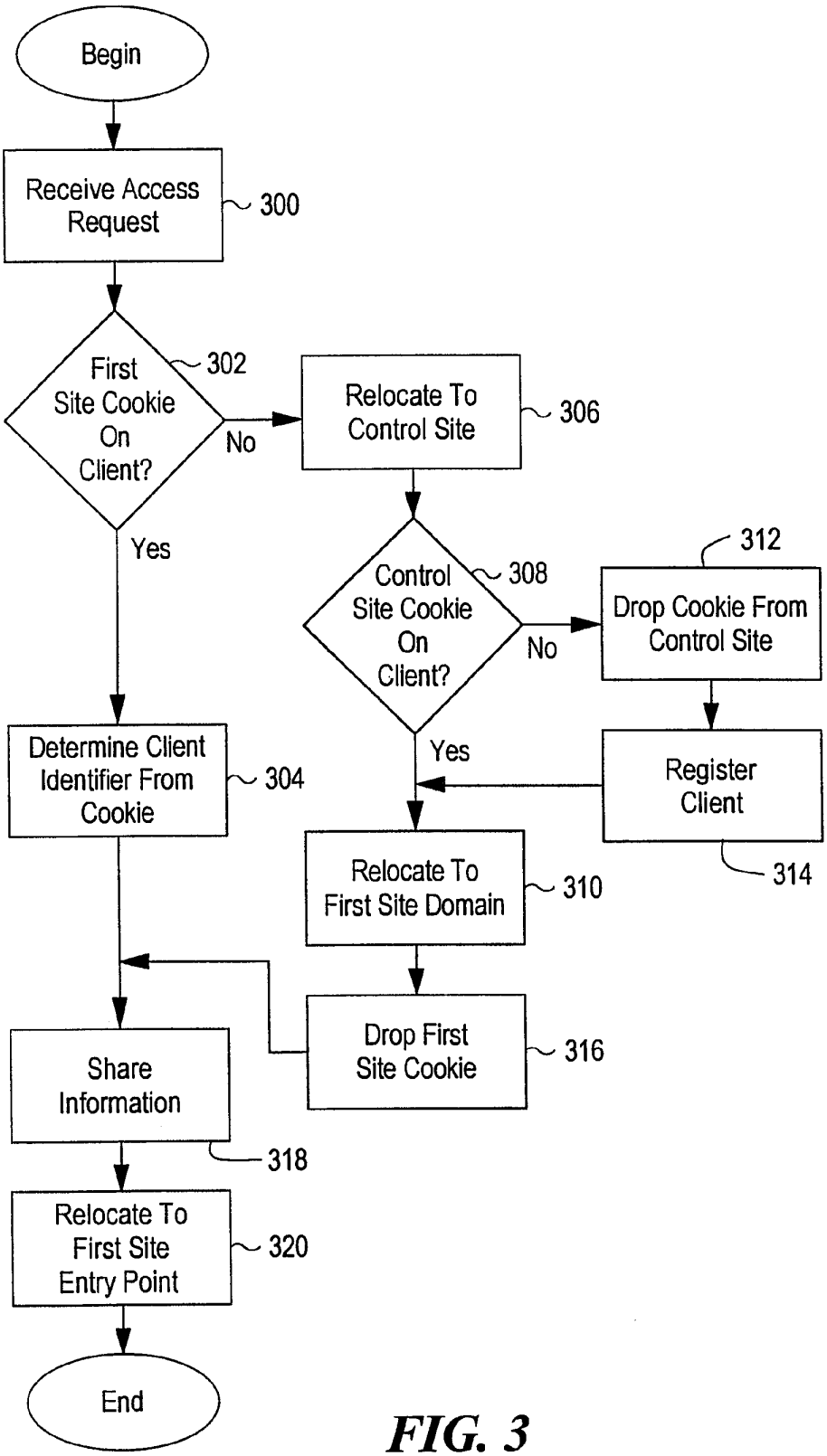

Begin
Receive Access Request
300
First Site Cookie On Client?
302
No
Relocate To Control Site
306
Yes
Control Site Cookie On Client?
308
No
312
Drop Cookie From Control Site
Yes
Register Client
314
Determine Client Identifier From Cookie
304
Relocate To First Site Domain
310
Drop First Site Cookie
316
Share Information
318
Relocate To First Site Entry Point
320
End

FIG. 3

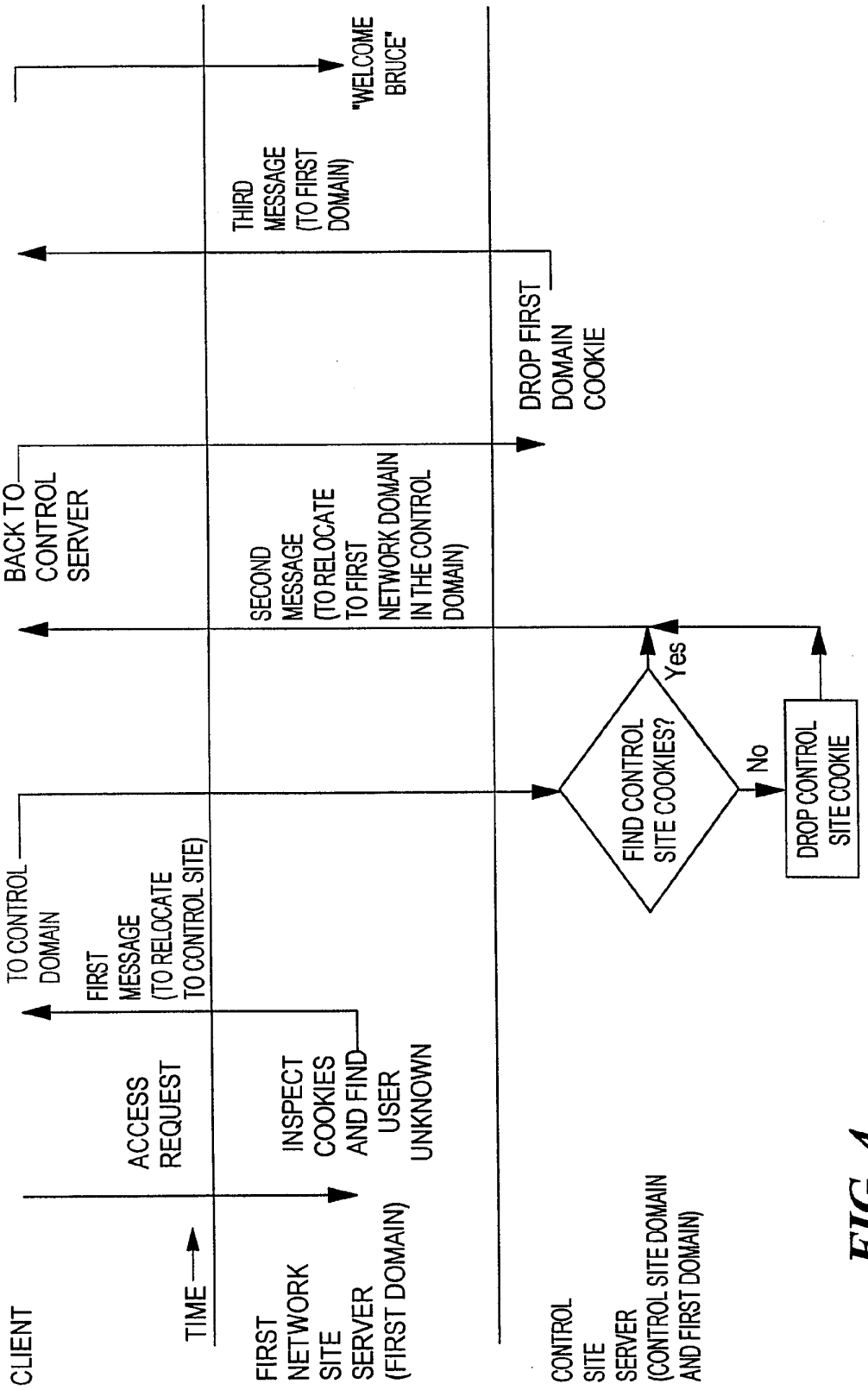

CLIENT
TIME
FIRST NETWORK SITE SERVER (FIRST DOMAIN)
CONTROL SITE SERVER (CONTROL SITE DOMAIN AND FIRST DOMAIN)
ACCESS REQUEST
TO CONTROL DOMAIN
FIRST MESSAGE (TO RELOCATE TO CONTROL SITE)
INSPECT COOKIES AND FIND USER UNKNOWN
FIND CONTROL SITE COOKIES?
Yes
No
DROP CONTROL SITE COOKIE
BACK TO CONTROL SERVER
SECOND MESSAGE (TO RELOCATE TO FIRST NETWORK DOMAIN IN THE CONTROL DOMAIN)
DROP FIRST DOMAIN COOKIE
THIRD MESSAGE (TO FIRST DOMAIN)
"WELCOME BRUCE"

FIG. 4

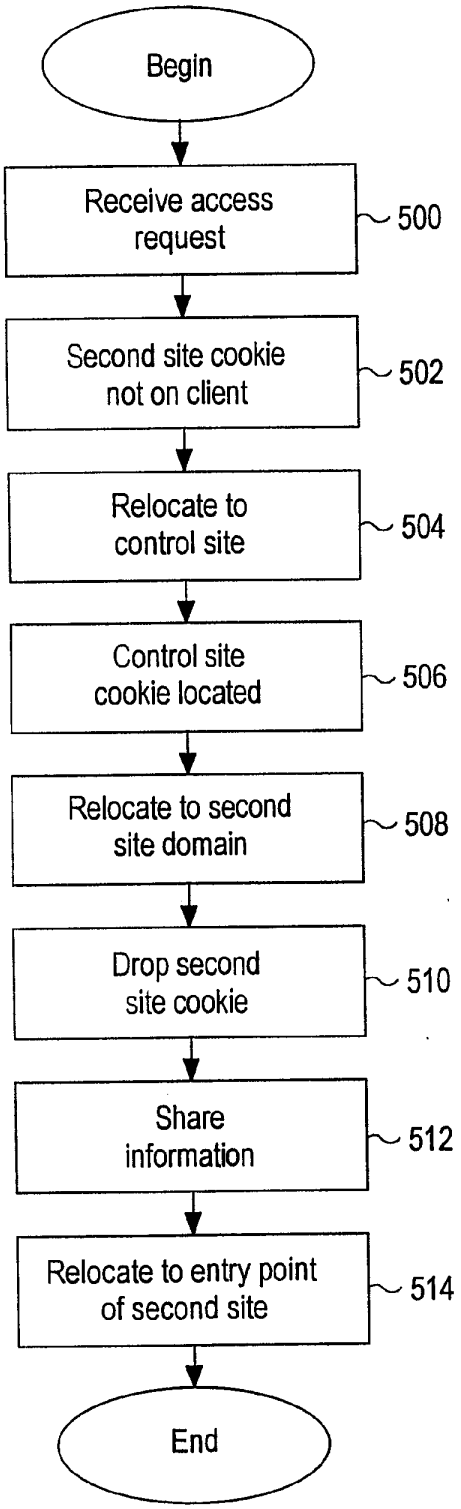

Begin
Receive access request
500
Second site cookie not on client
502
Relocate to control site
504
Control site cookie located
506
Relocate to second site domain
508
Drop second site cookie
510
Share information
512
Relocate to entry point of second site
514
End

FIG. 5

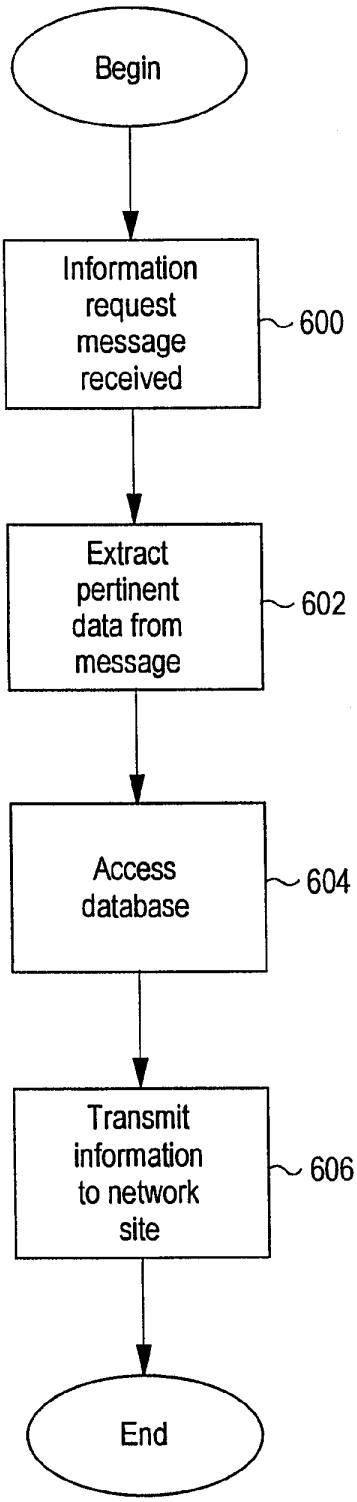

Begin
Information request message received
600
Extract pertinent data from message
602
Access database
604
Transmit information to network site
606
End

FIG. 6

INTERNATIONAL SEARCH REPORT

Int tional Application No
PCT/US 98/13153

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 H04L29/08 H04L29/06

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)
IPC 6 H04L G06F

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 practical, 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.
A	WO 96 42041 A (OPEN MARKET INC) 27 December 1996 see abstract see page 5, line 8 - page 6, line 22 see page 7, line 25 - page 8, line 7 see page 10, line 6 - page 16, line 20 see figures 2A,2B ---	1-94
A	HIGHLAND: "The cookie monster data privacy " EDPACS, vol. 24, no. 6, December 1996, pages 16-18, XP002079209 see page 16, line 1 - page 17, line 38 -----	1-94

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of theinternational search	Date of mailing of the international search report
2 October 1998	15/10/1998

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Lázaro Lõpez, M

1

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INTERNATIONAL SEARCH REPORT

information on patent family members

Int ional Application No
PCT/US 98/13153

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9642041 A	27-12-1996	US 5708780 A	13-01-1998
		AU 694367 B	16-07-1998
		AU 5936796 A	09-01-1997
		CA 2221506 A	27-12-1996
		EP 0830774 A	25-03-1998

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(30) Priority Data:
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(71) Applicant: E2 SOFTWARE CORPORATION [US/US]; Suite 102, 860 Avenue F, Plano, TX 75074 (US).

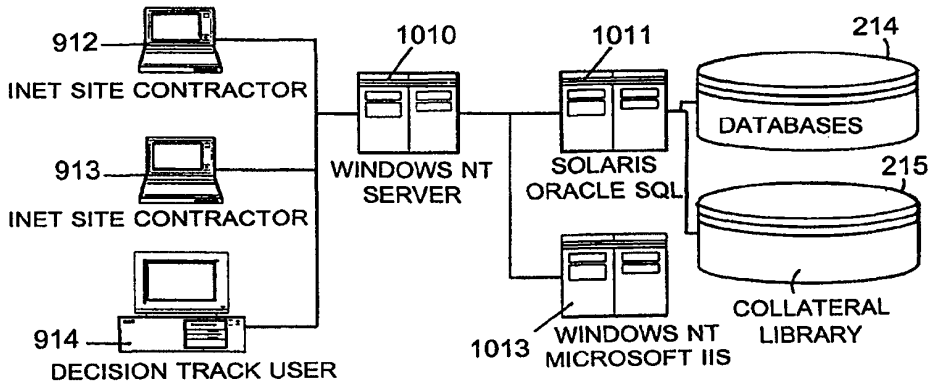
(72) Inventors: KEENE, John, D.; 4504 Torino Place, Plano, TX 75093 (US). FARRIS, Jeffrey, L.; 4301 Lakeside Drive, Dallas, TX 75219 (US).

(74) Agent: KINCART, Joseph, P.; Fish & Richardson P.C., Suite 2800, 45 Rockefeller Plaza, New York, NY 10111 (US).

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Published
With international search report.

(54) Title: NETWORK CONTACT TRACKING SYSTEM



(57) Abstract

In the present invention a method and apparatus is provided for information gathering and dissemination on a computer network, such as the Internet or a private network. Information dissemination is based on a profile of information compiled on a client accessing the network. The profile is referenced to create customized communications. The communication may be transmitted via standard web and e-mail interfaces, fax, conventional mail, or voice mail. The invention is particularly useful in gathering sales and marketing data from a web site visitor's browsing behavior or purchasing behavior and from user provided input. As a user's behavior is recorded, the invention also allow for customized messages to be selected and displayed on the web site in response to such behavior. Dynamic and unattended customization of web pages, e-mail or other messages (i.e., by varying the content thereof) is possible. The invention has application a wide range of contexts including business, scholastic and professional (e.g. medicine) environments where customized interactive information exchange with an individual user is desired.

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NETWORK CONTACT TRACKING SYSTEM

Cross Reference To Related Applications

This application claims priority to U.S. Provisional Application No. 60/095,652, filed August 7, 1998.

Background of the Invention

The present invention relates to interaction with customers for internet commerce. In particular, this invention relates to delivery of a sequence of messages to specific individuals in a time relative fashion. Determination of whether a customer receives a message is based upon a databased history of prior transactions with that customer.

A mechanism is described which implements a sequential or non-sequential, time-relative delivery of human readable messages based on specific input criteria. Different sets of criteria are maintained by the system concurrently. Each unique set of criteria is called a decision track. The input criteria for a decision track is continually evaluated to yield a continuous stream of contacts to deliver messages.

By way of background access to distributed networks such as the Internet has increased greatly in recent years and challenged commerce to use the Internet advantageously. Commercial Inet sites (e.g. an Internet or an Intranet site) have been added to networks to permit direct marketing of goods and services in an electronic environment. A great expenditure of time and effort has been invested to create a myriad of resources available to Inet browsers. As a means to benefit from the Inet forum, it is useful to have tools to interact with those browsing the Inet and track their contacts to

a particular Inet-site. Current tools available for interacting with such Inet clients, although useful, are primitive and limited in their capabilities and specifically do not permit time sequenced communication or real-time interaction which greatly facilitates commerce on the Internet.

Purveyors of the Internet desire interactions that further emulate a real life commercial experience. Virtual storefront owners, corporate home pages, online catalogue vendors, and other Inet-site owners, would find it useful to duplicate the real life experience of recognizing a repeat customer or visitor and remembering details concerning that person's previous visits. Internet interactions that can be tailored to a profile of a visitor to a web site would thus be advantageous.

It would also be useful to implement a vehicle to deliver a sequence of communications to a specific individual based upon profile knowledge both previously obtained and immediately determined during a web site visit. Further it would be useful to transmit such communications on a time schedule relative to an event. In order to determine delivery of a message, information on an individual, who may be anonymous, must be maintained. This information may include by way of example, where the individual can be contacted, what interests the individual may have, what sequence of messages has already been delivered, what format to send a message in, when is a favored time of day to reach that individual, and other useful information. To date, no solution is available that can provide such information and implement communication in a real time or event sequenced fashion.

Prior Inet database tools allow gathering of a group of addresses and delivery of a message to the entire group through batch mode processing. Batch mode

processing performs a given set of functions on groups of data referred to as batches. Typically data is collected and stored until a scheduled processing time. At the scheduled time, data is removed from a collection device and transferred to a processing device in batches. The processing device then performs a preprogrammed function in a backroom environment. Follow up to the collected data is thus subject to the timing of the batch processing.

Batch mode processing only allows follow up to a message after some period of time has elapsed. A new list of individuals may be gathered or the same list of individuals may be used to send another message. The problem that remains with this contact methodology is that it does not execute in real time, or even a time sequence queuing from an individual contact to a web site.

A system is needed that will deliver a message or a sequence of messages or perform some other useful action related to an individual's contact with a web site as soon as that individual client has been determined to have met predetermined criteria.

Summary of the Invention

Accordingly, an article of manufacture, a method and a system are provided for tracking Internet and/or Intranet contacts and automatically responding to such contacts in a real time environment with customized communications. The invention allows for a sequence of personalized messages to be sent to an individual contacting a web site on a real time basis and for personal messages to continue to be sent on a time schedule queuing off of a web site contact. A contact comprises access to an electronic interface such as a web site. A client is a person making such contact, or

causing a node of a network to make such contact. When a server, or system of servers hosting a Web site is contacted, useful information pertaining to, for example, a client's interests, browsing habits, purchasing history, time of contact, lead source of a contact, and a name and address if available, is gathered to create a contact profile database relating to the client. Further interactions with that client are customized in real time, according to the profile of information gathered in previous interactions including those interactions immediately preceding. In this way, activities can be directed towards a specific client in a time relative sequence. Information is disseminated to a specific client according to the information captured in that client's profile.

Disseminated information takes the form of customized communication. Communications may, for example, be modified contents of an Inet-site, e-mail, fax, voice mail, or U.S. mail. All communications can be part of a time sequence triggered by events in real time. With the use of real time customization, communications directed towards a client are intelligently structured according to accumulated information in the contact profile database and the occurrence of events. The use of a relative time line allows communications to take place on a timetable specifically tailored to the actions taken by a client.

A client profile is typically a database comprising related tables of data. The database may be updated via computer program code, or via direct input such as by a user of the invention, or a client directly supplying information. The database is stored in a medium allowing the data to be queried or retrieved.

For the purposes of this disclosure an Internet can refer to, for example, a network comprising computers

exceeding the boundaries of a private network. An Intranet can refer to, for example, computers within a private network. An Inet can refer to an Internet and/or an Intranet adhering to an internet protocol or similar protocol. An Inet-site is, for example, a site available on either an Internet or an Intranet. A network, for example, can have a computer acting as a server and a computer acting as a client. A contact can, for example, be an access to an electronic interface such as a web site, or other contents of a stored memory such as a hard drive or dynamic random access memory of a server. A client can be a person, a node operator, or broadly, a machine or electronic device making such contact, or causing a node of a network to make such a contact. Real time is meant to be read broadly to signify on a basis timely to or in relation to an individual event.

Other advantages and features of the present invention will become apparent from the following description, including the drawings and the claims.

Brief Description of the Drawing

FIG. 1 is a computer hardware diagram.

FIG. 2 is a computer network diagram.

FIG. 3 illustrates an embodiment of a decision track data structure.

FIG. 4 illustrates the flow of a real time response mechanism.

FIG. 5 illustrates the flow of querying a contact profile database.

FIG. 6 illustrates the flow of continual evaluation during decision track execution.

FIG. 7 illustrates the flow of an e-mail parsing routine.

FIG. 8 illustrates a data structure collateral management

FIG. 9 illustrates a small office configuration supporting this invention.

FIG. 10 illustrates a UNIX™-Based Database configuration.

FIG. 11 illustrates a flow of querying database records comprising information gathered from an Inet interface.

FIG. 12 illustrates a screen with a circumscribed area.

FIG. 13 illustrates multiple icons on a screen.

Description of the Preferred Embodiments

Fig. 1 depicts physical resources of a computer system 100. The computer 100 has a central processor 101 connected to a processor host bus 102 over which it provides data, address and control signals. The processors 101 may be any conventional general purpose single- or multi-chip microprocessor such as a Pentium® processor, a Pentium® Pro processor, a Pentium II® processor, a MIPS® processor, a Power PC® processor or an ALPHA® processor. In addition, the processor 101 may be any conventional special purpose microprocessor such as a digital signal processor or a graphics processor. The microprocessor 101 has conventional address, data, and control lines coupling it to a processor host bus 102.

The computer 100 includes a system controller 103 having an integrated RAM memory controller 104. The system controller 103 is connected to the host bus 102 and provides an interface to random access memory 105. The system controller 103 also provides host bus to peripheral bus bridging functions. The controller 103 thereby permits signals on the processor host bus 102 to be compatibly exchanged with signals on a primary peripheral bus 110. The peripheral bus 110 may be, for example, a Peripheral Component Interconnect (PCI) bus,

an Industry Standard Architecture (ISA) bus, or a Micro-Channel bus. Additionally, the controller 103 can provide data buffering and data transfer rate matching between the host bus 102 and peripheral bus 110. The controller 103 thereby allows, for example, a processor 101 having a 64-bit 66 MHz interface and a 533 Mbytes/second data transfer rate to interface to a PCI bus 110 having a data path differing in data path bit width, clock speed, or data transfer rate.

Accessory devices including, for example, a video display controller 112 and network controller 114 can be coupled to the peripheral bus 110. The network controller 114 may be a modem, an Ethernet networking card, a cable modem, or other network access device. The system 100 may also include a secondary peripheral bus 120 coupled to the primary peripheral bus 110 through a bridge controller 111. The secondary peripheral bus 120 can be included in the system 100 to provide additional peripheral device connection points or to connect peripheral devices that are not compatible with the primary peripheral bus 110. For example, in the system 100, the secondary bus 120 may be an ISA bus and the primary bus 110 may be a PCI bus. Such a configuration allows ISA devices to be coupled to the ISA bus 120 and PCI devices to be coupled to the PCI bus 110. The bridge controller 111 can also include a hard disk drive control interface to couple a hard disk 113 to the peripheral bus 110 and a controller to other computer readable medium 150.

The computer 100 also includes non-volatile ROM memory 122 to store basic computer software routines. ROM 122 may include alterable memory, such as EEPROM (Electronically Erasable Programmable Read Only Memory), to store configuration data. For example, EEPROM memory may be used to store hard disk 113 geometry and

configuration data. BIOS routines 123 are included in ROM 122 and provide basic computer initialization, systems testing, and input/output (I/O) services. For example, BIOS routines 123 may be executed by the processor 101 to process interrupts that occur when the bridge 111 attempts to transfer data from the ISA bus 120 to the host bus 102 via the bridge 111, peripheral bus 110, and system controller 103. The BIOS 123 also includes routines that allow an operating system to be "booted" from the disk 113 or from a server computer using a local area network connection provided by the network adapter 114. The operating system boot operation can occur after the computer 100 is turned on and power-on self-test (POST) routines stored in the BIOS 123 complete execution, or when a reset switch is depressed, or following a software-initiated system reset or a software fault. During the boot process, the processor 101 executes BIOS 123 software to access the disk controller 111 or network controller 114 and thereby obtain a high-level operating system. The high-level operating system is, for example, the Microsoft Disk Operating System (DOS)™, Windows 95™, Windows NT™, a UNIX operating system, the Apple Mac OS ™ operating system, or other operating system.

An operating system may be fully loaded in the RAM memory 105 or may include portions in RAM memory 105 , disk drive storage 113, or storage at a network location. For example, the Microsoft Windows 95™ operating system includes some functionality that remains in memory 105 during the use of Windows 95™ and other functionality that is periodically loaded into RAM memory 105 on an as-needed basis from, for example, the disk 113. An operating system, such as Windows 95™ or Windows NT ™ provides functionality to control computer peripherals such as devices 112-114, 121, and 124, and to

execute user applications. User applications may be commercially available software programs such as e2 SalesOffice™ word processing, spreadsheets, computer aided drawing and manufacturing software, scientific software, internet access software and many other types of software. User applications may access computer system peripherals 112-114, 121, and 124 through an application programming interface provided by the operating system and/or may directly interact with underlying computer system 100 hardware.

A collection of computers 100 can serve as components of a computer network. As shown in Fig. 2, a computer network 200 can include a host computer system 210 and client computers 231-233 or other network access devices 234-236. The client computers 231-233 or other network access devices 234-236 can communicate with the host 210 to obtain data stored at the host 210 in database 214 or collateral stored in a collateral library 215. The client computers 231-233 or other network access devices 234-236 can interact with the host computer 210 as if the host was a single entity in the network 200. However, a host 211-213 may include multiple processing and database sub-systems that can be geographically dispersed throughout the network 200. For example, a host 210 may include a single computer server 211 or a tightly coupled cluster 211-213 of computers 100 (Fig. 1) at a first location that access database system 214 or collateral stored in a collateral library 215 at remote locations. Each database system 214 or collateral stored in a collateral library 215 may include additional processing components.

Client computers 231-233 or other network access devices 234-236 can communicate with a host system 210 over, for example, a combination of public switched telephone network dial-up connections and packet network

interconnections. For example, client computers 231-233 may each include a modem coupled to voiceband telephone line 241-243. To communicate with a host 210, the client computer 231 can establish a data connection with a local terminal server 225 or 226 by dialing a telephone number assigned to the local terminal server 225. Other network access devices 232-233 can connect through dial up, direct cable access or other communications media. A local terminal server 225 or 226 may have both dial-up and packet network interfaces allowing the server 225 or 226 to receive data from client computers 231 or other network access devices 235 and 236, segment the received data into data packet payload segments, add overhead information to the payload segments, and send the resultant data packets over a link 221 to a packet data network 220 for delivery to a host system 210. Terminal servers 225 and 226 may also be referred to as a network service provider's point-of-presence (POP).

The overhead information added to the payload segments include a packet header. A packet header includes a destination address assigned to the host system 210 and a source address assigned to the local terminal server 225. Other overhead information may include information associating the data packet with a specific client 231-233. Similarly, the host system 210 may send data to a client 231-233 by segmenting the data into data packet payload segments, and adding overhead information to send the data packet to a client 231-234 at the terminal server 225. Client computers 234-236 may similarly exchange data with the host 210 over communications links 244-246 to the terminal server 226.

Data packet formats, switching equipment within the packet network 220, and networking protocols used within the network 200 may conform to the transaction control protocol/internet protocol (TCP/IP). In a TCP/IP

implementation, the host 210, packet network 220, terminal servers 225 and 226 are each assigned a unique internet protocol (IP) network address. TCP/IP switching equipment within the network 220 can direct a TCP/IP packet to the intended recipient 210, 225, or 226 based on the packet's destination IP address. Implementations may use other networking protocols and packet formats.

A vehicle such as a network interface screen 251 comprising an Inet-site, hosted on a server or a system of servers, gathers information via a software program, the information relating to a contact made with the server.

On an initial contact, information is taken from sources such as the Internet Protocol (IP) address of a client or a login screen at the site accessed. It may also be useful to download a cookie to identify a client during subsequent contacts. A "Cookie" sometimes referred to, as a "Magic Cookie" is a short piece of data downloaded to a client's computer and then read back by an Inet-site during subsequent interactions. Typically, this type of identification is accomplished through use of a small text file with information pertaining to a client's access to the originating Inet-site. The text file is sent to reside on the client's computer. The text file is presented to the originating Inet-site by the client's browser and avoids the necessity of repeating information submitted during a previous interaction. Most cookies reside in a computer's random access memory and are erased when a client exits his browser. More permanent cookies are stored on a client's hard drive and referred to as persistent cookies. Cookies can be used to tell a server if a client has visited the Inet-site before.

Information relating to an Inet contact is gathered and stored in a contact profile database 252.

Actions taken by a client including browsing behavior are databased along with other related information and added to a contact profile. Subsequently, information relating to a client can also be added to the contact profile database 252. Additional information may be input by a user, input by a client via an Inet interface 251, or merged from another data source. Inet screens customized according to the information gathered can then be presented to the client in real time, and other customized forms of communications may also be disseminated.

An unattended mechanism, such as an Inet interface screen 251, can be used for gathering customer information. Inputs may comprise a form to be filled in with information by a client, audit trail information such as page hits, file downloads or other Inet server interactions, such as searches. Information received by contact filled forms can be used to create or update information about a particular client. Audit trail information can be used to perform complex tasks such as notifying users of new versions of a product or performing follow up contacts to obtain additional information. Tasks may be carried out by a user customizable programming mechanism referred to as a decision track.

A contact profile database 252 comprising gathered data can be referenced by a decision track 253 mechanism. Decision Track records 300 can include: a client ID 310, which is a system identifier and uniquely identifies an individual or contact within the system; a decision track ID 311, which is a unique identifier for a sequence of actions to be taken such as the delivery of a message; a starting time 312, which is a time stamp of when a contact is first placed on that decision track; the current step 313, typically one of a plurality of steps

comprising a decision track 253 such as one message in a sequence of messages; and the last time 314 an action was taken directed toward this particular contact.

Tables may be modified to update customer and contact information. Table management can also include maintaining client contact audit trails. Locally generated contacts, such as phone, fax, e-mail and voice mail, as well as server-generated contacts can be stored. Individual customer records may be marked as private or public. Private records may be maintained locally and not synchronized with other servers. In addition private records may remain visible only to designated users. Changes to public records can be automatically synchronized with other servers in a multiple server environment.

Real time response can be accomplished by continuous gathering of contacts and evaluation of data relating to those contacts as well as evaluation of events that have occurred. Actions can be taken based on these evaluations after which the system is designed to loop back again to contact gathering. This flow is illustrated in FIG. 4.

The contact gathering process 410 collects information from any of the information sources known to the system. In particular sources comprise but are not limited to, a contact profile table, a history table, and any other table comprising a contact profile database. A history table contains transactional history relating to contacts, including but not limited to a list of web pages contacted, a purchase history, downloading activity and other data relating to a contact deemed to be of value to a user of this invention.

Step evaluation 411 compares information in a contact profile database 252 with criteria set forth by a user. A top level query gathers a result set comprising

contacts meeting a specified criteria. The result set is formed comprising a list of contact IDs that meet the criteria necessary to be placed on a decision track. The decision track 253 is then initialized for the aforesaid result set with each of the records comprising the result set placed on the first step of the initialized decision track. (Fig. 4.)

As the decision track 253 executes, a continual evaluation takes place to monitor the various steps 610 for all of the contact records involved in the execution. In addition, event evaluation 412 can take place and be tested against criteria necessary to advance to the next step of a decision track. For example, criteria to advance to the next step of a decision track 253 may be the expiration of a 24-hour period. The 24-hour period constitutes an event. Once an event has taken place, a step evaluation result tests true 611 and contact records waiting on that event advance to a next step of the decision track. When all criteria have been met, an action may be performed 612 as set forth in a step of a decision track.

Typically, contact to an Inet-site is effectuated via a client computer that has been lead sourced from another Inet-site. In this case a lead source 813 may also be added to a contact profile database. A lead source designates the site from which a contact originated. Tracking lead sources can be used to analyze an ad campaign and to quantify referrals from other sites. Information gathering techniques implemented in this invention allow for an accurate accounting of how many leads originating from a specified source eventually convert to a sale or result in some other desirable interaction. Quantifying information relating to a lead source can be useful in determining the value of advertising on that lead source. In addition compiled

lead source data can be used to compensate a lead source based on an actual number of click throughs, or the number of click throughs that convert to a sale or take some other desired action.

Interaction with a client can be based upon information accumulated in a contact profile database. Interaction includes a response to a request made by a client and also proactive communications originating from a host site. Communications can be customized according to pre-established criteria that a user may modify at any time. Clients may be placed in a particular classification and receive specific collateral communications based upon data stored in a contact profile database 252 such as a contact's tracked browsing or purchasing behavior, or other useful information. Classification criterion and a history of collateral receipt may become part of the client profile that is databased. Communications can be disseminated according to classifications in the contact profile database. A user may also make reference to the contact profile database 252 during subsequent interactions with that client, during user initiated communications, or at any other time that such data may be useful.

Collateral is a communication piece. A collateral library 215 may be stored in a database. Execution of a decision track 253 determines if a client should be sent a collateral piece at a given time. During execution of a decision track 253, contacts are queried to meet predetermined criteria 510. If predetermined criteria are met, a corresponding action may be taken such as initializing result set to a first step 511. For example, a corresponding action may cause a designated piece of collateral to be sent to a client. A specific example of a collateral is sending a message two weeks before a holiday, such as Mother's Day, to all customers

who bought on last year's Mother's Day, and sending out "Thank you" messages for purchases followed up by promotional messages after a predefined period.

A collateral library 215 allows for consistency in appearance that can create a theme throughout the collateral pieces. This is useful in creating a corporate identity. Collateral pieces 825 with similar features are more likely to be associated with an originating entity. A databased library of collateral may act as templates to be modified according to information in a client's profile. Collateral can be stored in a collateral database 255 using an index of labels 826 or binder information. Associated with the label will be documents having equivalent content but created in different format types. Types 824 include for example, e-mail, HTML, RTF, text, fax, white paper, brochure, telemarketing materials, voice mail, postal mail, as well as other appropriate types. Due to the nature of different collateral types 824, it is sometimes preferable to database locations of links to collateral pieces 825 instead of the collateral piece 825 itself. In addition, for electronic collateral, a graphic may be linked via a uniform resource locator (URL). External editors such as commercial word processors and graphics packages may be used to create and edit collateral. Centralized collateral management provides a mechanism for storing multiple collateral objects of different types under a common label.

Various modes of delivering collateral require different interfaces. Pager configuration involves specifying a phone number to dial and a sequence to specify the PIN number and transmit a message. Internet-based pager services can also be supported. Fax interface configuration involves specifying a fax device to use and a mechanism for delivering the phone number of

the target fax machine. Voice mail interface includes specifying a voice mail device and collateral for messages as well as telephone numbers and time of day to place calls.

One data structure that can be used for accomplishing centralized collateral management is illustrated in Fig. 8. Centralized collateral management can be accomplished by organizing the collateral into collateral binders 820 of various labels 826 each label 826 indicating a content 823 of a collateral with an ID 822, and collateral type 824.

The client's profile in the contact profile database 252 will determine the format type of the collateral to be sent to the client. Each contact can have a preferred contact type 812 stored in the contact profile database. The contact type can be determined from a client's browser, contact input into a form, types of documents requested by a client or other information gathered during client interaction. If a decision track 253 determines that an action should take place relating to a particular contact, the contact profile database 252 is referenced to determine the preferred contact type for that particular contact.

Collateral can also be displayed in apportioned areas of an Inet-site screen 251. For example, the Inet screen 251 can have one or more geographic areas circumscribed. Each circumscribed or apportioned area 1201 can be capable of displaying a customized content. As information on a client is gathered, or information is referenced from a contact profile database 252, the contents of a circumscribed area may be designated to contain a specific collateral piece according to that information. In a preferred embodiment a decision track 253 is a vehicle used to designate the contents of a circumscribed area 1201.

Communication with a client can be directed towards an interest demonstrated by a client by analyzing actions taken by a client on a web site, or determined from data stored in a client profile database, as discussed earlier. By way of example, if a client answers an online offer for sale, that offer for sale may not be subsequently presented to that client. Instead perhaps a follow up offer may be made. Similarly, if a client shows interest in a product line, additional items relating to the client's interest may be presented to that client either by showing additional items on a screen the client views, such as a custom Inet-site screen, or sending the information to the client via e-mail, fax, mail or other suitable medium. These paths of interaction are termed decision tracks.

An Inet-site screen 251 is contacted by a client via a network access device 234-236. Inet-sites may be located for example on Internet or Intranet networks. An example of an access device is a client computer 231-233. Use of an access device such as a computer allows a contact to remain anonymous. If a client is anonymous, a client ID 310 is created based on the IP address, or a cookie downloaded to the client's access device. During an interaction between a client and an Inet screen, an anonymous client may be queried for identification. Once identified, the profile created on initial contact is assigned to the newly identified entity, and may be transferred to a table dedicated to known entities or leads. If an anonymous contact is not converted to a known entity, the profile can still be databased according to the created ID and tracked for future contacts. If the contact remains anonymous and dormant, the anonymous profile may be pruned from the database after a predetermined time lapse follows a last contact.

Processing work can be divided into tracks of work that may be referred to as decision tracks. Each decision track 253 comprises a series of at least one condition that is to be tested by records of a database. The structure of a decision track 253 is described below (Table 1). The decision track 253 definition describes the top level of a decision track. The decision track 253 step definition describes the structure of one of the individual steps that are interconnected to form a complete decision track.

Table 1

Field	Description
Description	This is a user-friendly description of the decision track.
Decision Track ID	This is a unique code that is assigned to each decision track. It provides a simple mechanism to quickly identify a particular track. A tag is usually human readable so that users may refer to it in other conversations to refer to a specific message thread. The tag may be inserted into the collateral that is sent out to the client.
Local Variables	These are allocated when the decision track is started for a contact and used to provide mechanisms for tracking state between nodes across time. They can be used to implement simple looping constructs or sophisticated branching algorithms.
Conditions	If a condition is valued true, then the corresponding actions are taken.
Actions	Actions include setting variables, writing records, and sending collateral to the associated contact. Actions can also include advancing to other states of a decision track.
Target List	This is a query that defines which contacts are to be assigned to the decision track. These queries can be executed continuously to allow including new contacts that meet the criteria defined.

Events/Queries	Events may be time of day and date timer expiration, database queries or local variable values. Multiple Events/Queries may be interconnected with boolean ANDs and ORs to form logical expressions. The

As conditions of the decision track 253 are evaluated 610 and met with a true result 620, a predetermined action may be taken 630 in response to a condition met. If a condition is not met, then no action corresponding with that condition is executed. Appropriate action may take place on-line, such as presenting a collateral on a web site screen during a client's next visit, or off-line, such as mailing a hardcopy brochure via standard mail services, or fax. In addition, actions are sequenced so as to proceed in a desired order, as illustrated in Table 2 below.

Table 2

Decision Track		
Condition 1	If Condition is Met Then	Action 1
Condition 2	If Condition is Met Then	Action 2
Condition 3	If Condition is Met Then	Action 3
Condition 4	If Condition is Met Then	Action 4
Condition 5	If Condition is Met Then	Action 5

In one embodiment a series of records is tested against a selected condition. As each record is tested, if it meets the criteria of a condition, then a corresponding action may be executed. In another embodiment, multiple conditions are tested against a selected record, with corresponding actions being executed thereafter if the criteria of the conditions are met. A user may establish and modify test conditions at any time.

In still another embodiment decision tracks are combined with a network tracking system. In this case, decision tracks are designed to test conditions against data gathered and stored in a contact profile database. For

example information can be gathered from an Inet Interface screen 1110 into database records. Data comprising a database such as the contact profile database 252 may be updated in real time, increasing the responsiveness of the decision track. A query of database records 1120 can test conditions set by a user. Predetermined actions set by a user can be performed for those records meeting a condition 1130. With real time interaction, the effectiveness of a particular decision track 253 can be analyzed at any point in time, as the feedback can be immediate.

In addition a user may modify a decision track 253 in response to data gathered in real time. Conditions and corresponding actions comprising a decision track 253 can be created and modified by a user. For example, if a particular subject matter present on an Inet site is attracting a high number of contacts, a user may immediately tailor a set of conditions to appropriately respond to those contacts.

Responses can be accomplished in real time, or in a time sequence relative to an event. For example a preferred embodiment will modify an Inet site screen 251 in real time and send collateral in a sequence at predetermined time intervals triggered by an event. For example, twenty-four hours following a desired transaction such as a sale can be defined as an event. This invention can automatically send a follow up message, and invite more interaction when that twenty four hour event has taken place. Sequence timing can be in response for example to a profile that indicates that a client tends to sign on-line during particular hours of the day. The sequence may be timed to correspond with a client during those hours that the client is signed on-line.

Decision tracks 253 and the criteria for each step of a decision track 253 can be created and manipulated via a user interface 1300. A preferred interface utilizes a graphical representation 1310 for each step of a decision track 253 as it is created. The graphical representation facilitates accurate processing of the data and ease of use. Another method for creating decisions tracks would include a written language statement defining criteria for each decision.

Different flows can result from both internal and external triggers to a decision track 253 system. Decision tracks may test for different trigger events as a condition to be met before taking an action. Trigger events may be time-based single events, time-based recurring events or external input and query result events. External triggers include e-mail to accounts monitored by a server and Inet input. Internal triggers can include events that are generated as a result of a scheduling database that can indicate tasks that have transpired.

In addition an indicator may be made part of a database to store actions taken during execution of a decision track. Such an indicator can mark a contact record that achieves a particular result. A decision track 253 may then determine if it is desirable to continue executing a decision track 253 for a marked record.

Many methods are well known for marking database records. One method includes creation of a "yes/no" field that toggles between 1 and 0 to indicate a given state. Another known method of marking is to associate an array of variables with a given set of values. Values may indicate if a desired result has been achieved for a plurality of record states.

Actions designated by a decision track 253 may include one time calendar based mailings, mailings driven on responses to purchases, or mailing based on elapsed time without purchases. As activities are performed on contacts in relation to processing decision tracks, a client's audit trail is updated and used to maintain the current state of individual decision tracks. The audit trail can also be used for error recovery in the case of system failures, thereby facilitating faultless restart.

Various processing functions used to implement this invention are typically performed without user intervention and can sometimes be referred to as back office functions. A server 211-213 implements back office logic to coordinate various client components. A server can also implement tasks not requiring user intervention such as e-mail routing and performance of unattended, previously scheduled activities. It is preferred for a server to have an instrumented interface that can display current status information made available by an administration module.

A front end is the primary front end seen by a user. In a preferred embodiment, user interface is constructed with a list of icons representing various available modules on one side of a screen with module specific information display on the opposite side of the screen.

Reports for local viewing as well as formal reporting can be supported. Reports may be saved, printed, or forwarded via e-mail. The reports include various detail reports and summary reports of campaign, lead and contact information.

A console log may display the current output of activities. All logged activities can be time stamped. The log may be cleared or saved to disk. A log can include entries when users log in and out, when a system

is started, when server-to-server synchronization is performed and when various routing and tracking events occur. The amount of detail included in a log is adjustable. The age of information in a log is also configurable.

This invention is designed to utilize a commercially available database engine 910. Many such database engines are commercially available and include for instance, Oracle™, Sybase™, Informix™ and Microsoft SQL™ servers. Database tables used by a server of this invention may be administratively customized to integrate with an existing database structure. A create database utility, available in a preferred embodiment, automatically creates the tables required by a decision track. In addition, although internal databases such as a contact profile database 252 are preferred, queries may be processed against external Structured Query Language (SQL) databases.

Several configurations using combinations of Windows NT™ servers and UNIX™ servers to support Inet services, database servers 214 and a server 214 storing decision tracks 253, can be detailed. The following are presented as examples only and should not limit the scope of this invention.

As an example, a small office configuration illustrates a configuration supporting this invention (Fig. 9), with Inet, Database and Decision Track Server functions located on a single Windows NT™ system 911. Other various front-end components, such as those requiring customer interfaces, can run on Windows 95™ and Windows NT™ systems.

A Windows NT™ configuration may also use multiple Windows NT™ systems to support the various service components. A different Windows NT™ system may be used for Inet services, another system for a database server

and still another system for a decision track server. Various front-end components can run on Windows 95 and Windows NT™ systems.

A UNIX™-Based Database configuration may be similar to a Windows NT™ configuration except that the database server may be implemented using a Solaris™ based Oracle™ server. (Fig.10)

Inbound e-mail to accounts monitored by a server can be parsed 710 for both explicit requests (such as subscribe/unsubscribe requests) and implicit requests whose actions are determined through loose parsing of the requests. Parsing can be used to provide automatic response 720 generation to product information or technical support queries.

Bounced mail messages returned from an invalid address can be automatically processed and routed by an e-mail parser. If a destination address is in a contact profile database, a bounce counter can be incremented. If a counter reaches a system-defined limit, the corresponding contact record can be flagged as having an invalid e-mail address and future mail messages will not be delivered to that contact. In addition, Inet scripts can prompt a client with an invalid e-mail address when they next contact the site and request entry of a valid e-mail address. E-mail addresses may be verified to the extent possible. A primary verification method can be to ensure that the domain name provided is reachable.

Duplicate records in a contact profile database 252 can be eliminated based on e-mail address. Also, standard de-duplicating algorithms to locate and eliminate or combine duplicate contact information may be used. User interaction on questionable duplicates is preferable.

When for example an e-mail message is received, general conditions may be evaluated. Conditions include

specific words in the recipient's address, the sender's address, the subject, the body. Conditions are then matched against a sender's address in the contact database. If a match is found, appropriate actions may be taken, such as unsubscribe a user from a mail list, add a user to a mail list, send a collateral piece to a user, or forward a message to an account.

A preferred embodiment of this invention can also use multiple servers concurrently within a peer group to implement load balancing and fault tolerance. Load balancing and fault tolerance can be achieved by many known methods, the preferred method comprises claiming ownership of decision tracks and allocating work base on such ownership.

A synchronization function is also preferred to ensure full replication across multiple servers. Each remote server may maintain a complete copy locally of various databases used by a decision track 253 application. Conflicts in synchronization can be resolved by human interaction. Synchronization operations may be configured to operate continuously or periodically. Synchronization may be configured by establishing partnerships between cooperating servers. A server will attempt to synchronize its databases with other servers in a partner list. In this way, data synchronization may be tailored to the amount of communications bandwidth available between any given set of servers.

It is also preferred to implement load balancing and fault tolerance across several servers. Methods for load balancing and fault tolerance are well known and add to the reliability and responsiveness of a network system. A preferred embodiment utilizes a system of load balancing that divides work into tracks such as decision tracks and allows individual servers to claim ownership

of a particular track. After some initial work an owner server may then allocate blocks of work to other servers that may comprise a peer group of servers. Division and allocation of the work can provide load balancing. A plurality of servers comprising a peer group can provide fault tolerance.

The methods and mechanisms described here are not limited to any particular hardware or software configuration, or to any particular communications modality, but rather they may find applicability in any communications or computer network environment. In a preferred embodiment of this invention, a software program on a computer readable medium is loaded on a server or a plurality of servers. The software program comprises a front-end application that allows users to access a variety of the features designed to automate contact management on the Internet.

The techniques described here may be implemented in hardware or software, or a combination of the two. Preferably, the techniques are implemented in computer programs executing one or more programmable computers that each includes a processor, a storage medium readable by the processor (including volatile and non-volatile memory and/or storage elements), and suitable input and output devices. The programmable computers may be for example general-purpose computers or special-purpose, embedded systems. In either case, program code is applied to data entered with or received from an input device to perform the functions described and to generate output information. The output information is applied to one or more output devices.

Each program is preferably implemented in a high level procedural or object-oriented programming language to communicate with a computer system. However, the programs can be implemented in assembly or machine

language, if desired. In any case, the language may be a compiled or interpreted language.

Each such computer program is preferably stored on a storage medium or device (e.g., CD-ROM, hard disk, magnetic diskette, or memory chip) that is readable by a general or special purpose programmable computer for configuring and operating the computer when the storage medium or device is read by the computer to perform the procedures described. The system also may be implemented as a computer-readable storage medium, configured with a computer program, where the storage medium so configured causes a computer to operate in a specific and predefined manner.

The invention described has broad application to a wide range of electronic interaction environments and a number of embodiments based upon the principles disclosed are possible. Those skilled in the art will recognize that the method and apparatus of the present invention has many applications, and that the present invention is not limited to the representative examples disclosed herein. Moreover, the scope of the present invention covers conventionally known variations and modifications to the system components described herein.

What is claimed is:

1. A system for gathering and disseminating information on a network comprising:

a) a computer server;

b) an interface on the server for gathering and disseminating information;

c) a network access device enabling a client to electronically contact said computer server via the interface;

d) software implementing the following operations in said computer server:

e) gathering information relating to the electronic contact of said server by said client;

f) storing said gathered information in a client profile database;

g) referencing the client profile database to generate a customized communication; and

h) disseminating said customized communication to a client at a time relative to an event. The information gathering and dissemination system of claim 1 wherein the interface for disseminating information comprises an Inet-site page The information gathering and dissemination system of claim 1 wherein the customized communication disseminated is in response to a parsed e-mail message.

2. The information gathering and dissemination system of claim 1 wherein initial contact is anonymous and data tracked is subsequently associated with an identified contact.

3. The information gathering and dissemination system of claim 1 wherein the information gathered includes the lead source of the contact.

4. The information gathering and dissemination system of claim 1 wherein said customized communications are stored in a collateral library.

5. The information gathering and dissemination system of claim 1 wherein the customized communication is sent sequenced in time from an event triggered according to logic defined in a decision track interacting with the client profile database.

6. A method for analyzing the effectiveness of an information dissemination campaign on a distributed network, the method comprising:

a) distributing a communications collateral relating to a network interface screen;

b) gathering information relating to responses to said collateral;

c) storing the gathered information in a contact profile database;

d) generating at least one report based on the databased data; and

e) analyzing the report to determine the effectiveness of the campaign.

7. The method for analyzing the effectiveness of an information dissemination campaign on a distributed network of claim 6 wherein the distributed network is an Inet.

8. The method for analyzing the effectiveness of an information dissemination campaign on a distributed network of claim 6 wherein the communications collateral is an internet advertisement.

9. The method for analyzing the effectiveness of an information dissemination campaign on a distributed network of claim 6 wherein the information gathered comprises:

a) a lead source of a click through;

b) the time of day of the click through;

c) the date of a click through; and

d) the particular communications collateral responded to.

10. The method for analyzing the effectiveness of an information dissemination campaign on a distributed network of claim 6 further comprising, modifying the advertisement in response to the analysis of the effectiveness of the campaign.

11. A method of conducting an Inet advertising campaign comprising:

a) providing at least one advertisement on an Inet network on at least one host Inet site;

b) gathering information relating to a click through from said advertisement;

c) storing the gathered information in a contact profile database; and

d) compensating the Inet host site based on the number click throughs lead sourced from the Inet host site.

12. The method of conducting an Inet advertising campaign of claim 11 wherein the host Inet site is further compensated for lead sourcing a contact that consummates a sale.

13. The method of conducting an Inet advertising campaign of claim 11 wherein the stored information comprises:

a) the lead source of a click through;

b) the time of day of the click through;

c) the date of a click through; and

d) the particular ad responded to.

14. The method of conducting an Inet advertising campaign of claim 11 wherein a decision track modifies the advertisement and the host sites chosen after referencing information stored in the contact profile database.

15. An apparatus for conducting an Inet advertising campaign comprising:

a) a storage device;

b) a processor connected to the storage device;

c) a contact profile database stored on the storage device; and

d) a software program stored on the storage device and controlling the processor; and the processor operative with the program to:

e) provide an advertisement on at least one host site on a distributed network;

f) gather information relating to a click through on said advertisement;

g) store the gathered information in records comprising contact profile database;

h) generate at least one report based on the databased data; and

i) analyze the report to determine the effectiveness of the campaign.

16. A programmed computer for analyzing the effectiveness of an information dissemination campaign on a distributed network comprising:

a) a memory having at least one region for storing computer executable program code;

b) a processor for executing said program code stored in said memory;

c) a program code stored in said memory said program code implementing in said computer server:

d) distribute a communications collateral relating to a network site;

e) gather information relating to responses to said collateral;

f) store the gathered information in a contact profile database;

g) generate at least one report based on the databased data; and

h) analyze the report to determine the effectiveness of the campaign.

17. A method for coordinating communications collateral for use in a contact tracking system, the method comprising:

a) storing communications collateral in a database;

b) executing a decision track referencing a contact profile database;

c) customizing a collateral based on reference to the contact profile database; and

d) sending the customized collateral to a contact referenced in the contact profile database.

18. The method for coordinating communications collateral for use in a contact tracking system of claim 17 wherein the communications collateral present a common theme in appearance.

19. The method for coordinating communications collateral for use in a contact tracking system of claim 17 wherein the database contains collateral of different types and equivalent content.

20. The method for coordinating communications collateral for use in a contact tracking system of claim 17 wherein the contact tracking system is a computer network contact tracking system.

21. The method for coordinating communications collateral for use in a contact tracking system of claim 17 wherein the database makes reference to communications collateral with a label signifying the content of the collateral, and a type signifying the format of the collateral.

22. The method for coordinating communications collateral for use in a contact tracking system of claim 21 wherein the type of a collateral sent is determined by reference to a contact profile.

23. The method for coordinating communications collateral for use in a contact tracking system of claim 17 wherein the decision track is customizable by a user of the contact tracking system.

24. An apparatus for coordinating communications collateral for use in a contact tracking system, the apparatus comprising:

a) a storage device;

b) a processor connected to the storage device;

c) communications collateral stored in a database on the storage device;

d) a contact profile database stored on the storage device;

e) a software program stored on the storage device and controlling the processor; and the processor operative with the program to:

f) process a decision as defined in a decision track and referencing the contact profile database; and

g) send collateral stored in the communications collateral database to a contact as determined by the decisions processed.

25. The apparatus for coordinating communications collateral for use in a contact tracking system of claim 24 wherein the storage device and processor are contained in a computer.

26. The apparatus for coordinating communications collateral for use in a contact tracking system of claim 24 wherein the database references communications collateral with a label signifying the content of the collateral, and a type signifying the format of the collateral.

27. A programmed computer server for providing coordinated communications collateral, the computer server comprising:

a) a memory having at least one region for storing computer executable program code;

b) a processor for executing program code stored in said memory;

c) a program code stored in said memory said program code implementing the following operations in said computer server:

d) provide communications collateral;

e) store said communications collateral in a database;

f) provide a contact database;

g) customize a collateral according to reference to said contact profile database; and

h) transmit the customized collateral to a contact.

28. A method for processing work on a computer, the method comprising;

a) dividing work into at least one decision track, said track comprising at least one condition to be tested and at least one corresponding action to execute if the condition is met;

b) providing a database comprising data records relating to contact of an Inet interface by a client;

c) testing a data record against a condition of the decision track; and

d) executing an action corresponding to the condition tested if the condition tested is met by the data record.

29. The method of claim 28 wherein the condition is met by a trigger event.

30. The method of claim one wherein the action taken is the transmission of a communication collateral to the client.

31. The method of claim 28 wherein the action taken is a change in an interface content being viewed by the client.

32. The method of claim 28 wherein the database is updated in real time.

33. The method of claim 28 further comprising:

a) testing the data record against further conditions present in the decision track until all conditions have been tested; and

b) executing further actions corresponding to conditions that have been met by the data record.

34. The method of claim 28 further comprising:

a) defining a desired result to be accomplished by a decision track; and

b) flagging a record that achieves the desired result.

35. The method of claim 34 wherein a record having been flagged as achieving a desired result is bypassed from executing remaining conditions of a decision track.

36. An apparatus for performing data processing work comprising:

a) a storage device;

b) a processor connected to the storage device;

c) a database comprising data records stored on the storage device; and

d) a software program stored on the storage device and controlling the processor; the processor operative with the program to:

i) divide the data processing work into at least on decision track, said track comprising at least

one condition to be tested and at least one corresponding action to execute if the condition is met;

ii) test a data record against a condition of the decision track; and

iii) execute an action corresponding to the condition tested if the condition tested is met by the data record.

37. The apparatus of claim 36 wherein the condition and corresponding action may be created and modified and by a user.

38. The apparatus of claim 36 wherein the database provided is a contact profile database comprising information gathered relating to contact of an Inet site.

39. The apparatus of claim 36 wherein the processor is further operative with the program to:

a) test the data record against further conditions present in the decision track until all conditions have been tested; and

b) execute further actions corresponding to conditions that have been met by the data record.

40. A method of presenting dynamic network interface screens comprising, the method comprising:

a) providing a network interface screen with at least one geographic area circumscribed;

b) providing multiple customized content for each circumscribed area;

c) executing at least one decision track, wherein the executed decision track tests conditions to determine which customized content is to be displayed in each circumscribed geographic area;

d) displaying a customized content for each circumscribed geographic area of the network interface screen as determined by the execution of a corresponding decision track.

41. The method of claim 41 wherein an executed decision track references a contact profile database.

42. The method of claim 41 wherein the customized content for each circumscribed area is stored as collateral in a collateral database.

43. An apparatus for presenting dynamic network interface screens, the apparatus comprising:

a) a storage device;

b) a processor connected to the storage device;

c) decision tracks stored on the storage device;

d) a software program stored on the storage device and controlling the processor; and the processor operative with the program to:

e) provide a network interface screen with at least one geographic area circumscribed;

f) provide multiple customized content for each circumscribed area;

g) execute at least one decision track, wherein the executed decision track tests conditions to determine which customized content is to be displayed in each circumscribed geographic area;

h) displaying customized content for each circumscribed geographic area of the network interface screen as determined by the execution of a corresponding decision track.

44. The apparatus of claim 44 wherein a decision track is selected according to information recorded relating to a contact of an Inet site.

45. A programmed computer server for presenting dynamic network interface screens comprising:

a) a memory having at least one region for storing computer executable program code;

b) a processor for executing program code stored in said memory;

c) a program code stored in said memory said program code implementing in said computer server:

d) a means for providing a network interface screen with at least one geographic area circumscribed;

e) a means for providing multiple customized content for each circumscribed area;

f) a means for executing at least one decision track, wherein the executed decision track tests conditions to determine which customized content is to be displayed in each circumscribed geographic area; and

g) a means for displaying a customized content for each circumscribed geographic area of the network interface screen as determined by the execution of a corresponding decision track.

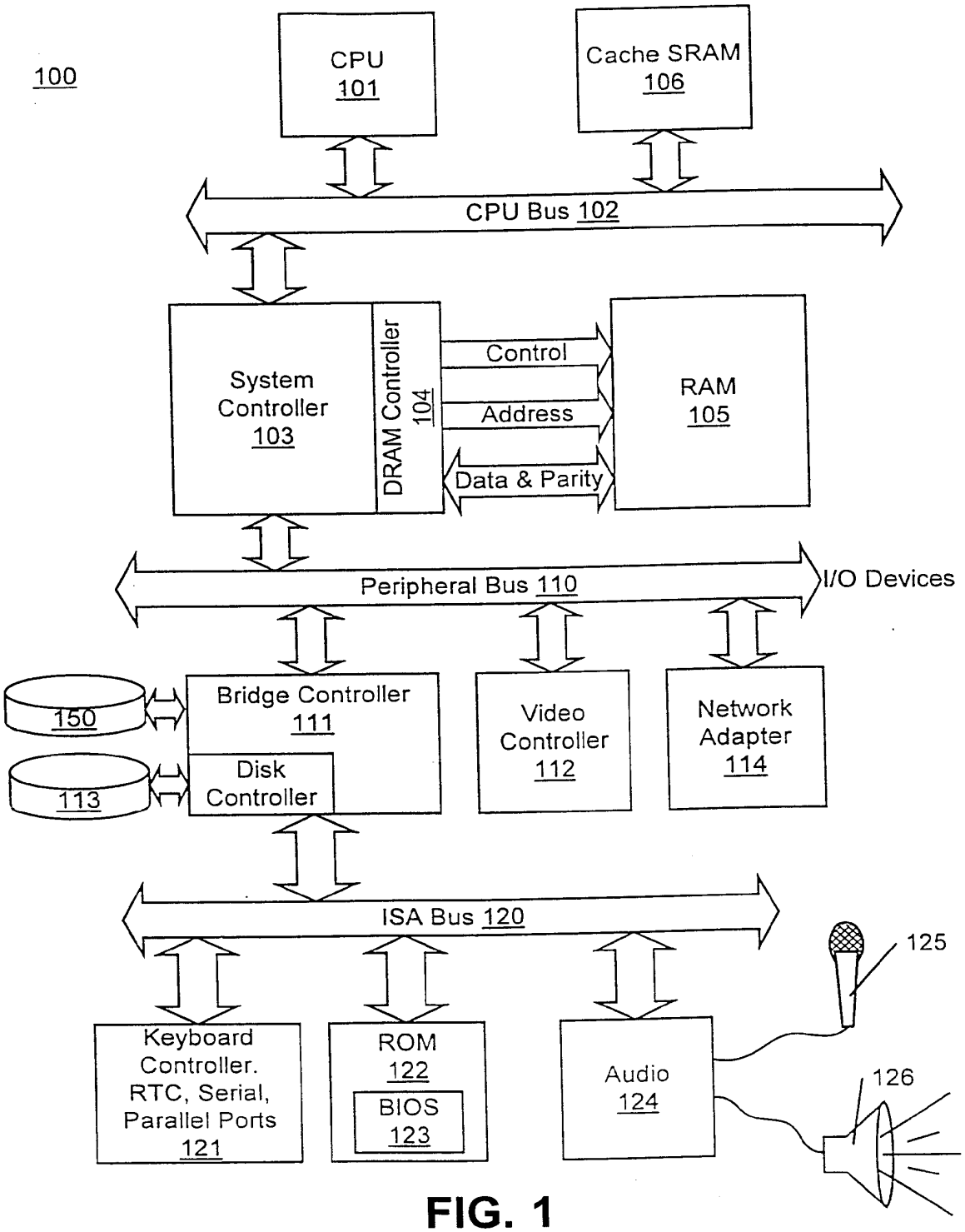


FIG. 1
(Prior Art)

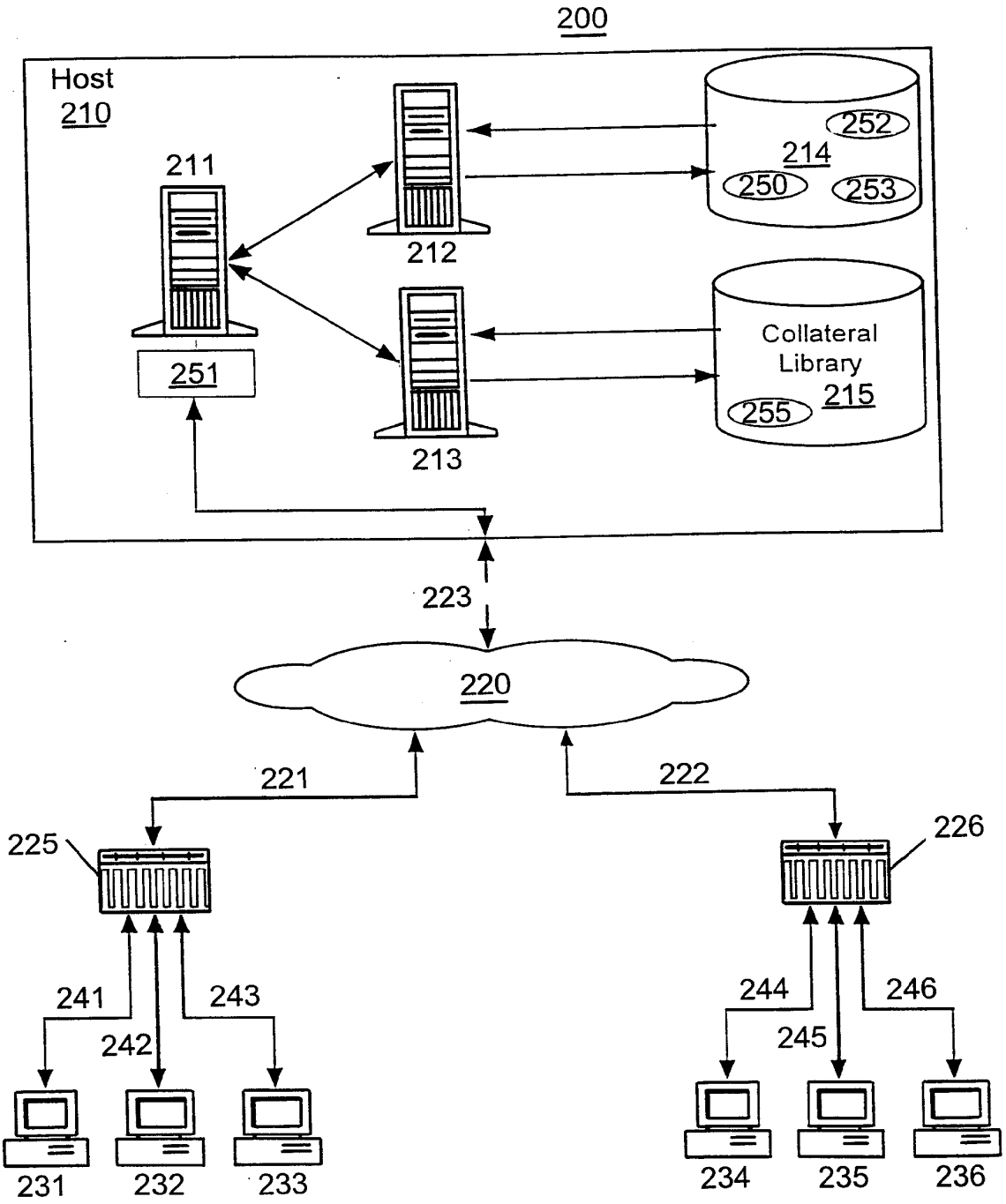

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FIG. 2

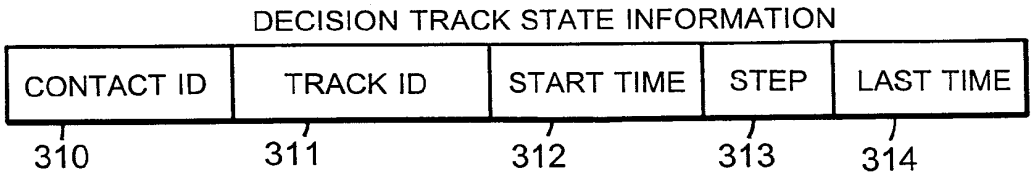


FIG. 3

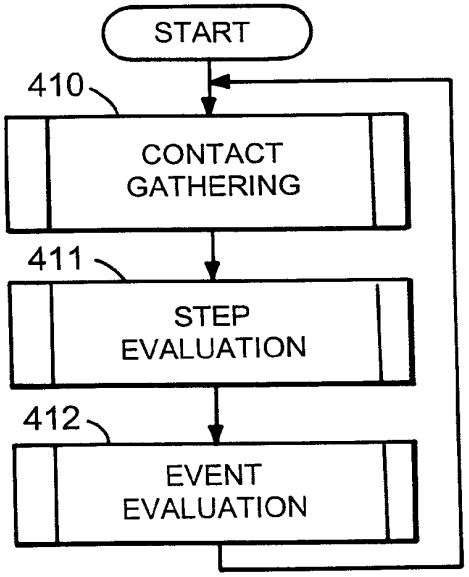


FIG. 4

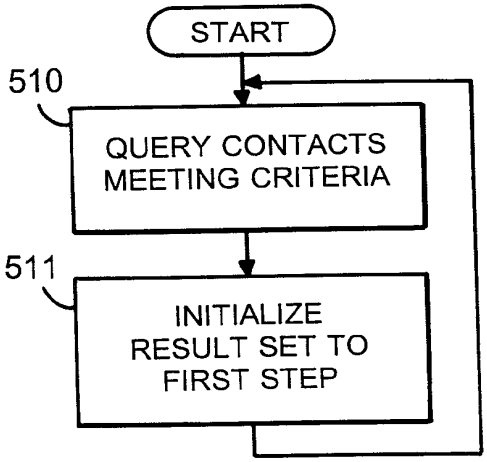


FIG. 5

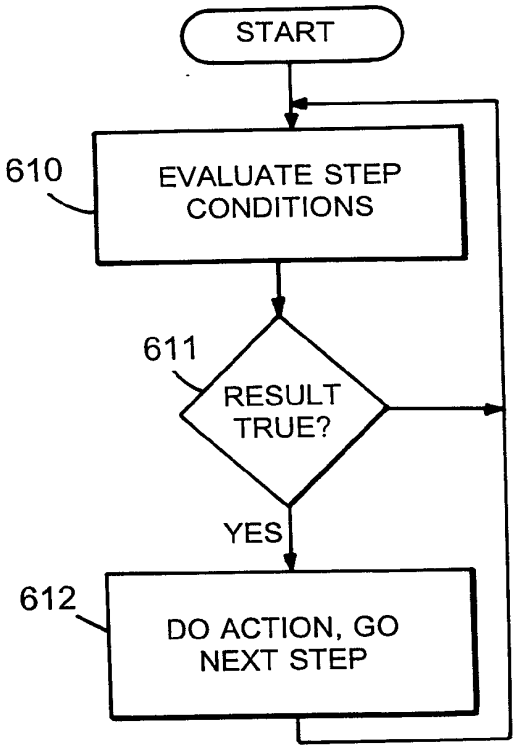


FIG. 6

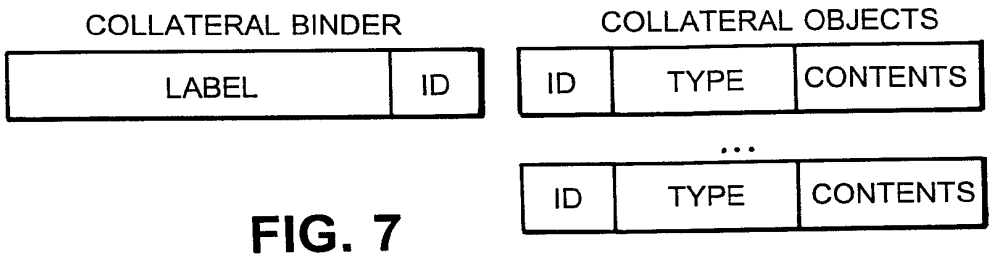


FIG. 7

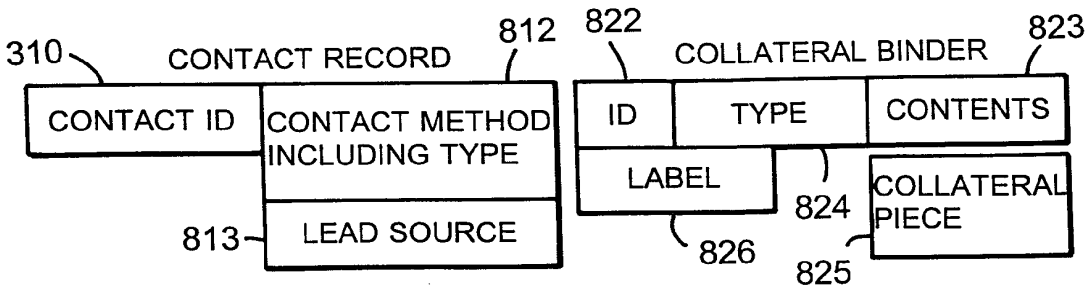


FIG. 8

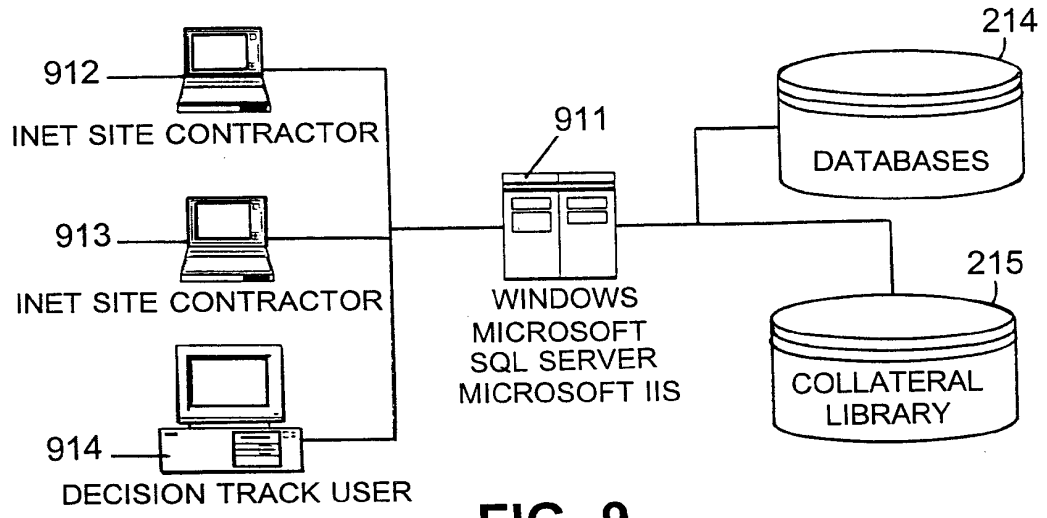

912
INET SITE CONTRACTOR
913
INET SITE CONTRACTOR
914
DECISION TRACK USER
911
WINDOWS
MICROSOFT
SQL SERVER
MICROSOFT IIS
214
DATABASES
215
COLLATERAL
LIBRARY

FIG. 9

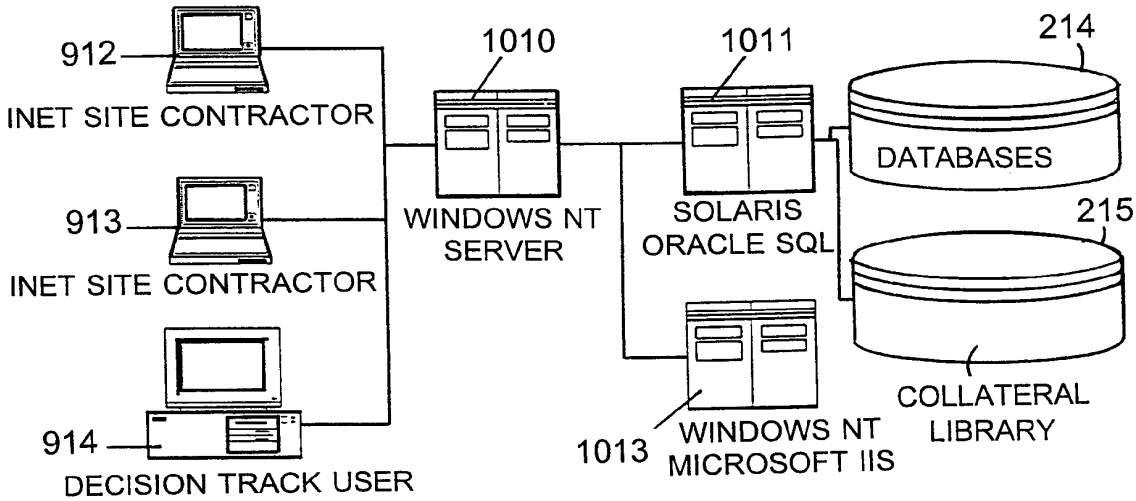

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INET SITE CONTRACTOR
913
INET SITE CONTRACTOR
914
DECISION TRACK USER
1010
WINDOWS NT
SERVER
1011
SOLARIS
ORACLE SQL
1013
WINDOWS NT
MICROSOFT IIS
214
DATABASES
215
COLLATERAL
LIBRARY

FIG. 10

INTERNATIONAL SEARCH REPORT

Intern: al Application No
PCT/US 99/02155

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 G06F17/60

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)
IPC 6 G06F

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 practical, 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.
X	WO 98 34189 A (FLYCAST COMMUNICATIONS CORP) 6 August 1998 see page 1, line 8 - page 4, line 24 see page 11 - page 17; figure 3	1-5, 27-45
Y	see page 8, line 13 - page 9, line 16 ---	11-16
X	WO 97 26061 A (ANTWERP JOHN VAN ;GOLDBERG SHELDON FRANCIS (US)) 24 July 1997 see page 10, line 26 - page 11, line 21	6-10
Y	see page 59, line 11 - page 68, line 9; figures 6A,6B,7 ---	11-16
X	WO 97 22074 A (CYBERGOLD INC ;GOLDHABER A NATHANIEL (US); FITTS GARY (US)) 19 June 1997 see page 36 - page 40 see page 48; claim 33 ---	6-16
	-/--	

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in 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 document 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
26 May 1999	10/06/1999

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Bowler, A

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Intern .al Application No
PCT/US 99/02155

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
X,P	EP 0 877 314 A (AIM CORP) 11 November 1998 see column 2, line 9 - column 6, line 28 see column 7, line 10	1-5,27, 36-45
X	& WO 97 27531 A (HYPER NET INC: ITAKURA:TSUTSUI: FUJITA) 31 July 1997 see abstract	1-5,27, 36-45
X	WO 96 24213 A (FREEMARK COMMUNICATIONS INC) 8 August 1996 see page 2, line 13 - page 6, line 19	17-27
A	ANONYMOUS: "Supporting Advertisement on Electronic Publications" IBM TECHNICAL DISCLOSURE BULLETIN, vol. 39, no. 8, August 1996, XP002103804 New York, US see page 149 - page 150	1-45

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Information on patent family members

Interr ial Application No
PCT/US 99/02155

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		AU 1833097 A	11-08-1997
		CA 2243582 A	24-07-1997
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		CA 2240314 A	19-06-1997
		US 5855008 A	29-12-1998
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		WO 9732258 A	04-09-1997
WO 9624213 A	08-08-1996	AU 4902096 A	21-08-1996

Form PCT/ISA/210 (patent family annex) (July 1992)

(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

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(12) EUROPEAN PATENT APPLICATION

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02.08.2000 Bulletin 2000/31

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19.10.1999 US 421770
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19.10.1999 US 421416
19.10.1999 US 421767
19.10.1999 US 425039
19.10.1999 US 421419

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(54) Multi-modal information access

(57) A system and method for browsing, retrieving, and recommending information from a collection uses multi-modal features of the documents in the collection, as well as an analysis of users' prior browsing and retrieval behavior. The system and method are premised on various disclosed methods for quantitatively representing documents in a document collection as vectors in multi-dimensional vector spaces, quantitatively determining similarity between documents, and clustering documents according to those similarities. The system and method also rely on methods for quantitatively representing users in a user population, quantitatively determining similarity between users, clustering users according to those similarities, and visually representing clusters of users by analogy to clusters of documents.

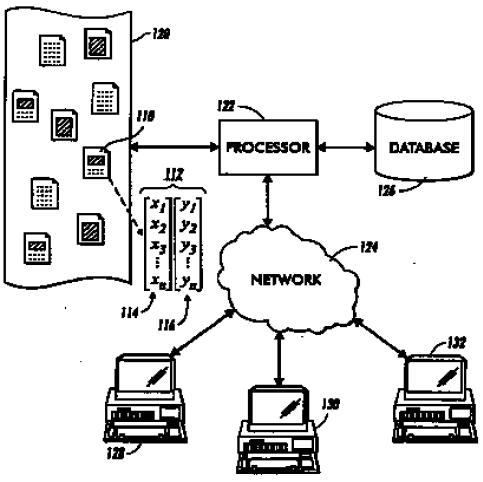


FIG. 1

EP 1 024 437 A2

Description

[0001] The invention relates to information browsing and retrieval, and more particularly to a system and method for using different document features to facilitate the identification of documents sharing one or more machine identifiable characteristics.

[0002] Computer users are increasingly finding navigating document collections to be difficult because of the increasing size of such collections. For example, the World Wide Web on the Internet includes millions of individual pages. Moreover, large companies' internal Intranets often include repositories filled with many thousands of documents.

[0003] It is frequently tine that the documents on the Web and in Intranet repositories are not very well indexed. Consequently, finding desired information in such a large collection, unless the identity, location, or characteristics of a specific document are well known, can be much like looking for a needle in a haystack.

[0004] The World Wide Web is a loosely interlinked collection of documents (mostly text and images) located on servers distributed over the Internet. Generally speaking, each document has an address, or Uniform Resource Locator (URL), in the exemplary form "http://www.server.net/directory/file.html". In that notation, the "http:" specifies the protocol by which the document is to be delivered, in this case the "HyperText Transport Protocol." The "www.server.net" specifies the name of a computer, or server, on which the document resides; "directory" refers to a directory or folder on the server in which the document resides; and "file.html" specifies the name of the file.

[0005] Most documents on the Web are in HTML (HyperText Markup Language) format, which allows for formatting to be applied to the document, external content (such as images and other multimedia data types) to be introduced within the document, and "hotlinks" or "links" to other documents to be placed within the document, among other things. "Hotlinking" allows a user to navigate between documents on the Web simply by selecting an item of interest within a page. For example, a Web page about reprographic technology might have a hotlink to the Xerox corporate web site. By selecting the hotlink (often by clicking a marked word, image, or area with a pointing device, such as a mouse), the user's Web browser is instructed to follow the hotlink (usually via a URL, frequently invisible to the user, associated with the hotlink) and read a different document.

[0006] Obviously, a user cannot be expected to remember a URL for each and every document on the Internet, or even those documents in a smaller collection of preferred documents. Accordingly, navigation assistance is not only helpful, but necessary.

[0007] Accordingly, when a user desires to find information on the Internet (or other large network) that is not already represented in the user's bookmark collection, the user will frequently turn to a "search engine" to locate the information. A search engine serves as an index into the content stored on the Internet.

[0008] There are two primary categories of search engines: those that include documents and Web sites that are analyzed and used to populate a hierarchy of subject-matter categories (e.g., Yahoo), and those that "crawl" the Web or document collections to build a searchable database of terms, allowing keyword searches on page content (such as AltaVista, Excite, and Infoseek, among many others).

[0009] Also known are recommendation systems, which are capable of providing Web site recommendations based on criteria provided by a user or by comparison to a single preferred document (e.g., Firefly, Excite's "more like this" feature).

[0010] While the foregoing systems and services blend traditional search engine and recommendation system capabilities to some degree, it should be recognized that none of them are presently adaptable to provide search-engine-like capabilities while taking into account the preferences of a smaller group than the Internet as a whole. In particular, it would be beneficial to be able to incorporate community- or cluster-based recommendations into a system that is capable of retrieving previously unknown documents from the Internet or other collection of documents.

[0011] Accordingly, when dealing with a large collection, or corpus, of documents, it is useful to be able to search, browse, retrieve, and view those documents based on their content. However, this is difficult in many cases because of limitations in the documents. For example, there are many kinds of information available in a typical collection of documents, the files on the World Wide Web. There are text files, HTML (HyperText Markup Language) documents including both text and images, images by themselves, sound files, multimedia files, and other types of content.

[0012] To easily browse and retrieve images, each image in a collection ideally should be labeled with descriptive information including the objects in the image and a general description of the image. However, identification of the objects in an unrestricted collection of images, such as those on the web, is a difficult task. Methods for automatically identifying objects are usually restricted to a particular domain, such as machine parts. And having humans identify each image is an onerous undertaking, and in some cases impossible, as on the web.

[0013] Much research in information retrieval has focused on retrieving text documents based on their textual content or on retrieving image documents based on their visual features. Moreover, with the explosion of information on the web and corporate intranets, users are inundated with hits when searching for specific information. The task of sorting through the results to find what is really desired is often tedious and time-consuming. Recently, a number of search

engines have added functionality that permits users to augment queries from traditional keyword entries through the use of metadata (e.g., Hotbot, Infoseek). The metadata may take on various forms, such as language, dates, location of the site, or whether other modalities such as images, video or audio are present.

[0014] Recently, however, there has been some research on the use multi-modal features for retrieval. Presented herein are several approaches allowing a user to locate desired information based on the multi-modal features of documents in the collection, as well as similarities among users' browsing habits.

[0015] Set forth herein is an approach to document browsing and retrieval in which a user iteratively narrows a search using both the image and text associated with the image, as well as other types of information related to the document, such as usage. Disparate types of information such as text, image features and usage are referred to as "modalities." Multi-modal clustering hence is the grouping of objects that have data from several modalities associated with them.

[0016] The text surrounding or associated with an image often provides an indication of its context. The method proposed herein permits the use of multi-modal information, such as text and image features, for performing browsing and retrieval (of images, in the exemplary case described herein). This method is applicable more generally to other applications in which the elements (e.g., documents, phrases, or images) of a collection can be described by multiple characteristics, or features.

[0017] One difficulty in the use of multiple features in search and browsing is the combination of the information from the different features. This is commonly handled in image retrieval tasks by having weights associated with each feature (usually image features such as color histogram, texture, and shape) that can be set by the user. With each revision of the weights, a new search must be performed. However, in employing a heterogeneous set of multi-modal features, it is often difficult to assign weights to the importance of different features. In systems that employ metadata, the metadata usually has finite, discrete values, and a Boolean system that includes or excludes particular values can be used. Extending the concept to multi-modal features that may not be discrete leads exacerbates the question of how to combine the features.

SUMMARY OF THE INVENTION

[0018] Accordingly, there is a need for a system that is capable of flexibly handling multi-modal information in a variety of contexts and applications. It is useful to be able to perform queries, while also subsequently refining and adjusting search results by characteristics other than direct text content, namely image characteristics and indirect text characteristics. It is also useful to be able to track individuals' information access habits by way of the characteristics of the documents those users access, thereby enabling a recommendation system in which users are assigned to similar clusters.

[0019] This disclosure sets forth a framework for multi-modal browsing and clustering, and describes a system advantageously employing that framework to enhance browsing, searching, retrieving and recommending content in a collection of documents.

[0020] Clustering of large data sets is important for exploratory data analysis, visualization, statistical generalization, and recommendation systems. Most clustering algorithms rely on a similarity measure between objects. This proposal sets forth a data representation model and an associated similarity measure for multi-modal data. This approach is relevant to data sets where each object has several disparate types of information associated with it, which are called modalities. Examples of such data sets include the pages of a World Wide Web site (modalities here could be text, inlinks, outlinks, image characteristics, text genre, etc.).

[0021] A primary feature of the present invention resides in its novel data representation model. Each modality within each document is described herein by an n-dimensional vector, thereby facilitating quantitative analysis of the relationships among the documents in the collection.

[0022] In one application of the invention, a method is described for serially using document features in different spaces (i.e., different modalities) to browse and retrieve information. One embodiment of the method uses image and text features for browsing and retrieval of images, although the method applies generally to any set of distinct features. The method takes advantage of multiple ways in which a user can specify items of interest. For example, in images, features from the text and image modalities can be used to describe the images. The method is similar to the method set forth in U.S. Patent No. 5,442,778 and in D. Cutting, D.R. Karger, J.O. Pedersen, and J.W. Tukey, "Scatter/Gather: A cluster-based approach to browsing large document collections," Proc. 15th Ann. Int'l SIGIR'92, 1992 ("Scatter/Gather") in that selection of clusters, followed by reclustering of the selected clusters is performed iteratively. It extends the Scatter/Gather paradigm in at least two respects: each clustering may be performed on a different feature (e.g., surrounding text, image URL, image color histogram, genre of the surrounding text); and a "map" function identifies the most similar clusters with respect to a specified feature. The latter function permits identification of additional similar images that may have been ruled out due to missing feature values for these images. The image clusters are represented by selecting a small number of representative images from each cluster.

[0023] In an alternative application of the invention, various document features in different modalities are appropriately weighted and combined to form clusters representative of overall similarity.

[0024] Various alternative embodiments of the invention also enable clustering users and documents according to one or more features, recommending documents based on user clusters' prior browsing behaviors, and visually representing clusters of either documents or users, graphically and textually.

[0025] Initially, a system for representing users and documents in vector space and for performing browsing and retrieval on a collection of web images and associated text on an HTML page is described. Browsing is combined with retrieval to help a user locate interesting portions of the corpus or collection of information, without the need to formulate a query well matched to the corpus. Multi-modal information, in the form of text surrounding an image and some simple image features, is used in this process. Using the system, a user progressively narrows a collection to a small number of elements of interest, similar to the Scatter/Gather system developed for text browsing, except the Scatter/Gather method is extended hereby to use multi-modal features. As stated above, some collection elements may have unknown or undefined values for some features; a method is presented for incorporating these elements into the result set. This method also provides a way to handle the case when a search is narrowed to a part of the space near a boundary between two clusters. A number of examples are provided.

[0026] It is envisioned that analogous to a database with various metadata fields, the documents in the present collection are characterized by many different features, or (probably non-orthogonal) "dimensions," many of which are derived from the contents of the unstructured documents.

[0027] Multi-modal features may take on many forms, such as user information, text genre, or analysis of images. The features used in the present invention can be considered a form of metadata, derived from the data (text and images, for example) and its context, and assigned automatically or semi-automatically, rather than current image search systems, in which metadata is typically assigned manually. Table 1 lists several possible features (all of which will be described in greater detail below); it will be recognized that various other features and modalities are also usable in the invention, and that the features of Table 1 are exemplary only.

Table 1

Feature	Modality
Text Vector	text
Subject	text
URLs	text
Inlinks	hyperlink
Outlinks	hyperlink
Genre	genre
Page Usage	user info
Color Histogram	image
Complexity	image

[0028] Methods are presented herein for combining rich "multi-modal" features to help users satisfy their information needs. At one end of the spectrum, this involves ad-hoc retrieval (applied to images), providing simple, rapid access to information pertinent to a user's needs. At the other end, this involves analyzing document collections and their users. The common scenario is the World Wide Web, which consists of the kind of unstructured documents that are typical of many large document collections.

[0029] Accordingly, this specification presents methods of information access to a collection of web images and associated text on an HTML page. The method permits the use of multi-modal information, such as text and image features, for performing browsing and retrieval of images and their associated documents or document regions. In the described approaches, text features derived from the text surrounding or associated with an image, which often provide an indication of its content, are used together with image features. The novelty of this approach lies in the way it makes text and image features transparent to users, enabling them to successively narrow down their search to the images of interest. This is particularly useful when a user has difficulty in formulating a query well matched to the corpus, especially when working with an unfamiliar or heterogeneous corpus, such as the web, where the vocabulary used in the corpus or the image descriptors are unknown.

[0030] The methods presented herein are premised on an advantageous data representation model, in which doc-

ument (and user) features are embedded into multi-dimensional vector spaces. This data representation model facilitates the use of a consistent and symmetric similarity measure, which will be described in detail below. With the data representation and similarity models set forth herein, it is possible to represent users and clusters of users based on the contents and features of the documents accessed by those users (i.e., collection use data), thereby improving the ability to cluster users according to their similarities.

[0031] Furthermore, a recommendation system based on multi-modal user clusters is possible with the collection of multi-modal collection use data as described below. A set of clusters is induced from a training set of users. A user desiring a recommendation is assigned to the nearest cluster, and that cluster's preferred documents are recommended to the user.

[0032] Finally, this disclosure sets forth improved methods of visually representing clusters of documents and clusters of users. While documents are frequently stored hierarchically, enabling a hierarchical visual representation, the same is not usually true for users. Accordingly, the present invention allows for a view of user data by way of the a hierarchical view of the documents accessed or likely to be accessed by the appropriate users. Documents and clusters of documents can be visualized similarly, and also textually by way of clusters' "salient dimensions."

[0033] Although the use of clustering in image retrieval is not new, it has usually been used for preprocessing, either to aid a human during the database population stage, or to cluster the images offline so that distance searches during queries are performed within clusters. In the present invention, iterative clustering and selection of cluster subsets can help a user identify images of interest. Clustering is used for interactive searching and presentation, and relevance feedback is implicit in the user's choice of clusters. Because the user is dealing with clusters, not individual images, the feedback step is also easier to perform.

[0034] The various forms of multi-modal clustering set forth herein can be used for information access: for browsing a collection in order to find a document; for understanding a collection that is new to the user; and for dealing with cases of "nothing found" (in which clustering can help the user reformulate his or her query by formulating it in the vocabulary that is appropriate for the collection).

FIGURE 1 is a block diagram illustrating a network-connected document collection suitable for use with a system according to the invention;

FIGURE 2 is a flow chart illustrating the process used by an embodiment of the invention to handle new documents added to a collection;

FIGURE 3 is a flow chart illustrating the process used by an embodiment of the invention to calculate feature vectors representative of various documents and users;

FIGURE 4 is a flow chart illustrating the process used to calculate text-based feature vectors in an embodiment of the invention;

FIGURE 5 is a flow chart illustrating the process used to calculate a text genre feature vector in an embodiment of the invention;

FIGURE 6 is a flow chart illustrating the process used to calculate a color histogram feature vector in an embodiment of the invention;

FIGURE 7 is a flow chart illustrating the process used to calculate a corresponding pair of color complexity feature vectors in an embodiment of the invention.

FIGURE 8 is a flow chart illustrating the process used to calculate a page usage vector in an embodiment of the invention;

FIGURE 9 is a flow chart illustrating the process used in wavefront clustering to identify initial cluster centers in an embodiment of the invention;

FIGURE 10 is a flow chart illustrating the process used in *k*-means clustering to assign related objects to clusters;

FIGURE 11 is a diagram illustrating a hypothetical session of scattering and gathering collection objects in different modalities;

FIGURE 12 is an exemplary visual display of text clusters returned in response to the query "ancient cathedral";

FIGURE 13 is an exemplary visual display of text clusters returned after scattering the first text cluster of FIGURE 12;

FIGURE 14 is an exemplary visual display of image clusters returned after clustering based on the complexity feature;

FIGURE 15 is an exemplary visual display of text clusters returned in response to the query "paper money";

FIGURE 16 is an exemplary visual display of image clusters returned after clustering the first text cluster of FIGURE 15 based on the complexity feature;

FIGURE 17 is an exemplary visual display of image clusters returned after clustering the third and fifth image clusters of FIGURE 16 based on the color histogram feature;

FIGURE 18 is an exemplary visual display of image clusters returned after clustering the second image cluster of FIGURE 17 based on the color histogram feature;

FIGURE 19 is an exemplary visual display of text clusters returned in response to the query "pyramid egypt";

FIGURE 20 is an exemplary visual display of image clusters returned after clustering based on the complexity feature;

FIGURE 21 is an exemplary visual display of image clusters returned after clustering based on the color histogram feature;

FIGURE 22 is an exemplary visual display of text clusters returned after expanding the set of images of FIGURE 21 and clustering the result based on the color histogram feature;

FIGURE 23 is an exemplary indirect visualization of clusters according to the invention; one user cluster is illustrated by coloring in red (and indicated herein by arrows) all pages that have a high probability of being chosen by a member of the cluster;

FIGURE 24 is an exemplary visual display illustrating the interface used to browse and show the contents of clusters and documents in an embodiment of the invention;

FIGURE 25 is a flow chart illustrating the process used to recommend popular pages to a user in an exemplary recommendation system according to the invention; and

FIGURE 26 is a flow chart illustrating the process used to recalculate recommendations in an exemplary recommendation system according to the invention.

[0035] In the Figures, like reference numerals denote the same elements; however, like parts are sometimes labeled with different reference numerals in different Figures in order to clearly describe the present invention.

[0036] The ability of the system and method of the present invention to efficiently browse and search upon documents in a collection, as described in general terms above, is highly dependent on the existence of a consistent data representation model. Specifically, in order to define a quantitative similarity metric between documents, it has been found useful to map documents into multi-dimensional vector spaces. Accordingly, the approach set forth herein defines a data representation model for all modalities, wherein each document is represented as a vector in R^n. This model is best illustrated with reference to Figure 1.

[0037] As illustrated in Figure 1, each document (for example, an HTML document 110) chosen from a collection 120 maps to a set of feature vectors 112, one for each modality (for example, a text vector 114 and a URL vector 116).

[0038] The feature vectors 112 are calculated by a processor 122 having access to both the document collection 120 and a communication network 124 (such as the Internet or a corporate intranet). In one embodiment of the invention, the collection 120 is hosted by one or more servers also coupled to the network 124. The feature vectors 112 for each document are stored in a database 126, where they are correlated with the documents they correspond to. A plurality of user terminals 128, 130, and 132 coupled to the network 124 are used to access the system.

[0039] These feature vectors are generated by a system according to the invention when documents are first added to the collection 120 or at a later time. It should be observed that in a presently preferred embodiment of the invention, the collection 120 comprises all known documents that will ever by processed by a system according to the invention. However, it is also possible to generate the collection on-the-fly for results of a search engine query. This approach, which may be more practicable for extremely large groups of documents (such as the World Wide Web), can then be used to organize, browse, view, and otherwise handle the original search results.

[0040] This action of adding documents to the collection 120 is performed as shown in Figure 2. First, a new document is located (step 210). The document is processed (step 212) to calculate the feature vectors 112, and the document can then be added to the corpus (step 214) or collection available to the invention, If there are no more documents (step 216), then the process is finished (step 218). Otherwise, another document is located (step 210) and the process is repeated.

[0041] A presently preferred and operational version of the system is capable of employing eight possible document features: text content, document link, inlinks, outlinks, text genre, image color histogram, and image complexity. The first two of the listed features are text based, inlinks and outlinks are hyperlink based, text genre is probability based, and the final two features (image color histogram and image complexity) are image-based. These features were selected for use with the present invention because of their simplicity and understandability. The chosen features serve to illustrate the disclosed method for using and combining image and text modalities in information access. However, it is understood that many other document metrics (such as local color histograms for different image regions, image segmentations, and texture features, to name but a few) are also possible and can be deployed within a system or method according to the invention.

[0042] In an embodiment of the invention, these feature vectors are derived as described in Figure 3. After the contents of a new document (which can be a text document, image, or other type of information) are isolated (step 310), the disclosed method uses various information sources to derive the feature vectors. Text is extracted from the document (step 312) and used to create a corresponding text vector (step 314) and a corresponding URL vector (step 316).

[0043] Meanwhile (at the same time or serially), all outlinks (hypertext links within the document that point elsewhere) are extracted (step 318) and used to create a corresponding outlink vector (step 320). Inlinks (documents within

the collection that point to the subject document) are extracted (step 322) and used to create a corresponding outlink vector (step 324). Text genre is identified (step 326) and used to create a corresponding genre vector (step 328).

[0044] If the new document is or contains at least one image, then the colors are extracted from the image (step 330) and used to create a corresponding color histogram vector (step 332). Horizontal and vertical runs of a single color (or set of similar colors) are also extracted from the image (step 334) and used to create a color complexity vector (step 336).

[0045] Finally, references to the document are extracted from usage logs (step 338) and used to update users' page access vectors (step 340).

[0046] All of the content vectors are then stored in the database 126 (step 342).

[0047] The methods used to calculate the different feature vector types set forth above will be described in further detail below.

[0048] It should be noted, however, that adding documents having certain features to an existing collection may require revising the entire set of feature vectors for all documents in the collection. For example, adding a document that contains a unique word will impact the text vectors for all documents in the collection, as that word will require adding an extra term to each document's text vector. Accordingly, it may be computationally more efficient to update the collection in substantially large groups of documents, rather than incrementally each time a new document becomes available. Such considerations, as well as methods for computationally optimizing the set of vectors, is an implementation detail not considered to be important to the invention.

[0049] In one embodiment of the invention, each feature is used separately, and the most suitable distance metric can be applied to each feature. In an alternative embodiment of the invention, the features are combined into a single content vector representative of the document, and a single distance metric is used to cluster and compare the documents. These alternative embodiments will be described in further detail below.

VECTOR SPACE REPRESENTATION OF DOCUMENT INFORMATION

[0050] The calculation of each type of feature vector will be explained in further detail below. However, as will be seen below, several general characteristics apply to all representations.

[0051] The text feature is calculated as illustrated in Figure 4. The text feature is a term vector, where the elements of the vector represent terms used in the document itself. In a presently preferred embodiment of the invention, for an all-text or HTML document (or other document type actually containing text), the text vector is based on the document's entire text content. Where the document is an image (or other type of document not containing actual text), the text used to formulate the text vector is derived from text surrounding an image in a "host" HTML page. The scope of the surrounding text is limited to 800 characters preceding or following the image location. If a horizontal rule, heading or another image occurs prior to the limit being reached, the scope ends at the rule, heading or image. A "stop list" is used to prevent indexing of common terms with little content, such as articles, prepositions, and conjunctions.

[0052] Accordingly, for purposes of the invention as described herein, text documents, image documents, and multimedia documents are all special cases of the generic term "documents," and for each of those special cases, some or all of the modalities described herein may be applicable. For example, as described above, images do not necessarily contain text, but are described by text in the hypertext links and URLs that point to them. Images containing text (such as facsimile bitmaps) can have their text extracted via known document image decoding techniques. Similarly, audio files may also be referenced by text in hyperlinks and URLs, and may also contain text extractable via known speech recognition algorithms. In certain applications, it can be beneficial to process images and other types of data files to derive text (and other embedded modalities) therefrom, but it should be recognized that it is not essential to the invention.

[0053] As suggested above, in the vector space model described herein, each text document d (or any kind of document containing extractable text) is embedded by the present invention into

$$R^{n_t}$$

(a vector space having n_t dimensions, wherein each dimension is represented by a real number), where n_t is the total number of unique words in the collection (n_t stands for "number of text elements"). The embedding into the vector space is defined as follows:

$$\phi_t(d)_i = tf_{di} icf_i$$

where d is a particular document, i is the index of a word, and $\phi_t(d)_i$ is component i of vector $\phi_t(d)$. Token frequency weight (tf) and inverse context frequency weight (icf) are generalizations of the term frequency weight and inverse doc-

ument frequency weight used in information retrieval. They are defined as follows:

$$tf_{ci}=\log(1+N_{ci}) \text{ and } icf=\log\frac{N}{N_i}$$

where N_{ci} is the number of occurrences of element i in context c, N_i is the number of contexts in which i occurs, and N is the total number of contexts. In the case of the text modality, elements correspond to words, and contexts corresponds to documents; this definition is consistent with the standard definitions for term frequency weight and inverse document frequency weight in the information-retrieval field.

[0054] Accordingly, the text vector is calculated by first calculating the token frequency weight as above (step 410), then calculating the inverse context frequency weight as above (step 412), then multiplying the two to calculate the text content vector (step 414).

[0055] The use of token frequency weight and inverse context frequency weight for the embedding employed by the invention is consistent with the following intuitive description. Each additional occurrence of an element (or word, for example) in a context (e.g., a document) reflects an increased level of importance for that element as a descriptive feature. However, the increase should not be linear, but somehow "dampened." Logarithms conventionally used as a dampening function, and have been found to be satisfactory for this application. Similarly, the inverse context frequency weight ranges from 0 for an element that occurs in every context (an example might be the word "the" in text documents) and reaches its maximum for an element that occurs in only one context (log N). One motivation for the logarithmic scaling is based on information theory: $\log N / N_i$ can be interpreted as a measure of how much information is gained when learning about the occurrence of element i in a context. When it is learned that the word "the" occurs in a document, no significant information is gained (assuming it occurs in every document). However, when it is learned that the phrase "Harry Truman" occurs in a document, much information is present (assuming that the phrase occurs in only a few documents).

[0056] It should be noted that the token frequency weight multiplied by the inverse context frequency weight has been found to be an advantageous way to scale the vectors. However, other weighting schemes are also possible and may provide other advantages.

[0057] Accordingly, once text vectors have been calculated as set forth above, the similarity between two text vectors can be calculated via a simple cosine distance:

$$\text{sim}_t(d_1,d_2)=\frac{\sum_i \phi_t(d_1)_i \phi_t(d_2)_i}{\sqrt{(\sum_i \phi_t(d_1)_i^2)(\sum_i \phi_t(d_2)_i^2)}}$$

wherein d_1 and d_2 represent two different documents, and $\phi_t(d_1)_i$ represents the i-th term of the vector representing document d_1. As will be discussed in further detail below, the cosine distances between pairs of documents can be used to cluster documents based on text features alone, or can be used in combination with other features.

[0058] In an alternative embodiment of the invention, the text feature described above can be calculated in a different way, or as a separate and independent feature. In this alternative version, only the text from titles, headings, and captions is isolated from a document to define a "subject" modality in

$$R^{n_s}$$

(where n_s is the total number of unique words in the titles, headers, and captions of documents in the collection). Because this alternate (or additional) modality is otherwise derived exactly the same way as the text modality described above (except from only a subset of a document's full text), the above formulas used to derive the corresponding feature vectors and similarities remain the same:

$$\phi_s(d)_i = tf_{di} icf_i \quad \text{and} \quad \text{sim}_s(d_1,d_2)=\frac{\sum_i \phi_s(d_1)_i \phi_s(d_2)_i}{\sqrt{(\sum_i \phi_s(d_1)_i^2)(\sum_i \phi_s(d_2)_i^2)}}$$

Both embodiments have been found to be useful, and can be used interchangeably or together, if desired. For example, to it is also possible to weight title, heading, and caption text differently than other text in a document (e.g., by treating each occurrence of a word in a title as though it had occurred twice or three times in the text). As a general proposition, it should be recognized that all text in a document need not be treated the same for purposes of text-based modalities; adjustments and weightings are possible and may be advantageous in certain applications.

[0059] Similarly, vectors can be calculated for a document's URL. Elaborating on the example set forth above, the exemplary URL "http://www.server.net/directory/file.html" includes seven terms: "http," "www," "server," "net," "directory," "file," and "html." As with the text feature, some of those terms contain little or no informational value ("http," "www," "net," and "html," in this example). Accordingly, the token frequency weight and inverse context frequency weight embedding is appropriate here, as well. Again see Figure 4.

[0060] Consequently, each document d is embedded

$$R^{n_u}$$

into (a vector space having n_u dimensions, wherein each dimension is represented by a real number), where n_u is the total number of unique URL terms identifying all documents in the collection (n_u stands for "number of URL elements"). The embedding into the vector space is defined as follows:

$$\phi_u(d)_i = tf_{di} icf_i$$

where d is a particular document, i is the index of a word, and $\phi_u(d)_i$ is component i of vector $\phi_u(d)$. Token frequency weight (tf) and inverse context frequency weight (icf) are generalizations of the term frequency weight and inverse document frequency weight used in information retrieval. They are defined as follows:

$$tf_{ci} = \log(1+N_{ci}) \text{ and } icf = \log\frac{N}{N_i}$$

where N_{ci} is the number of occurrences of element i in context c, N_i is the number of contexts in which i occurs, and N is the total number of contexts. In the case of the URL modality, elements correspond to URL terms, and contexts corresponds to documents.

[0061] Similar vector embeddings are used for the inlink modality ($\phi_\ell(d)_i = tf_{di} icf_i$) and the outlink modality ($\phi_o(d)_i = tf_{di} icf_i$). Inlink vectors exist in

$$R^{n_\ell}$$

, where n_ℓ is the total number of distinct inlinks embodied in the collection (i.e., the total number of documents in the collection referring to other documents in the collection). Outlink vectors exist

$$R^{n_o}$$

in , where n_o is the total number of distinct outlinks embodied in the collection (i.e., the total number of documents, in the collection or out, referred to by a document in the collection). Cosine similarities are calculated analogously:

$$\mathrm{sim}_t(d_1,d_2)=\frac{\sum_i \phi_t(d_1)_i \phi_t(d_2)_i}{\sqrt{(\sum_i \phi_t(d_1)_i^2)(\sum_i \phi_t(d_2)_i^2)}} \text{ and}$$

$$\mathrm{sim}_o(d_1,d_2)=\frac{\sum_i \phi_o(d_1)_i \phi_o(d_2)_i}{\sqrt{(\sum_i \phi_o(d_1)_i^2)(\sum_i \phi_o(d_2)_i^2)}}$$

[0062] In an alternative embodiment of the invention, the terms in URLs (as used in the URL embedding defined above) extracted from inlinks and outlinks and used in that manner. However clustering based on inlink and outlink features derived in this alternative manner has been found to be less effective in clustering similar documents.

[0063] A document's text genre is embedded into

$$R^{n_g}$$

, where n_g is the number of known text genres. A document genre is a culturally defined document category that guides a document's interpretation. Genres are signaled by the greater document environment (such as the physical media, pictures, titles, etc. that serve to distinguish at a glance, for example, the National Enquirer from the New York Times) rather than the document text. The same information presented in two different genres may lead to two different interpretations. For example, a document starting with the line "At dawn the street was peaceful . . ." would be interpreted differently by a reader of Time Magazine than by a reader of a novel. Each document type has an easily recognized and culturally defined genre structure which guides our understanding and interpretation of the information it contains. For example, news reports, newspaper editorials, calendars, press releases, and short stories are all examples of possible genres. A document's structure and genre can frequently be determined (at least in part) by an automated analysis of the document or text (step 510). Although text genre might not always be determinable, particularly with web pages (which frequently do not have a well-defined genre), it is generally possible to calculate a vector of probability scores (step 512) for a number of known possible genres; that vector can then be used to determine similarity (via a cosine similarity computation) in the manner discussed above with regard to text term vectors:

$$\mathrm{sim}_g(d_1,d_2)=\frac{\sum_i \phi_g(d_1)_i \phi_g(d_2)_i}{\sqrt{(\sum_i \phi_g(d_1)_i^2)(\sum_i \phi_g(d_2)_i^2)}}$$

[0064] To embed images into vector space, two modalities have been successfully used: color histogram and complexity. For the color histogram feature, image documents are embedded

$$R^{n_h}$$

into , where n_h is the number of "bins" in the histogram (twelve, in a presently preferred embodiment of the invention). Preferably, a single color histogram is used as the color feature. The feature space is converted to HSV (the Hue, Saturation, and Value color model), and two bits are assigned to each dimension (step 610). Accordingly, there are three dimensions to the color space, and two bits (four values) for each color dimension, resulting in twelve total dimensions in the preferred vector space.

[0065] Each pixel in the image being processed is then categorized (step 612): its hue, saturation, and value will fall into one of the four bins for each dimension, so the corresponding vector element is incremented (step 614). In a preferred embodiment of the invention, the color histogram for each document is normalized (step 616) so that all of the

bin values sum to one - the result is then stored as the histogram vector (step 618). It should be noted that it is not appropriate to use the token frequency weight and inverse context frequency weight embedding as is preferably done for text (and certain other) modalities, as it is not meaningful in this context. However, the distance between histogram vectors is still advantageously calculated by way of cosine distance:

$$\mathrm{sim}_h(d_1, d_2) = \frac{\sum_i \phi_h(d_1)_i \phi_h(d_2)_i}{\sqrt{(\sum_i \phi_h(d_1)_i^2)(\sum_i \phi_h(d_2)_i^2)}}$$

[0066] In an alternative embodiment of the invention, the distance between histograms can computed via an intersection measure with normalization by the largest bin value:

$$\mathrm{sim}_h(d_1, d_2) = 1.0 - \frac{\sum_i \min(\phi_h(d_1)_i, \phi_h(d_2)_i)}{\sum_i \max(\phi_h(d_1)_i, \phi_h(d_2)_i)}$$

[0067] In another alternative embodiment of the invention, multiple color histograms are determined for multiple regions of each image, resulting in multiple color histogram feature vectors. For example, color histograms in the four quadrants (top left, top right, bottom left, and bottom right) and center of an image can be computed separately, resulting in five separate color histogram vectors, which can then be weighted and combined as desired by a user or left as separate vectors. Alternatively, partially or completely overlapping regions can also be used, such as the top half bottom half, left half right half, and center rectangle. For efficiency, an image can be subdivided into tiles, with histograms being computed separately for each tile, and then combined as appropriate into regions. It then becomes possible to compare images by way of their regional similarities; for example, all images having a blue sky may be grouped together by virtue of similarity in their "top" color histogram vectors. It should be recognized that other embodiments and applications addressing regional image similarities are also possible within the framework of the invention described herein.

[0068] These distance metrics are symmetric with respect to the two images. A symmetric distance is needed in this framework because distances between an image and another image or a centroid are needed for clustering purposes, rather than simple retrieval purposes.

[0069] The complexity feature attempts to capture a coarse semantic distinction that humans might make between images: that between simple logos and cartoons at the one extreme, which are composed of a relatively small number of colors with regions of high color homogeneity, and photographs on the other, which are composed of a relatively large number of colors with fine shading. This feature is derived from horizontal and vertical run lengths of each color within an image. In particular, runs of the same color (which in a preferred embodiment is coarsely quantized into two-bit HSV values, step 710, as above) are identified in the x (step 712) and y (step 714) directions. A histogram is computed for each direction (step 716), wherein each bin represents the number of pixels (or in an alternative embodiment, a quantized percentage of the total height or width) a run spans in the x or y direction, respectively. The count in each bin is the number of pixels in the image belonging to that particular run-length. Alternatively, the value added to a bin for each run can be weighted by the length of the run, giving greater weight to longer runs. The total number of elements in a histogram is the number of pixels in the image's horizontal and vertical dimensions, respectively. Accordingly, two vectors (one for each histogram, horizontal and vertical) are created (steps 718 and 720), and the horizontal and vertical vectors for image complexity is embedded into

$$R^{n_x}$$

, where n_x is the maximum horizontal pixel dimension of an image,

$$R^{n_y}$$

and , where n_y is the maximum horizontal pixel dimension of an image, respectively.

[0070] In a presently preferred embodiment of the invention, run-length complexity information is quantized into a smaller number of bins (and hence a smaller number of dimensions for each vector). This is performed to reduce the sparseness of the vectors, enabling more efficient and more robust comparisons between images. Given N bins, and a maximum horizontal dimension of n_x, any horizontal run r_x longer than $n_x/4$ is placed into the Nth (or last) bin. Shorter runs r_x are placed into the bin indexed by floor$(r_x(N\text{-}1) / (n_x/4))+1$ (where the "floor" function rounds its argument down to the nearest integer). Accordingly, run lengths are linearly quantized into N bins, with all runs of length greater than $n_x/4$ going into the last bin. Similar operations are performed on vertical runs, resulting in a horizontal complexity vector having N dimensions and a vertical complexity vector also having N dimensions.

[0071] With the cosine distance metric used as set forth below, there is no need to normalize the sum of the bins:

$$\mathrm{sim}_c(d_1,d_2) = 0.5\frac{\sum_i \phi_x(d_1)_i \phi_x(d_2)_i}{\sqrt{(\sum_i \phi_x(d_1)_i^2)(\sum_i \phi_x(d_2)_i^2)}} + 0.5\frac{\sum_i \phi_y(d_1)_i \phi_y(d_2)_i}{\sqrt{(\sum_i \phi_y(d_1)_i^2)(\sum_i \phi_y(d_2)_i^2)}}$$

where ϕ_x and ϕ_y represent the horizontal complexity vector and the vertical complexity vector, respectively.

[0072] Alternatively, the two vectors (horizontal and vertical) can be appended into a larger vector in

$$R^{n_x+n_y}$$

(or in the quantized preferred embodiment, R^{2N}), with the standard cosine distance metric used:

$$\mathrm{sim}_c(d_1,d_2) = \frac{\sum_i \phi_c(d_1)_i \phi_c(d_2)_i}{\sqrt{(\sum_i \phi_c(d_1)_i^2)(\sum_i \phi_c(d_2)_i^2)}}$$

where ϕ_c represents the appended vector.

[0073] For both the color complexity and color histogram features, it should be recognized that subsampling can be performed to reduce the computational expense incurred in calculating the vector embeddings. For example, it has been found that it is possible to select a fraction (such as 1/10) or a limited number (such as 1000) of the total number of pixels in the image an still achieve useful results. Those subsampled pixels are preferably uniformly spaced throughout the image, but in an alternative embodiment can be randomly selected. For the histogram feature, it is sufficient to calculate the proper histogram bin for only the subsampled pixels. For the complexity feature, it is also necessary to determine the lengths of runs, both horizontal and vertical, that subsampled pixels belong to. In a preferred embodiment of the invention, this is accomplished by subsampling rows and columns. For the horizontal complexity vector, a maximum of fifty approximately evenly-distributed rows of pixels are selected (less than fifty if the image is shorter than fifty pixels in height), and runs in only those rows are counted. A similar process is followed for columns in the vertical complexity vector. The vector embeddings otherwise remain the same.

[0074] Finally, there are analogous features that are capable of highlighting differences among users in a user population, not among documents (as the other vector embeddings have indicated). For example, page usage has been found to be indicative of users' information-seeking preferences. For the page usage modality, page accesses are first identified (step 810). The token frequency weight (step 812) and inverse context frequency weight (step 814) are again preferably used, the context being each user and a token being a user's page accesses. The product is stored as the page usage vector (step 816). Accordingly, the page embedding is $\phi_p(u)_i = tf_{ui}icf_i$, where u represents a user, and i represents a page. Consequently, the embedding is into

$$R^{n_p}$$

, where n_p is the total number of documents in the collection. In an alternative embodiment, each user's page accesses may be regarded as binary: either the user has accessed a page, in which case the corresponding user's vector has a

"1" in the appropriate element; or the user has not accessed a page, in which case the appropriate element is a "0." In either case, the cosine distance metric can be used to calculate the similarity between users (in terms of their page references):

$$\mathrm{sim}_p(u_1,u_2)=\frac{\sum_i \phi_p(u_1)_i \phi_p(u_2)_i}{\sqrt{(\sum_i \phi_p(u_1)_i^2)(\sum_i \phi_p(u_2)_i^2)}}$$

[0075] Other modalities can also be derived from users. For example, user-specified demographic information (such as names, ages, hobbies, telephone numbers, home addresses, selected group memberships, and the like) and other kinds of tracked information (including but not limited to on-line purchasing habits, software usage, and time spent viewing documents), can also be embedded into scalar or vector spaces, allowing numeric distance metrics to be used and clustering to be performed (as will be discussed below). By way of example, a user's group memberships can be embedded into a vector space having a number of dimensions equal to the number of known groups, with the terms of a user's group membership vector having boolean ("0" or "1") values representative of whether the user is a member of the corresponding group. These additional exemplary modalities will not be discussed in greater detail herein; however, it should be apparent that a system according to the invention can easily be enhanced to incorporate these modalities or nearly any other document-based or user-based information by defining a mapping into a vector space.

[0076] It should be noted that the number of dimensions in the vector spaces for each modality can vary depending on a number of factors. By way of example, for the text modality, each text vector has a number of dimensions equal to the number of unique words in the collection; for the image complexity modality, each vector has a number of dimensions equal to the maximum horizontal or vertical pixel dimension of images in the collection; and for the page usage modality, each vector has a number of dimensions equal to the number of documents in the collection. Accordingly, as documents are added to the collection (and as users are added to the user population), it may become necessary to recalculate many of the feature vectors, to ensure that all of the vectors for the same feature have the same dimensions, thereby enabling use of the similarity metrics described above. Therefore, to reduce computational expense, it has been recognized that it may be advantageous in certain circumstances to defer updating the database of feature vectors until a significant number of documents (or users) has been added. Of course, new documents (and users) will not be recognized by a system according to the invention until they are added and corresponding feature vectors are calculated.

[0077] The foregoing representation of various modalities have been found to be useful and efficient to track the similarities between documents and users in a system according to the invention. However, it should be recognized that various other methods of embedding document information into vector space and for computing the similarity between documents are also possible. By way of example, it is possible to combine the text, URL, inlink text, and outlink text corresponding to a document into a single overarching text vector. This approach can be useful when there is very little text associated with image documents. Also, it should be noted that the cosine similarity metrics set forth above calculate the similarity between two documents on the basis of a single feature or modality at a time. It is also possible, and preferable under certain circumstances, to calculate an aggregate similarity between two documents:

$$\mathrm{sim}(d_1,d_2)=\sum_j w_j \mathrm{sim}_j(d_1,d_2)$$

where j represents and ranges over the applicable modalities discussed above, and is w_j represents a weighting factor corresponding to each modality (preferably unity, but adjustable as desired). This aggregate similarity then represents the overall similarity between documents based on all possible (or practical) modalities.

[0078] It should be apparent from the foregoing that not all modalities are present in all documents. For example, on the Web (or a Web-like intranet collection), every document, whether text, image, or something else entirely, will have a corresponding URL that serves to identify the document for retrieval. However, not every document is an image, so not all documents are images, so the histogram and complexity metrics are not possible for some documents. Similarly, not every document includes text, though (as described above) text can be synthesized from referring documents in certain cases (where there are inlinks).

[0079] Accordingly, the aggregate similarity metric may be sub-optimal in certain circumstances, and it may be desirable to have the capability to "fall back" upon the individual similarity metrics when needed.

CLUSTERING

[0080] The similarity metrics set forth above, including the aggregate similarity metric, define the basis for clustering documents and users (collectively "objects"). A standard clustering algorithm is used. In a presently preferred embodiment of the invention, "*k*-means" clustering is used to assign objects to *k* different clusters.

[0081] As is well known in the art, *k*-means clustering is a partitioning method that usually begins with *k* randomly selected objects as cluster centers. Objects are assigned to the closest cluster center (the center they have the highest similarity with). Then cluster centers are recomputed as the mean of their members. The process of (re)assignment of objects and re-computation of means is repeated several times until it converges. The number *k* of clusters is a parameter of the method. Values of $k = 20$ and $k = 50$ have been used in various implementations and studies because these values gave good results, but other values may be used to equal effect based on the user's preferences.

[0082] In an alternative embodiment of the invention, hierarchical multi-modal clustering can also be used, but k-means clustering has been found to provide satisfactory results.

[0083] As stated above, the classical form of *k*-means clustering selects initial clusters by way of random selection from the objects that are to be clustered. An alternative method for selecting the initial clusters uses the Buckshot algorithm, which computes initial centers by applying a hierarchical (but computationally expensive) clustering algorithm to a subset of the objects. The initial centers for *k*-means clustering are then the centers of the clusters found by clustering the subset.

[0084] However, both random selection and hierarchical subset clustering have been found to be sub-optimal for multi-modal clustering. The vector spaces that are typical of the document collections often have a majority of objects bunched together in one small region of the space and another significant number of objects sparsely populating other regions. For this type of data, wavefront clustering to identify initial centers has been found to be far more efficient. The wavefront algorithm proceeds as follows and as shown in Figure 9.

[0085] First, *m* (a number much smaller than the total number *N* of objects to be clustered) objects are randomly selected (step 910). This number is independent of the number *k* (which will be the number of clusters eventually calculated). By way of experimentation, it has been found that a suitable value for *m* is ten.

[0086] Then compute the vector centroid $\vec{c}$ of the *m* objects (step 912). The centroid is calculated by methods well known in the art, namely by averaging the corresponding terms of the subject vectors.

[0087] Next, a total of *k* objects $\vec{x}_i$ are selected randomly from the *N* objects to be clustered (step 914). As stated above, *k* is the desired number of final clusters. Finally for each of the *k* initial objects $\vec{x}_i$, calculate *k* cluster centers $\vec{x}_i'$ around the centroid $\vec{c}$ on the way to each of the *k* initial objects. These cluster centers are calculated as follows (step 916):

$$\vec{x}_i' = \alpha\vec{c} + (1 - \alpha)\vec{x}_i$$

for $i = 1 \ldots k$. An appropriate value of □ has been found to be 0.9; other values may also be effective.

[0088] This technique has been given the name "wavefront clustering" because, in simplified terms, a "wave" is sent from the centroid $\vec{c}$, and the objects that are hit by the wave on its way to the second set of randomly picked objects are selected as initial cluster centers. These initial centers are appropriate for the case of a large number of objects being bunched up in one point because the centroid $\vec{c}$ tends to be close to that point. The initial centers are well suited to efficiently partition the concentrated region.

[0089] Standard *k*-means clustering then proceeds, as shown in Figure 10, by assigning each object to its nearest cluster. First, after selecting the cluster centers as illustrated in Figure 9 (step 1010), an unassigned object is chosen (step 1012). Its similarity is calculated with respect to each cluster center (step 1014), using one of the similarity metrics set forth above. The object is then assigned to the nearest cluster center (step 1016). If there are more objects to assign, the process repeats (step 1018). The cluster centers are then recomputed (step 1020) as the centroid (or mean) of each cluster corresponding to each cluster center. If the cluster centers have converged sufficiently (step 1022), for example by determining whether a sufficiently small number of objects have switched clusters, then the clustering process is finished (step 1024). Otherwise, all objects are de-assigned from all clusters (step 1026), and the process begins again with the newly determined cluster centers.

APPLICATIONS

[0090] To illustrate the systems and methods of the invention, two applications of multi-modal features are considered herein: (1) helping a user to identify documents of interest in a system called multi-modal browsing and retrieval; and (2) the multi-modal analysis of users' interactions with a collection (collection use analysis, or CUA).

[0091] In the first application, clusters of documents created as described above are used in a system for searching, recommending, and browsing documents. In a first embodiment of the first application, one feature is considered

at a time, as specified by a user; in a second embodiment, multiple features are considered simultaneously.

[0092] In the second application, user clusters created as described above are applied to two separate functions. First, user clusters are made suitable for visualization through mediation, which will be described in farther detail below. Second, multi-modal user clusters are used to generate recommendations.

[0093] Below, the use of multi-modal information in these two applications will be described, including methods for combining such information and illustrating their benefit through examples.

SEQUENTIAL MULTI-MODAL BROWSING

[0094] Multi-modal searching and browsing, using one type of feature at a time, is best illustrated in connection with Figures 11-22. Each feature is used to either refine the set of images or to map to a related set of images of interest. Thus the image features are used independently of text features to create multiple clusterings which the human user can navigate between, using text (e.g., section headings, abstract title, "ALT" tags in image anchors) when it is perceived to be more appropriate, and image features when they are more so.

[0095] One potential problem with progressively narrowing a search based on different features is that images with missing feature values may be inadvertently eliminated from consideration. For example, some documents contain images with no associated text, or text unrelated to the contents of the image. In particular, some images exist on pages that have no text. In other cases, the text surrounding the image has no relevance to the semantic content of the image. Another problem with progressively narrowing a search is that the search may be narrowed to a part of the space near a boundary between two clusters.

[0096] The use of features herein permits quick initial focusing of the set of elements of interest, and then organization and expansion to include similar elements, some of which may have incomplete features sets or may occur in another cluster.

[0097] Some of the methods presented herein can be thought of as an extension to image browsing. An ideal image browsing system would allow a user to browse documents, including images, that may or may not have descriptive annotative text and use both text or image features. Users may wish to browse through image collections based either on their semantic content ("what does the image show?") or their visual content ("what does the image look like?"). Image retrieval systems are often based on manual keyword annotation or on matching of image features, since automatically annotating images with semantic information is currently an impossible task. Even so, a manually labeled image collection cannot include all the possible semantic significances that an image might have.

[0098] As stated above, the approach set forth herein is similar in some ways to the Scatter/Gather methods set forth in the Cutting et al. article. Scatter/Gather was originally designed for use with text features derived from documents. Scatter/Gather iteratively refines a search by "scattering" a collection into a small number of clusters, and then a user "gathers" clusters of interest for scattering again. The Scatter/Gather method is extended by the invention to extend to a multi-modal, multi-feature method, using both text and image features to navigate a collection of documents with text and images; there is also an "expand" (i.e., mapping) function so that elements from outside the working set can be incorporated into the working set.

[0099] In the present approach to multi-modal browsing, recommendations, and visualization, the correct answer to a query depends on the user. Accordingly, in the aspect of the invention related to browsing, the user selects the feature used at each step. The user only sees the current working set. If the map function is not used, and only one cluster is selected after each operation, this is equivalent to the user expanding only one node of the tree in a depth-first search. By selecting clusters to combine, a lattice is formed. And by using the map function, elements from outside the working set may become part of the working set, so neither a tree nor a lattice is created. Accordingly, the present method is quite different from a decision tree.

[0100] In practice, an initial text query can be used to find candidate images of interest. Some of the returned clusters containing images of interest are then identified by the user for further consideration. By expanding based on similarity of one image feature, the system then finds and presents image clusters that are similar to those represented by the initially selected clusters, but without associated text or with text not similar enough to the user-specified query. Thus the expand function permits relevant images that are absent in the original set as a result of the text query to be identified and included. The expand function can also identify for consideration elements that are near the feature space of interest, but that are - due to the partitioning at an earlier step - in another cluster.

[0101] As discussed above, for the multi-modal browsing and retrieval aspect of this invention, a preprocessing step is used to precompute information needed during browsing and to provide the initial organization of the data. A set of distinct features (possibly from different modalities) is precomputed for each document and stored as vectors. In the present application, features of images in web pages are computed in the manner described below. The text features include the words of text surrounding and associated with each image, the URL of the image, ALT tags, hyperlink text, and text genre (described below). The image features include a color histogram and a measure of color complexity. See Table 1, above. The documents are clustered into groups based on each of the features.

[0102] To search for images, a user begins by entering a text query. A hypothetical session is illustrated in Fig. 11, in which a circular node represents the data in a cluster; the solid arrows represent the scattering or gathering of data in a node; and the dashed lines represent movement of a subset of data in a node to another node, as in the expand (or map) function. The precomputed text clusters are ranked in terms of relevance (i.e., similarity) to the query terms using the cosine distance, and the highest ranking clusters are returned. These may be displayed as representative text or images in a first set of results 1110. The user then selects the clusters that are most similar to their interest. This may include all or a subset of clusters 1112. One of two operations is then typically performed: the images in the selected clusters are re-clustered based on a selected feature to result in another set of results 1114, or the selected clusters are mapped (or expanded) to new similar clusters 1116 based on a selected feature.

[0103] It should be noted that at any time, the user is free to start a new search, or to operate on an existing results set by performing a new query (like the initial text query). The results of the later query can then be used to either refine or add to the existing results set, at the user's option.

[0104] The new clusters are displayed as representative text or images, depending on whether the selected feature is derived from text or image data. The selected feature may be any of the precomputed features. By re-clustering, the user can refine the set of images. By mapping or expanding (i.e., identifying other similar documents in the same or similar clusters regardless of prior refinement), images similar in the specified feature, possibly with missing values in other features, can be brought into the set of images for consideration.

[0105] As above, the clustering is performed using a standard *k*-means clustering algorithm with a preset number of clusters. In the precomputing step set forth above, the number of clusters is larger than the number of clusters presented to the user. This is because only a subset of clusters will be presented in response to the initial text string query. In one embodiment of the invention with an initial text query, twenty clusters are initially used, but only the five most similar clusters are returned based on the query. The clusters selected by the user for gathering are then re-clustered, where the number of clusters is equal to the number of clusters to be displayed, again five in the disclosed embodiment. Each further gather and clustering operation results in five clusters. As each operation is performed, cluster results are stored. This permits "backing up" the chain of operations, and is also needed by the mapping or expanding operation.

[0106] The initial clustering could alternatively be based on another feature, such as the color histogram feature. The appropriate number of initial clusters may be smaller, depending on the feature. In the disclosed embodiment, the initial clustering is based on text, but at any time, the scatter and further clustering can be based on either a text feature or an image feature. It should also be noted that in alternative embodiments of the invention, initial clustering based on non-text features is possible and may be useful in certain circumstances.

[0107] As stated above, the expand/map function addresses a problem with progressively narrowing a search based on different features, in that images with missing values will be eliminated from consideration. For example, some documents contain images with no associated text, or text unrelated to the contents of the image. In other cases, the text surrounding the image has no relevance to the semantic content of the image. Another problem with progressively narrowing a search is that the search may be narrowed to a part of the space near a boundary between two clusters.

[0108] The mapping or expanding operation adds images or clusters to the current set based on similarity in one feature dimension. Because only one feature is considered at a time, it should be noted that the distance metric used to establish similarity can be different for each feature. For example, as discussed above, the cosine distance can be used for text feature similarity, while Euclidean distance or the normalized histogram intersection is used for histogram similarity.

[0109] The expand operation can be performed in several ways. One method ensures that the elements of the current clusters remain in the mapped set and the set size is increased. This is accomplished by adding to the current working set some elements that are close (via the appropriate distance metric) to the working set based on the selected feature. In a presently preferred embodiment, the mean of the selected feature for the current working set is computed, and then those elements (represented as vectors) selected from the entire database that are closest to this mean are added. This is most appropriate for text features. In an alternative version, elements that are close to each displayed representative in the working set are selected and added. This alternative mapping procedure is more applicable to image features, in which the clusters are represented by selected images instead of a compilation of the elements used to represent text. However, if the text is represented by selected documents, the latter method of mapping would also be appropriate.

[0110] Mapping can be sped up by considering only those elements that are present further up the chain of working sets saved for backup, as discussed above. That is, look up the backup chain of operations until the feature chosen for mapping was used for clustering. By way of example, assume that clustering was performed based on the color histogram feature, followed by further clustering based on the URL feature. If a map operation based on color complexity is requested, elements from the selected clusters based on the color histogram (another image feature) can be used, rather than all clusters.

[0111] A final extension involves creating a special cluster for each feature containing all of the elements with no data for the feature. When mapping is to be performed, only those elements in the special clusters associated with a

feature already used are considered as candidates to be added to the current working set.

[0112] Referring back to Fig. 11 and the color histogram/URL features example set forth above, another (simpler) method for mapping involves identifying the most similar clusters based on the color histogram feature. In this way, images with no relevant text are identified if they are similar to images with relevant associated text. For example, some URLs are not informative (e.g., "http://www.company.com/products/ special/image.jpg", which contains only the common terms "www," "company, "com," "products, "special," "image," and "jpg"). By first identifying images with the URL feature and then mapping to images similar in another feature, a larger number of images can be identified without restarting the search or requiring the use of feature weights.

[0113] When using a clustering scheme such as Scatter/Gather, it is necessary to display or otherwise represent the clusters to the user during a browsing session. A text cluster can be represented in a number of ways, the most common being the selection and display of a set of words that are in some way most representative of the cluster. When image clusters need to be represented, it is less meaningful to choose image features that are common to the cluster members and display them, since these will not, in general, have semantic meaning to the user. Previous clustering image browsers have represented image clusters by mapping the images into a lower (two) dimensional space and displaying the map. Instead, a preferred embodiment of the invention calls for a further clustering of the cluster, followed by representing the cluster by (a) the three images closest to the centroid of the cluster, and (b) three images representative of subregions of the cluster. The three subregion representatives are computed by removing the three most central images from (a) above, computing three subclusters, and using the image closest to the centroid of each subcluster (as measured via the appropriate distance metric). This representation provides a sense of the cluster centroid and the range of images in the cluster. The representative images could also have been placed on a 2-D display using multidimensional scaling, but for the examples in this disclosure, the representatives are displayed in a row of three "centroid" images or three "subcluster" images (see, e.g., Fig. 14). This permits very similar images, such as thumbnails and multiple copies of originals, to be more readily identified.

[0114] A collection of Web-like documents containing 2,310 images has been used as an exemplary corpus for the examples set forth below. Web documents contain many of the same types of "meta-information" that can be found in scanned images of documents and can be used to infer the content of a document or the components in a document. By working with web documents, the issues involved with identifying components and layout in an image are minimized, while permitting development of techniques for using metadata in the retrieval process.

[0115] To prevent the corpus from being dominated by "uninteresting" images such as logos and icons that are so ubiquitous on the Web, some simple and somewhat arbitrary criteria that images must satisfy were applied to be included in the corpus. Note that it was not necessary, nor a goal of the experimentation performed, to include all images of any particular class, only to assemble an interesting corpus from what was available on the Web, so a high reject threshold was intentionally used. An image was required to have height and width of at least 50 pixels, and to contain at least 10,000 total pixels. An image was also required to pass some color-content-based tests: that no more than 90% of the image be composed of as few as 8 colors, no more than 95% of the image be composed of as few as 16 colors, and that the RGB colorspace covariance matrix of the image's pixels be non-singular. Qualitatively, these criteria ensure that the images are not simple line drawings, and contain enough variety of color content to be well-differentiable by the color features described in detail above. No screening was performed for multiple versions of the same image, so the corpus does contain identical images, as well as an image and a thumbnail of the image.

[0116] Three sample sessions illustrating the use of "scattering" and "gathering" in different modalities are set forth below. The first example illustrates the use of the text feature to first narrow the collection and then use of an image feature to organize the results. Referring initially to Figure 12, the user starts by typing in the text query "ancient cathedral" 1210 and by pressing a "submit" button 1212. It should be recognized, and will be assumed below, that a user's interaction with a system as disclosed herein can take place in any known manner - for example, by interacting with actual physical buttons, by manipulating on-screen representations of buttons with a pointing device such as a mouse, by voice commands, to name but a few possibilities. In the presently preferred embodiment of the invention, the user interacts with a multi-modal image browser presented as a window 1214 by a software program implementing the invention.

[0117] A snapshot of the screen displaying five returned text clusters 1216, 1218, 1220, 1222, and 1224 is shown in the left half of Fig. 12. These clusters are the clusters closest to the query terms. The most frequent content terms in each cluster are displayed to represent each cluster. The user can scroll each text window to view additional representative terms for a text cluster. The user decides to scatter the first text cluster containing the terms "ancient" and "cathedral" again based on text. To do so, the user selects a checkbox 1226 next to the desired cluster and subsequently depresses a "text cluster" button 1228. As described above, this causes the system to refine the existing selected cluster into smaller separate clusters.

[0118] A snapshot of the screen displaying the five resulting text clusters 1310, 1312, 1314, 1316, and 1318 is shown on the left half of Fig. 13. The user selects the three clusters that contain the terms "ancient," "cathedral," and "church" to gather (by way of corresponding checkboxes 1320, 1322, and 1324) and selects complexity as the feature for scattering (by depressing a "complexity cluster" button 1326).

[0119] A snapshot of the screen after clustering based on the image complexity is shown in Fig. 14. The representative images closest to the centroid are displayed. By clicking on the arrows next to each image cluster (for example, a left arrow 1410 and a right arrow 1412 corresponding to a first image cluster 1414), the user can move between the centroid and subcluster representative views. Image clusters 1414, 1416 and 1420 contain images primarily of "ancient" buildings and monuments, including old churches and cathedrals. Image cluster 1418 contains a logo and image cluster 1422 appears to contain miscellaneous items.

[0120] In the second example, our hypothetical user is trying to find a number of images of paper money in our corpus. As shown in Figure 15, an initial query of "paper money" is given and the resulting text clusters 1510, 1512, 1514, 1516, and 1518 are displayed. The first text cluster 1510 contains the word "money" as well as the word "note". This cluster looks promising so the user selects it. The second text cluster 1512 contains the word "paper," but the surrounding words do not indicate that the desired sense of the word paper is being used, so this cluster is not selected. Since money is printed in many colors, the color complexity measure is appropriate to use initially as an image feature. Accordingly, the first text cluster 1510 is scattered based on the color complexity feature and the resulting clusters are shown in Fig. 16. Image clusters 1614 and 1618 contain images of paper money, so they are gathered (by selecting both clusters) and then scattered based on the color histogram feature this time. The other image clusters 1610, 1612, and 1616 do not appear to contain images of interest, so the user would not select those.

[0121] The resulting image clusters are shown in Fig. 17. Image cluster 1712 contains 14 images, and the central representatives are all images of paper money. This cluster is scattered again based on the histogram feature; it can be observed that it contains many images of paper money, as shown in Fig. 18. Some of the images appear to be duplicates, but in this case they are actually a thumbnail and the full-size image. Examination of the sub-cluster representatives reveals some images in the subclusters that do not contain money, but which have similar colors to the money images.

[0122] This example illustrates the use of different features in serial combination to selectively narrow the set of images to a set of interest. Scattering is used to help organize a larger collection into smaller subsets. Gathering permits different collections to be combined and reorganized together.

[0123] In the final example, shown beginning in Figure 19, the user is searching for pyramids and types in the query "pyramid egypt." The returned text clusters 1910, 1912, 1914, 1916, and 1918 are displayed. The user selects the first text cluster 1910 to be scattered based on the complexity feature, and representative images from the resulting image clusters are shown in Figure 20. The user notes that there are outdoor scenes with stone in the second and fourth image clusters 2012 and 2016 and selects those for further clustering based on the color histogram feature. The resulting image clusters are shown in Fig. 21. The first image cluster 2110 contains four images, and the first image is of pyramids.

[0124] When the first image cluster 2110 is expanded to include similar images based on the color histogram feature (by selecting the first image cluster 2110 and depressing the "histogram expand" button 2120), another image of a pyramid 2210 is identified, as shown in Fig. 22. This image occurs on a web page without any text and with a non-informative URL, and so it was retrieved on the basis of the color histogram feature.

[0125] In this example, the text query was used to reduce the size of the image collection, and the reduced collection was organized for presentation based on the image complexity feature. Additional images were obtained that were similar in the color histogram feature dimension.

[0126] In these examples, features in different modalities are used serially to help a user browse a set of images with associated text, using techniques of "scattering" and "gathering" subsets of elements in the corpus. A session begins with a text query to start with a more focussed initial set than the entire corpus. Clusters which are observed to contain one or more interesting elements can then be scattered to examine their content, or expanded to retrieve similar results from the entire collection. It should be noted that although the foregoing examples (Figs. 12-22) employed only three feature types, text, image histogram, and image complexity, the methods disclosed are equally applicable to all eight modalities discussed herein, as well as others.

[0127] Accordingly, an aspect of the present invention includes a system for browsing a collection utilizing multiple modalities. Through an iterative process of "gathering" clusters and "scattering" the elements to examine the clusters, a user can find groups of images of interest. An "expand" or "map" function permits identification of elements in a collection that may be missing a value in one or more dimensions but are similar to other elements in some dimension of interest.

AGGREGATE MULTI-MODAL BROWSING

[0128] As suggested above, it is also possible to use various combinations of the distance metrics for clustering and expanding operations.

[0129] To implement this using the exemplary system and method set forth above, the aggregate similarity $sim(d_1,d_2)$ between two documents or objects can be used in the gathering, scattering, and expanding operations

described in the foregoing section. Minor modifications to the user interface illustrated in Figs. 12-22 will accommodate this additional feature. For example, "Aggregate Cluster" and "Aggregate Expand" buttons can be added to facilitate operating on all possible modalities simultaneously, or alternatively, a listing of the possible modalities (text, color complexity, color histogram, etc.) can be provided with checkboxes (and optionally user-adjustable weights) to allow a user to indicate whether one modality or multiple modalities at once should be used when a "Cluster Selected Modalities" or "Expand Selected Modalities" button is activated. The aggregate similarity $\text{sim}(d_1, d_2)$ over the selected modalities is then used in the scattering and mapping functions.

MULTI-MODAL COLLECTION USE ANALYSIS

[0130] A difficulty arises in attempting to cluster users according to their information-browsing habits. In some cases, the only direct information available for clustering users of a web site is which pages they accessed, and how often. Unfortunately, this often results in an inability to cluster users with mutually-exclusive page views, as there is insufficient information to determine their similarities.

[0131] In order to enable multi-modal clustering in this type of situation, mediated multi-modal representations are calculated by way of matrix multiplication. For example, let P be the matrix of page accesses, with n_p rows (the total number of pages) and n_u columns (the number of users). Each column corresponds to a vector generated by the function ϕ_p, the derivation of which is described in detail above. For example, the fifth column, corresponding to user number five, is $\phi_p(u_5)$. Let T be the text matrix with n_p columns (the number of pages) and n_t rows (the number of words). As above, each column corresponds to a vector generated by the function ϕ_t. For example, the seventh column, corresponding to document number seven, is $\phi_t(d_7)$. Then, the text representation of users is calculated as follows:

$$P_T = T \cdot P$$

This matrix inner product, which is a matrix having n_t rows and n_u columns, can be interpreted as the weighted average of the text content of pages that each user has accessed. Or stated another way, P_T can also be interpreted as an extrapolation of page accesses to the contents of the pages accessed.

[0132] As an example of the usefulness of this approach, consider the example of the only user who accessed a page that describes the personal copier XC540. If mono-modal clustering is performed only on the basis of page accesses, then it would not be practical to assess this user's similarity with other users, since this user is the only one who accessed this page. If the user is also represented on the basis of the text modality, as computed by the product $P_T = T \cdot P$, then the user will be represented in P_T by words like "legal-size" or "paper tray" that occur on the XC540 page. This text representation of the user (a vector defined by a single column in P_T) will be similar to text representations of other users that access copier pages. And as described above, the cosine distance metric can be used to determine the similarity between users in P_T for clustering purposes. This example shows how mediated representations can help in similarity assessments and clustering.

[0133] By way of further example, the inlink, outlink, and URL modalities are also representable by mediation, calculated analogously. The matrix multiplications here are $L \cdot P$ (inlinks), $O \cdot P$ (outlinks), and $U \cdot P$ (URLs), where L, O, and U are the matrices for inlinks, outlinks and urls respectively. This concept can also be extended to the other modalities, such as text genre, color histogram, and color complexity, as well as any other desired modality or feature calculated on a per-document basis.

[0134] Accordingly, a multi-modal technique for analyzing how users interact with a document collection is now possible. This process is called *collection use analysis* (CUA). There is a large literature on organizing and analyzing libraries, but this is an underinvestigated area for digital collections. In most known prior work, collections are organized without a characterization of user needs (for example, by way of generic clustering). In this section, it is illustrated how an analysis of actual collection use can inform issues such as how the organization of a collection can be improved and what parts of a collection are most valuable to particular segments of the user population.

[0135] These questions are especially important in the context of the World Wide Web because of the rich hyperlink structure of Web collections and their commercial importance - both of which necessitate good collection design. Of the modalities listed in Table 1 (above), the following information is used in a preferred embodiment of the invention to characterize pages and users: text, URLs, outlinks, inlinks, and usage logs. The availability of this information motivates a multi-modal approach to CUA, as described above. It is desirable to be able to exploit and combine information available from all possible modalities.

[0136] The main technique used for CUA as described herein is multi-modal clustering of users; however, there remains the issue of trying to interpret those clusters. In the abstract, the objects of a cluster are characterized by similarities among the objects on features of text, usage, collection topology (inlinks and outlinks), and URL. To reveal these characteristic similarities among objects, a variety of user interface and visualization techniques are employed.

[0137] Disk Trees (Fig. 23, described below) can be used to visualize the page and hyperlink topology of a Web

site, and have been found advantageous to identify the parts of a site that typically interest various clusters of users. Also, techniques for summarizing the text and URLs that typify the interests of a cluster of users are employed by the invention. By combining such techniques, an analyst can be presented with an identification of the text, topology, and URLs that characterize the interests of an automatically identified cluster.

[0138] The testbed used in performing the examples set forth below consisted of a complete snapshot of the Xerox Web site (http://www.xerox.com) during a 24-hour period over May 17 and 18, 1998. The entire day's usage information for about 6,400 users was collected. Users were identified on the basis of browser cookies. Additionally, the entire text and hyperlink topology was extracted. At the time of the snapshot, the site consisted of over 6,000 HTML pages and 8,000 non-HTML documents.

[0139] The testbed system consisted of three primary components: a mapping program, which mapped modal information into real-valued vectors (embedded into R_n); a clustering program, which clustered sets of users; and a visualization system, which handled interactive data visualization of Web sites. The visualization program was capable of analyzing the directory structure of a Web site and constructing a Disk Tree as shown in Figure 23. As illustrated, each directory in the Web site corresponds to one node in the tree with all subdirectories and files in the directory being represented as children of the node. Preferably, layout of the tree is performed on a breadth-first basis.

[0140] Accordingly, a visualization system used in an embodiment of the invention constructs a Disk Tree to represent the basic topology of a Web site, as shown in Figure 23. Each directory corresponds to one node in the tree with all subdirectories and files in the directory being represented as children of the node. Layout of the tree is performed on a Breadth-First basis. The Disk Tree 2310 in Figure 23 shows the Xerox Web site, starting from the Xerox "splash page" (http://www.xerox.com/), with subsequent directories being depicted as concentric rings extending from the center of the disk. This produces an asymmetric disk.

[0141] The Disk Tree provides the analyst-user with a way to assess topology information about clusters. In the Disk Tree 2310, clusters are visualized by coloring all segments that correspond to members of the cluster in one color. For example, in a preferred embodiment of the invention, membership in a cluster can be indicated by coloring in red (indicated by bold lines in the Figure) the segments 2312, 2314, and 2316 that correspond to documents in the cluster. Additionally, the preferred system allows for the visualization of multiple membership. For these cases, multiple membership is simply indicated by mixing the colors of all clusters that the page belongs to, for example by coloring one group 2320 of segments in stripes of red and blue to indicate simultaneous membership in a "red cluster" and a "blue cluster."

[0142] Also, via a dialog box interface (Figure 24), the user of a preferred embodiment of the invention can interactively specify which clusters to display (currently limited to one or two clusters simultaneously). The dialog box displays a textual representation of the members of each cluster. For each cluster member, the weights of each modality are listed. The inlink, outlink, text, and usage modalities are equally weighted (25% each). The "Clustering Report" 2410 contains the most characteristic keywords 2412 across all documents for the user cluster. This enables quick access to a high level abstraction of this modality while simultaneously viewing other properties. The "Document Report" 2414 provides the URL and a textual summary 2418 of the most characteristic document 2416 in the cluster. Experience with multi-dimensional clustering shows that in some cases, the Clustering Report is the best characterization of the cluster and in other cases, the Document Report provides the best characterization. It has been found that interaction with the system is greatly facilitated by being able to readily access a summary of both the entire cluster or of its most representative document.

[0143] The result of multi-modal clustering is a textual listing of the dimensions that are most characteristic of a cluster for each modality. For example, if the cluster is "about" the Xerox HomeCentre product, then a salient dimension for the text modality is the word "HomeCentre." Given that for the testbed Xerox Web site, twenty to fifty clusters were produced each containing hundreds of users, the task of identifying, comparing, and evaluating the cluster results in textual form can be daunting. In that case, the Disk Tree (described above) can be helpful.

[0144] As illustrated in Figure 24, the Cluster Report window 2410 contains the characteristic keywords 2412 across all documents for the user cluster. These are computed by selecting the most highly weighted words in the text centroid (a text vector representing the centroid) of the cluster. Such summaries have been found to provide users with reliable assessments of the text of large clusters.

[0145] The Document Report window 2414 provides the URL 2416 and a text summary 2418 of the most characteristic document (the document closest to the text centroid in the cluster). Together, the Cluster Report and Document Report windows 2410 and 2414 provide the analyst-user with a high level assessment of the text modality and the URL while simultaneously viewing other modalities.

[0146] The remainder of the dialog box interface in Figure 24 is used to specify which clusters to display. The dialog box uses text to represent the members of each cluster. For each cluster member, the weights of each modality 2420 are listed (the clustering shown in the figure was done for four of the five modalities), and in a preferred embodiment of the invention can be adjusted by the user. For example, in Figure 24, /investor/pr/ir980512.html is shown a member of cluster zero. The inlink, outlink, text, and usage modalities are equally weighted (25% each).

[0147] One motivation for showing pages instead of showing users directly in the dialog box of Figure 24 and the Disk Tree of Figure 23 is that users are not organized structurally and hierarchically the same way pages are, which makes the direct visualization of users difficult.

[0148] Accordingly, two methods of presenting clusters are proposed. The first method consists of a visual presentation of all members of the cluster. Building on the Disk Tree described above, this is straightforward if there is a hierarchical structure that members are embedded in. For example, a cluster of pages is shown by coloring all nodes in the Disk Tree that correspond to members of the cluster.

[0149] There is no equally straightforward way of showing clusterings of objects that are represented by way of mediation. There is no direct hierarchical organization of users that can be visualized as a Disk Tree. Accordingly, a technical problem then is how to show user clusters in a web page-based visualization. This problem is solved by computing the probability that a particular page will be accessed if a random user is selected from a desired cluster. The probability $P(p \mid u)$ is calculated as the relative frequency with which a page p is accessed by a user u. For example, if a user accesses three pages, then each of them will have a probability $P(p \mid u)$ of 1/3. The probability $P(p \mid c)$, the relative frequency with which a page p is accessed by any user within a cluster c is then computed as the average of the probabilities $P(p \mid u)$ for the users in the cluster, as follows:

$$P(p \mid c) = \sum_{u \in c} \frac{1}{|c|} P(p \mid u)$$

where $|c|$ is the total number of users in the cluster c. This visualization can be thought of as a "density plot." Intuitively, it answers the question of where a typical user from this cluster is most likely to be. In a presently preferred embodiment of the invention, all non-zero probabilities are mapped onto a scale from 0.3 to 1.0 so that even pages that are only accessed a few times by users in the cluster are clearly visible.

[0150] In order to analyze the user population, all 6,400 users of the tested were clustered into 20 clusters. Nine of the user clusters were characterized by interest in Xerox product offerings: Pagis scanning, copiers, XSoft software, the Xerox software library (for downloading programs), home and desktop products, and TextBridge for Windows, by way of example. Seven user clusters accessed only a single page, for example the index of drivers or the Xerox home page. One cluster of users accessed employment information. One cluster was characterized by interest in investment information such as press releases and news about Xerox. Two clusters were mixed, containing users that did not fit well into any of the other categories. Accordingly, referring again to Figure 23, in a preferred embodiment of the invention, various sets of documents 2312, 2314, and 2316 can be highlighted in color to indicate the documents that a particular cluster (or clusters) of users are likely to access.

[0151] In the second method for presenting clusters, text-based cluster summaries are generated by presenting the most salient dimensions for each modality. An example is shown in Table 2 for a cluster of users interested in the Xerox HomeCentre. For each modality, the ten most salient dimensions are listed: the ten most salient words, the ten most salient pages pointing to pages accessed by this cluster, the ten most salient outlinks occurring on accessed pages, the ten most salient pages accessed and the ten most salient url elements. It would be a daunting task to interpret and compare clusters based only on the objects that are in the cluster (the users in this case). The textual summary by means of salient dimensions makes it easier to understand clusters and why users were put in the same cluster.

Table 2

text		
0.504	8332	homecentre
0.221	14789	detachable
0.171	15270	artist
0.162	5372	slot
0.155	12010	mono
0.142	21335	photoenhancer
0.122	237	foot
0.121	4605	creative
0.113	3533	projects
0.109	21336	pictureworks

inlink		
0.343	23856	products/dhc/index.htm
0.265	24144	products/dhc/06does.htm
0.259	17045	soho/whatsnew.html
0.257	24155	products/dhc/13inclu.htm
0.240	24151	products/dhc/07buser.htm
0.240	24152	products/dhc/07cuser.htm
0.235	24143	products/dhc/12more.htm
0.235	24157	products/dhc/15supp.htm
0.235	24156	products/dhc/14req.htm

outlink		
0.527	24143	products/dhc/12more.htm
0.272	24156	products/dhc/14req.htm
0.272	24155	products/dhc/13inclu.htm
0.272	24157	products/dhc/15supp.htm
0.255	24149	products/dhc/11pagis.htm
0.248	31814	http://www.teamxrx.com/retailers.html
0.216	24145	products/dhc/07user.htm
0.216	24144	products/dhc/06does.htm
0.192	23856	products/dhc/index.htm
0.137	23857	products/dwc450c/index.htm

pages		
0.557	37067	products/dhc
0.330	24143	products/dhc/12more.htm
0.303	19452	products/multiprd.htm
0.287	24144	products/dhc/06does.htm
0.274	24739	soho/dhc.html
0.233	24155	products/dhc/13inclu.htm
0.208	24156	products/dhc/14req.htm
0.191	24148	products/dhc/09scan.htm
0.184	24157	products/dhc/15supp.htm
0.176	24145	products/dhc/07user.htm

url		
0.791	15	products
0.583	2036	dhc
0.141	646	soho
0.057	2037	dwc450c
0.054	895	print
0.044	31	cgi-bin
0.042	603	supplies
0.036	1768	usa
0.027	91	xps
0.020	844	wwwwais

[0152] The salient dimensions for a given modality are calculated by using the probabilities expressed in $P(p \mid c)$ to weight the documents contributing to an aggregate feature vector. The largest terms in the aggregate feature vector then represent the salient dimensions. For example, referring to Table 2 above, the largest term in the aggregate text feature vector for the illustrated cluster corresponds to the word "homecentre"; likewise, the second-largest term corresponds to the word "detachable." For the aggregate URL feature vector, the most-important word is "products," followed by "dhc."

[0153] Such a detailed characterization of the parts of the collection that are accessed can be used to add appropriate material or to improve existing material. For example, it was surprising to determine that there is only one small investor cluster. This can be interpreted as evidence that there is either not enough investment information on the site or that its layout should be improved to make it more attractive.

[0154] As mentioned above, a striking feature of several clusters is that they essentially consist of users that access

only one page. An example is the cluster that only accesses the page for requesting a trial version of TextBridge Pro 98 (an optical character recognition program). These users have a clearly defined information need and are probably following a link from outside. Once they have the information they need (for example, Xerox' stock price on the Xerox home page), they leave immediately.

[0155] Other clusters are characterized by grazing behavior, a much more amorphous information need that is gradually satisfied as the user browses through a large number of pages. One example is the cluster of users browsing the subhierarchy called the Document HomeCentre which has information on smaller devices, appropriate for small office and home office. In an empirical analysis, it was found that users from this cluster generally look at several pages of the subhierarchy, corresponding to several different Document HomeCentre products. Apparently, these users come to the Xerox Web site to educate themselves about the range of products available, a process that requires looking at a relatively wide spectrum of information.

[0156] This analysis of the use of the collection can again feed into a better design. For example, a set of pages that are often browsed together should be linked together by way of hyperlinking to facilitate browsing.

[0157] Multi-modal user clustering is also useful for improving the design of a Web site. The Disk Tree 2310 of Figure 23 shows a cluster of investors from the 50-cluster clustering. There are two areas of strong activity in the upper half of the figure indicated by bold areas 2312 and 2314. One area 2312 corresponds to the sub-hierarchy "annualreport"; the other area 2314 corresponds to the sub-hierarchy "factbook". The fact that many investors look at both suggests that the collection should be reorganized so that these two sub-hierarchies are located together.

[0158] The system is an example of using multi-modal clustering for exploratory data analysis. The system was used to characterize the user population on May 17, 1998. All 6400 users were assigned to 20 clusters. Nine clusters correspond to product categories: Pagis scanning, copiers, XSoft software, Xerox software library (for downloading pages), home and desktop products, TextBridge for Windows. Seven clusters correspond to users that mainly access a single page, for example the index of drivers or the Xerox home page. One cluster contains visitors who access employment information. One cluster contains investors and other visitors who are interested in press releases and other news about Xerox. Two clusters are mixed, containing users that do not fit well into any of the other categories. Multi-modal clustering thus enables analysts to get a quick characterization of the user population.

[0159] Many visualizations, including Disk Trees, can only depict a limited number of nodes on a screen. Multi-modal clustering can be used for node aggregation the grouping of nodes into meta-nodes. For example, if there is not enough screen real estate to display the 1000 subnodes of a node on the edge of a screen, then these 1000 subnodes can be aggregated into 5 meta-nodes using multi-modal clustering. Displaying these 5 meta-nodes then takes up less space than displaying all 1000 subnodes.

[0160] Multi-modal clustering can also be used for data mining. Once a cluster of users has been created by the multi-modal algorithm, one can automatically find salient features. For example, based on the textual representation of the HomeCentre cluster in Table 2 which shows "homecentre" as a salient word, one can test how well it is characterized by "homecentre" alone.

[0161] Another data mining application is the discovery of unusual objects. For example, in the discovery phase of a lawsuit, a law firm may only be interested in outlier documents, not in the large groups of similar documents that mostly contain boilerplate. Multi-modal clustering would identify the large groups of similar documents (e.g., because of shared boilerplate). Interesting document would then be among those that are most distant from the centroids of large clusters.

[0162] A data mining technique according to the invention compares two groups of objects by doing a multi-modal clustering for the first and then assigning the second group to the clusters of the first. This analysis technique has been successfully used to compare Xerox-base and non-Xerox-based users of the Web site and found surprisingly few differences mainly because Xerox employees are users of Xerox products and that is one of the main reasons to go to the external Xerox web site (to download drivers, look up product information, etc). One difference was that a higher proportion of Xerox users visited only one page, the Xerox home page. The reason is probably that many browsers of Xerox employees have the Xerox home page as their default page, so that the user automatically goes to the Xerox home page when starting up their browser and then moves on to a page on a different site. This example demonstrates the utility of multi-modal clustering for comparing different user groups.

[0163] An increasingly important technique for organizing large collections, including intranets, is hierarchical clustering. The purpose is to automatically generate a hierarchy as it can be found on yahoo (and on many intranets). Hierarchical multi-modal clustering can be used to generate such a hierarchy automatically or to give human categorizers a first cut which they can then hand-edit.

RECOMMENDATIONS BASED ON COLLECTION USE ANALYSIS

[0164] Finally, a recommendation system based on multi-modal user clusters is possible with the collection of multi-modal collection use data as described above. A set of clusters is induced from a training set of users. A new user is

assigned to one of the clusters based on a few initial page accesses. Pages that were accessed by the users in the assigned cluster are then recommended to the user. Since the clustering is done based on multi-modal information it is robust enough to make useful recommendations.

[0165] A multi-modal recommendation system according to the invention is illustrated in Figure 25. Initially, a training set of users is identified (step 2510). Any type of information that is available about users is collected. In the disclosed embodiment, it has been found to be useful to collect information on the pages users access, as well as the text content, inlinks, outlinks, and URLs of these pages. It should also be noted that real-time document access data need not be used for this; the data can come from a usage log or even a user's set of browser "bookmarks," when available. Also, as noted above, there are other modalities (beyond page usage) applicable to users that may be useful in this application, such as demographic information and other kinds of tracked information.

[0166] The users are then clustered via multi-modal information (step 2512), as described above in the section related to multi-modal clustering. If page usage is the primary information collected about users, as in the preferred embodiment of the invention, then it is appropriate to cluster users via the mediated representation of users by way of various document features, as described above. It should be recognized that other strategies are also possible. For example, if demographic information is collected, it may be more appropriate to cluster users simply on the demographic information. The selection of a basis on which to cluster is an implementation detail left to the judgment of a designer of a system according to the invention. Or alternatively, the selection may be left to the user.

[0167] If there are no new users (step 2514), then the process is finished (step 2516). Otherwise, the new user is identified (step 2518), browsing information is collected from the new user (step 2520), and the user is assigned to the nearest existing cluster (step 2522). In a preferred embodiment of the invention, the user is assigned based on the aggregate cosine similarity calculated over text content, inlinks, outlinks, and URLs, as described above.

[0168] The most popular pages in the nearest cluster can then be identified (step 2524) and recommended to the new user (step 2526). In an alternative embodiment of the invention, the names, e-mail addresses, or other identifying data for the users in the nearest cluster (or at least one user in that nearest cluster, identified via the aggregate cosine similarity metric described above) can be provided to the new user, thereby allowing the new user to identify "experts" in a desired area.

[0169] This algorithm has several advantages over other recommendation algorithms. The algorithm is fast. Since the clustering is a compile-time operation, the only run-time operation is the mapping of multi-modal information into the vector spaces of each modality and the computation of the aggregate cosine similarity with each cluster. This is efficient. Another way to gain the same advantage is to regard clustering as a way of summarizing the user population. This is important if the user population is large. For example, instead of having to keep track of one million users, recommendations can be made based on only, say, 1000 users; those that are representative of 1000 clusters derived from the complete user population.

[0170] It should be noted that although inducing clusters from the user population is more expensive than just assigning a new user, it is still efficient enough to be done several times a day or even more often for large data sets (since clustering is linear with respect to the number of objects to be clustered). Recommendations can thus adapt to quickly changing user needs. This can be performed as shown in Figure 26. When it is desirable to do so (either periodically or after a sufficient number of new users have been added to the user pool, for example), a subset of users is first identified (step 2610). As stated above, with a large population, a subset of users can represent very well the characteristics of the entire population. The subset of users is then re-clustered (step 2612). The most popular pages for each cluster are then determined (step 2614), and the pages recommended to new users are adjusted accordingly (step 2616).

[0171] The algorithm set forth herein for providing multi-modal recommendations based on collection use analysis has been found to be very accurate and robust. Other recommendation algorithms rely on comparisons of the new user with previous users. When recommendations are based on one or two users who happen to be the nearest neighbors, then a bad page may be recommended because outliers can influence the recommended pages. Cluster-based generalization reduces the influence of outliers. Furthermore, since all available information is used and combined, the algorithm is more robust than recommendation algorithms that rely on a single source of information.

[0172] For the examples set forth below, the actions of testbed users (i.e., users of the Xerox Web site on May 17-18, 1998) were logged. Based on their browsing habits, those users were placed into 200 clusters.

[0173] The first type of recommendation that can be made by a cluster-based system is shown in Table 3:

Table 3

Cluster 35 0.976277 probsum		
16406	0.088639	products/copiers.htm

Table 3 (continued)

Cluster 35 0.976277 probsum		
37005	0.085385	http://www.xerox.com
19453	0.059099	products/cop_soho.htm
33739	0.051071	soho/xc0355.html
21231	0.040836	soho/xc1044.html
17033	0.039741	soho/xc0830.html
37025	0.036496	cgi-bin/wwwwais
19451	0.035938	products/cop_pers.htm
17029	0.034706	soho/xc0540.html
17010	0.028586	soho/5306.html
21232	0.026014	soho/xc1045.html

[0174] Table 3 shows the most popular pages for user cluster 35, based on the computation of the probability $P(p \mid u)$ (probability of page p given that we have a user u from Cluster 35; see above). This information can be exploited by recommending to any user who accesses the page "products/copiers.htm" the other pages in the cluster, in other words, the most popular copiers. Some of these links are accessible from the page "products/copiers.htm". The algorithm makes it easy for users to choose those links that are most likely to be relevant.

[0175] The second type of recommendation that is enabled by cluster-based generalization is shown in Table 4:

Table 4

Cluster 127 1.000000 probsum		
24663	0.297222	employment/ressend.htm
37057	0.268162	employment
24666	0.079701	employment/resascii.htm
21384	0.076923	research/xrcc/jobopps.htm
37005	0.054701	http://www.xerox.com
37087	0.050000	cgi-bin/employment/xrxresume.cgi
24675	0.047436	employment/restip.htm
24664	0.023077	employment/college.htm
15355	0.012821	XBS/employmt.htm
24665	0.012821	employment/recruit.htm
34418	0.012821	employment/overview.htm
37025	0.012821	cgi-bin/wwwwais

[0176] This table includes the most salient pages for user cluster 127. Based on the contents of this cluster, the system can recommend the employment pages of various subdivisions to users who are ready to apply for jobs. The listed documents include several employment pages on the Xerox web site that are not directly accessible from the central employment page (the second page in the table, with numerical identifier 37057). Two such not directly accessible pages are "research/xrcc/jobopps.htm" and "XBS/employmt.htm". This type of recommendation enables users to find something that they may not find at all otherwise (as opposed to just saving them time). The same algorithm as described above is used to accomplish this: assign a new user to a user cluster (after some initial page accesses), and recommend pages characteristic of the cluster that the user has not accessed.

[0177] Table 5 includes the most salient pages for user cluster 25:

Table 5

Cluster 25 0.998387 probsum		
37057	0.661425	employment
37005	0.300403	http://www.xerox.com
34418	0.022581	employment/overview.htm
12839	0.004435	searchform.html
24675	0.004032	employment/restip.htm
37155	0.002688	scansoft/tbapi
37113	0.002016	factbook/1997
23465	0.000806	xbs

[0178] These users are browsing and probably not ready to apply for a job, so the employment pages of specific divisions like XBS are not recommended to them. The contrast between Tables 4 and 5 is an example of a generalization found by multi-modal clustering. Users in the first cluster are much more likely to submit their resumes. It is a good idea to recommend the employment pages of subdivisions like XBS to them since they seem to be serious about finding a job.

[0179] On the other hand, users in the second cluster just do some general browsing. Employment is the focus of their browsing, but they do not seem to perform a focussed job search. These users are less likely to want to see pages with job ads, so the employment pages of subdivisions are not recommended to them.

Claims

1. A method for information browsing using multi-modal features, comprising the steps of:

   isolating a plurality of features corresponding to each of a first plurality of objects in a collection;
   searching the collection to obtain search results;
   clustering a second plurality of objects into a plurality of clusters; and
   presenting the clusters to a user.

2. A system adapted for information browsing using multi-modal features, comprising:

   storage for a document collection, wherein the document collection includes a plurality of documents each having a plurality of features;
   a database adapted to store a quantitative representation of each feature corresponding to each document in the document collection; and
   a processor adapted to facilitate clustering the documents according to at least one feature.

3. A method for providing document recommendations from a document collection based on multi-modal user clusters, comprising the steps of:

   identifying an initial set of users representing a subset of all possible users;
   clustering the initial set of users into a plurality of user clusters;
   identifying a new user;
   collecting information from the new user; and
   assigning the new user to a user cluster.

4. A method for quantitatively representing objects in a vector space, comprising the steps of:

   identifying an object to be processed from a plurality of objects;
   extracting a feature corresponding to the object from the plurality of objects;
   converting the feature to at least one vector; and

associating the at least one vector with the object.

5. A method for calculating the similarity between two objects in a collection of objects, wherein each object is associated with at least one multi-dimensional vector representative of a feature of the object, comprising the steps of:

identifying a first vector corresponding to a first feature of a first object and a second vector corresponding to a first feature of a second object; and
computing a first distance metric between the first vector and the second vector.

6. A method for calculating the similarity between two objects in a collection of objects, wherein each object is associated with a plurality of multi-dimensional vectors representative of a plurality of corresponding features of the object, comprising the steps of:

for each feature, identifying a first vector corresponding to a first object and a second vector corresponding to a second object,
for each feature, computing a distance metric between the first vector and the second vector; and
summing the distance metrics for each feature into an aggregate distance metric.

7. A method for calculating the similarity between two users in a user population, wherein each user is associated with a multi-dimensional vector representative of a user feature, comprising the steps of:

identifying a first vector corresponding to a first user and a second vector corresponding to a second user; and
computing a first distance metric between the first vector and the second vector.

8. A method for selecting a set of initial cluster centers in clustering a collection of objects in a multi-dimensional vector space, comprising the steps of:

selecting a first number of first objects from the collection;
computing a vector centroid of the first objects;
selecting a second number of second objects from the collection; and
identifying a second number of initial cluster centers between the centroid and the second objects.

9. A method for clustering a collection of objects in a multi-dimensional vector space, comprising the steps of:

selecting a first number of first objects from the collection;
computing a vector centroid of the first objects;
selecting a second number of second objects from the collection;
identifying a second number of initial cluster centers between the centroid and the second objects; and
performing iterated *k*-means clustering around the initial cluster centers to cluster the objects.

10. A method for visualizing clusters of users represented by way of documents selected from a collection of documents, comprising the steps of:

identifying a selected plurality of users in a user population, wherein the plurality of users share an interest;
for each user in the plurality of users, for each document in the collection, identifying a corresponding access probability corresponding to the likelihood that the user will access the document;
for each document in the collection, calculating an aggregate access probability across the users in the selected plurality of users, corresponding to the likelihood that a user in the selected plurality will access the document; and
visually displaying the aggregate probability for each document in the collection.

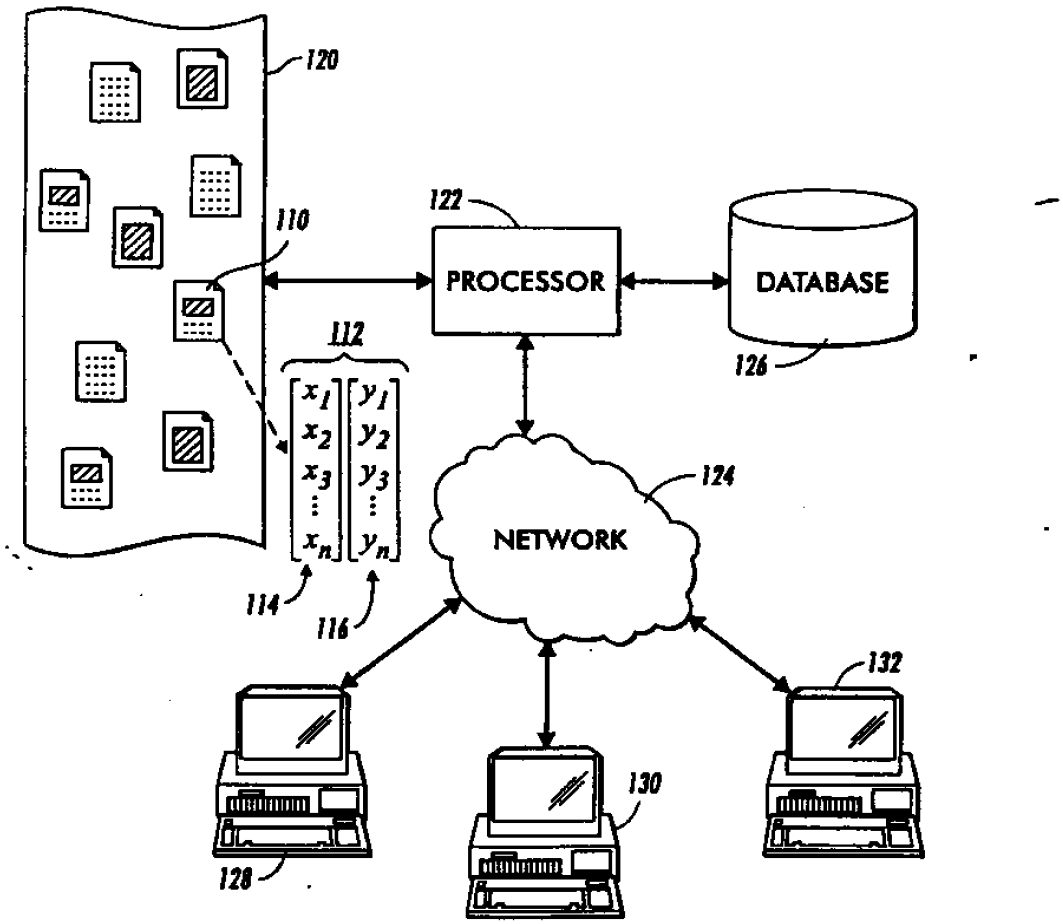

120
110
122
PROCESSOR
DATABASE
126
112
x_1 y_1
x_2 y_2
x_3 y_3
x_n y_n
114
116
124
NETWORK
132
130
128

FIG. 1

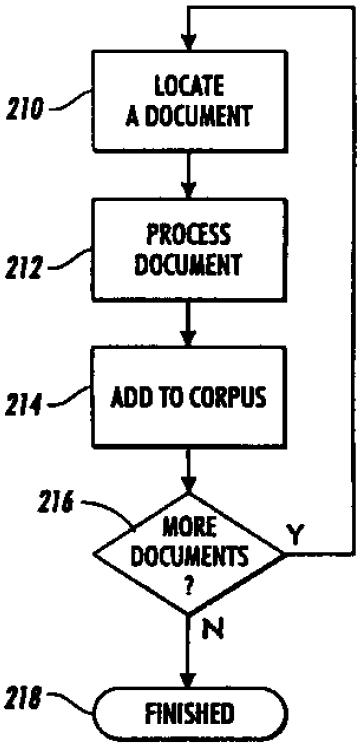

210
LOCATE A DOCUMENT
212
PROCESS DOCUMENT
214
ADD TO CORPUS
216
MORE DOCUMENTS ?
Y
N
218
FINISHED

FIG. 2

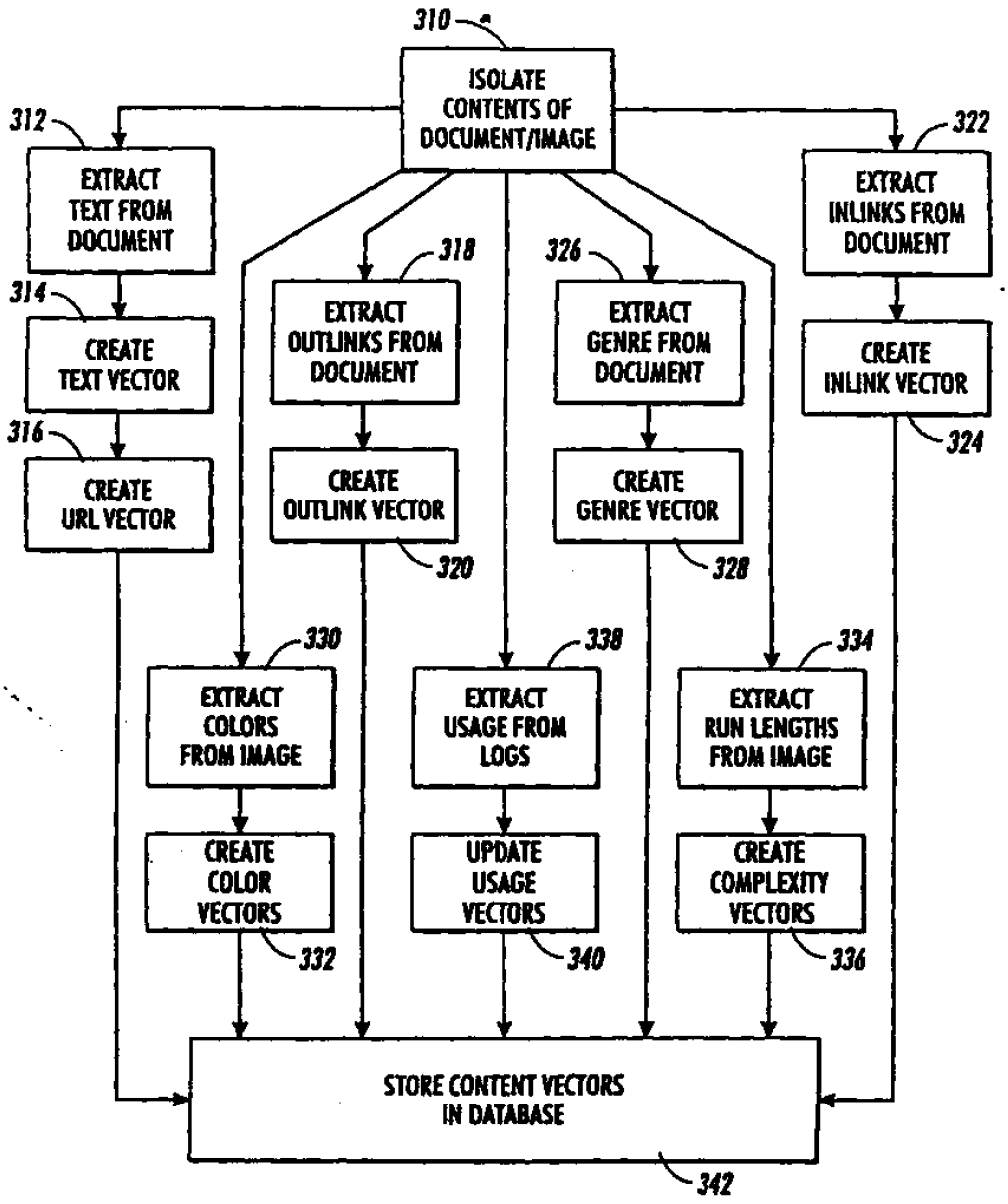
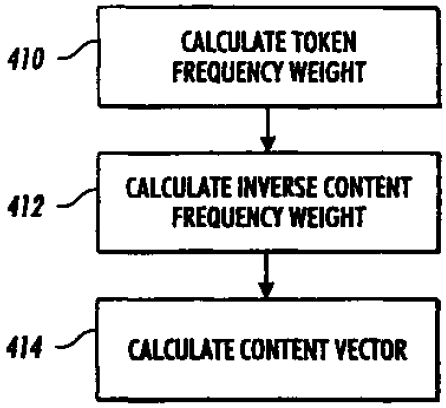

310
ISOLATE CONTENTS OF DOCUMENT/IMAGE
312
EXTRACT TEXT FROM DOCUMENT
314
CREATE TEXT VECTOR
316
CREATE URL VECTOR
318
EXTRACT OUTLINKS FROM DOCUMENT
CREATE OUTLINK VECTOR
320
326
EXTRACT GENRE FROM DOCUMENT
CREATE GENRE VECTOR
328
322
EXTRACT INLINKS FROM DOCUMENT
CREATE INLINK VECTOR
324
330
EXTRACT COLORS FROM IMAGE
CREATE COLOR VECTORS
332
338
EXTRACT USAGE FROM LOGS
UPDATE USAGE VECTORS
340
334
EXTRACT RUN LENGTHS FROM IMAGE
CREATE COMPLEXITY VECTORS
336
STORE CONTENT VECTORS IN DATABASE
342

FIG. 3

FIG. 4


410
CALCULATE TOKEN FREQUENCY WEIGHT
412
CALCULATE INVERSE CONTENT FREQUENCY WEIGHT
414
CALCULATE CONTENT VECTOR

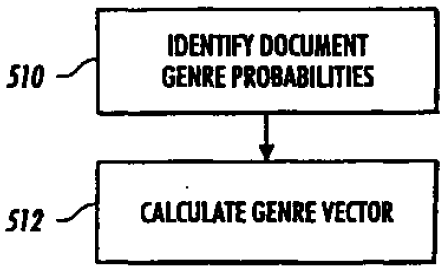

510
IDENTIFY DOCUMENT GENRE PROBABILITIES
512
CALCULATE GENRE VECTOR

FIG. 5

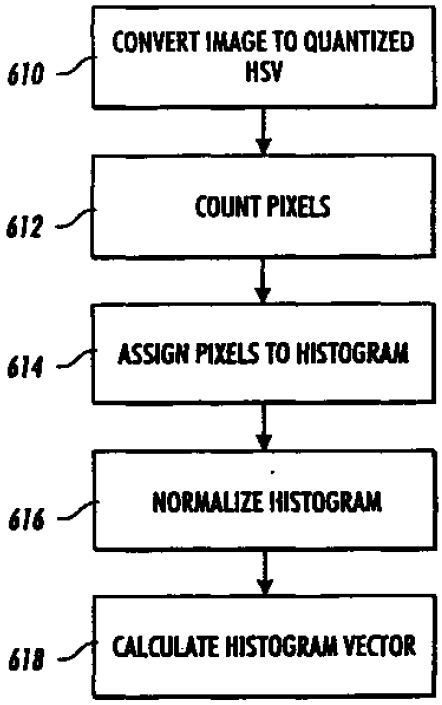

610
CONVERT IMAGE TO QUANTIZED HSV
612
COUNT PIXELS
614
ASSIGN PIXELS TO HISTOGRAM
616
NORMALIZE HISTOGRAM
618
CALCULATE HISTOGRAM VECTOR

FIG. 6

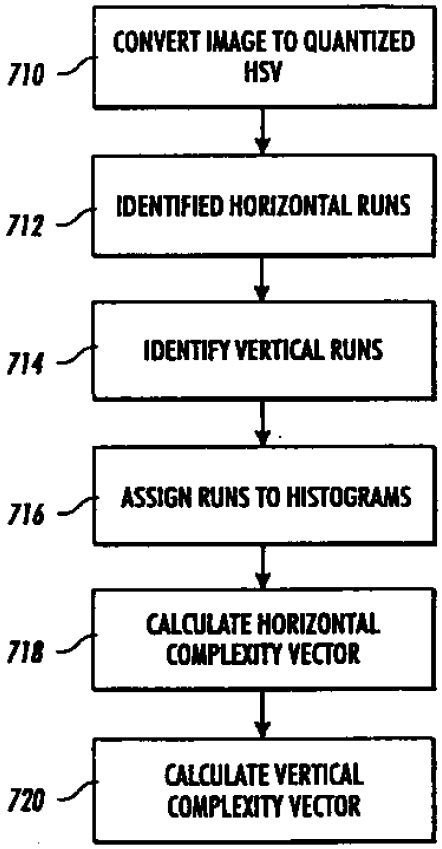
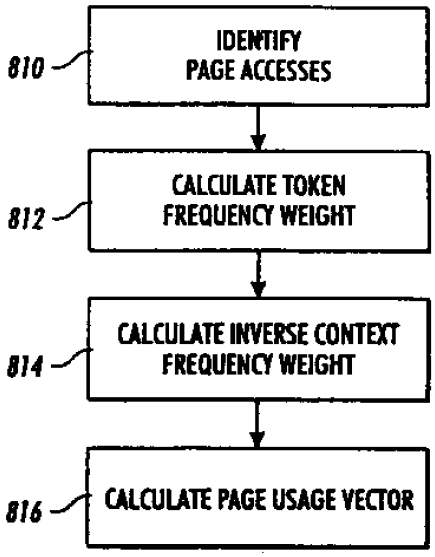

710
CONVERT IMAGE TO QUANTIZED HSV
712
IDENTIFIED HORIZONTAL RUNS
714
IDENTIFY VERTICAL RUNS
716
ASSIGN RUNS TO HISTOGRAMS
718
CALCULATE HORIZONTAL COMPLEXITY VECTOR
720
CALCULATE VERTICAL COMPLEXITY VECTOR

FIG. 7

FIG. 8


810
IDENTIFY PAGE ACCESSES
812
CALCULATE TOKEN FREQUENCY WEIGHT
814
CALCULATE INVERSE CONTEXT FREQUENCY WEIGHT
816
CALCULATE PAGE USAGE VECTOR

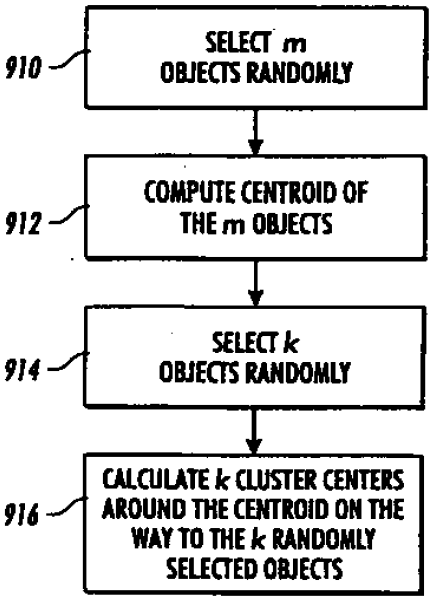

910
SELECT m OBJECTS RANDOMLY
912
COMPUTE CENTROID OF THE m OBJECTS
914
SELECT k OBJECTS RANDOMLY
916
CALCULATE k CLUSTER CENTERS AROUND THE CENTROID ON THE WAY TO THE k RANDOMLY SELECTED OBJECTS

FIG. 9

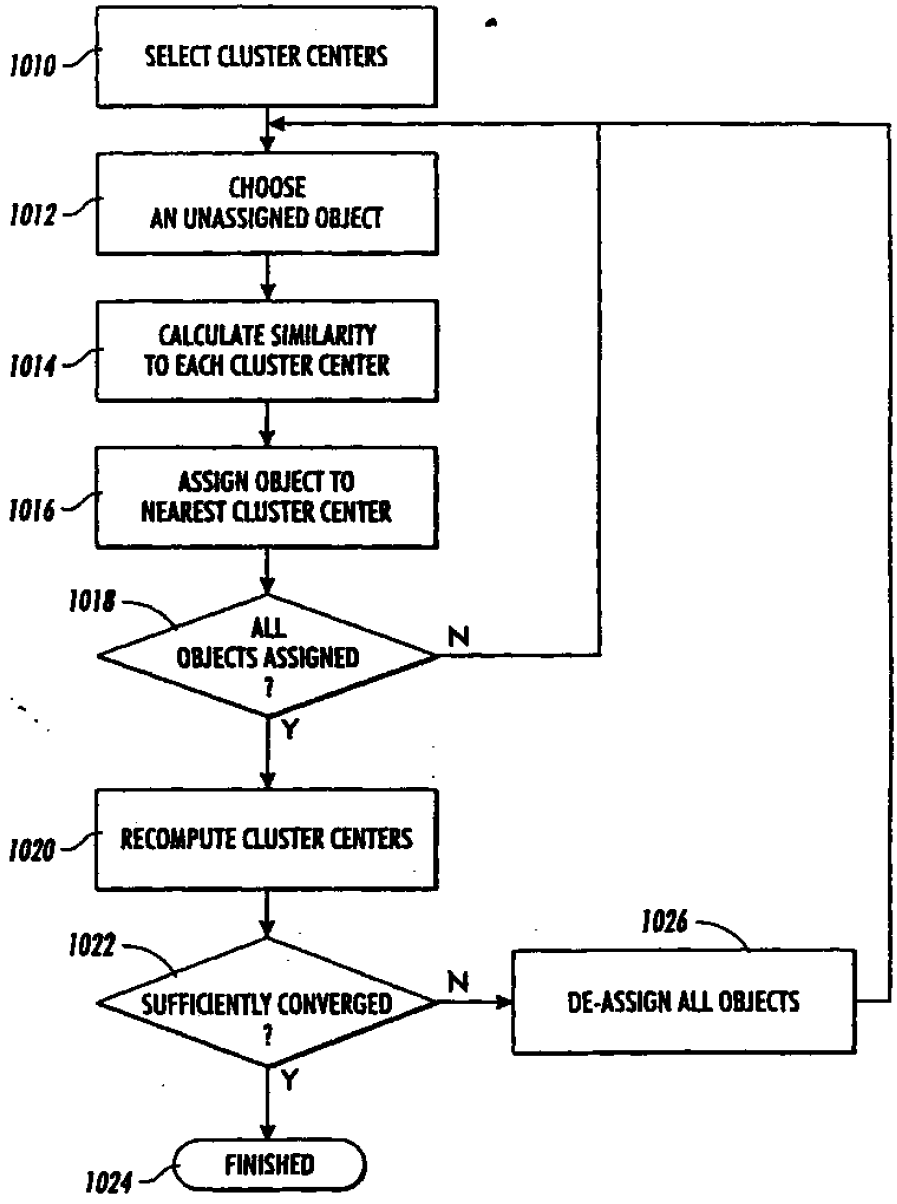

1010
SELECT CLUSTER CENTERS
1012
CHOOSE AN UNASSIGNED OBJECT
1014
CALCULATE SIMILARITY TO EACH CLUSTER CENTER
1016
ASSIGN OBJECT TO NEAREST CLUSTER CENTER
1018
ALL OBJECTS ASSIGNED ?
N
Y
1020
RECOMPUTE CLUSTER CENTERS
1022
SUFFICIENTLY CONVERGED ?
N
1026
DE-ASSIGN ALL OBJECTS
Y
1024
FINISHED

FIG. 10

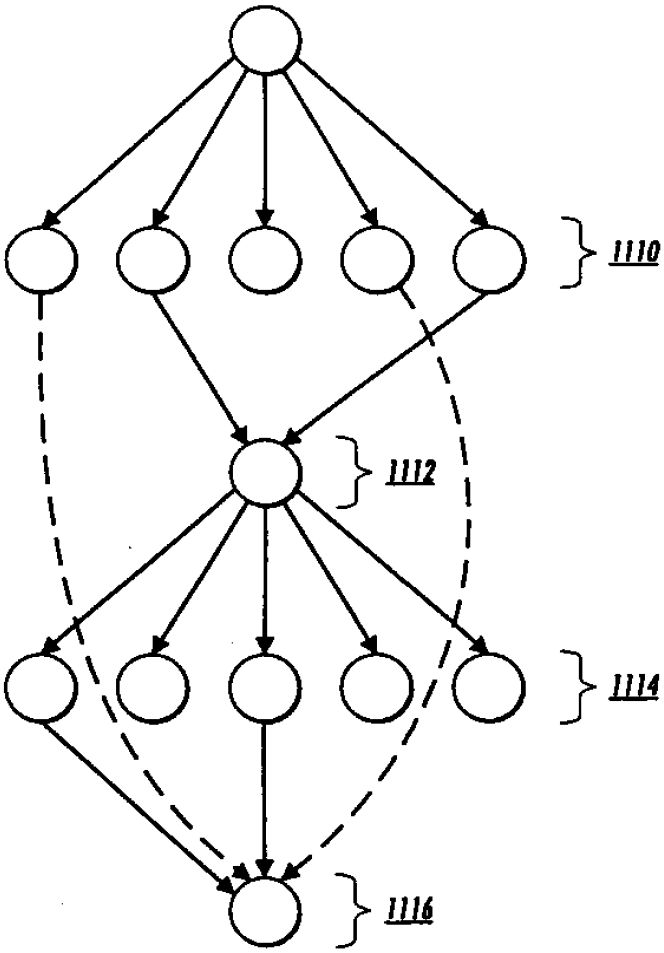


FIG. 11

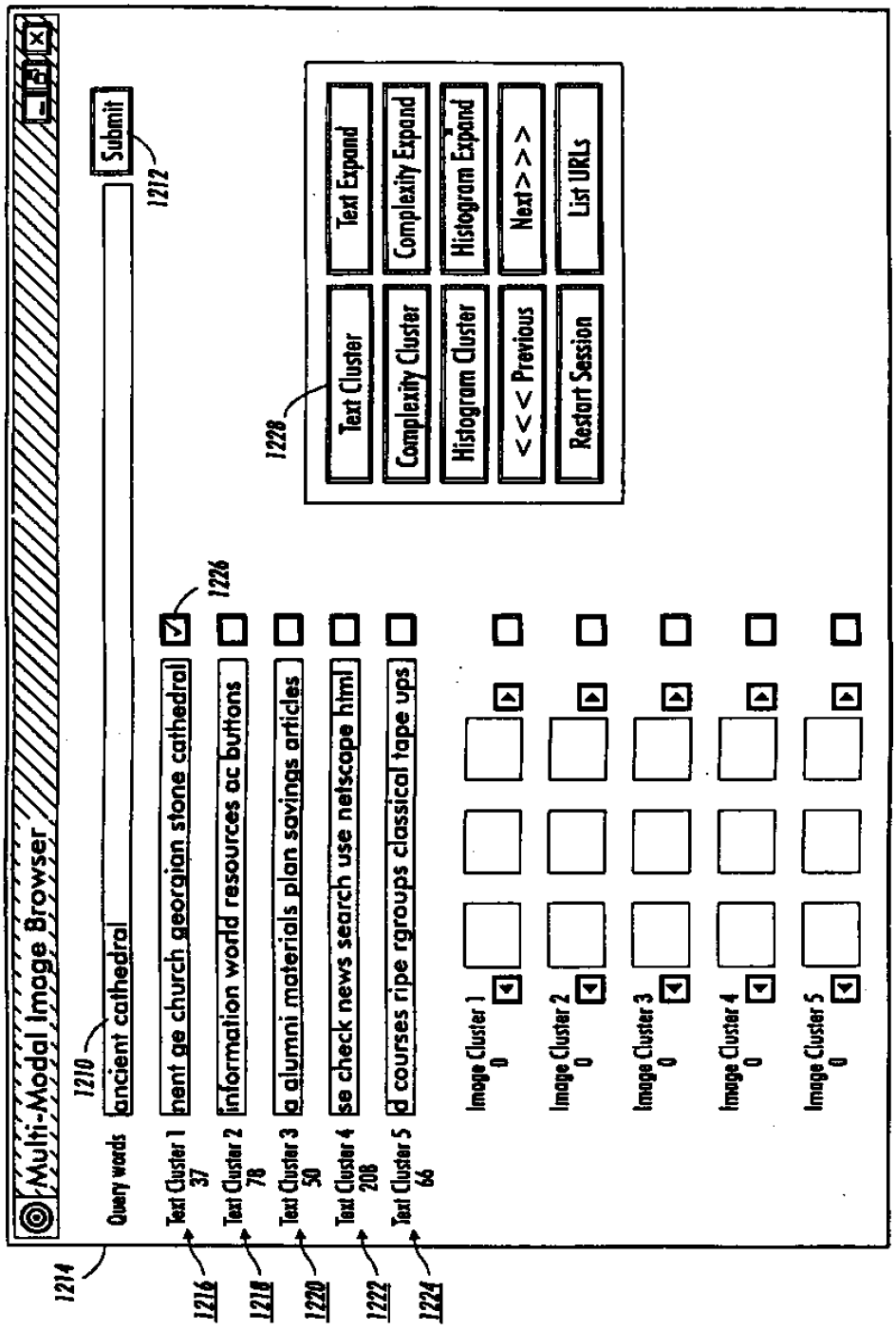

Multi-Modal Image Browser
Query words
ancient cathedral
Submit
1210
1212
1214
1216
1218
1220
1222
1224
1226
1228
Text Cluster 1
37
ient ge church georgian stone cathedral
Text Cluster 2
78
information world resources oc buttons
Text Cluster 3
50
o alumni materials plan savings articles
Text Cluster 4
208
se check news search use netscape html
Text Cluster 5
66
d courses ripe rgroups classical tape ups
Image Cluster 1
0
Image Cluster 2
0
Image Cluster 3
0
Image Cluster 4
0
Image Cluster 5
0
Text Cluster
Complexity Cluster
Histogram Cluster
<<< Previous
Restart Session
Text Expand
Complexity Expand
Histogram Expand
Next >>>
List URLs

FIG. 12

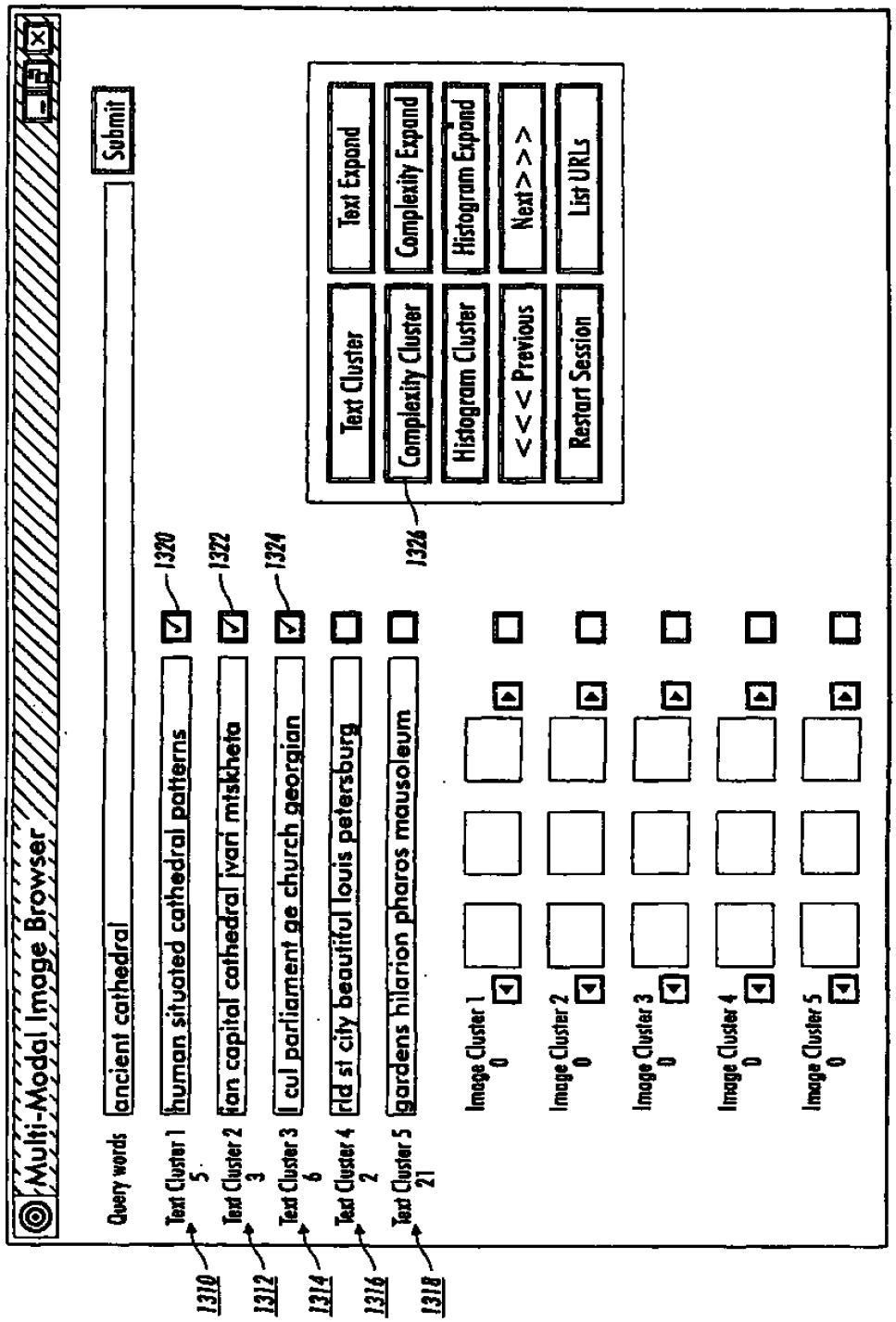

Multi-Modal Image Browser
Query words
ancient cathedral
Submit
Text Cluster 1
5
human situated cathedral patterns
Text Cluster 2
3
ian capital cathedral jvari mtskheta
Text Cluster 3
6
cul parliament ge church georgian
Text Cluster 4
2
rld st city beautiful louis petersburg
Text Cluster 5
21
gardens hilarion pharos mausoleum
Image Cluster 1
0
Image Cluster 2
0
Image Cluster 3
0
Image Cluster 4
0
Image Cluster 5
0
Text Cluster
Text Expand
Complexity Cluster
Complexity Expand
Histogram Cluster
Histogram Expand
<<< Previous
Next>>>
Restart Session
List URLs
1310
1312
1314
1316
1318
1320
1322
1324
1326

FIG. 13

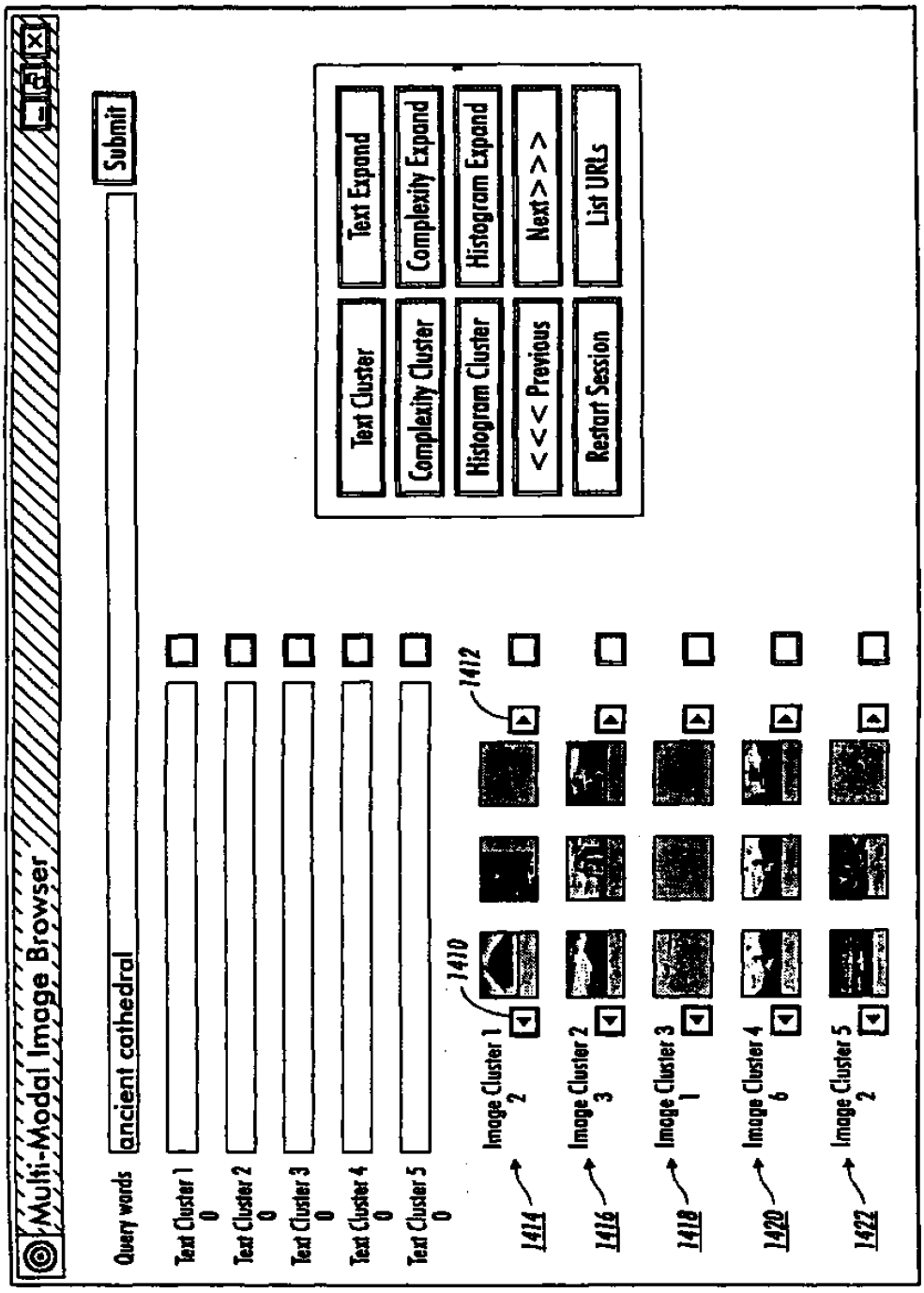

Multi-Modal Image Browser
Query words
ancient cathedral
Submit
Text Cluster 1
0
Text Cluster 2
0
Text Cluster 3
0
Text Cluster 4
0
Text Cluster 5
0
Text Cluster
Text Expand
Complexity Cluster
Complexity Expand
Histogram Cluster
Histogram Expand
<<< Previous
Next>>>
Restart Session
List URLs
1410
1412
Image Cluster 1
2
Image Cluster 2
3
Image Cluster 3
1
Image Cluster 4
6
Image Cluster 5
2
1414
1416
1418
1420
1422

FIG. 14

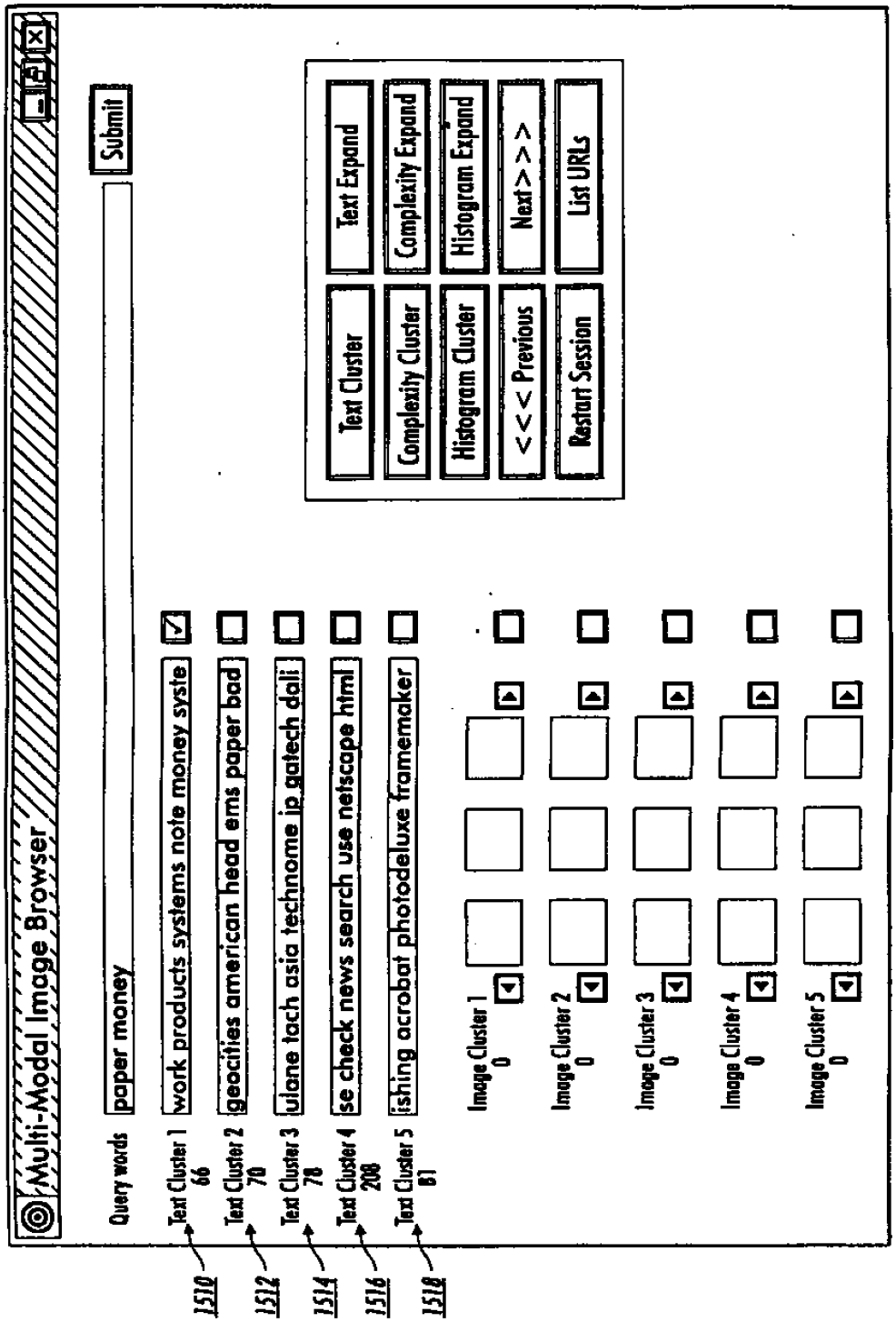

Multi-Modal Image Browser
Query words
paper money
Submit
Text Cluster 1
66
work products systems note money syste
Text Cluster 2
70
geocities american head ems paper bad
Text Cluster 3
78
uiome tach asia technome ip gatech dali
Text Cluster 4
208
se check news search use netscape html
Text Cluster 5
61
ishing acrobat photodeluxe framemaker
Image Cluster 1
0
Image Cluster 2
0
Image Cluster 3
0
Image Cluster 4
0
Image Cluster 5
0
Text Cluster
Text Expand
Complexity Cluster
Complexity Expand
Histogram Cluster
Histogram Expand
<<< Previous
Next >>>
Restart Session
List URLs
1510
1512
1514
1516
1518

FIG. 15'

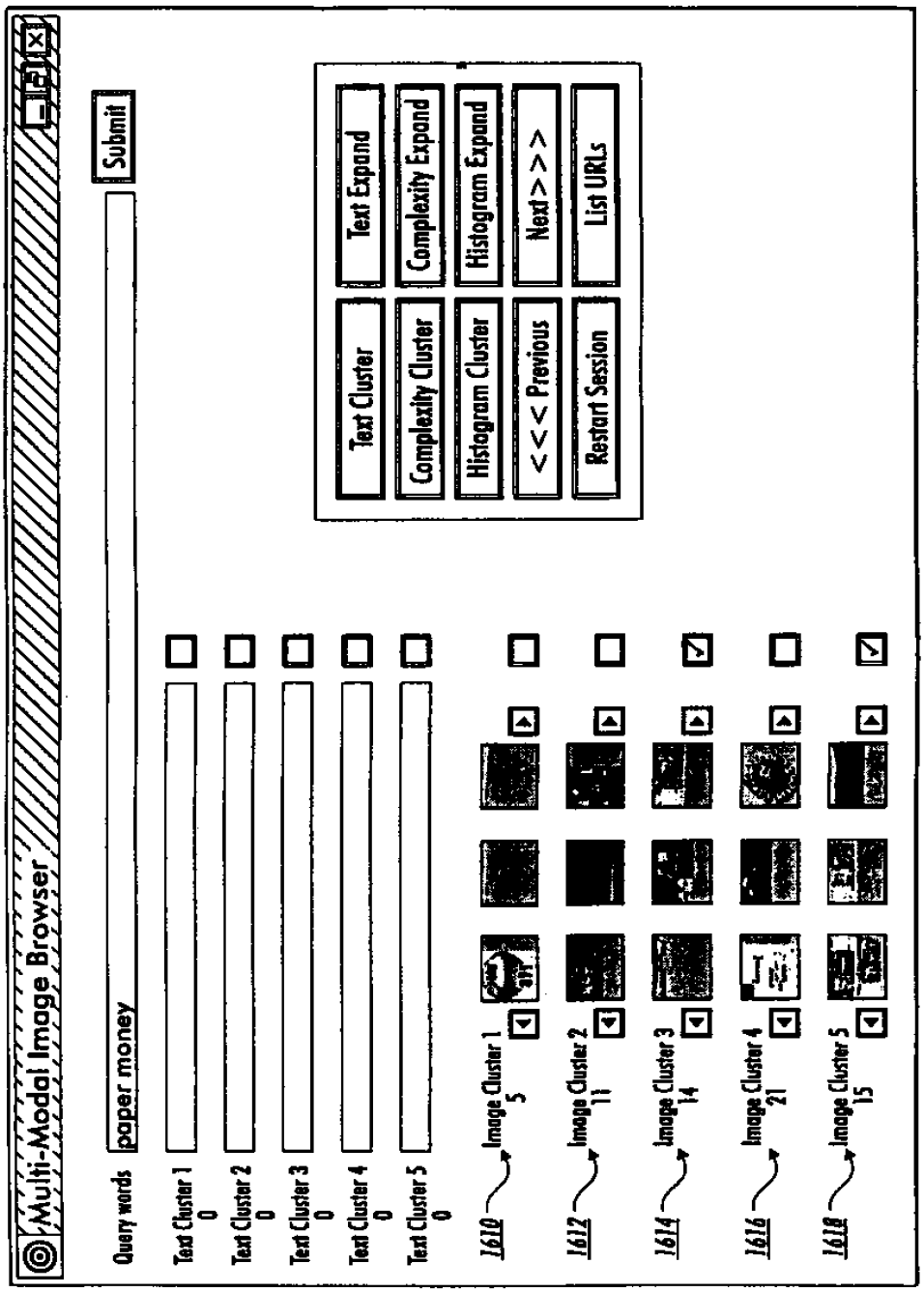

Multi-Modal Image Browser
Query words
paper money
Submit
Text Cluster 1
0
Text Cluster 2
0
Text Cluster 3
0
Text Cluster 4
0
Text Cluster 5
0
Text Cluster
Text Expand
Complexity Cluster
Complexity Expand
Histogram Cluster
Histogram Expand
<<<< Previous
Next >>>
Restart Session
List URLs
1610
Image Cluster 1
5
1612
Image Cluster 2
11
1614
Image Cluster 3
14
1616
Image Cluster 4
21
1618
Image Cluster 5
15

FIG. 16

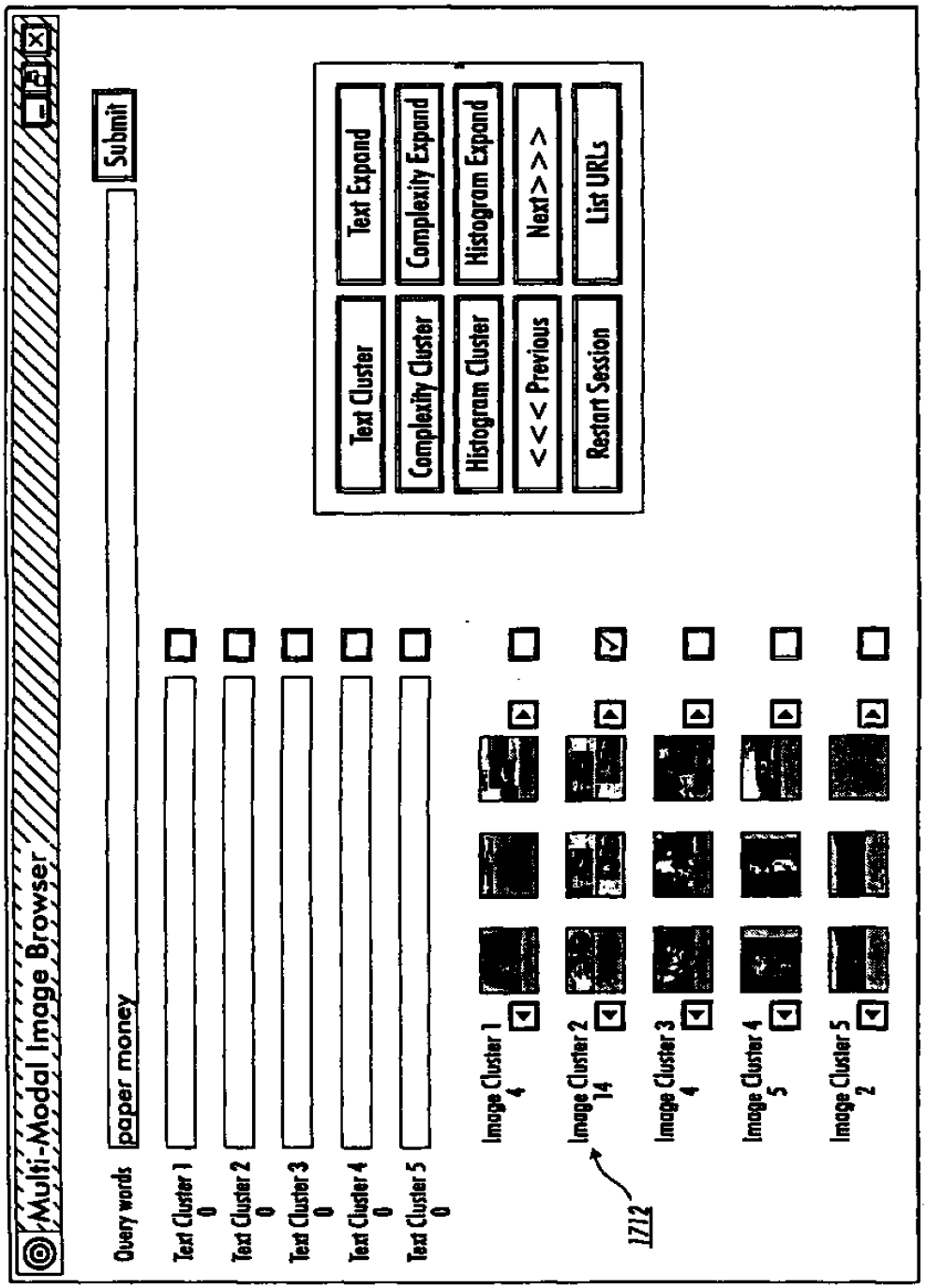

Multi-Modal Image Browser
Query words
paper money
Submit
Text Cluster 1
0
Text Cluster 2
0
Text Cluster 3
0
Text Cluster 4
0
Text Cluster 5
0
Image Cluster 1
4
Image Cluster 2
14
Image Cluster 3
4
Image Cluster 4
5
Image Cluster 5
2
1712
Text Cluster
Text Expand
Complexity Cluster
Complexity Expand
Histogram Cluster
Histogram Expand
<< < Previous
Next > > >
Restart Session
List URLs

FIG. 17

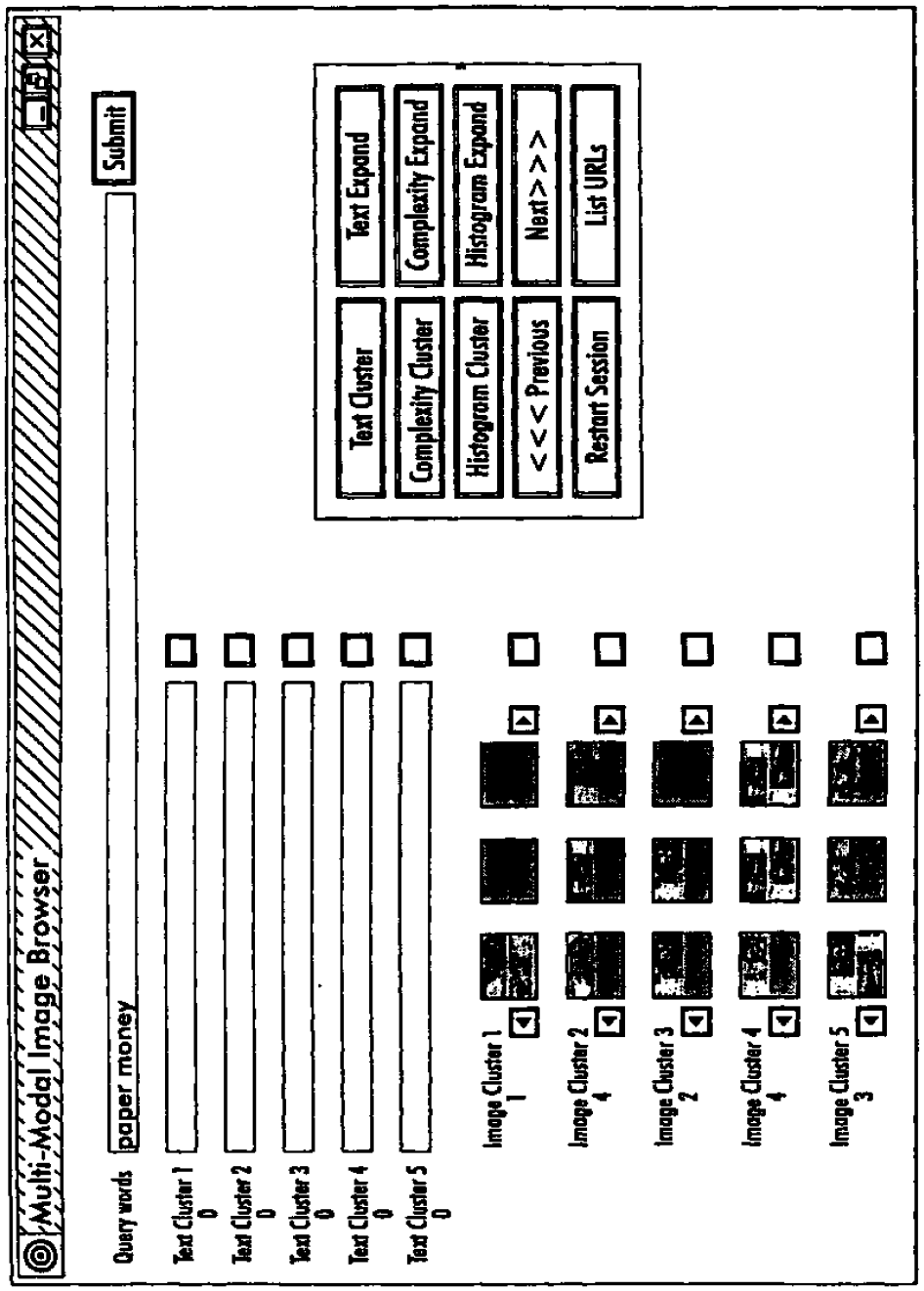

Multi-Modal Image Browser
Query words
paper money
Submit
Text Cluster 1
0
Text Cluster 2
0
Text Cluster 3
0
Text Cluster 4
0
Text Cluster 5
0
Image Cluster 1
1
Image Cluster 2
4
Image Cluster 3
2
Image Cluster 4
4
Image Cluster 5
3
Text Cluster
Text Expand
Complexity Cluster
Complexity Expand
Histogram Cluster
Histogram Expand
<<< Previous
Next >>>
Restart Session
List URLs

FIG. 18

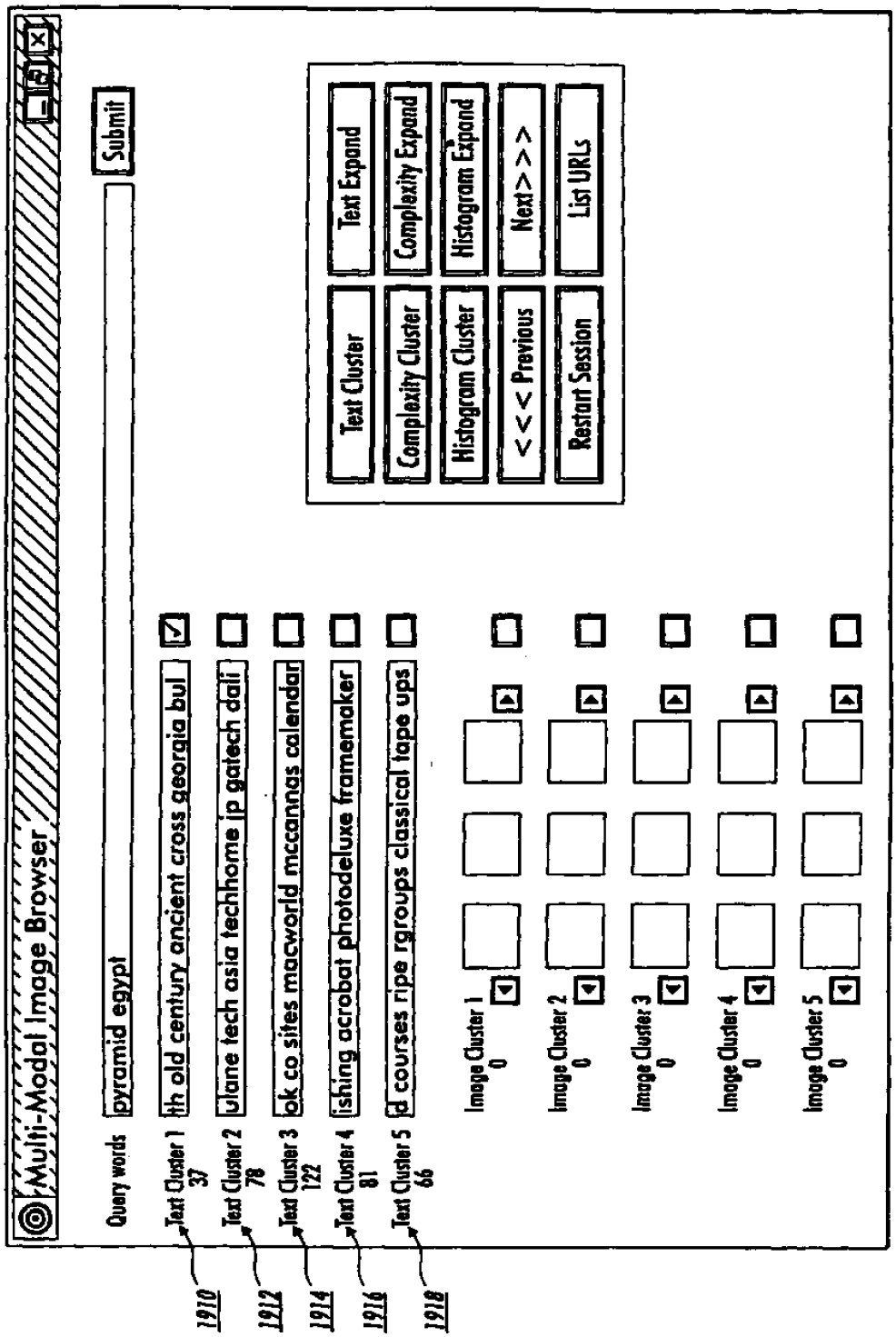

Multi-Modal Image Browser
Query words
pyramid egypt
Submit
Text Cluster 1
37
th old century ancient cross georgia bul
Text Cluster 2
78
ulane tech asia techhome ip gatech dali
Text Cluster 3
122
ok co sites macworld mccannas calendar
Text Cluster 4
81
ishing acrobat photodeluxe framemaker
Text Cluster 5
66
d courses ripe rgroups classical tape ups
Image Cluster 1
0
Image Cluster 2
0
Image Cluster 3
0
Image Cluster 4
0
Image Cluster 5
0
Text Cluster
Text Expand
Complexity Cluster
Complexity Expand
Histogram Cluster
Histogram Expand
<<< Previous
Next>>>
Restart Session
List URLs
1910
1912
1914
1916
1918

FIG. 19

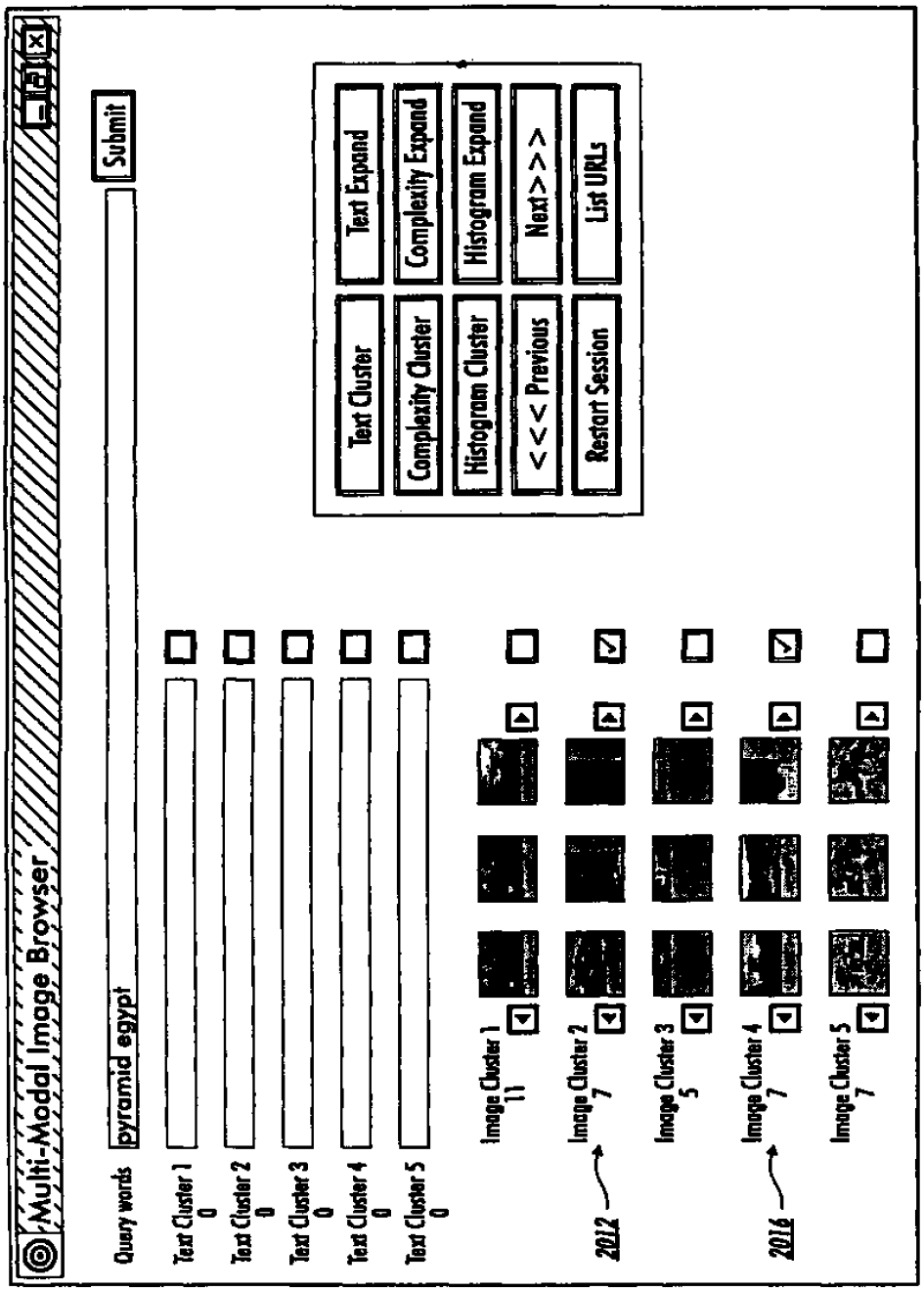

Multi-Modal Image Browser
Query words
pyramid egypt
Submit
Text Cluster 1
0
Text Cluster 2
0
Text Cluster 3
0
Text Cluster 4
0
Text Cluster 5
0
Image Cluster 1
11
Image Cluster 2
7
Image Cluster 3
5
Image Cluster 4
7
Image Cluster 5
7
2012
2016
Text Cluster
Text Expand
Complexity Cluster
Complexity Expand
Histogram Cluster
Histogram Expand
<< Previous
Next >>
Restart Session
List URLs

FIG. 20

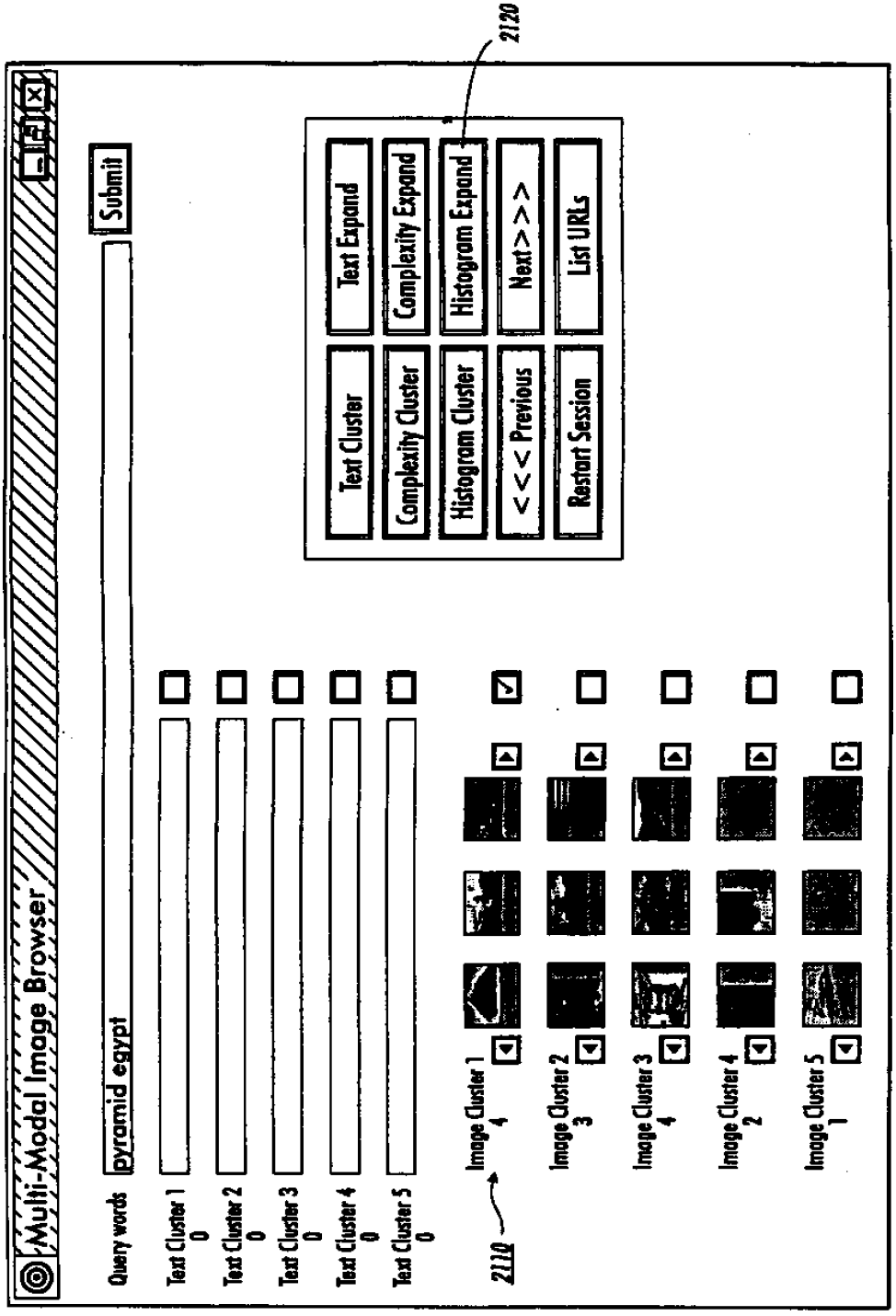

Multi-Modal Image Browser
Query words
pyramid egypt
Submit
Text Cluster 1
0
Text Cluster 2
0
Text Cluster 3
0
Text Cluster 4
0
Text Cluster 5
0
2110
Image Cluster 1
4
Image Cluster 2
3
Image Cluster 3
4
Image Cluster 4
2
Image Cluster 5
1
2120
Text Cluster
Text Expand
Complexity Cluster
Complexity Expand
Histogram Cluster
Histogram Expand
<<< Previous
Next >>>
Restart Session
List URLs

FIG. 21

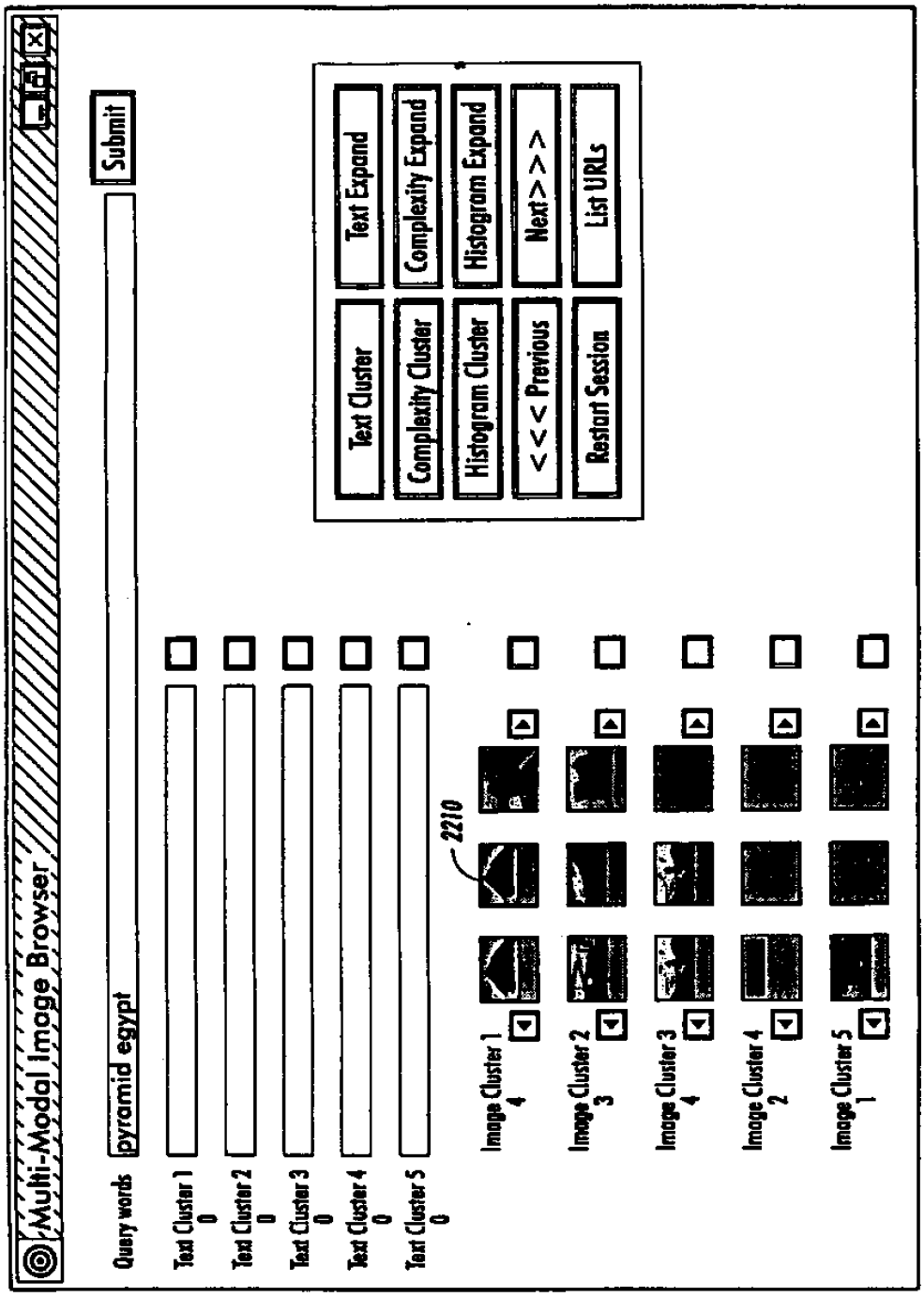

Multi-Modal Image Browser
Query words
pyramid egypt
Submit
Text Cluster 1
0
Text Cluster 2
0
Text Cluster 3
0
Text Cluster 4
0
Text Cluster 5
0
2210
Image Cluster 1
4
Image Cluster 2
3
Image Cluster 3
4
Image Cluster 4
2
Image Cluster 5
1
Text Cluster
Text Expand
Complexity Cluster
Complexity Expand
Histogram Cluster
Histogram Expand
<<< Previous
Next>>>
Restart Session
List URLs

FIG. 22

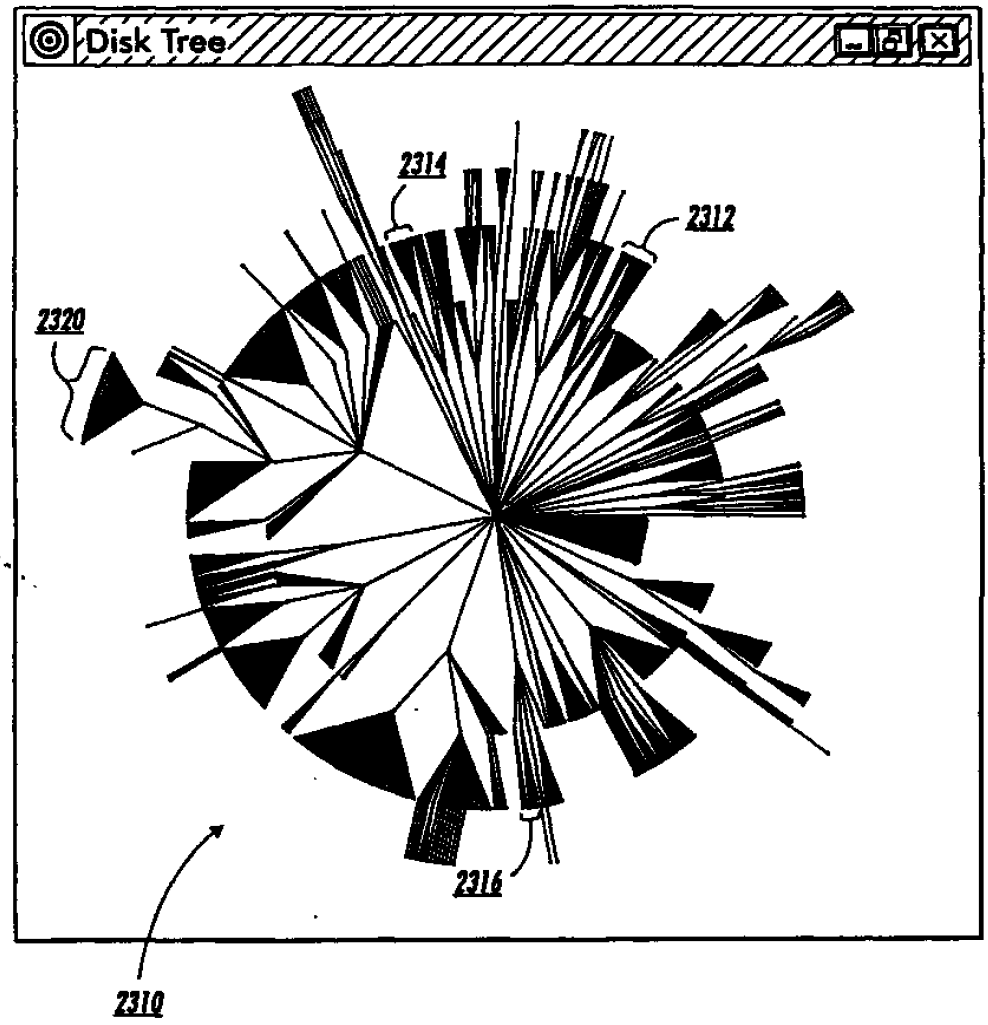


FIG. 23

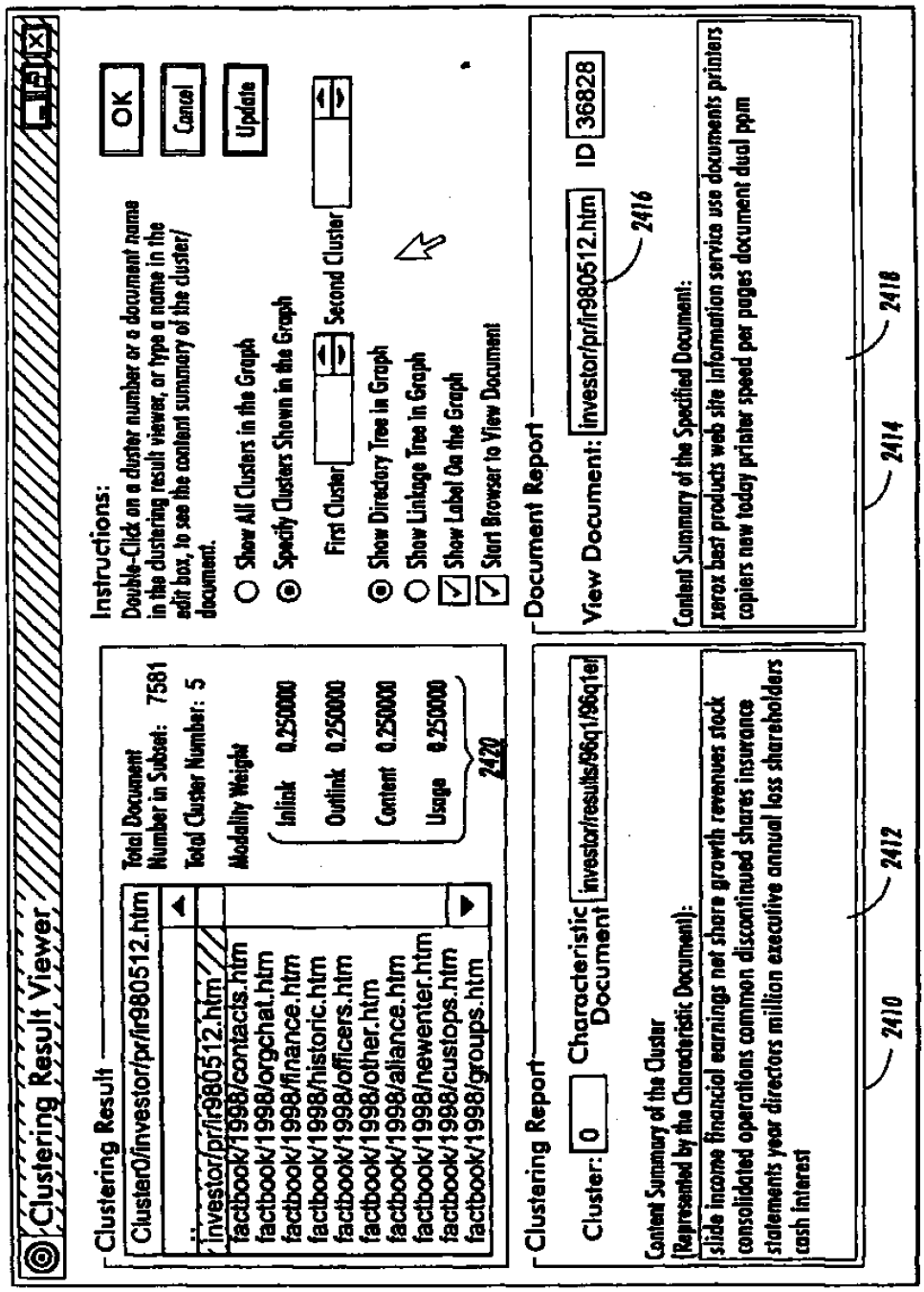

Clustering Result Viewer
Clustering Result
Cluster0/investor/pr/ir980512.htm
..
investor/pr/ir980512.htm
factbook/1998/contacts.htm
factbook/1998/orgchat.htm
factbook/1998/finance.htm
factbook/1998/historic.htm
factbook/1998/officers.htm
factbook/1998/other.htm
factbook/1998/alliance.htm
factbook/1998/newenter.htm
factbook/1998/custops.htm
factbook/1998/groups.htm
Total Document Number in Subset: 7581
Total Cluster Number: 5
Modality Weight
Inlink 0.250000
Outlink 0.250000
Content 0.250000
Usage 0.250000
2420
Instructions:
Double-Click on a cluster number or a document name in the clustering result viewer, or type a name in the edit box, to see the content summary of the cluster/ document.
OK
Cancel
Update
Show All Clusters in the Graph
Specify Clusters Shown in the Graph
First Cluster
Second Cluster
Show Directory Tree in Graph
Show Linkage Tree in Graph
Show Label On the Graph
Start Browser to View Document
Clustering Report
Cluster: 0
Characteristic Document
investor/results/96q1/96q1ei
Content Summary of the Cluster (Represented by the Characteristic Document):
slide income financial earnings net share growth revenues stock consolidated operations common discontinued shares insurance statements year directors million executive annual loss shareholders cash interest
2410
2412
Document Report
View Document:
investor/pr/ir980512.htm
2416
ID 36828
Content Summary of the Specified Document:
xerox best products web site information service use documents printers copiers new today printer speed per pages document dual ppm
2414
2418

FIG. 24

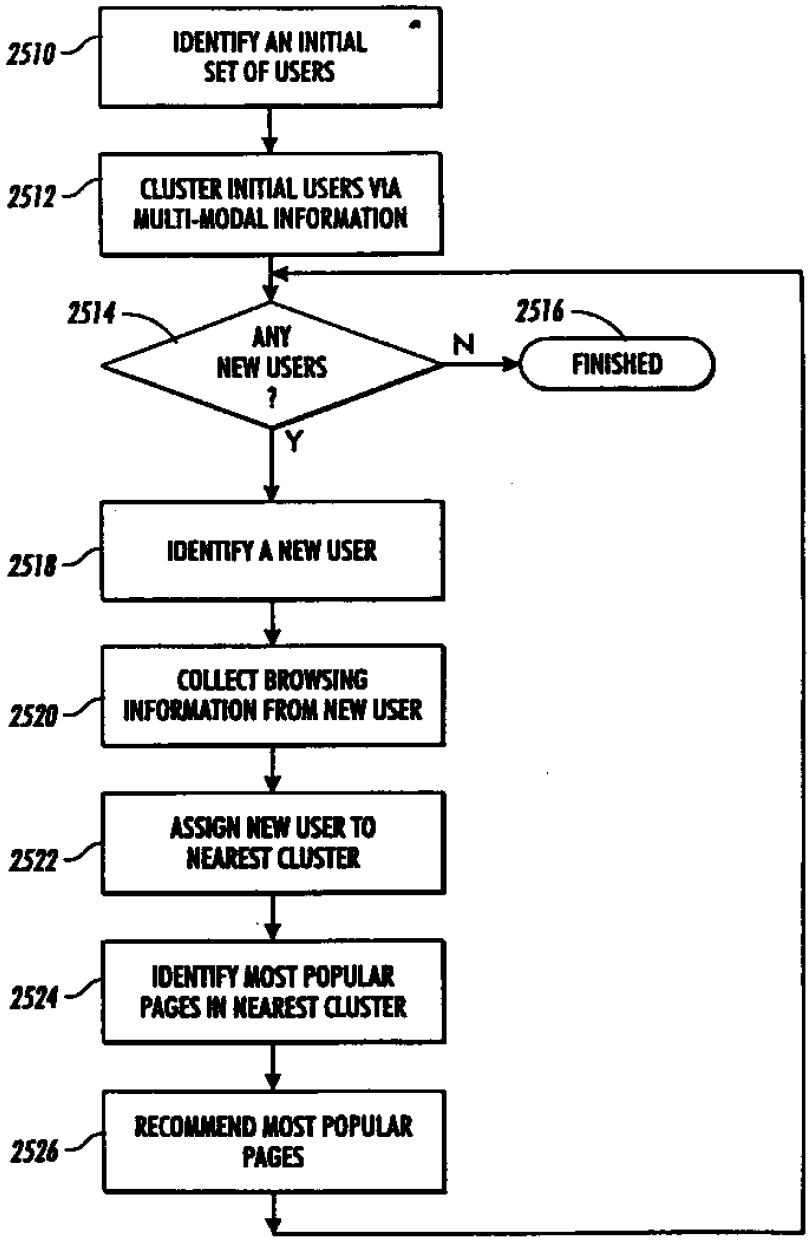
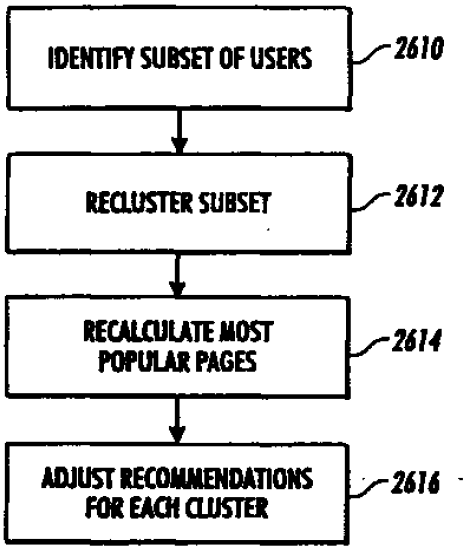

2510
IDENTIFY AN INITIAL SET OF USERS
2512
CLUSTER INITIAL USERS VIA MULTI-MODAL INFORMATION
2514
ANY NEW USERS ?
N
2516
FINISHED
Y
2518
IDENTIFY A NEW USER
2520
COLLECT BROWSING INFORMATION FROM NEW USER
2522
ASSIGN NEW USER TO NEAREST CLUSTER
2524
IDENTIFY MOST POPULAR PAGES IN NEAREST CLUSTER
2526
RECOMMEND MOST POPULAR PAGES

FIG. 25

FIG. 26


IDENTIFY SUBSET OF USERS
2610
RECLUSTER SUBSET
2612
RECALCULATE MOST POPULAR PAGES
2614
ADJUST RECOMMENDATIONS FOR EACH CLUSTER
2616

Electronic Acknowledgement Receipt

EFS ID:	1679453
Application Number:	11099861
International Application Number:	
Confirmation Number:	2082
Title of Invention:	Descriptive-profile mercantile method
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
Receipt Date:	12-APR-2007
Filing Date:	06-APR-2005
Time Stamp:	20:53:27
Application Type:	Utility

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Filed	Supp_IDS_07-04-12.pdf	56110	no	1
Warnings:					

Information:					
This is not an USPTO supplied IDS fillable form					
2	Information Disclosure Statement (IDS) Filed	PTO-SB08A.pdf	382458	no	3
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	NPL Documents	Clickz_10-6-98.pdf	197252	no	2
Warnings:					
Information:					
4	NPL Documents	FindArticles_10-12-98.pdf	184176	no	2
Warnings:					
Information:					
5	NPL Documents	S1A_247RealMedia.pdf	359123	no	21
Warnings:					
Information:					
6	NPL Documents	Engage_S1A_pp36-50.pdf	151937	no	16
Warnings:					
Information:					
7	NPL Documents	Brody.pdf	870412	no	7
Warnings:					
Information:					
8	NPL Documents	e-MarketingReport.pdf	2446827	no	10
Warnings:					
Information:					
9	NPL Documents	WO9859481.pdf	1950515	no	44
Warnings:					
Information:					

10	NPL Documents	WO08583A1.pdf	1991232	no	49
Warnings:					
Information:					
11	NPL Documents	EP1024437A2.pdf	1406941	no	52
Warnings:					
Information:					
		Total Files Size (in bytes):	9996983		

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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
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

Applicant	:	Roy Shkedi	Art Unit	:	3629
Serial No.	:	11/099,861	Examiner	:	Ouellette, J.P.
Filed	:	04/06/2005			
Title	:	Descriptive-Profile Mercantile Method			

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

SUPPLEMENTAL PRELIMINARY AMENDMENT

Dear Sir:

Assignee submits this supplemental Preliminary Amendment along with fees for 14 additional claims in excess of the 39 paid-for claims. No additional fee is due for the 6 independent claims because the fee for 12 independent claims was previously paid.

IN THE CLAIMS

1-39. (Canceled)

40. (Previously Presented) A method of updating profiles of Internet-using entities, the method comprising:

(a) electronically receiving, from an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network, which partial profile contains at least one profile attribute related to the entity; and

(b) automatically electronically determining whether the received partial profile contains any new profile attributes about the entity, and if so, in accordance with a predetermined arrangement, creating an electronic credit identifying a payment to the unaffiliated third party as a result of using any of the new profile attributes in targeting advertisements to the entity's computer over the global computer network.

41. (Previously Presented) The method of claim 40 wherein part (a) comprises receiving the partial profile along with an identifier of the entity.

42. (Previously Presented) The method of claim 41 wherein receiving the partial profile along with an identifier of the entity comprises reading a cookie previously stored in a memory device associated with the entity's computer.

43. (Previously Presented) The method of claim 41 wherein part (a) comprises receiving from the entity's computer a redirected request to display at least a portion of a web page.

44. (Previously Presented) The method of claim 43 wherein part (a) further comprises receiving the partial profile information while receiving from the entity's computer the redirected request to display at least a portion of a web page.

45. (Previously Presented) The method of claim 40 further comprising electronically determining whether the profile attributes received in part (a) appear to relate to an entity associated with previously collected profile attributes and, if so, storing the profile attributes received in part (a) with an identifier associated with the previously collected profile attributes.

46. (Previously Presented) The method of claim 45 further comprising creating a new identifier if, as a result of said electronically determining step, the profile attributes received in part (a) do not appear to relate to any entity associated with previously collected profile attributes.

47. (Previously Presented) The method of claim 40 wherein the new profile attributes about the entity in part (b) comprises information about actions the entity performed online over a pre-defined recent time period.

48. (Previously Presented) The method of claim 40 wherein the new profile attributes about the entity in part (b) comprises one or more demographic attributes.

49. (Previously Presented) The method of claim 40 wherein the new profile attributes about the entity in part (b) comprises one or more behavioral attributes.

50. (Previously Presented) The method of claim 40 wherein the new profile attributes includes previously monitored search requests by the entity.

51. (Previously Presented) The method of claim 40 wherein part (b) includes determining whether one of the received profile attributes is new only if the attribute is among a predetermined set of desired profile attributes.

52. (Previously Presented) The method of claim 40 wherein part (b) is done just after and in response to receipt of the partial profile in part (a).

53. (Previously Presented) The method of claim 40 wherein part (b) comprises recording a specific payment amount for the new profile attribute, provided that the new profile attribute is used in targeting advertisements.

54. (Previously Presented) The method of claim 40 wherein part (b) comprises recording a royalty payment on account of use of the new profile attribute in targeting advertisements.

55. (Previously Presented) The method of claim 54 wherein the royalty payment is determined using a formula that factors in the newness of the attribute.

56. (Previously Presented) The method of claim 54 wherein the payment is triggered by click-through activity by the entity to a site advertised by the targeted advertisement.

57. (Previously Presented) The method of claim 56 wherein part (a) comprises receiving the partial profile information and reading a cookie previously stored in a memory device associated with the entity's computer, while receiving from the entity's computer a redirected request to display at least a portion of a web page.

58. (Currently Amended) A method of profiting from ~~collecting~~ profiles of Internet-using entities, the method comprising:

(a) electronically ~~transmitting~~ providing, to an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network,

(b) which partial profile contains at least one profile attribute related to the entity,

(c) in accordance with a predetermined agreement involving an electronic credit identifying a payment from the third party as a result of:

(i) the third party automatically electronically determining that the ~~transmitted~~ provided partial profile contains any new profile attributes about the entity, and

(ii) at least one of the new profile attributes being used in targeting advertisements to the entity's computer over the global computer network.

59. (Currently Amended) The method of claim 58 wherein part (a) comprises redirecting a request from the entity's computer to display at least a portion of a web page maintained by the ~~transmitting~~ profile-providing party.

60. (Currently Amended) The method of claim 59 wherein part (a) comprises ~~transmitting~~ providing the partial profile along with an identifier of the entity.

61. (Currently Amended) The method of claim 58 wherein the new profile attributes about the entity in part (c)(i) comprises information about actions the entity performed at a site maintained by the ~~transmitting~~ profile-providing party.

62. (Previously Presented) The method of claim 61 wherein the new profile attributes includes previously monitored search requests by the entity.

63. (Previously Presented) The method of claim 58 wherein the electronic credit identifies a royalty payment on account of use of the new profile attribute in targeting advertisements.

64. (Previously Presented) The method of claim 63 wherein the electronic credit is triggered by click-through activity by the entity to a site advertised by the targeted advertisement.

65. (Previously Presented) A data storage medium comprising indicia of instructions for a processor to perform a method of updating profiles of Internet-using entities, the method comprising:

(a) electronically receiving, from an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network,

which partial profile contains at least one profile attribute related to the entity; and

(b) automatically electronically determining whether the received partial profile contains any new profile attributes about the entity, and if so, in accordance with a predetermined arrangement, creating an electronic credit identifying a payment to the unaffiliated third party as a result of using any of the new profile attributes in targeting advertisements to the entity's computer over the global computer network.

66. (New) A method of updating profiles of Internet-using entities, the method comprising:

(a) electronically receiving, from an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network, which partial profile contains at least one profile attribute related to the entity; and

(b) in accordance with a predetermined arrangement, automatically creating an electronic credit identifying a payment to the unaffiliated third party as a result of using at least one of the profile attributes in the partial profile in targeting advertisements to the entity's computer over the global computer network, wherein the credit is based on at least the parameter of newness of the at least one profile attribute.

67. (New) The method of claim 66 wherein the at least one profile attribute in part (b) comprises one or more behavioral attributes.

68. (New) The method of claim 67 wherein the behavioral attributes comprise at least one previously monitored search request by the entity.

69. (New) The method of claim 67 wherein the behavioral attributes comprise at least one indication of goods purchased by entity.

70. (New) The method of claim 66 further comprising performing part (a) with respect to a multitude of unaffiliated third parties, each of which provide a plurality of partial profiles, and storing the resulting partial profiles in a common databank.

71. (New) The method of claim 70 further comprising electronically determining whether the profile attributes received in part (a) appear to relate to an entity associated with previously collected profile attributes and, if so, storing the profile attributes received in part (a) with an identifier associated with the previously collected profile attributes.

72. (New) The method of claim 66 wherein part (a) comprises receiving the partial profile along with an identifier of the entity by reading a cookie previously stored in a memory device associated with the entity's computer.

73. (New) The method of claim 66 wherein part (a) comprises receiving the partial profile while receiving from the entity's computer a redirected request to display at least a portion of a web page.

74. (New) The method of claim 66 wherein the credit is determined using a formula that factors into the credit at least the newness of the attribute.

75. (New) The method of claim 74 wherein the formula also factors into the credit information about the geographical extent wherein the attribute is of presumable value.

76. (New) The method of claim 74 wherein the formula also factors into the credit an estimate of veracity of the attribute.

77. (New) The method of claim 66 wherein the credit is in an amount specified by the unaffiliated third party.

78. (New) The method of claim 66 wherein the credit is created only if the profile attribute has not exceeded a predetermined age.

79. (New) The method of claim 66 further comprising electronically receiving from the unaffiliated third party a restriction identifying at least one entity on whose behalf the profile attributes may be used in targeting advertisements, and wherein part (b) further comprises allowing use of the profile attributes only on behalf of entities identified in the restriction.

80. (New) The method of claim 66 further comprising electronically receiving from the unaffiliated third party a restriction identifying a number of times the profile attributes may be used in targeting advertisements, and wherein part (b) further comprises allowing use of the profile attributes no more than the number of usages identified in the restriction.

81. (New) A method of profiting from profiles of Internet-using entities, the method comprising:

(a) electronically providing, to an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network,

(b) which partial profile contains at least one profile attribute related to the entity,

(c) in accordance with a predetermined agreement involving an electronic credit identifying a payment from the third party, which credit is

based on at least the parameter of newness of at least one of the profile attributes and is triggered by that profile attribute being used in targeting advertisements to the entity's computer over the global computer network.

82. (New) The method of claim 81 wherein the at least one of the profile attributes in part (c) comprises one or more behavioral attributes.

83. (New) The method of claim 82 wherein the behavioral attributes comprise at least one previously monitored search request by the entity.

84. (New) The method of claim 82 wherein the behavioral attributes comprise information about actions the entity performed at a site maintained by the profile-providing party.

85. (New) The method of claim 84 wherein part (a) comprises providing the partial profile along with an identifier of the entity.

86. (New) The method of claim 84 wherein the electronic credit is triggered by click-through activity by the entity to a site advertised by the targeted advertisement.

87. (New) The method of claim 84 wherein the payment identified by the credit is determined using a formula that factors into the credit at least the newness of the attribute.

88. (New) The method of claim 84 wherein the payment identified by the credit is triggered only if the profile attribute has not exceeded a predetermined age.

89. (New) The method of claim 81 further comprising electronically providing, to the unaffiliated third party, a price for usage of the at least one of the profile attributes specified in part (c).

90. (New) The method of claim 81 further comprising electronically providing, to the unaffiliated third party, a restriction identifying at least one entity on whose behalf the at least one of the profile attributes specified in part (c) may be used in targeting advertisements, and wherein the predetermined agreement includes terms requiring enforcement of the restriction so that profile attribute is used only on behalf of the at least one entity identified in the restriction.

91. (New) The method of claim 81 further comprising electronically providing, to the unaffiliated third party, a restriction identifying a number of times the at least one of the profile attributes specified in part (c) may be used in targeting advertisements, and wherein the predetermined agreement includes terms requiring enforcement of the restriction so that profile attribute is used no more than the number of usages identified in the restriction.

92. (New) A data storage medium comprising indicia of instructions for a processor to perform a method of updating profiles of Internet-using entities, the method comprising:

(a) electronically receiving, from an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network, which partial profile contains at least one profile attribute related to the entity; and

(b) in accordance with a predetermined arrangement, automatically creating an electronic credit identifying a payment to the unaffiliated third party as a result of using at least one of the profile attributes in the partial profile in targeting advertisements to the entity's computer over the global computer network, wherein the credit is based on at least the parameter of newness of the profile attribute.

Remarks

Further to its March 7, 2007, Preliminary Amendment, assignee presents a series of additional related claims and requests prompt examination, search, consideration, and allowance.

Broadening amendments are made to claims 58-61 to clarify that the provision of partial profiles need not be "transmitted," and need not be sent directly, in line with the specification, which describes "providing" profile information and identifies one possible method for doing same as being the redirection of a visitor's computer that is visiting a profile-provider's website from the website to a databank. Claim 58 is further amended to clarify that some or all of the new profile attributes can be used in targeting an ad, thus triggering payment.

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

Respectfully submitted,

ALMONDNET INC.
by its attorney

Dated: August 7, 2007

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

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Electronic Patent Application Fee Transmittal

Application Number:	11099861
Filing Date:	06-Apr-2005
Title of Invention:	Descriptive-profile mercantile method
First Named Inventor/Applicant Name:	Roy Shkedi
Filer:	Louis J. Hoffman/Donald Hertz
Attorney Docket Number:	14
Filed as Small Entity	

Utility Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	2202	14	25	350
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**350**

Electronic Acknowledgement Receipt

EFS ID:	2058666
Application Number:	11099861
International Application Number:	
Confirmation Number:	2082
Title of Invention:	Descriptive-profile mercantile method
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
Receipt Date:	07-AUG-2007
Filing Date:	06-APR-2005
Time Stamp:	19:06:48
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	Supplemental Response or Supplemental Amendment	07-08-07-Almondnet-DescProfile-SupplPrelimAmend.pdf	41208 03d76d4567a7e7407515840 0e870900 4998f9512	no	9
Warnings:					

Information:					
2	Fee Worksheet (PTO-06)	fee-info.pdf	8127 72bec2e5c375ce9395b809eb857326ba4899efac	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	49335	

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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
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.

Electronic Patent Application Fee Transmittal

Application Number:	11099861
Filing Date:	06-Apr-2005
Title of Invention:	Descriptive-profile mercantile method
First Named Inventor/Applicant Name:	Roy Shkedi
Filer:	Louis J. Hoffman/Donald Hertz
Attorney Docket Number:	14
Filed as Small Entity	

Utility Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	2202	14	25	350
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**350**

Electronic Acknowledgement Receipt

EFS ID:	2058931
Application Number:	11099861
International Application Number:	
Confirmation Number:	2082
Title of Invention:	Descriptive-profile mercantile method
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
Receipt Date:	07-AUG-2007
Filing Date:	06-APR-2005
Time Stamp:	20:11:55
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment was successfully received in RAM	$350
RAM confirmation Number	3219
Deposit Account	

File Listing:

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

1	Fee Worksheet (PTO-06)	fee-info.pdf	8127 ba3cf488124b4af2ed21a63c5511e4c5d71f6254	no	2

Warnings:	
Information:	
Total Files Size (in bytes):	8127

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PTO/SB/06 (12-04)
Approved for use through 7/31/2006. OMB 0651-0032
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 displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875 Effective December 8, 2004

Application or Docket Number

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	150.00		N/A	300.00
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	$250		N/A	$500
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	$100		N/A	$200
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 = *		X$ 25 =		OR	X$50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 = *		X100 =			X200 =	
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 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))			+180=			+360=	
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT A

	(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 ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 53	Minus	** 39	= 14	X$ 25 =	350.00	OR	X$50 =	
Independent (37 CFR 1.16(h))	* 6	Minus	*** 12	= 0	X100 =		OR	X200 =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					+180=		OR	+360=	
					TOTAL ADD'L FEE	350.00	OR	TOTAL ADD'L FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X$ 25 =		OR	X$50 =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X100 =		OR	X200 =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					+180=		OR	+360=	
					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 number found in the appropriate box in column 1.

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.

MULTIPLE DEPE[illegible] CLAIM FEE CALCULATION SHEET

(FOR USE WITH FO[illegible] PTO-875)

SERIAL NO. 11/099,861

FILING DATE

APPLICANT(S)

81717

CLAIMS

	AS FILED		AFTER 1st AMENDMENT		AFTER 2nd AMENDMENT	
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TOTAL DEP		⬅		⬅		⬅
TOTAL CLAIMS						

	AS FILED		AFTER 1st AMENDMENT		AFTER 2nd AMENDMENT	
	IND.	DEP.	IND.	DEP.	IND.	DEP.
51		1				
52		1				
53		1				
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TOTAL IND.	6	⬇		⬇		⬇
TOTAL DEP	47	⬅		⬅		⬅
TOTAL CLAIMS	53					

U.S. DEPARTMENT of COMMERCE

PTO/SB/08A (04-07)
Approved for use through 09/30/2007. 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	11/099,861
Filing Date	04/06/2005
First Named Inventor	Shkedi, Roy
Art Unit	3629
Examiner Name	Ouellette, Jonathan P.
Attorney Docket Number	14-DP

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- 6594691	07-15-2003	McCollum, 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		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.

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Electronic Acknowledgement Receipt

EFS ID:	2088653
Application Number:	11099861
International Application Number:	
Confirmation Number:	2082
Title of Invention:	Descriptive-profile mercantile method
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-DP
Receipt Date:	15-AUG-2007
Filing Date:	06-APR-2005
Time Stamp:	20:24:56
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) Filed	07-08-15-IDS-DP.pdf	54250 74a44d603d2f2d5b12df611e796f6e1f0622428a	no	1
Warnings:					

Information:	
This is not an USPTO supplied IDS fillable form	
Total Files Size (in bytes):	54250

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.

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United States Patent and Trademark Office
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/099,861	04/06/2005	Roy Shkedi	14-DP	2082

26362 7590 09/10/2007

LOUIS J. HOFFMAN, P.C.
11811 North Tatum Boulevard, Suite 2100
Phoenix, AZ 85028

EXAMINER	
OUELLETTE, JONATHAN P	
ART UNIT	**PAPER NUMBER**
3629	
MAIL DATE	**DELIVERY MODE**
09/10/2007	PAPER

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.

Office Action Summary	Application No.	Applicant(s)	
	11/099,861	SHKEDI, ROY	
	Examiner	Art Unit	
	Jonathan Ouellette	3629	

-- 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 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, 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 *06 April 2005*.

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

3)☐ 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

4)☒ Claim(s) *40-92* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *40-74,77,81-87,89 and 92* is/are rejected.

7)☒ Claim(s) *75,76,78-80,88,90 and 91* is/are objected to.

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

Application Papers

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

10)☐ 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).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

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).

a)☐ All b)☐ Some * c)☐ None of:

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) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20050406,20070412,20070815*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Claims 1-39 have been cancelled, Claims 40-92 have been added; therefor, Claims 40-92 are currently pending in application 11/099,861.

Claim Rejections - 35 USC § 103

4. 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.

5. **Claims 40-74, 77, 81-87, 89, and 92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Acxiom ("There Time Has Come," Direct, v11, n8, p1+, June 1999).**

75, 76, 78-80, 88, 90, and 91

6. As per **independent Claims 40, 58, 65, 66, 81, and 92**, Acxiom discloses a method of updating profiles of Internet-using entities, the method comprising: (a) electronically receiving, from an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network, which partial profile contains at least one profile attribute related to the entity; and (b) automatically electronically determining whether the received partial profile contains any new profile attributes about the entity,

and if so, in accordance with a predetermined arrangement, creating an electronic credit identifying a payment to the unaffiliated third party as a result of using any of the new profile attributes in targeting advertisements to the entity's computer over the global computer network (pg. 2 of 4 e-mail addresses matched to / correlated with current profile and royalty is paid based on match and use of profile).

2. Acxiom fails to disclose wherein the credit is provided electronically
3. However, Official Notice is taken that electronic payment was a well known form of transmitting monies at the time the invention was made, and would have been obvious to one of ordinary skill to utilize a variety of payment techniques to transmit the due royalty payments, to include electronic payment.
4. As per Claims 41, 60, and 85, Acxiom discloses receiving the partial profile along with an identifier of the entity (e-mail address).
5. As per Claims 42-44, 57, 59, 72, and 73, Acxiom fails to expressly disclose receiving the multitude of data described by the instant application being received along with the partial profile.
6. However these differences are only found in the nonfunctional descriptive data and are not functionally involved in the steps recited. Thus, this descriptive data will not distinguish the claimed invention from the prior art in terms of patentability, see In re Gulack, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); In re Lowry, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994).
7. As per Claim 45, Acxiom discloses electronically determining whether the profile attributes received in part (a) appear to relate to an entity associated with previously

collected profile attributes and, if so, storing the profile attributes received in part (a) with an identifier associated with the previously collected profile attributes (correlate and save data).

8. As per Claims 46 and 71, Acxiom discloses creating a new identifier if, as a result of said electronically determined step, the profile attributes received in part (a) do not appear to related to any entity associated with previously collected profile attributes (uncorrelated records become new record)
9. As per Claims 47-50, 61, 62, 67-69, and 82-84, Acxiom fails to expressly disclose the multitude of profile attributes disclosed in the instant application.
10. However these differences are only found in the nonfunctional descriptive data and are not functionally involved in the steps recited. Thus, this descriptive data will not distinguish the claimed invention from the prior art in terms of patentability, see In re Gulack, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); In re Lowry, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994).
11. As per Claim 51, Acxiom discloses determining whether one of the received profile attributes is new only if the attribute is among a predetermined set of desired profile attributes.
12. As per Claim 52, Acxiom discloses wherein part (b) is done just after and in response to receipt of the partial profile in part (a).
13. As per Claim 53, Acxiom discloses wherein part (b) comprises recording a specific payment amount for the new profile attribute, provided that the new profile attribute is used in targeting advertisements.

14. As per Claims 54, 63, and 89, Acxiom discloses wherein part (b) comprises recording a royalty payment on account of use of the new profile attribute in targeting advertisements.

15. As per Claims 55, 74, and 87, Acxiom discloses wherein the royalty payment is determined using a formula that factors in the newness of the attribute.

16. As per Claims 56, 64, and 86, Acxiom discloses wherein payment is triggered by click-though activity by the entity to a site advertised by the targeted advertised by the targeted advertisement (royalty paid when advertisement completed).

17. As per Claim 70, Acxiom discloses performing part (a) with respect to a multitude of unaffiliated third parties, each of which provide a plurality of partial profiles, storing the resulting partial profiles in a common databank.

18. As per Claim 77, Acxiom discloses wherein the credit is in an amount specified by the unaffiliated third party.

Allowable Subject Matter

19. **Claims 75, 76, 78-80, 88, 90, and 91** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

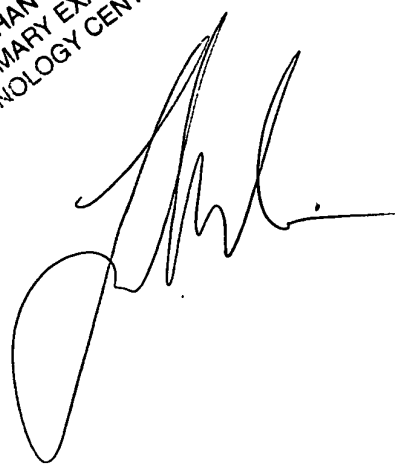
20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Ouellette whose telephone number is (703) 605-

0662. The examiner can normally be reached on Monday through Thursday, 8am - 5:00pm.

21. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on (703) 308-2702. The fax phone numbers for the organization where this application or proceeding is assigned (703) 872-9306 for all official communications.

22. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5484.

JONATHAN OUELLETTE
PRIMARY EXAMINER
TECHNOLOGY CENTER 3600



jo
September 3, 2007

PTO/SB/08A (04-07)
Approved for use through 09/30/2007. OMB 0651-0031
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
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Filing Date	04/06/2005
First Named Inventor	Shkedi, Roy
Art Unit	3629
Examiner Name	Ouellette, Jonathan P.
Attorney Docket Number	14-DP

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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
/JO/		US- 6594691	07-15-2003	McCollum, et al.	
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Examiner Signature	/Jonathan Ouellette/	Date Considered	09/03/2007

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Art Unit	3629
Examiner Name	Ouellette, J.P.
Attorney Docket Number	14-DPCON

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/JO/		US- 4863384	09-05-1989	Slade	
/JO/		US- 5099422	03-24-1992	Foresman, et al.	
/JO/		US- 5446891	08-29-1995	Kaplan, et al.	
/JO/		US- 5710884	01-20-1998	Dedrick	
/JO/		US- 5717923	02-10-1998	Dedrick	
/JO/		US- 5724521	03-03-1998	Dedrick	
/JO/		US- 5752238	05-12-1998	Dedrick	
/JO/		US- 5848396	12-08-1998	Gerace	
/JO/		US- 5956693	09-21-1999	Geerlings	
/JO/		US- 6055573	04-25-2000	Gardenswartz, et al.	
/JO/		US- 6128624	10-03-2000	Papierniak, et al.	
/JO/		US- 6134532	10-17-2000	Lazarus, et al.	
/JO/		US- 6141010	10-31-2000	Hoyle	
/JO/		US- 6151601	11-21-2000	Papierniak, et al.	
/JO/		US- 6216129	04-10-2001	Eldering	
/JO/		US- 6269361	07-31-2001	Davis, et al.	
/JO/		US- 6393471	05-21-2002	Kobata	
/JO/		US- 6415322	07-02-2002	Jaye	
/JO/		US- 6832207	12-14-2004	Shkedi	

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Examiner Signature	/Jonathan Ouellette/	Date Considered	09/03/2007

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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2 of 3

Complete If Known	
Application Number	11/099,861
Filing Date	04/06/2005
First Named Inventor	Shkedi, Roy
Art Unit	3629
Examiner Name	Ouellette, J.P.
Attorney Docket Number	14-DPCON

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
/JO/		US- 6868389	03-15-2005	Wilkins, et al.	
/JO/		US- 6925440	08-02-2005	Shkedi	
/JO/		US- 6973436	12-06-2005	Shkedi	
/JO/		US- 6993590	01-31-2006	Gauthier, et al.	
/JO/		US- 7065500	06-20-2006	Singh, et al.	
/JO/		US- 7072853	07-04-2006	Shkedi	
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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]
/JO/		WO 98/59481	12-30-1998	Buckland		
/JO/		WO 00/08583	02-17-2000	Keen		
/JO/		EP 1 024 437 A2	08-02-2000	Chen		

Examiner Signature	/Jonathan Ouellette/	Date Considered	09/03/2007

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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.**

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PTO/SB/08B (09-06)
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(Use as many sheets as necessary)

Sheet 3 of 3

Complete if Known	
Application Number	11/099,861
Filing Date	04/06/2005
First Named Inventor	Shkedi, Roy
Art Unit	3629
Examiner Name	Ouellette, J.P.
Attorney Docket Number	14-DPCON

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	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, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
/JO/		Brody, R.; "The Conditions and Consequences of Profiling in Commercial and Governmental Settings"; IEEE; 1998.	
/JO/		"IntelliQuest, 24/7 Media Pair to Deliver Tech Household Database"; from webpage http://www.clickz.com; October 6, 1998.	
/JO/		"Internet Access: Intelliquest and 24/7 Media Team Up to Deliver 100 Million Household Database to Internet Marketers"; from website http://findarticles.com; October 12, 1998.	
/JO/		24/7 Real Media Inc. - TFSM; Form S-1A, filed with the SEC April 14, 1999 (portions).	
/JO/		Engage Technologies, Inc.; Form S-1A; filed with the SEC July 19, 1999; pp. 36-50.	
/JO/		"The e-Marketing Report"; Morgan Stanley Dean Witter; May, 2000 (portions).	

Examiner Signature	/Jonathan Ouellette/	Date Considered	09/03/2007

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1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

/Jonathan Ouellette/

Sheet 1 of 1

Complete if Known	
Application Number	CONTINUATION of 09/593,993
Filing Date	
First Named Inventor	Shkedi, Roy
Art Unit	
Examiner Name	
Attorney Docket Number	

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
/JO/		us-6855008	12/29/1998	Goldhaber et al.	
/JO/		us-6055513	04/25/2000	Katz 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	/Jonathan Ouellette/	Date Considered	09/03/2007

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet | | of | |

Complete If Known	
Application Number	
Filing Date	
First Named Inventor	
Group Art Unit	
Examiner Name	
Attorney Docket Number	

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	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, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
/JO/		"Their Time Has Come", Direct, v11, n8, p1+, June 1999.	
/JO/		www.acxiom.com, www.archive.org, date range: 2/24/1999-11/14/1999.	
/JO/		Barrett, Jennifer, "Databasing in the 90s: data and what we're doing with it!" Direct Marketing, v58, n4, p40, August 1995.	
/JO/		Odell, Patricia, "Sweetening the pot." Direct, v10, n9, p91, July 1998.	
/JO/		Hatch, Denny, "Co-op databases", Target Marketing, v21n5, pp:38-42, May 1998.	

Examiner Signature	/Jonathan Ouellette/	Date Considered	09/03/2007

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[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

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Index of Claims

Application/Control No.	Applicant(s)/Patent under Reexamination
11/099,861	SHKEDI, ROY
Examiner	**Art Unit**
Jonathan Ouellette	3629

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claim		Date
Final	Original	9/3/07
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Claim		Date
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Search Notes

Application/Control No.	Applicant(s)/Patent under Reexamination	
11/099,861	SHKEDI, ROY	
Examiner	**Art Unit**	
Jonathan Ouellette	3629	

SEARCHED			
Class	Subclass	Date	Examiner
705	1	9/3/2007	JO

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR
EAST (US and FOR)	9/3/2007	JO

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Roy Shkedi	Art Unit	:	3629
Serial No.	:	11/099,861	Examiner	:	Ouellette, J.P.
Filed	:	04/06/2005			
Title	:	Descriptive-Profile Mercantile Method			

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

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Dear Sir:

Assignee discloses the reference listed on form PTO/SB/08A attached to this document.

The item contained in the information disclosure statement was not cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, was not known to any individual designated in Rule 1.56(c) more than three months prior to filing of this statement.

Assignee also wishes to advise the Examiner of the existence of five other pending applications it owns, namely application Serial Nos. 11/736,544, filed April 17, 2007, 11/763,286, filed June 14, 2007, 11/765,433, filed June 19, 2007, 11/968,107, filed December 31, 2007, and 11/968,117, filed December 31, 2007, and the references cited therein.

If the Examiner has any questions concerning these matters, please contact assignee's undersigned attorney.

Respectfully submitted,

ALMONDNET INC.
by its attorney

Dated: February 11, 2008

/Louis J. Hoffman/
Louis J. Hoffman
Reg. No. 38,918
LOUIS J. HOFFMAN, P.C.
11811 North Tatum Boulevard, Suite 2100
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(480) 948-3295

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Roy Shkedi	Art Unit	:	3629
Serial No.	:	11/099,861	Examiner	:	Ouellette, J.P.
Filed	:	04/06/2005			
Title	:	Descriptive-Profile Mercantile Method			

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

RESPONSE TO OFFICE ACTION AND INTERVIEW REPORT

Dear Sir:

In response to the Office Action dated September 10, 2007, assignee submits the following amendments and remarks along with fees in the amount of $380 for (1) a two-month extension of time in the amount of $230, and (2) six extra total claims in the amount of $150. Assignee has previously qualified as a small entity. No fees are due for additional independent claims because assignee has paid for 12 independent claims and only 7 are presented now.

IN THE CLAIMS

1-39. (Canceled)

40. (Currently Amended) A method of updating profiles of Internet-using entities, the method comprising:

(a) electronically receiving, from an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network, which partial profile contains at least one profile attribute related to the entity; and

(b) automatically electronically determining whether the received partial profile contains any new profile attributes about the entity, and if so, in accordance with a predetermined arrangement, creating and recording an electronic credit identifying a royalty payment to the unaffiliated third party as a result of and on account of using any of the new profile attributes in targeting advertisements to the entity's computer over the global computer network;

(c) wherein the royalty payment is determined using a formula that factors in the newness of the attribute.

41. (Previously Presented) The method of claim 40 wherein part (a) comprises receiving the partial profile along with an identifier of the entity.

42. (Previously Presented) The method of claim 41 wherein receiving the partial profile along with an identifier of the entity comprises reading a cookie previously stored in a memory device associated with the entity's computer.

43. (Previously Presented) The method of claim 41 wherein part (a) comprises receiving from the entity's computer a redirected request to display at least a portion of a web page.

44. (Previously Presented) The method of claim 43 wherein part (a) further comprises receiving the partial profile information while receiving from the entity's computer the redirected request to display at least a portion of a web page.

45. (Previously Presented) The method of claim 40 further comprising electronically determining whether the profile attributes received in part (a) appear to relate to an entity associated with previously collected profile attributes and, if so, storing the profile attributes received in part (a) with an identifier associated with the previously collected profile attributes.

46. (Previously Presented) The method of claim 45 further comprising creating a new id

entifier if, as a result of said electronically determining step, the profile attributes received in part (a) do not appear to relate to any entity associated with previously collected profile attributes.

47. (Currently Amended) The method of claim 40 wherein the new profile attributes about the entity in part (b) comprises information about actions the entity performed online over a pre-defined recent time period and further comprising using the information about recent actions of the entity to target the advertisements to the entity's computer.

48. (Previously Presented) The method of claim 40 wherein the new profile attributes about the entity in part (b) comprises one or more demographic attributes.

49. (Previously Presented) The method of claim 40 wherein the new profile attributes about the entity in part (b) comprises one or more behavioral attributes.

50. (Previously Presented) The method of claim 40 wherein the new profile attributes includes previously monitored search requests by the entity.

51. (Previously Presented) The method of claim 40 wherein part (b) includes determining whether one of the received profile attributes is new only if the attribute is among a predetermined set of desired profile attributes.

52. (Previously Presented) The method of claim 40 wherein part (b) is done just after and in response to receipt of the partial profile in part (a).

53. (Previously Presented) The method of claim 40 wherein part (b) comprises recording a specific payment amount for the new profile attribute, provided that the new profile attribute is used in targeting advertisements.

54. (Canceled)

55. (Canceled)

56. (Currently Amended) The method of claim ~~54~~ 40 wherein the payment is triggered by click-through activity by the entity to a site advertised by the targeted advertisement.

57. (Previously Presented) The method of claim 56 wherein part (a) comprises receiving the partial profile information and reading a cookie previously stored in a memory device associated with the entity's computer, while receiving from the entity's computer a redirected request to display at least a portion of a web page.

58. (Currently Amended) A method of profiting from profiles of Internet-using entities, the method comprising:

(a) electronically providing, to an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network,

(b) which partial profile contains at least one profile attribute related to the entity,

(c) in accordance with a predetermined agreement involving the recording of an electronic credit identifying a royalty payment from the third party, wherein the royalty payment is determined using a formula that factors in the newness of the attribute, wherein the recording of the credit is as a result of and on account of:

(i) the third party automatically electronically determining that the provided partial profile contains any new profile attributes about the entity, and

(ii) at least one of the new profile attributes being used in targeting advertisements to the entity's computer over the global computer network.

59. (Previously Presented) The method of claim 58 wherein part (a) comprises redirecting a request from the entity's computer to display at least a portion of a web page maintained by the profile-providing party.

60. (Previously Presented) The method of claim 59 wherein part (a) comprises providing the partial profile along with an identifier of the entity.

61. (Currently Amended) The method of claim 58 ~~wherein the new profile attributes about the entity in part (c)(i) comprises~~ further comprising collecting information about actions the entity performed at a site maintained by the profile-providing party, wherein the collected information becomes used as the new profile attributes about the entity in part (c)(i).

62. (Currently Amended) The method of claim 61 further comprising monitoring search requests by the entity and wherein the new profile attributes includes the previously monitored search requests by the entity.

63. (Previously Presented) The method of claim 58 wherein the electronic credit identifies a royalty payment on account of use of the new profile attribute in targeting advertisements.

64. (Previously Presented) The method of claim 63 wherein the electronic credit is triggered by click-through activity by the entity to a site advertised by the targeted advertisement.

65. (Currently Amended) A data storage medium comprising indicia of instructions for a processor to perform a method of updating profiles of Internet-using entities, the method comprising:

(a) electronically receiving, from an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network, which partial profile contains at least one profile attribute related to the entity; and

(b) automatically electronically determining whether the received partial profile contains any new profile attributes about the entity, and if so, in accordance with a predetermined arrangement, creating and recording an electronic credit identifying a royalty payment to the unaffiliated third party as a result of and on account of using any of the new profile attributes in targeting advertisements to the entity's computer over the global computer network;

(c) wherein the royalty payment is determined using a formula that factors in the newness of the attribute.

66. (Previously Presented) A method of updating profiles of Internet-using entities, the method comprising:

(a) electronically receiving, from an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network, which partial profile contains at least one profile attribute related to the entity; and

(b) in accordance with a predetermined arrangement, automatically creating an electronic credit identifying a payment to the unaffiliated third party as a result of using at least one of the profile attributes in the partial profile in targeting advertisements to the entity's computer over the global computer network, wherein the credit is based on at least the parameter of newness of the at least one profile attribute.

67. (Previously Presented) The method of claim 66 wherein the at least one profile attribute in part (b) comprises one or more behavioral attributes.

68. (Previously Presented) The method of claim 67 wherein the behavioral attributes comprise at least one previously monitored search request by the entity.

69. (Currently Amended) The method of claim 67 wherein the behavioral attributes comprise at least one indication of goods purchased by the entity.

70. (Previously Presented) The method of claim 66 further comprising performing part (a) with respect to a multitude of unaffiliated third parties, each of which provide a plurality of partial profiles, and storing the resulting partial profiles in a common databank.

71. (Previously Presented) The method of claim 70 further comprising electronically determining whether the profile attributes received in part (a) appear to relate to an entity associated with previously collected profile attributes and, if so, storing the profile attributes received in part (a) with an identifier associated with the previously collected profile attributes.

72. (Previously Presented) The method of claim 66 wherein part (a) comprises receiving the partial profile along with an identifier of the entity by reading a cookie previously stored in a memory device associated with the entity's computer.

73. (Previously Presented) The method of claim 66 wherein part (a) comprises receiving the partial profile while receiving from the entity's computer a redirected request to display at least a portion of a web page.

74. (Previously Presented) The method of claim 66 wherein the credit is determined using a formula that factors into the credit at least the newness of the attribute.

75. (Previously Presented) The method of claim 74 wherein the formula also factors into the credit information about the geographical extent wherein the attribute is of presumable value.

76. (Previously Presented) The method of claim 74 wherein the formula also factors into the credit an estimate of veracity of the attribute.

77. (Previously Presented) The method of claim 66 wherein the credit is in an amount specified by the unaffiliated third party.

78. (Previously Presented) The method of claim 66 wherein the credit is created only if the profile attribute has not exceeded a predetermined age.

79. (Previously Presented) The method of claim 66 further comprising electronically receiving from the unaffiliated third party a restriction identifying at least one entity on whose behalf the profile attributes may be used in targeting advertisements, and wherein part (b) further comprises allowing use of the profile attributes only on behalf of entities identified in the restriction.

80. (Previously Presented) The method of claim 66 further comprising electronically receiving from the unaffiliated third party a restriction identifying a number of times the profile attributes may be used in targeting advertisements, and wherein part (b) further comprises allowing use of the profile attributes no more than the number of usages identified in the restriction.

81. (Previously Presented) A method of profiting from profiles of Internet-using entities, the method comprising:

(a) electronically providing, to an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network,

(b) which partial profile contains at least one profile attribute related to the entity,

(c) in accordance with a predetermined agreement involving an electronic credit identifying a payment from the third party, which credit is based on at least the parameter of newness of at least one of the profile attributes and is triggered by that profile attribute being used in targeting advertisements to the entity's computer over the global computer network.

82. (Previously Presented) The method of claim 81 wherein the at least one of the profile attributes in part (c) comprises one or more behavioral attributes.

83. (Currently Amended) The method of claim 82 further comprising monitoring at least one search request by the entity and wherein the behavioral attributes comprise the at least one previously monitored search request by the entity.

84. (Currently Amended) The method of claim 82 ~~wherein the behavioral attributes comprise~~ further comprising collecting information about actions the entity performed at a site maintained by the profile-providing party, wherein the credit in part (c) is based on the newness of at least one behavioral attribute of the collected information.

85. (Previously Presented) The method of claim 84 wherein part (a) comprises providing the partial profile along with an identifier of the entity.

86. (Previously Presented) The method of claim 84 wherein the electronic credit is triggered by click-through activity by the entity to a site advertised by the targeted advertisement.

87. (Previously Presented) The method of claim 84 wherein the payment identified by the credit is determined using a formula that factors into the credit at least the newness of the attribute.

88. (Previously Presented) The method of claim 84 wherein the payment identified by the credit is triggered only if the profile attribute has not exceeded a predetermined age.

89. (Previously Presented) The method of claim 81 further comprising electronically providing, to the unaffiliated third party, a price for usage of the at least one of the profile attributes specified in part (c).

90. (Previously Presented) The method of claim 81 further comprising electronically providing, to the unaffiliated third party, a restriction identifying at least one entity on whose behalf the at least one of the profile attributes specified in part (c)

may be used in targeting advertisements, and wherein the predetermined agreement includes terms requiring enforcement of the restriction so that profile attribute is used only on behalf of the at least one entity identified in the restriction.

91. (Previously Presented) The method of claim 81 further comprising electronically providing, to the unaffiliated third party, a restriction identifying a number of times the at least one of the profile attributes specified in part (c) may be used in targeting advertisements, and wherein the predetermined agreement includes terms requiring enforcement of the restriction so that profile attribute is used no more than the number of usages identified in the restriction.

92. (Previously Presented) A data storage medium comprising indicia of instructions for a processor to perform a method of updating profiles of Internet-using entities, the method comprising:

(a) electronically receiving, from an unaffiliated third party, a partial profile of an entity that uses a computer coupled to a global computer network, which partial profile contains at least one profile attribute related to the entity; and

(b) in accordance with a predetermined arrangement, automatically creating an electronic credit identifying a payment to the unaffiliated third party as a result of using at least one of the profile attributes in the partial profile in targeting advertisements to the entity's computer over the global computer network, wherein the credit is based on at least the parameter of newness of the profile attribute.

93. (New) A method of collecting and utilizing profiles of Internet-using entities, the method comprising:

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

(b) wherein receiving the partial profile is achieved by redirection of a portion of a page of the website accessed by the entity's computer;

(c) automatically electronically attempting to match the received partial profile to a maintained profile believed to be related to the same entity;

(d) automatically generating and storing an electronic record of which of the plurality of unaffiliated third parties contributed to the maintained profile particular profile attributes; and

(e) allowing use of the maintained profile in targeting advertisements to the entity's computer over the global computer network.

94. (New) The method of claim 93 further comprising automatically maintaining an electronic record of which unaffiliated third party contributed, to the maintained profile, the profile attributes that were used in targeting the advertisements.

95. (New) The method of claim 94 further comprising determining whether the received partial profile contains any profile attributes about the entity that were not previously contained in a matching maintained profile.

96. (New) The method of claim 93 further comprising allowing use of the maintained profile along with a credibility rating associated with at least one of the profile attributes of the maintained profile.

97. (New) The method of claim 96 wherein the credibility rating is reflected in a price for the at least one profile attribute.

98. (New) The method of claim 93 wherein allowing use of the maintained profile includes allowing selection of profile attributes from the maintained profile based on the source thereof.

99. (New) The method of claim 93 further comprising reading a cookie previously stored on the entity's computer, as a result of the redirection.

100. (New) A data storage medium comprising indicia of instructions for a processor to perform a method of updating profiles of Internet-using entities, the method comprising:

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

(b) wherein receiving the partial profile is achieved by redirection of a portion of a page of the website accessed by the entity's computer;

(c) automatically electronically attempting to match the received partial profile to a maintained profile believed to be related to the same entity;

(d) automatically generating and storing an electronic record of which of the plurality of unaffiliated third parties contributed to the maintained profile particular profile attributes; and

(e) allowing use of the maintained profile in targeting advertisements to the entity's computer over the global computer network.

Remarks and Interview Report

Assignee's undersigned representative conducted a telephone conversation with the examiner on February 1, 2008, which was adjourned and completed on February 4, 2008. Assignee and its representative thank the examiner for the useful discussion.

Pursuant to the agreement in the interview, assignee has canceled a number of claims and focuses on one specific group of claims that seem allowable without significant further work or discussion, and without revision or clarification. The remaining subject matter is likely to be pursued in a continuing application.

Starting with previously presented independent Claim 66, assignee respectfully directs the examiner's attention to the following element: "… wherein the credit is based on at least the parameter of newness of the at least one profile attribute." Specification support for this element is found in paragraph [0013] of the specification as published (U.S. Pub. No. 2005/0193020).

In the interview, the examiner explained that he had believed, when examining the application, that the term "newness" referred to the profile attribute being new *to the database* in which the profile attribute might be stored. However, that is not the proper interpretation of the claim element. First, the language of claim 66 does not refer to any database (although a database *might* be used), and the claim language further refers to "newness *of the … profile attribute*" as opposed to newness of a database entry. Second, the specification, for example at paragraph [0126], explains that information in profile attributes may have a "shelf life," in other words be less valuable as they become old and outdated, and (for example at paragraph [0099]) that the price for a purchase attribute can change as a function of its value.

Accordingly, in context, the claim term "newness" refers to the "recency" of the information in the profile attribute, in other words, its "shelf life," or, put still another way, how recently it relates to activities or information about the computer-using entity. For illustration, referring to the example discussed at paragraph [0123] of the specification, if it was known that certain information about Ms. Blue had been acquired before she became bankrupt, then such information would be outdated and useless. In the invention of claim 66, the credit being based on the parameter of newness, therefore,

would allow for adjustment of the level of compensation for providing a profile attribute, or even for its elimination entirely if its "shelf life" was considered excessive.

Accordingly, in the interview, assignee's undersigned representative explained that the examiner's initial interpretation of the term "newness" was incorrect, and the examiner indicated that he understood and agreed with assignee's argument in that regard. The examiner asked the undersigned to explain the proper interpretation of "newness" in these remarks, to clarify the record. The examiner said that he was not aware of prior art references that he had reviewed disclosing adjustment of compensation based on a profile attribute's recency or "newness" but that a further search would be performed.

Accordingly, absent any new reference, claim 66 should be indicated allowable.

Independent claims 81 and 92 have the same reference to "newness" and, respectfully, should be allowable under the same interpretation.

Returning to the lower-numbered claims, assignee has copied the limitations of previously presented dependent claim 55 (including features in intermediate dependent claim 54) into independent claim 40. Previous claim 55 (now canceled in view of the copying) referred to the royalty payment for the attribute being determined using a formula that factors in the newness of the attribute. As a result of the inclusion of that element in claim 40, that independent claim should be also allowable.

In claim 40 as amended, the phrase "new profile attribute about the entity" appears. That reference to "new" does not have, in context, the same connotation as the term "newness" discussed above. The "new profile attribute" refers to an attribute that is not known before. For example, the profile attribute being new to a databank is discussed in the specification at paragraphs [0023], [0024], and [0092]. Unfortunately, the specification uses the word "new" in that sense and the word "newness" in the sense above, but the context and disclosure make the different usage clear.

Finally with respect to claim 40, the examiner clarified in the interview that he interpreted the "formula" broadly, such that it might encompass a formula that had a binary decision depending on recency, such that a payment would be lower, or even

zero, if older than a certain standard and higher if newer. Assignee does not challenge the breadth of the interpretation of "formula" and so clarified in the interview.

Assignee has inserted parallel limitations into independent claims 58 and 65. Claim 58 is written from the perspective of the profile provider, as opposed to a collector of attributes (which might be a databank company), but the limitations are similar, and in the case of the feature related to the "newness" of provided attributes, the same. Claim 65 is a stored-program version of claim 40. Respectfully, those claims should also be allowable for the same reason.

A few dependent claims are being amended to correct minor informalities or improve their form. Claims 47, 61, 62, 83, and 84 are amended to clarify that the information in the referenced profile attributes are collected and used and are not merely "nonfunctional descriptive data," as asserted in the Office Action, paragraphs 9-10. Claim 69 is corrected for grammatical purposes, to restore an omitted word "the" – no change in scope is intended or accomplished.

A number of dependent claims not discussed above appear to contain patentable distinctions over the "Acxiom" reference cited in the Office Action not recognized or credited in the Office Action. In view of the productive interview, it does not seem necessary to discuss such additional distinctions in detail here. However, to avoid any risk of the Office misinterpreting Acxiom, assignee briefly notes that Acxiom does not:

* do part (b) just after and in response to receipt of the partial profile (Claim 52) – even assuming *arguendo* that Acxiom does part (b) at all;

* record specific payment amounts for new profile attributes provided that they are used in targeting advertisements (Claim 53);

* record the royalty payment on account of use of new profile attributes in targeting advertisements (Claims 54 and 63);

* provide a price for using profile attributes (Claim 89);

* trigger payment of a royalty by click-through activity with respect to a targeted advertisement (Claims 56, 64, and 86); or

* create a credit in an amount specified by the profile provider (Claim 77).

Finally, new claims 93-100 are (generally, and without limiting or expanding their scope) directed to methods of collecting profile attributes and recording their sources, by use of redirection from a visited website, and an associated stored-program version. Acxiom does not seem to teach or suggest these methods, and the claims are believed patentable over other known art as well. Assignee respectfully requests examination and allowance of this subject matter.

Assignee respectfully submits that the claims are in condition for allowance. Please feel free to telephone the undersigned if it would in any way advance prosecution of this application.

Respectfully submitted,

ALMONDNET INC.
by its attorney

Dated: February 11, 2008

/Louis J. Hoffman /
Louis J. Hoffman
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PTO/SB/08B (09-06)
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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	11/099,861
Filing Date	04/06/2005
First Named Inventor	Shkedi, Roy
Art Unit	3629
Examiner Name	Ouellette, J.P.
Attorney Docket Number	14-DP

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	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, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
		"DoubleClick Launches New Marketing Solutions"; from website www.clickz.com; October 6, 1998.	

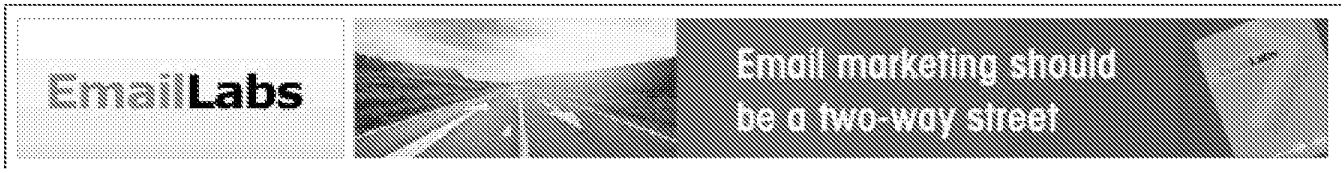
Examiner Signature		Date Considered	

*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 Applicant is to place a check mark here if English language Translation is attached.

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DoubleClick Launches New Marketing Solutions

By , October 6, 1998

DoubleClick Inc. launched DoubleClick "Closed-Loop Marketing Solutions," a suite of products designed to give advertisers and agencies real-time, in-depth control of delivery, measurement and analysis of their campaigns.

The product suite includes DoubleClick DART, now being privately labeled for advertisers, and two new products: DoubleClick DataBank and DoubleClick Boomerang.

DoubleClick said that using the new products, advertisers will have the ability to change creative, targeting, criteria, frequency and other marketplace variables in real-time.

The new solutions allow advertisers to deliver ads, measure and analyze results and adapt future advertising to increase effectiveness, the company said.

Said Kevin O'Connor, chairman and chief executive officer of DoubleClick: "DoubleClick Closed- Loop Marketing Solutions provides a standard for building relationships between brands and consumers online, and facilitates the return-on-investment that advertisers have been craving from their marketing strategies."

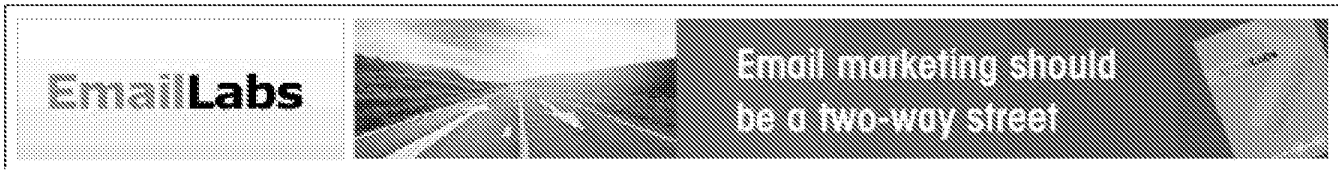
DoubleClick's newest products are available for stand-alone application or as part of the Closed-Loop package. DART for Advertisers, combined with the power of DataBank and Boomerang, delivers the first online advertising solution that can re-target interested consumers and bring them back to a marketer's site while protecting their privacy, the company said.

DART (Dynamic Ad Reporting and Targeting) gives advertisers and agencies the ability to target, deliver and report campaigns across any site on the Web. DART currently delivers more than 3 billion ads a month on more than 2,900 sites, according to the company.

DataBank is a data mining tool that allows advertisers to analyze and evaluate marketing campaigns. DataBank's "knowledge discovery" mechanism allows advertisers to uncover patterns and correlations between ad campaigns and a customer's activity. For example, an advertiser can ascertain the impact of ad frequency on online purchasing patterns.

Boomerang is a one-to-one targeting solution for advertisers that allows marketers to identify users who have come to their sites and then re-target those consumers on DoubleClick's Network, which currently reaches 40 million unique users per month.

Back to Article



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Electronic Patent Application Fee Transmittal

Application Number:	11099861
Filing Date:	06-Apr-2005
Title of Invention:	Descriptive-profile mercantile method
First Named Inventor/Applicant Name:	Roy Shkedi
Filer:	Louis J. Hoffman/Donald Hertz
Attorney Docket Number:	14-DP
Filed as Small Entity	

Utility Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	2202	6	25	150
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 2 months with $0 paid	2252	1	230	230
Miscellaneous:				
		Total in USD ($)		**380**

Electronic Acknowledgement Receipt

EFS ID:	2840284
Application Number:	11099861
International Application Number:	
Confirmation Number:	2082
Title of Invention:	Descriptive-profile mercantile method
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-DP
Receipt Date:	11-FEB-2008
Filing Date:	06-APR-2005
Time Stamp:	14:17:30
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$380
RAM confirmation Number	8462
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File Listing:

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

1	Amendment - After Non-Final Rejection	08-02-11-AlmondNet-Desc_Profile-RTOA-I.pdf	65181 c9fc810a322b930d47d549a37bc3f8f435a3a5fb	no	13
Warnings:					
Information:					
2	Information Disclosure Statement Letter	08-02-11-Desc_Profile-Supp_IDS.pdf	57654 67ba83ca61dda6afa038ca456d061992b8a4c10c	no	2
Warnings:					
Information:					
3	Information Disclosure Statement (IDS) Filed	08-02-11-SB08A.pdf	57368 e9b034457e2eb0316de63664d9385d1e5ec5fc82	no	1
Warnings:					
Information:					
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4	NPL Documents	DoubleClick_launches.pdf	75131 c793deb34a6e5f5ce35574e56f58103305bd6d6b	no	1
Warnings:					
Information:					
5	Fee Worksheet (PTO-06)	fee-info.pdf	8295 6f298642c19daf958f3904387b955a0021f17f85	no	2
Warnings:					
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		Total Files Size (in bytes):	263629		

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 11/099,861	Filing Date 04/06/2005	☐ To be Mailed

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)	SMALL ENTITY ☒		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			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 $250 ($125 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			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	02/11/2008	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 59	Minus	** 59	= 0	X $25 =	0	OR	X $ =	
	Independent (37 CFR 1.16(h))	* 8	Minus	***12	= 0	X $105 =	0	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	0	OR	TOTAL ADD'L FEE	

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
	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".

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Legal Instrument Examiner:
/Halley D. Massey/

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26362 7590 05/20/2008

LOUIS J. HOFFMAN, P.C.
11811 North Tatum Boulevard, Suite 2100
Phoenix, AZ 85028

EXAMINER	
OUELLETTE, JONATHAN P	
ART UNIT	PAPER NUMBER
3629	

DATE MAILED: 05/20/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/099,861	04/06/2005	Roy Shkedi	14-DP	2082

TITLE OF INVENTION: DESCRIPTIVE-PROFILE MERCANTILE METHOD

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$720	$300	$0	$1020	08/20/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

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PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

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Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

26362 7590 05/20/2008

LOUIS J. HOFFMAN, P.C.
11811 North Tatum Boulevard, Suite 2100
Phoenix, AZ 85028

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)

(Signature)

(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/099,861	04/06/2005	Roy Shkedi	14-DP	2082

TITLE OF INVENTION: DESCRIPTIVE-PROFILE MERCANTILE METHOD

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$720	$300	$0	$1020	08/20/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
OUELLETTE, JONATHAN P	3629	705-001000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

❑ A check is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. 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, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/099,861	04/06/2005	Roy Shkedi	14-DP	2082

26362 7590 05/20/2008

LOUIS J. HOFFMAN, P.C.
11811 North Tatum Boulevard, Suite 2100
Phoenix, AZ 85028

EXAMINER	
OUELLETTE, JONATHAN P	
ART UNIT	PAPER NUMBER
3629	

DATE MAILED: 05/20/2008

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 398 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 398 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

Interview Summary	Application No.	Applicant(s)	
	11/099,861	SHKEDI, ROY	
	Examiner	Art Unit	
	Jonathan Ouellette	3629	

All participants (applicant, applicant's representative, PTO personnel):

(1) *Jonathan Ouellette*. (3)_____.

(2) *Louis Hoffman*. (4)_____.

Date of Interview: *09 May 2008*.

Type: a)☒ Telephonic b)☐ Video Conference
c)☐ Personal [copy given to: 1)☐ applicant 2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes e)☒ No.
If Yes, brief description: _____.

Claim(s) discussed: *All Independent Claims*.

Identification of prior art discussed: _____.

Agreement with respect to the claims f)☒ was reached. g)☐ was not reached. h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: *See Continuation Sheet*.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

/Jonathan Ouellette/
Primary Examiner, Art Unit 3629
Examiner's signature, if required

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Examiner Ouellette and Mr. Hoffman discussed independent claims 66, 81, and 92, and the need to amend the independent claims in order to place the claims in condition for allowance. Mr. Hoffman requested that Examiner Ouellette make the suggested amendments through an Examiner's Amendment. Examiner Ouellette and Mr. Hoffman further discussed the newly added claims 93-100. Examiner Ouellette stated that the new claims incorporated a new invention and would require a restriction. Mr. Hoffman elected the original claims 40-53 and 46-92 without traverse.

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Notice of Allowability	Application No.	Applicant(s)	
	11/099,861	SHKEDI, ROY	
	Examiner	Art Unit	
	Jonathan Ouellette	3629	

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

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *2/11/2008*.

2. ☒ The allowed claim(s) is/are *40-53 and 56-92*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   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. *09/593,993* .
      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)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 20080211
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *20080509* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Response to Amendment

1. Claims 1-39, 54, and 55 have been cancelled, Claims 93-100 have been added; therefor, Claims 40-53, and 56-100 are currently pending in application 11/099,861.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

3. Authorization for this examiner's amendment was given in a telephone interview with **Louis Hoffman on 5/9/2008**.

The application has been amended as follows:

1. Claim 66, line 10, add "**determined**" before "based on"; and replace "the parameter" with "**a parameter**".
2. Claim 81, line 9, add "**determined**" before "based on"; and replace "the parameter" with "**a parameter**".
3. Claim 92, line 12, add "**determined**" before "based on"; and replace "the parameter" with "**a parameter**".
4. Cancel **Claims 93-100**. Cancelled Claims have previously withdrawn by a restriction requirement.

Election/Restrictions

4. Claims 93-100 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the Examiner Interview held 5/9/2008 with Louis Hoffman (Reg. No. 38,918).

Claim Rejections - 35 USC § 103

5. The rejection of Claims 40-74, 77, 81-87, 89, and 92 under 35 U.S.C. 103(a) as being unpatentable over Acxiom ("There Time Has Come," Direct, v11, n8, p1+, June 1999), is withdrawn due to Applicant's amendments.

Allowable Subject Matter

6. **Claims 40-53, and 56-92 are allowed**.

7. The following is an examiner's statement of reasons for allowance:

8. The Prior art fails to teach or suggest determining a royalty payment or credit for a received profile attribute, based on a parameter of newness, as disclosed in the independent claims.

9. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Ouellette whose telephone number is (703) 605-0662. The examiner can normally be reached on Monday through Thursday, 8am - 5:00pm.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on (703) 308-2702. The fax phone numbers for the organization where this application or proceeding is assigned (703) 872-9306 for all official communications.

12. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5484.

May 16, 2008

/Jonathan Ouellette/

Primary Examiner, Art Unit 3629

PTO/SB/08B (09-06)
Approved for use through 03/31/2007. 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	11/099,861
Filing Date	04/06/2005
First Named Inventor	Shkedi, Roy
Art Unit	3629
Examiner Name	Ouellette, J.P.
Attorney Docket Number	14-DP

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	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, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
		"DoubleClick Launches New Marketing Solutions"; from website www.clickz.com; October 6, 1998.	

Examiner Signature	/Jonathan Ouellette/	Date Considered	05/08/2008

*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 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 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.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JO/

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11099861	SHKEDI, ROY
	Examiner	**Art Unit**
	Jonathan Ouellette	3629

✓	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	05/10/2008								
	1	-								
	2	-								
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	36	-								

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11099861	SHKEDI, ROY
	Examiner	Art Unit
	Jonathan Ouellette	3629

✓	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	05/10/2008								
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	38	-								
	39	-								
1	40	=								
2	41	=								
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29	70	=								
30	71	=								
31	72	=								

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11099861	SHKEDI, ROY
	Examiner	**Art Unit**
	Jonathan Ouellette	3629

✓	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	05/10/2008								
32	73	=								
33	74	=								
34	75	=								
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	97	-								
	98	-								
	99	-								
	100	-								

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11099861	SHKEDI, ROY
	Examiner	**Art Unit**
	Jonathan Ouellette	3629

ORIGINAL		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
705	1	G	0	6	Q	99 / 00 (2006.01.01)						

CROSS REFERENCE(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE (Assistant Examiner) (Date)		**Total Claims Allowed:** 51
/Jonathan Ouellette/ (Primary Examiner)	5/10/2008 (Date)	O.G. Print Claim(s) 40 / O.G. Print Figure 2

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11099861	SHKEDI, ROY
	Examiner	Art Unit
	Jonathan Ouellette	3629

SEARCHED			
Class	Subclass	Date	Examiner
705	1	5/10/2008	JO

SEARCH NOTES		
Search Notes	Date	Examiner
EAST (US and FOR)	5/10/2008	JO
DIALOG - NPL Search	5/10/2008	JO
Revewed Search for Parent Application 09/593993i	5/10/2008	JO

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
705	1	5/10/2008	JO

To: LJH@patentit.com,duff@patentit.com,shaelyn@patentit.com
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 26362

May 20, 2008 06:55:43 AM

Dear PAIR Customer:

LOUIS J. HOFFMAN, P.C.
11811 North Tatum Boulevard, Suite 2100
Phoenix, AZ 85028
UNITED STATES

The following USPTO patent application(s) associated with your Customer Number, 26362 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR. The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

Application	Attorney Docket No.
11099861	14-DP

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Monday - Friday 6:00 a.m. to 12:00 a.m. Eastern Standard Time (EST)

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Roy Shkedi	Art Unit	:	3629
Serial No.	:	11/099,861	Examiner	:	Ouellette, J.P.
Filed	:	04/06/2005			
Title	:	Descriptive-Profile Mercantile Method			

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

INTERVIEW REPORT

Dear Sir:

Assignee's undersigned representative conducted a telephone conversation with the examiner on May 9, 2008, by telephone, in which they discussed independent claims 66, 81, and 92. Assignee and its representative thank the examiner for the useful discussion, in which the parties reached agreement, and for the examiner's amendment incorporating the changes to which the parties agreed. No further action is thought needed on this application; the below report is intended simply to amplify the examiner's interview report, to allow the written record to contain a more precise understanding of the nature of the discussion.

The examiner began by saying that he thought that this case was potentially allowable, but he had observed that the three independent claims listed above did not include the "formula" present in lower-numbered independent claims. The undersigned agreed that the examiner's observation was accurate but argued that the prior art did not require that the claims be limited to a formula (1) provided that the term "newness" of the profile attribute was properly interpreted to refer to the "recency" of the information in the profile attribute, in other words, its "shelf life," and (2) in view of the limitation in those three claims referring to "the credit [being] based on at least the parameter of newness of" a profile attribute. Both of those points had been explained in the most recent response to Office Action, and the undersigned pointed out to the examiner certain aspects of that document.

The examiner responded positively and specifically stated that he accepted the interpretation of "newness." He thought, however, that the term "based on" might be unclear in this context and inquired what a credit being "based on" something means. Applicant's representative responded that the amount of the credit did not have to change based on the parameter but also the credit could be paid or not paid depending on the parameter. The examiner responded that, on account of ambiguity, the term "based on" – in this context – would seem to require revision to obtain a finding of patentability of these three claims. Applicant suggested that the term "based on" be changed to "determined based on," which would make the term and its intent more clear. The examiner agreed with that proposal, observing that, although the change added only a single word, the resulting phrase seemed much clearer grammatically.

The parties then discussed claims 93-100, which are (generally, and without limiting or expanding their scope) directed to methods of collecting profile attributes and recording their sources, by use of redirection from a visited website, and an associated stored-program version. As indicated in the interview report prepared by the examiner, the parties agreed that these claims defined an independent and distinct invention from the balance of the claims and would be restricted.

Assignee thanks the examiner for the subsequent notice of allowance.

Respectfully submitted,

ALMONDNET INC.
by its attorney

Dated: June 3, 2008

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

LOUIS J. HOFFMAN, P.C.
11811 North Tatum Boulevard
Suite 2100
Phoenix, Arizona 85028
(480) 948-3295

Electronic Acknowledgement Receipt

EFS ID:	3397979
Application Number:	11099861
International Application Number:	
Confirmation Number:	2082
Title of Invention:	DESCRIPTIVE-PROFILE MERCANTILE METHOD
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-DP
Receipt Date:	03-JUN-2008
Filing Date:	06-APR-2005
Time Stamp:	17:41:22
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	Applicant summary of interview with examiner	08-06-03-AlmondNet-DP-IV_report.pdf	23458 6024c28d4ddce75c46b4277b660cfba839b15837	no	2

Warnings:	
Information:	

Total Files Size (in bytes):	23458

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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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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571) 273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

26362 7590 05/20/2008

LOUIS J. HOFFMAN, P.C.
11811 North Tatum Boulevard, Suite 2100
Phoenix, AZ 85028

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

FILED VIA E.F.S.

Donald Hertz	(Depositor's name)
/Donald Hertz/	(Signature)
06/03/2008	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/099,861	04/06/2005	Roy Shkedi	14-DP	2082

TITLE OF INVENTION:

DESCRIPTIVE-PROFILE MERCANTILE METHOD

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$720	$300	$1020	08/20/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
OUELLETTE, JONATHAN P	3629	705-001000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Louis J. Hoffman
2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE	(B) RESIDENCE: (CITY and STATE OR COUNTRY)
AlmondNet, Inc.	New York, New York

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☑ Corporation or other private group entity ☐ Government

4a. The following fee(s) are enclosed:

☑ Issue Fee

☑ Publication Fee (No small entity discount permitted)

☐ Advance Order - # of Copies _____

4b. Payment of Fee(s):

☐ A check in the amount of the fee(s) is enclosed.

☑ Payment by credit card.

☐ The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.
NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature /Louis J. Hoffman/ Date 06/03/2008

Typed or printed name Louis J. Hoffman Registration No. 38,918

This collection of information is required by 37 CFR 1.311. 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, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Electronic Patent Application Fee Transmittal

Application Number:	11099861
Filing Date:	06-Apr-2005
Title of Invention:	DESCRIPTIVE-PROFILE MERCANTILE METHOD
First Named Inventor/Applicant Name:	Roy Shkedi
Filer:	Louis J. Hoffman/Donald Hertz
Attorney Docket Number:	14-DP
Filed as Small Entity	

Utility Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl issue fee	2501	1	720	720
Publ. Fee- early, voluntary, or normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**1020**

Electronic Acknowledgement Receipt

EFS ID:	3398028
Application Number:	11099861
International Application Number:	
Confirmation Number:	2082
Title of Invention:	DESCRIPTIVE-PROFILE MERCANTILE METHOD
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-DP
Receipt Date:	03-JUN-2008
Filing Date:	06-APR-2005
Time Stamp:	17:44:59
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$1020
RAM confirmation Number	2807
Deposit Account	
Authorized User	

File Listing:

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

1	Issue Fee Payment (PTO-85B)	08-06-03-AlmondNet-DP-IssueFeeTrans.pdf	49466 c0fe077f4959967c95d98e40ccdbb8ac97c2e85b	no	1
Warnings:					
Information:					
2	Fee Worksheet (PTO-06)	fee-info.pdf	8273 60212df90f11124fad5df9ef0892d81fd2e8b9ce	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	57739		

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Bib Data Sheet

CONFIRMATION NO. 2082

SERIAL NUMBER	FILING OR 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
11/099,861	04/06/2005 RULE	705	3629	14-DP

APPLICANTS

Roy Shkedi, Bnei-Brak, ISRAEL;

**** CONTINUING DATA ***************************

This application is a CON of 09/593,993 06/14/2000 PAT 6,925,440

**** FOREIGN APPLICATIONS *********************

ISRAEL 133489 12/13/1999

IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** SMALL ENTITY **
** 05/11/2005

Foreign Priority claimed	STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS
☒ yes ☐ no 35 USC 119 (a-d) conditions met ☒ yes ☐ no ☐ Met after Allowance Verified and Acknowledged _____ Examiner's Signature Initials	ISRAEL	3	39	12

ADDRESS
26362

TITLE
DESCRIPTIVE-PROFILE MERCANTILE METHOD

FILING FEE RECEIVED		
2825	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/099,861	09/23/2008	7428493	14-DP	2082

26362 7590 09/03/2008

LOUIS J. HOFFMAN, P.C.
11811 North Tatum Boulevard, Suite 2100
Phoenix, AZ 85028

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 398 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Roy Shkedi, Bnei-Brak, ISRAEL;

To: LJH@patentit.com,duff@patentit.com,shaelyn@patentit.com
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 26362

Sep 04, 2008 05:52:35 AM

Dear PAIR Customer:

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11811 North Tatum Boulevard, Suite 2100
Phoenix, AZ 85028
UNITED STATES

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Application	Document	Mailroom Date	Attorney Docket No.
11099861	ISSUE.NTF	09/03/2008	14-DP

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Monday - Friday 6:00 a.m. to 12:00 a.m.

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UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor	:	Shkedi, Roy	Patent No.	:	7,428,493 B2
Serial No.	:	11/099,861	Issue Date	:	09/23/2008
Filing Date	:	04/06/2005	Conf. No.	:	2082
Title	:	Descriptive-Profile Mercantile Method			

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

Filed via EFS-Web – January 20, 2016

NOTIFICATION OF LOSS OF ENTITLEMENT TO SMALL ENTITY STATUS

Dear Sir:

Assignee notifies the USPTO of the loss of entitlement to small entity status in the above-captioned patent.

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

Respectfully submitted,

ALMONDNET, INC.

by its attorney

Dated: January 20, 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

Electronic Acknowledgement Receipt	
EFS ID:	24675979
Application Number:	11099861
International Application Number:	
Confirmation Number:	2082
Title of Invention:	DESCRIPTIVE-PROFILE MERCANTILE METHOD
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-DP
Receipt Date:	20-JAN-2016
Filing Date:	06-APR-2005
Time Stamp:	16:26:25
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	Notification of loss of entitlement to small entity status	16-01-20-AN-DP_CON1-Notif_Loss_Small_Entity_Status.pdf	34076 904a960b871513975 8b794628dbcad7f3d1b2280	no	1
Warnings:					
Information:					

Total Files Size (in bytes):	34076

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PTO/AIA/123 (08-12)
Approved for use through 03/31/2021. OMB 0651-0035
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Patent

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Alexandria, VA 22313-1450

Patent Number	7,428,493
Issue Date	9/23/2008
Application Number	11/099,861
Filing Date	4/6/2005
First Named Inventor	Shkedi, Roy
Attorney Docket Number	DP-CON1

Please change the Correspondence Address for the above-identified patent to:

☐ The address associated with Customer Number: [ ]

OR

☑ **Firm *or* Individual Name** ALMONDNET, INC.

37-18 Northern Boulevard
Suite 404

Address

City Long Island City **State** NY **ZIP** 11101

Country US

Telephone (646) 217-0930 **Email** roy@almondnet.com

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I am the:

☐ Patentee.

☐ If the Patentee was not the applicant for patent (37 CFR 1.42), then a Statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is enclosed or was filed on _____. See 37 CFR 3.71.

☑ Attorney or agent of record. Registration Number 38918.

☐ Patent practitioner acting in a representative capacity whose correspondence address is the correspondence address of record. Notice has been given to the patentee or owner. Registration Number 38918.

Signature /Louis J. Hoffman/

Typed or Printed Name Louis J. Hoffman

Date 10/23/2020 Telephone (480) 948-3295

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.33. 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 3 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: Mail Stop Post Issue, 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 Acknowledgement Receipt	
EFS ID:	40936638
Application Number:	11099861
International Application Number:	
Confirmation Number:	2082
Title of Invention:	DESCRIPTIVE-PROFILE MERCANTILE METHOD
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-DP
Receipt Date:	23-OCT-2020
Filing Date:	06-APR-2005
Time Stamp:	19:09:55
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	Change of Address	20-10-23-AN-DP_CON1-COA.pdf	191311 c700e8411e241ac729ff9e4fa32051220b112614	no	1

Warnings:

Information:	
Total Files Size (in bytes):	191311

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