

EXHIBIT 3-A

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(Also referred to as FORM PTO-1465)

REQUEST FOR *INTER PARTES* REEXAMINATION TRANSMITTAL FORM

Address to:

**Mail Stop *Inter Partes* Reexam
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450**Attorney Docket No.: 309101.211-1Date: February 7, 2011

1. This is a request for *inter partes* reexamination pursuant to 37 CFR 1.913 of patent number 6,879,985 issued April 12, 2005. The request is made by a third party requester, identified herein below.
2. a. The name and address of the person requesting reexamination is:
Heidi L. Keefe/Cooley LLP
777 6th Street NW, Suite 1100
Washington D.C. 20001
- b. The real party in interest (37 CFR 1.915(b)(8)) is: FACEBOOK, INC.
3. a. A check in the amount of \$ _____ is enclosed to cover the reexamination fee, 37 CFR 1.20(c)(2);
- b. The Director is hereby authorized to charge the fee as set forth in 37 CFR 1.20(c)(2) to Deposit Account No. 50-1283 ; or
- c. Payment by credit card. Form PTO-2038 is attached.
4. Any refund should be made by check or credit to Deposit Account No. 50-1283 37 CFR 1.26(c). If payment is made by credit card, refund must be to credit card account.
5. A copy of the patent to be reexamined having a double column format on one side of a separate paper is enclosed. 37 CFR 1.915(b)(5)
6. CD-ROM or CD-R in duplicate, Computer Program (Appendix) or large table
 Landscape Table on CD
7. Nucleotide and/or Amino Acid Sequence Submission
If applicable, items a. – c. are required.
- a. Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. CD-ROM (2 copies) or CD-R (2 copies); or
- ii. paper
- c. Statements verifying identity of above copies
8. A copy of any disclaimer, certificate of correction or reexamination certificate issued in the patent is included.
9. Reexamination of claim(s) 1 and 7 is requested.
10. A copy of every patent or printed publication relied upon is submitted herewith including a listing thereof on Form PTO/SB/08, PTO-1449, or equivalent.
11. An English language translation of all necessary and pertinent non-English language patents and/or printed publications is included.

[Page 1 of 2]

This collection of information is required by 37 CFR 1.915. 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 18 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 *Inter Partes* Reexam, 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.

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.

12. The attached detailed request includes at least the following items:
- a. A statement identifying each substantial new question of patentability based on prior patents and printed publications. 37 CFR 1.915(b)(3)
- b. An identification of every claim for which reexamination is requested, and a detailed explanation of the pertinency and manner of applying the cited art to every claim for which reexamination is requested. 37 CFR 1.915(b)(1) & (3).
13. It is certified that the estoppel provisions of 37 CFR 1.907 do not prohibit this reexamination. 37 CFR 1.915(b)(7)
14. a. It is certified that a copy of this request has been served in its entirety on the patent owner as provided in 37 CFR 1.33(c).
The name and address of the party served and the date of service are:
Oblon, Spivak, McClelland, Maier & Neustadt LLP
1940 Duke Street
Alexandria, VA 22314
Date of Service: February 7, 2011; or
- b. A duplicate copy is enclosed because service on patent owner was not possible. An explanation of the efforts made to serve patent owner **is attached**. See MPEP 2620.

15. Third Party Requester Correspondence Address: Direct all communications about the reexamination to:

 The address associated with Customer Number:

58,249

OR Firm or
Individual Name _____

Address

City

State

Zip

Country

Telephone

Email

16. The patent is currently the subject of the following concurrent proceeding(s): a. Copending reissue Application No. _____ b. Copending reexamination Control No. _____ c. Copending Interference No. _____ d. Copending litigation styled: _____Mekiki Co., Ltd. and Mekiki Creates Co., Ltd. v. Facebook, Inc.,No. 10-cv-2721-LHK (USDC - No. Dist. of California)**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**/Heidi L. Keefe/February 7, 2011

Authorized Signature

Date

Heidi L. Keefe40,673

Typed/Printed Name

Registration No., if applicable

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re U.S. Patent No.: 6,879,985

Patent Assignees: Mekiki Co., Ltd., Tokyo
(JP); Mekiki Creates Co.,
Ltd., Tokyo (JP)

Issued: April 12, 2005

FOR: **HUMAN RELATIONSHIPS REGISTERING SYSTEM, METHOD AND DEVICE FOR REGISTERING
HUMAN RELATIONSHIPS, PROGRAM FOR REGISTERING HUMAN RELATIONSHIPS, AND
MEDIUM STORING HUMAN RELATIONSHIPS REGISTERING PROGRAM AND READABLE BY
COMPUTER**

Mail Stop *Inter Partes* Reexamination
U.S. Patent and Trademark Office
Via EFS
Randolph Building
401 Dulany Street
Alexandria, VA 22314

**REQUEST FOR INTER PARTES REEXAMINATION
UNDER 35 U.S.C. §§ 311 ET SEQ. AND 37 C.F.R. §§ 1.902 ET. SEQ.**

Dear Sir or Madam:

Pursuant to 35 U.S.C. §§ 311 *et seq.* and 37 C.F.R. §§ 1.902 *et seq.*, the undersigned, on behalf of Facebook, Inc., hereby requests an *inter partes* reexamination of claims 1 and 7 of U.S. Patent No. 6,879,985 (the "'985 patent") to Hikaru Deguchi et al. A copy of the '985 patent is attached as **Exhibit A**. The '985 patent issued on April 12, 2005 from an application filed in the United States on October 17, 2001.

The substantial new questions of patentability set forth in this Request are precipitated by a number of prior art references that were neither cited nor considered during the original prosecution of the '985 patent, as well as a reference that was previously cited but is now presented in a new light in this Request. Claims 1 and 7 of the '985 patent are invalid in view of these prior art references under 35 U.S.C. § 102 and/or 35 U.S.C. § 103.

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I. Requirements for *Inter Partes* Reexamination under 37 C.F.R. § 1.915

Pursuant to 37 C.F.R. § 1.915, each requirement for *inter partes* reexamination of the '985 patent is satisfied as discussed herein.

A. Payment of Fees – 37 C.F.R. § 1.915(a)

The Requester authorizes the Patent and Trademark Office to charge Deposit Account No. 50-1283 for the fees set in 37 C.F.R. § 1.20(c)(2) for reexamination.

B. Identification of Claims for Reexamination – 37 C.F.R. § 1.915(b)(1)

The Requester seeks reexamination of claims 1 and 7 of the '985 patent. A detailed explanation of the pertinence and manner of applying the prior art references to each claim for which reexamination is requested is found below under Sections V-VII, starting on page 12.

C. Citation of Prior Art Presented – 37 C.F.R. § 1.915(b)(2)

The attached Patent and Trademark Office Form SB/08 lists the patents and printed publications relied upon or referred to in this Request for *Inter Partes* Reexamination. This Request for *Inter Partes* Reexamination is based on the following patents and printed publications, which are attached as **Exhibits B** through **F**.

- Exhibit B** U.S. Patent No. 6,269,369 to Brian D. Robertson, entitled "Networked Personal Contact Manager" (hereafter "Robertson")
- Exhibit C** U.S. Patent No. 7,433,832 to Jeffrey P. Bezos, et al., entitled "Methods and Systems for Distributing Information Within a Dynamically Defined Community" (hereafter "Bezos" or "Bezos '832")
- Exhibit D** U.S. Provisional Patent Application No. 60/166,547 by Warren Adams, et al. filed on November 19, 1999 (hereafter "Adams '547 Provisional"), which was incorporated by reference in its entirety into Bezos '832.
- Exhibit E** U.S. Provisional Patent Application No. 60/166,664 by Jeffrey P. Bezos, et al. filed on November 19, 1999 (hereafter "Bezos '664 Provisional"), which was incorporated by reference in its entirety into Bezos '832.

Exhibit F U.S. Patent No. 6,175,831 to Andrew P. Weinreich, et al. entitled “Method and Apparatus for Constructing a Networking Database and System” (hereafter “Weinreich”)

D. Statement Pointing Out Each Substantial New Question of Patentability – 37 C.F.R. § 1.915(b)(3)

This Request for *Inter Partes* Reexamination is based upon the prior art documents identified on the attached Patent and Trademark Office Form SB/08. All but one of these documents were never cited or considered during the original prosecution of the patent, and the one reference that was cited during the original prosecution is being presented herein with a material new argument and interpretation, and therefore, is presented in a new light. Each reference raises a substantial new question of patentability (“SNQ”) for claims 1 and 7 of the ’985 Patent. A more detailed identification of each new SNQ is provided in Section VI, beginning on page 16. The SNQs presented by this Request for *Inter Partes* Reexamination are listed below:

No.	Substantial New Questions of Patentability (as Proposed Rejections)
1	Claims 1 and 7 are <i>anticipated</i> by Robertson
2	Claims 1 and 7 are <i>obvious</i> over Weinreich in view of Robertson
3	Claims 1 and 7 are <i>obvious</i> over Bezos in view of Robertson
4	Claims 1 and 7 are <i>obvious</i> over Robertson in view of Weinreich and Bezos

E. Copies of Every Piece of Prior Art Relied Upon or Referred To – 37 C.F.R. § 1.915(b)(4)

Copies of every patent and printed publication relied upon or referred to in this Request for *Inter Partes* Reexamination are contained in **Exhibits B** through **F**. All of the patent and printed publications relied upon or referred to in this Request for *Inter Partes* Reexamination are in the English language, and thus no translations are provided.

F. Copy of the Patent for Which Reexamination Is Requested – 37 C.F.R. § 1.915(b)(5)

A copy of the '985 patent is attached to this Request for *Inter Partes* Reexamination as **Exhibit A**. To the Requester's knowledge, the '985 patent remains in force. The Requester is aware of no disclaimer, certificate of correction, or reexamination certificate for the '985 patent. 37 C.F.R. § 1.915(b)(5).

G. Certification of Service on the Patent Owner – 37 C.F.R. § 1.915(b)(6)

The undersigned certifies that a complete and entire copy of this Request for *Inter Partes* Reexamination and all supporting documents have been provided to the Patent Owner by serving the attorneys of record at the U.S. Patent and Trademark Office for the '985 Patent as set forth in 37 C.F.R. § 1.33(c):

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.
1940 Duke Street
Alexandria, VA 22314

A complete and entire copy of this Request for *Inter Partes* Reexamination is also being served on the attorneys representing the patent owner in the Concurrent Litigation.

H. Certification that Estoppel Provisions do not Prohibit *Inter Partes* Reexamination - 37 C.F.R. § 1.915(b)(7)

The Requester, Facebook, Inc. (hereinafter "Facebook") hereby certifies that it is not prohibited under the provisions of 35 U.S.C. § 317 or 37 C.F.R. § 1.907 from filing this Request for *Inter Partes* Reexamination. Facebook may request *inter partes* reexamination because neither it nor those in privity with it have previously requested *inter partes* reexamination of the '985 patent. 37 C.F.R. § 1.907; 35 U.S.C. § 317(b); MPEP § 2612.

I. Statement Identifying Real Party in Interest - 37 C.F.R. § 1.915(b)(8)

Facebook, Inc., as the real party in interest, requests reexamination of the '985 patent in view of the substantial new questions of patentability (SNQs) presented herein. Facebook reserves all rights and defenses available including, without limitation, defenses as to invalidity and unenforceability. By filing this Request for *Inter Partes* Reexamination in compliance with the Patent Rules, Facebook does not represent, agree, or concur that the '985 patent is enforceable. Facebook specifically asserts that claims 1 and 7 are in fact not patentable and as such the U.S. Patent and Trademark Office should reexamine and find claims 1 and 7 unpatentable and cancel these claims, rendering these claims of the '985 patent null, void, or otherwise unenforceable.

II. Identification and Status of Pending Litigation Involving the '985 Patent

The '985 patent is the subject of pending litigation, styled *Mekiki Co., Ltd. and Mekiki Creates Co., Ltd. v. Facebook, Inc.*, pending in the U.S. District Court for the Northern District of California, Case No. 10-cv-2721-LHK ("Concurrent Litigation"), before the Honorable Lucy Koh.

The patent owner initiated the Concurrent Litigation on October 7, 2009 in the U.S. District Court for the District of Delaware, and the case was transferred to the Northern District of California on June 7, 2010. Plaintiffs allege that Defendants infringe the '985 patent, as well as U.S. Patent Nos. 7,493,342 (the "'342 patent") and 7,496,603 (the "'603 patent"). The '603 patent resulted from a divisional application of U.S. Patent Application No. 11/073,542, which resulted in the '342 patent, which was a divisional application of U.S. Patent Application No. 09/978,030, the application that resulted in the '985 patent. Facebook is filing separate requests for *inter partes* reexamination for the '342 patent and the '603 patent.

Facebook answered the Complaint on December 28, 2009, denying that it infringes the patents-in-suit and asserting that the patents are invalid. The Court held a scheduling conference on November 5, 2010. Plaintiff served its Disclosure of Asserted Claims and Infringement Contentions pursuant to Northern District of California Patent Local Rule 3-1 on

November 19, 2010. A copy of the infringement contentions with respect to the '985 patent is attached as **Exhibit G**.

The Concurrent Litigation is currently in the early stages of discovery. No claim construction order has issued and no trial date has been set.

III. Overview of the '985 Patent

A. Summary of the Disclosure and Claims of the '985 Patent

The '985 patent purports to disclose a computer-implemented system for registering human relationships, which is used to establish relationships with other members who have a variety of occupations and or backgrounds in order to obtain expert knowledge or information. ('985 Patent, Abstract.) The "Background of the Invention" asserts that people wishing to locate and become acquainted with specialists in a given field have "no efficient system or method which is usable" to do so, and that no existing system allows a user to "establish wide and close relationships with a great number of people." (*Id.*, 1:20-27.)

The '985 patent purports to address these perceived deficiencies through a computer-implemented "human relationships registering system" that stores personal data about members and their relationships with other members. The system disclosed in the '985 patent "provides a Web site for constituting the human relationships registering system, stores names and personal data of registered members, and has a database for retrieving the names and personal data of the registered members." (*Id.*, 4:27-31.) Independent claim 1 recites:

1. A server connected to terminals used by members via a network, the server being configured to establish and update relationships between the members, the server comprising:
 - a database configured to store personal attributes of each member, the personal attributes including an identification code, a name, a specialized field, and relationship coefficient data indicating degrees of relationship between each member and other members;
 - a message communicator configured to communicate a first message from one member to another member and configured to communicate a

respective response to the first message from the another member to the one member, the response establishing a relationship between the one member and the another member;

a database update unit configured to update, when the relationship is established between the one member and the another member, the relationship coefficient data indicating degrees of relationship between (1) the one member and the another member, (2) the one member and members having relationships with the another member, and (3) the another member and members having relationships with the one member; and

a data retriever configured to identify target members having personal attributes satisfying one or more key words of a search criteria, the key words including at least a relationship coefficient data value indicating the degree of relationship between the target members and a particular member;

wherein the key words include a minimum or maximum relationship coefficient data value indicating a maximum or minimum degree of relationship between the target members and the particular member.

The other claim of the '985 patent for which reexamination is requested, independent claim 7, recites similar features in the form of a method claim.

B. Prosecution History of the '985 Patent

On October 17, 2001, the applicants filed the application that resulted in the '985 Patent, which was assigned Application Ser. No. 09/978,030 (the "'030 Application"). The '030 Application claims priority to two Japanese patent applications filed on October 17, 2000 and October 9, 2001.

On February 26, 2004, the U.S. Patent and Trademark Office (the "PTO") issued its first Office Action rejecting all of the claims of the '030 Application under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,175,831 to Weinreich et al. ("Weinreich"). Office Action (February 26, 2004). The applicants filed their response on June 28, 2004, in which all original claims 1-14 were canceled, and new claims 15-26 were proposed in an attempt to distinguish the claims from Weinreich. Response (June 28, 2004), at pages 2-5. In the response, the applicants attempted to distinguish newly added claims 15 and 20 over Weinreich by arguing

that Weinreich does not teach a “data retriever configured to identify members having relationship coefficients indicating a specific degree of relationship between those members and a particular member. Thus, the teachings of Weinreich would not enable a user to search for other members of the network that engage in a particular occupation *and* that are separated from another particular member (including but not limited to the user) by a specified degree of separation.” Response (June 28, 2004), at page 8. The applicant contended that Weinreich only disclosed searching for members satisfying a given search criteria, but there is “no indication that a specific degree of separation may be included as a component of that search.” Response (June 28, 2004), at pages 8-9.

On December 9, 2004, the PTO issued a Notice of Allowance, including an Examiner’s Amendment authorized via a telephone interview conducted on December 2, 2004. Notice of Allowance (December 9, 2004), at page 2. This amendment added to the end of claims 15 and 20 the following limitation:

wherein the key words include a minimum or maximum relationship coefficient data value indicating a maximum or minimum degree of relationship between the target members and the particular member.

Notice of Allowance (December 9, 2004), at pages 3, 4.

The Notice of Allowance included a statement of Reasons for Allowance. The PTO found that Weinreich failed to suggest the following limitations: “a database for updating and data retrieving method, the relationship coefficient data indicating degrees of relationship between the one member and the another member, the one member and members having relationships with the another member, and the another member and members having relationships with the one member, a data retriever configured to identify target members having personal attributes satisfying one or more key words of a search criteria, the key words including at least a relationship coefficient data value indicating the degree of relationship between the target members and a particular member, wherein the key words include a minimum or maximum relationship coefficient data value indicating a maximum or minimum degree of relationship between the target members and the particular member” in combination with other limitations

of the dependent and independent claims.¹ Notice of Allowance (December 9, 2004), at pages 5-6. The '030 Application issued as the '985 patent on April 12, 2005.

IV. Priority Date to Which the '985 Patent is Entitled

As noted above, the applicants filed the '030 Application, on October 17, 2001. The '030 Application in turn claims priority back to two earlier Japanese patent applications: (1) Japanese Patent Application No. 2001-311528, which was filed in Japan on October 9, 2001; and (2) Japanese Patent Application 2000-316496, which was filed in Japan on October 17, 2000. Both of these applications were filed in the Japanese language.

The claims of the '985 patent are not entitled to the earliest-filed October 17, 2000 Japanese application because the applicants subsequently added new matter to their applications that is critical to the elements of the claims of the '985 patent for which Requester is seeking reexamination. A copy of the October 17, 2000 Japanese application (as filed in the Japanese language), and an English translation of that application procured by the Requester, is attached as **Exhibit H**.² In particular, each claim of the '985 patent for which reexamination is requested requires, among other things, that one member's identification code be stored "in association with" another member's identification code. The disclosure in the specification addressing these elements appears in a discussion regarding the storage of "relationship coefficients," the mechanism by which the alleged invention maintains and tracks human relationships. ('985 patent, 7:24-8:39, Figs. 8-9 (portions of specification describing relationship coefficients).) This disclosure was not included in the October 17, 2000 Japanese application. (See Ex. H at [0043-0045], Figs. 8-9 (demonstrating that the relationship coefficient disclosures, including Figs. 8 and 9 from the '603 patent specification are not included).)

The Federal Circuit has held that unless the Patent Office explicitly considered whether the disclosures of an earlier-filed application support the claims (which did not occur here), the

¹ This statement is unclear as to which precise elements were not found to be suggested by Weinreich, as the language identified by the Examiner for the reasons of allowance did not track the claim language. In light of the prosecution history that preceded it, it is likely the Examiner was focusing primarily on the limitation added by the Examiner's amendment.

² The English translation immediately follows the Japanese application in **Exhibit H**.

patent owner bears the burden of establishing entitlement to the priority date of the earlier-filed application. See *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1303-07, 86 U.S.P.Q.2d 1385, 1388-89 (Fed. Cir. 2008). To establish entitlement to the priority date of the provisional application, therefore, it must be shown that the October 17, 2000 application discloses the claimed invention in the manner required by 35 U.S.C. § 112 ¶ 1, which cannot be shown here given the absence of the “relationship coefficient” and other disclosures from the October 17, 2000 Japanese application. For at least these reasons, therefore, the priority date to which the '985 patent is entitled is no earlier than October 9, 2001.

V. Summary and § 102/103 Date Qualification of the Prior Art

A. Robertson

U.S. Patent No. 6,269,369 to Brian D. Robertson entitled “Networked Personal Contact Manager” (“Robertson”) issued on July 31, 2001 from an application filed on November 2, 1997. Robertson qualifies as prior art to the '985 patent under 35 U.S.C. § 102(e) and § 102(a).

Robertson discloses a computerized contact management system that implements a “method of creating links between members over a network and providing information to each member based on levels of permission maintained by the other members to which they are linked.” (Robertson, 1:7-10.) The system disclosed in Robertson was implemented in a web-based social networking website known as “PlanetAll.” (Robertson, 4:38-41.)

The system in Robertson allows each member to enter identification and other information about itself, such as its name, e-mail address, geographic location (e.g., city and postal address), birthdate, group(s) with which the user is affiliated, and other personal information. (Robertson, 5:5-19, 5:33-64.) This information is stored in one or more tables in a relational database. (Robertson, 4:46-5:4.)

Each member can register and record human relationships with other members. A member can initiate a human relationship with a second member by establishing a “link” between the two members, e.g., by adding the second member to the first member’s personal address book. (Robertson, 2:66-3:4.) The system “maintains a database of information about

the second users to whom the first user has established a link.” (Robertson, 3:13-15.) The second member is then notified that the first member has attempted to establish a human relationship, and is given the opportunity to confirm or reciprocate that relationship. (Robertson, 8:14-19 (“If a first user specifies a second user whom the first user would like to add to his personal address book, as explained in the description of FIG. 8, the second user will receive notification (issued by the contact manager program 343--FIG. 5) that the first user has ‘linked’ to him.”).) An example of how the second user is notified is shown in Figure 11:

The following members have linked to you and have requested that you reciprocate:

- Jun Ohama
- Lee Rogers

(Robertson, Fig. 11 (partial figure shown).)

The second user can reciprocate the relationship with the first user, for example, by initiating its own link or returning the link to the first user: “Each second user to whom the first user has initiated a link will then be informed of the link, and can then return the link and specify data field permissions for the first user” (Robertson, 12:28-32.) The first user, in turn, is notified of the second user’s action. (Robertson, 12:37-40.)

B. Weinreich

U.S. Patent No. 6,175,831 to Andrew P. Weinreich et al. entitled “Method and Apparatus for Constructing a Networking Database and System” (“Weinreich”) issued on January 16, 2001 from an application filed on January 17, 1997. Weinreich qualifies as prior art to the ’985 patent under 35 U.S.C. § 102(e) and § 102(a).

Weinreich purports to disclose a computerized system that includes “a networking database in which a plurality of individuals register and become respectively linked with one or more other registered individuals by defined relationships.” (Weinreich, 2:21-26.) The system disclosed in Weinreich, for purposes of this Request, is similar in many respects to the systems described in Robertson and Bezos ’832, above. Weinreich discloses a “networking database system (NDS)” that includes a plurality of computers, communications software, web server

software, a relationship database and other components. (Weinreich, 5:23-38, 6:4-10.) The database stores personal information about a user, including its name and e-mail address, and can include other personal information such as the user's occupation, hobbies and skills. (Weinreich, 7:9-15, 18:2-9.)

The system and database in Weinreich allows each member to register and record human relationships with other members. In particular, a member can press a button on a website to add new relationships with a second user:

"In the embodiment, referring to FIGS. 9A-9B, at the Web-site 90 personal profile screen 102, a user may add a new relationship by clicking on 'Add New Relationships'. The user is then required to submit selected information. In the preferred embodiment, the information is input into four separate fields displayed on profile page 102: first name, last name, e-mail address, and relationship type (father, mother, employee, etc.) To initiate the process, the user is required to at least enter a last name, an e-mail address and a relationship type." (Weinreich, 14:13-22.)

The second user (e.g., USER2) subsequently receives a message asking it to confirm the relationship with the first user (e.g., USER1): "an email is sent to USER2 inviting him to confirm the relationship to USER1 and USER1 is notified that this will occur." (Weinreich, 14:35-40.) A second user can confirm its relationship with a first user through a web-based interface, as shown in Figure 9A below:



(Weinreich Fig. 9A (partial figure shown).)

C. Bezos (and its Incorporated Provisional Applications)

U.S. Patent No. 7,433,832 B1 to Jeffrey P. Bezos et al. entitled "Methods and Systems for Distributing Information Within a Dynamically Defined Community" ("Bezos '832") issued

on October 7, 2008 from an application filed on November 17, 2000. Bezos '832 qualifies as prior art to the '985 patent under 35 U.S.C. § 102(e).

Bezos '832 was filed after the first Japanese application to which the '985 patent attempts to claim priority, Japanese Application 2000-316496 (filed October 17, 2000), but before the second Japanese Application No. 2001-311528 (filed October 9, 2001) and the subsequent '030 Application filed in the United States on October 17, 2001. The earliest October 17, 2000 Japanese application, however, presents no obstacle to considering Bezos '832 as § 102(e) prior art for at least two reasons. First, as explained above in Part IV on page 11, the claims of the '985 patent for which reexamination is requested are not entitled to the priority date of the October 17, 2000 Japanese application.

Second, even if the claims of the '985 patent could claim priority back to the October 17, 2000 Japanese application, Bezos '832 itself claims priority to U.S. Provisional Application Nos. 60/166,547 and 60/166,664, both filed on November 19, 1999, both incorporated by reference in their entirety into Bezos '832. (Bezos '832, 1:7-10.) The invalidating disclosures from Bezos '832 patent were also present in the incorporated provisional applications, as shown in the claim chart in Part VII.C beginning on page 44. Bezos '832 is therefore entitled to a § 102(e) priority date of no later than November 19, 1999 based on the earlier provisional applications. *See Ex parte Yamaguchi*, Appeal No. 2007-4412, 88 U.S.P.Q.2d 1606, 1609, 2008 WL 4233306, at *3-4 (BPAI Aug. 29, 2008) (holding that patent claiming the benefit of earlier-filed provisional application is prior art under § 102(e) as of the filing date of the provisional application). A copy of the issued Bezos '832 patent is attached as **Exhibit C**, and a copy of the two incorporated provisional applications are attached as **Exhibits D and E**.

Bezos '832 discloses a human relationship registering system that is similar in many respects to the one disclosed in Robertson. Bezos '832 was assigned to the same company as Robertson (Amazon.com), and in fact, Mr. Robertson is one of the inventors on Bezos '832.

The system in Bezos '832 is designed to allow users to create human relationships with other users to facilitate more effective sharing of information (such as product reviews) to make better product purchasing decisions. (Bezos '832, 13:19-39.) Bezos '832 claims that "one

embodiment of the present invention provides a novel infrastructure that captures and stores customer-to-customer relationships for future use.” (Bezos ’832, 13:40-42.) This allegedly novel infrastructure “facilitates the sharing of other types of customer information, such as wish lists, reviews, auctions, favorite artists, instant recommendations, shipping address, and so on.” (Bezos ’832, 13:43-46.)

The system maintains a “customer account database” that includes identification and other information about each user, such as the user’s name, nickname, purchase history and other personal information. (Bezos ’832, 20:29-35.) The system and database in Bezos ’832 allows each member to register and record human relationships with other members. Each member can “define a ‘Personal Purchase Circle’ set that includes a list or designation of people and/or groups that a customer has given permission to see his or her purchases, opinions, and/or ratings.” (Bezos ’832, 13:49-52.) In particular, a member can invite a second member to join its “Personal Purchase Circle” as follows:

“Once a person has been added to a customer's Personal Purchase Circle, a notification or invitation may be provided to the added person, also termed an invitee. For example, the added person may be notified via e-mail or a message on the merchant's Web site that she or he has been added to the customer's Personal Purchase Circle. The notification may contain a link to the customer's profile page, described below, to provide easy access. If the invitee activates the link, the invitation is considered accepted. The customer may be provided with a notification that the invitee has accepted the invitation and/or view the customer's profile page.” (Bezos ’832, 13:66-14:9.)

The customer’s profile page, in turn, contains reviews written by the customer, its purchase history and other personal information the customer has chosen to share with members of its Personal Purchase Circle. (Bezos ’832, Fig. 3A.)

VI. Statement Identifying Each Substantial New Question of Patentability Based On Prior Patents and Printed Publications - 37 C.F.R. 1.915(b)(3)

This Request for *Inter Partes* Reexamination is based on the prior art references cited in Section I. C, beginning on page 4 above. The Requester is submitting herewith a Patent and Trademark Office Form SB/08 listing these references. All but one of the prior art references

cited in this Request for *Inter Partes* Reexamination were not before the Examiner during the prosecution of the application that issued as the '985 patent. These references raise substantial new questions of patentability that are different from those before the Examiner during the original prosecution of the '985 patent. With respect to Weinreich, the only prior art reference in this Request that was cited in the original prosecution, this Request presents that reference in a new light and a material new argument and interpretation. This Request identifies substantial new questions of patentability under § 103 based on the combination of Weinreich and other prior art references that were not cited in the original prosecution.

A. Summary Identification of Substantial New Questions

For ease of reference, the 4 substantial new questions raised by the new prior art are set forth in the chart below, in the form of proposed rejections.

No.	Substantial New Questions for the '985 Patent (as Proposed Rejections)
1	Claims 1 and 7 are <i>anticipated</i> by Robertson.
2	Claims 1 and 7 are <i>obvious</i> over Weinreich in view of Robertson.
3	Claims 1 and 7 are <i>obvious</i> over Bezos in view of Robertson.
4	Claims 1 and 7 are <i>obvious</i> over Robertson in view of Weinreich and Bezos.

A detailed explanation of each substantial new question (SNQ) for each of the new prior art references is provided below.

B. Substantial New Question Raised by Robertson (SNQ Nos. 1, 2, 3, 4)

Robertson raises a substantial new questions of patentability as to claims 1 and 7. Robertson was not of record during the original prosecution of the '985 patent and is therefore new art. A reasonable examiner would consider the teachings of Robertson important in deciding whether or not these claims of the '985 patent are patentable. As explained in the summary provided in Part V.A above at page 12, Robertson discloses a human relationships

registering system in which each member can register and record human relationships with other members. (Robertson, 2:66-3:4, 3:13-15, 8:14-19.)

As explained in Part III.B above, in order to overcome the prior art cited during the original prosecution, the Examiner added the following limitation to claims 1 and 7: “wherein the key words include a minimum or maximum relationship coefficient data value indicating a maximum or minimum degree of relationship between the target members and the particular member.” Notice of Allowance (December 9, 2004), at pages 3, 4.

The system disclosed in Robertson, however, fully discloses that limitation and therefore raises a substantial new question of patentability. In particular, Robertson provides a search function in which a user can specify the minimum degrees of separation between the user and other users who are located in response to the search. A user can specify a “Friends of Friends” search, for example, in which users identified by the search have at least two degrees of separation with the user. (Robertson, 14:63-67 (“The Friends of Friends system allows a first member to search for the names of contacts of their contacts who live in the same city as the first member [and] are affiliated with a group with which the first member is also affiliated.”).) The user can also specify a minimum of three degrees of separation by selecting a search criteria for a “Friends of Friends of Friends” search. (Robertson, 15:35-41.) Robertson, therefore, discloses that the keywords of the search criteria can include a minimum or maximum relationship coefficient data value indicating a maximum or minimum degree of relationship between the user and target users. As explained in Part VII.A below, moreover, Robertson discloses every other element of claims 1 and 7 as well. Robertson, which was not before the Examiner, therefore raises substantial new questions of patentability.

C. Substantial New Question Raised by Weinreich (SNQ Nos. 2, 4)

Weinreich raises a substantial new question of patentability as to claims 1 and 7. A reasonable examiner would consider the teachings of Weinreich important in deciding whether or not these claims of the '985 patent are patentable. As explained in the summary provided in Part V.B above at page 13, Weinreich discloses a human relationships registering system in

which each member can register and record human relationships with other members. (Weinreich, 2:22-26, 7:9-15, 14:13-22.)

Weinreich was cited during the original prosecution of the '985 patent, and was the primary reference relied upon by the Examiner to reject the claims. As explained in Part III.B above, in order to overcome the rejections based on Weinreich, the Examiner added the following limitation to claims 1 and 7: "wherein the key words include a minimum or maximum relationship coefficient data value indicating a maximum or minimum degree of relationship between the target members and the particular member." Notice of Allowance (December 9, 2004), at pages 3, 4.

As explained in the preceding section, however, this element and any other allegedly missing element from Weinreich is fully disclosed by Robertson, which provides a search function in which a user can specify the minimum degrees of separation between the user and other users who are located in response to the search. (Robertson, 14:62-67, 15:35-41.) Robertson was not before the Examiner during the original prosecution of the '985 patent.

The MPEP is clear that, for any reexamination requested on or after November 2, 2002, a substantial new question of patentability can even be based exclusively on art that was cited in the original prosecution. "Determinations on whether a substantial new question of patentability exists in such an instance shall be based upon a fact-specific inquiry done on a case-by-case basis. For example, a substantial new question of patentability may be based solely on old art where the old art is being presented/viewed in a new light, or in a different way, as compared with its use in the earlier examination(s), in view of a material new argument or interpretation presented in the request." MPEP § 2242.

Weinreich is presented in this Request in a new light and in a different way than the original prosecution. Weinreich is cited in this Request in combination with Robertson, which was not before the Examiner. The combination of Weinreich and Robertson presents a new combination and substantial new ground of invalidity that could was never considered during the original prosecution. This combination renders claims 1 and 7 of the '985 patent obvious

under § 103(a) as explained in Part VII.B, beginning on page 31. For at least these reasons, therefore, Weinreich presents a substantial new question of patentability as to claims 1 and 7.

D. Substantial New Question Raised by Bezos (SNQ Nos. 3, 4)

Bezos raises a substantial new question of patentability as to claims 1 and 7. Bezos was not of record during the original prosecution of the '985 patent and is therefore new art. A reasonable examiner would consider the teachings of Bezos important in deciding whether or not these claims of the '985 patent are patentable. As explained in the summary provided in Part V.C above at page 14, Bezos discloses a human relationships registering system in which each member can register and record human relationships with other members. (Bezos '832, 13:40-46, 20:29-35, 13:66-14:9, Fig. 3A.) As explained in Part VII.C below, moreover, Bezos discloses many other elements of claims 1 and 7 as well, and in combination with Robertson, renders claims 1 and 7 obvious. Bezos, which was not before the Examiner, therefore raises substantial new questions of patentability.

VII. Detailed Explanation of the Pertinence and Manner of Applying the Prior Art References to Every Claim for Which Reexamination is Requested

As required under 37 C.F.R. § 1.915(b)(3), a detailed explanation of the pertinence and manner of applying the prior art references to all of the claims for which reexamination is requested is provided below.

As the Federal Circuit has emphasized, claims in reexamination must be “given their broadest reasonable interpretation consistent with the specification,” a standard that is fundamentally different from the manner in which claims are interpreted in litigation:

In PTO examinations and reexaminations, the standard of proof – a preponderance of evidence – is substantially lower than in a civil case; there is no presumption of validity; and the examiner is not attacking the validity of the patent but is conducting a subjective examination of the claims in light of prior art. And unlike in district courts, in reexamination proceedings claims are given their broadest reasonable interpretation, consistent with the specification.

In re Swanson, 540 F.3d 1368, 1377-78, 88 U.S.P.Q.2d 1196, 1203 (Fed. Cir. 2008) (internal citations and quotation marks omitted).

Therefore, by applying the claim language as set forth in the explanations provided below, the Requester is not admitting and/or acquiescing to the correctness and/or reasonableness of any particular construction for the purposes of any litigation or for any other purpose. To the extent any interpretation can be discerned from the analysis provided in this Request, such interpretation does not necessarily reflect the construction that the Requester believes should be given to the claims outside reexamination but is consistent with the manner in which the patent owner has attempted to apply them in the Concurrent Litigation.

A. Anticipation of Claims 1 and 7 by Robertson (SNQ No. 1)

A claim chart setting forth a detailed explanation of the pertinence and manner of applying Robertson to claims 1 and 7 of the '985 patent is set forth below. Robertson anticipates these claims and therefore renders them invalid under 35 U.S.C. § 102(e). For the convenience of the Examiner, the Requester has divided up the elements of each claim as shown below (identified with bracketed letters and numbers) to facilitate easier comparison of the claim language with the disclosures of the prior art. No change of meaning is intended. Unless otherwise noted, underlining and highlighting of text and images reproduced from the prior art were added by the Requester for clarity and emphasis.

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 1 – Anticipation of Claims 1 and 7 by U.S. Patent No. 6,269,369 (Robertson)</p>
<p>1. A server connected to terminals used by members via a network, the server being configured to establish and update relationships between the members, the server comprising:</p>	<p><i>Robertson discloses an apparatus including a server (e.g., server computer) connected to terminals (e.g., client computers) via a network (e.g., Internet and World Wide Web):</i></p> <p><i>“As represented in FIG. 5, the preferred embodiment follows a standard Internet architecture, in which <u>client computers 370</u> and a <u>server computer 330</u> are connected via the World Wide Web 360 and modems 338, 378 or other communications channels. <u>A user accesses the server 360</u> via a client computer 370 operating a web</i></p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 1 – Anticipation of Claims 1 and 7 by U.S. Patent No. 6,269,369 (Robertson)</p>
	<p>browser 382 or other software application residing in memory 374 that allows it to display information downloaded from a server computer 330.” (4:27-35.)</p> <p><i>Server computer 330 includes database 340 with Friend Table 460, which is configured to establish and update relationships between members:</i></p> <p>“<u>The server computer system 330</u> . . . interacts with the client computers 370 and <u>a user information database 340.</u>” (4:35-39.)</p> <p>“FIG. 6 outlines the data structure of the relational <u>database 340</u> in the preferred embodiment, in which seven tables 350 are employed to enable most of the functionality of the present invention: . . . (2) <u>Friend Table 460;</u>...” (4:61-66.)</p> <p>“The Friend Table 460 is a key to the present invention because it relates users to each other. <u>Each record in the table represents a relationship between one user, identified by CustomerID 460-4, and another, identified by FriendID 460-6, with a certain level of permissions 460-10.</u>” (5:20-24.)</p>
<p>[a] a database configured to store personal attributes of each member, the personal attributes including</p>	<p><i>Robertson discloses a database (e.g., database 340):</i></p> <p>“<u>The server computer system 330</u> . . . interacts with the client computers 370 and <u>a user information database 340.</u>” (4:35-39.)</p> <p>“A distinction over the prior art is that the <u>database 340</u> in the present invention is necessarily a relational database built from a set of relational tables 350.” (4:46-48.)</p> <p><i>Robertson discloses that the database (e.g., database 340) is configured to store personal attributes of each member:</i></p> <p>“FIG. 6 outlines the data structure of the relational database 340 in the preferred embodiment, in which seven tables 350 are employed to enable most of the functionality of the present invention: (1) <u>Customer Table 440;</u> . . .” (4:61-65.)</p> <p>“The Customer Table 440 contains one record for each unique user. The key field in this table is <u>CustomerID 440-</u></p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 1 – Anticipation of Claims 1 and 7 by U.S. Patent No. 6,269,369 (Robertson)</p>
	<p><u>2</u>. All information stored in the various database tables relating to a particular member is linked together by a unique number in this field.” (5:5-19.)</p> <p><i>The specific personal attributes are detailed below.</i></p>
<p>[a1] an identification code,</p>	<p><i>Robertson discloses that the personal attributes include an identification code.</i></p> <p><i>Robertson discloses several different alternative types of identification codes (e.g., CustomerID, E-mail address, City):</i></p> <p>“The Customer Table 440 contains one record for each unique user. The key field in this table is CustomerID 440-2. All information stored in the various database tables relating to a particular member is linked together by a unique number in this field. Other important fields in this table include information used by users to login to the system (Username 440-6 and Password 440-8), <u>information which helps users identify each other (First Name 440-10, Last Name 440-12, and E-mail 440-20)</u>, information required to provide Birthday Notification (Birthday 440-16) and information required to provide Crossing Paths notification (<u>CityID 440-14</u>).” (5:5-15.)</p> <p><i>Because each of these pieces of information (e.g., CustomerID, Name, E-Mail address, City) is used by the system of Robertson to identify the member, each provides a separate example of an identification code.</i></p>
<p>[a2] a name,</p>	<p><i>Robertson discloses that the personal attributes include a name:</i></p> <p>“Other important fields in this table include information used by users to login to the system (<u>Username 440-6</u> and Password 440-8), information which helps users identify each other (<u>First Name 440-10, Last Name 440-12, and E-mail 440-20</u>)” (5:9-15.)</p>
<p>[a3] a specialized field, and</p>	<p><i>Robertson discloses that the personal attributes include a specialized field (e.g., Birthdate):</i></p> <p>“Other important fields in this table include information used by users to login to the system (Username 440-6 and Password 440-8), information which helps users identify</p>

U.S. Patent No. 6,879,985 Claim Language	SNQ No. 1 – Anticipation of Claims 1 and 7 by U.S. Patent No. 6,269,369 (Robertson)
	<p>each other (First Name 440-10, Last Name 440-12, and E-mail 440-20), <u>information required to provide Birthday Notification (Birthday 440-16)</u> and information required to provide Crossing Paths notification (CityID 440-14).” (5:5-15.)</p>
<p>[a4] relationship coefficient data indicating degrees of relationship between each member and other members;</p>	<p><i>Robertson discloses that the personal attributes include relationship coefficient data indicating degrees of relationship between each member and other members.</i></p> <p><i>In particular, Robertson discloses a “Friend Table” that stores records of each user and whether it has established a relationship with another identified user.</i></p> <p><u>“The Friend Table 460 is a key to the present invention because it relates users to each other.</u> Each record in the table represents a relationship between one user, identified by CustomerID 460-4, and another, identified by FriendID 460-6, with a certain level of <u>permissions 460-10.</u>” (5:20-24.)</p> <p><i>The entries in the Friend Table indicate the degrees of relationship between the users (e.g., whether they are “friends”) with other users. Greater degrees of relationship (e.g., “friends of friends”) are also available through the “permissions” field of the Friend table:</i></p> <p><u>“If member B grants Friends of Friends Information 600-14 permission to member A, if member A searches for information about the contacts of his/her contacts, such as who lives in a particular city or is associated with a particular group, information from member B’s circle of contacts will be included in the search results, if applicable.”</u> (9:40-46.)</p>
<p>[b] a message communicator</p>	<p><i>Robertson discloses a message communicator (e.g., software 342 and contact manager program 343 running on server 330) that is responsible for communicating messages from and to members:</i></p> <p><u>“The server computer system 330 runs server software 342, including the network-computer-based personal contact manager 343 of the present invention, which interacts with the client computers 370 and a user</u></p>

U.S. Patent No. 6,879,985 Claim Language	SNQ No. 1 – Anticipation of Claims 1 and 7 by U.S. Patent No. 6,269,369 (Robertson)
	<p>information database 340. In a commercial embodiment of the present invention, the personal contact manager 343 is the heart of a Web-based personal contact management service called PlanetAll.” (4:35-42.)</p>
<p>[b1] configured to communicate a first message from one member to another member and</p>	<p><i>Robertson discloses that the message communicator is configured to communicate a message (e.g., a request by a user to add another user to the user’s address book) from one member to another member:</i></p> <p><u>“If a first user specifies a second user whom the first user would like to add to his personal address book, as explained in the description of FIG. 8, the second user will receive notification (issued by the contact manager program 343--FIG. 5) that the first user has ‘linked’ to him.” (8:14-19.)</u></p> <p><u>“Each second user to whom the first user has initiated a link will then be informed of the link, and can then return the link and specify data field permissions for the first user, if any, as explained in the description of FIG. 9.” (12:28-32.)</u></p>
<p>[b2] configured to communicate a respective response to the first message from the another member to the one member, the response establishing a relationship between the one member and the another member;</p>	<p><i>Robertson discloses that the message communicator is configured to communicate a response to the first message from the another member to the one member, the response establishing a relationship between the one member and the another member (e.g., the second user “returning” the link to the first user thereby agreeing to establish a relationship, upon which the first user receives a notification):</i></p> <p><u>“If the second user chooses to return the link to the first user, the preferred embodiment of the present invention will display the pseudo GUI 600 shown in FIG. 9 with the name of the first user 600-5, allowing the second user to set data field permissions for the first user.” (8:19-23.)</u></p> <p><u>“Each second user to whom the first user has initiated a link will then be informed of the link, and can then return the link and specify data field permissions for the first user, if any, as explained in the description of FIG. 9.” (12:28-32.)</u></p> <p><u>“In another portion of the member update pseudo GUI</u></p>

U.S. Patent No. 6,879,985 Claim Language	SNQ No. 1 – Anticipation of Claims 1 and 7 by U.S. Patent No. 6,269,369 (Robertson)
	650 shown in FIG. 11, if a second user has initiated a link to a first user, <u>the first user will be automatically notified 650-18 that a link has been made.</u> ” (12:37-40.)
<p>[c] a database update unit configured to update, when the relationship is established between the one member and the another member, the relationship coefficient data indicating degrees of relationship between (1) the one member and the another member, (2) the one member and members having relationships with the another member, and (3) the another member and members having relationships with the one member; and</p>	<p><i>Robertson discloses a database update unit (e.g., server 330, server hard disks 336, database 340, database tables 350).</i></p> <p>“A distinction over the prior art is that the database 340 in the present invention is necessarily a relational database built from a set of <u>relational tables 350</u>. In the conventional manner, both the <u>server 330</u> and the clients 370 <u>include</u> respective <u>storage devices</u>, such as <u>hard disks 336</u> and 376 and operate under the control of operating systems 344, 384 executed in RAM 334, 374 by the CPUs 332, 372.” (4:46-52.)</p> <p><i>The database update unit is configured to update, when the relationship is established between the one member and the another member, the relationship coefficient data (e.g., the information in the Friend Table 460):</i></p> <p>“<u>The Friend Table 460 is a key to the present invention because it relates users to each other.</u> Each record in the table represents a relationship between one user, identified by CustomerID 460-4, and another, identified by FriendID 460-6, with a certain level of permissions 460-10.” (5:20-24.)</p> <p>“Referring now to FIG. 13, a diagram illustrating the Friends of Friends system is shown. <u>The Friends of Friends system allows a first member to search for the names of contacts of their contacts who live in the same city as the first member [and] are affiliated with a group with which the first member is also affiliated.</u>” (14:62-67.)</p> <p><i>The relationship coefficient data indicates degrees of relationship between (1) the one member and the another member (e.g., a first user and a second user), (2) the one member and members having relationships with the another member (a first member and the contacts of his contacts, or “friends of friends”), and (3) the another member and members having relationships with the one member (e.g., the</i></p>

U.S. Patent No. 6,879,985 Claim Language	SNQ No. 1 – Anticipation of Claims 1 and 7 by U.S. Patent No. 6,269,369 (Robertson)
	<p><i>second user and the contacts of the first user, or the second user's "friends of friends").</i></p> <p><i>For example, when a first user adds a second user as his friend, the Friend Table 460 is updated with a record of the relationship between these users, thus updating the degree of relationship between the one member and the another member.</i></p> <p><u>"The Friend Table 460 is a key to the present invention because it relates users to each other.</u> Each record in the table represents a relationship between one user, identified by CustomerID 460-4, and another, identified by FriendID 460-6, with a certain level of permissions 460-10." (5:20-24.)</p> <p><i>Further, when the first user uses the Friends of Friends system, the second user's contacts will now be included as contacts of the first user's contacts, or the first user's "friends of friends." Thus, upon the formation of the relationship between the first user and the second user, relationship coefficient data indicating degrees of relationship between the first user and the friends of the second user is updated to reflect their status as "friends of friends." Similarly, the relationship coefficient data indicating degrees of relationship between the second user and the friends of the first user is updated to reflect their status as "friends of friends."</i></p> <p><u>"Referring now to FIG. 13, a diagram illustrating the Friends of Friends system is shown. The Friends of Friends system allows a first member to search for the names of contacts of their contacts who live in the same city as the first member [and] are affiliated with a group with which the first member is also affiliated."</u> (14:62-67.)</p> <p><u>"The present invention is not limited to the search criteria or levels of separation in the preferred embodiment. The database architecture in the present invention is flexible to allow searches to be extended to more than one degree of separation. For instance, it would be possible to add a Friends of Friends of Friends search feature. The architecture is also flexible to allow new search criteria to</u></p>

U.S. Patent No. 6,879,985 Claim Language	SNQ No. 1 – Anticipation of Claims 1 and 7 by U.S. Patent No. 6,269,369 (Robertson)
	be added.” (15:35-41.)
<p>[d] a data retriever configured to identify target members having personal attributes satisfying one or more key words of a search criteria, the key words including at least a relationship coefficient data value indicating the degree of relationship between the target members and a particular member;</p>	<p><i>Robertson discloses a data retriever (e.g., software 342 and contact manager program 343 running on server 330 and user information database 340) that is responsible for interacting with member terminals and the database:</i></p> <p>“The server computer system 330 runs <u>server software 342, including the network-computer-based personal contact manager 343 of the present invention, which interacts with the client computers 370 and a user information database 340.</u> In a commercial embodiment of the present invention, the personal contact manager 343 is the heart of a Web-based personal contact management service called PlanetAll.” (4:35-42.)</p> <p><i>Robertson discloses that the data retriever is configured to receive one or more key words of a search criteria including at least a relationship coefficient data value indicating the degree of relationship between the target members and a particular member. For example, a user can specify a “Friends of Friends” search, for example, specifying a relationship coefficient to locate users at least two degrees separated from the user.</i></p> <p>“Referring now to FIG. 13, a diagram illustrating the Friends of Friends system is shown. <u>The Friends of Friends system allows a first member to search for the names of contacts of their contacts who live in the same city as the first member [and] are affiliated with a group with which the first member is also affiliated.</u>” (14:62-67.)</p> <p><i>The user can also specify a minimum of three degrees of separation by selecting a search criteria for a “Friends of Friends” search.</i></p> <p>“The present invention is not limited to the <u>search criteria or levels of separation in the preferred embodiment.</u> The database architecture in the present invention is flexible to allow searches to <u>be extended to more than one degree of separation.</u> For instance, it would be possible to add a <u>Friends of Friends of Friends search feature.</u> The architecture is also flexible to allow new search criteria to</p>

U.S. Patent No. 6,879,985 Claim Language	SNQ No. 1 – Anticipation of Claims 1 and 7 by U.S. Patent No. 6,269,369 (Robertson)
	be added.” (15:35-41.)
<p>[e] wherein the key words include a minimum or maximum relationship coefficient data value indicating a maximum or minimum degree of relationship between the target members and the particular member.</p>	<p><i>Robertson discloses that the key words include a minimum or maximum relationship coefficient data value (e.g., selection of “friends of friends” or “friends of friends of friends” search) indicating a maximum or minimum degree of relationship between the target members and the particular member (e.g., second or third degree relationships):</i></p> <p>“Referring now to FIG. 13, a diagram illustrating the Friends of Friends system is shown. <u>The Friends of Friends system allows a first member to search for the names of contacts of their contacts who live in the same city as the first member</u> [and] are affiliated with a group with which the first member is also affiliated.” (14:62-67.)</p> <p>“The present invention is not limited to the <u>search criteria</u> or levels of separation in the preferred embodiment. The database architecture in the present invention is flexible to allow <u>searches to be extended to more than one degree of separation</u>. For instance, it would be possible to add a <u>Friends of Friends of Friends search feature</u>. The architecture is flexible to allow new search criteria to be added.” (15:35-41.)</p>
<p>7. A method of establishing and updating relationships between members using terminals connected to a server, the method comprising:</p>	<p><i>Claim 7 is substantially similar to claim 1, above, except that claim 7 is written as a method claim instead of an apparatus claim. In the interests of brevity, the full explanation provided in connection with claim 1 above will not be repeated here.</i></p> <p><i>As explained in connection with claim 1, Robertson discloses a method of establishing and updating human relationships between members using terminals connected to a server.</i></p>
<p>[a] storing personal attributes of each member, the personal attributes including an identification code, a name, a specialized field, and</p>	<p><i>This limitation is substantially the same as limitation [a] of claim 1, above. In the interests of brevity, the disclosures of claim 1[a] (above) are not repeated here but are incorporated by reference.</i></p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 1 – Anticipation of Claims 1 and 7 by U.S. Patent No. 6,269,369 (Robertson)</p>
<p>relationship coefficient data indicating degrees of relationship between each member and other members;</p>	
<p>[b] communicating a first message from one member to another;</p>	<p><i>This limitation is substantially the same as limitation [b], specifically limitation [b1] of claim 1, above. In the interests of brevity, the disclosures of claim 1[b] and 1[b1] (above) are not repeated here but are incorporated by reference.</i></p>
<p>[c] communicating a respective response to the first message from the another member to the one member, the response establishing a relationship between the one member and the another member;</p>	<p><i>This limitation is substantially the same as limitation [b], specifically limitation [b2] of claim 1, above. In the interests of brevity, the disclosures of claim 1[b] and 1[b2] (above) are not repeated here but are incorporated by reference.</i></p>
<p>[d] updating, when the relationship is established between the one member and the another member, the relationship coefficient data indicating degrees of relationship between (1) the one member and the another member, (2) the one member and members having relationships with the another member, and (3) the another member and members having relationships with the one member; and</p>	<p><i>This limitation is substantially the same as limitation [c] of claim 1, above. In the interests of brevity, the disclosures of claim 1[c] (above) are not repeated here but are incorporated by reference.</i></p>
<p>[e] identifying target members having personal attributes satisfying one or more key words of a search criteria, the key words including at least a relationship coefficient data value indicating the degree of</p>	<p><i>This limitation is substantially the same as limitation [d] of claim 1, above. In the interests of brevity, the disclosures of claim 1[d] (above) are not repeated here but are incorporated by reference.</i></p>

U.S. Patent No. 6,879,985 Claim Language	SNQ No. 1 – Anticipation of Claims 1 and 7 by U.S. Patent No. 6,269,369 (Robertson)
relationship between the target members and a particular member;	
[f] wherein the key words include a minimum or maximum relationship coefficient data value indicating a maximum or minimum degree of relationship between the target members and the particular member.	<i>This limitation is substantially the same as limitation [e] of claim 1, above. In the interests of brevity, the disclosures of claim 1[e] (above) are not repeated here but are incorporated by reference.</i>

B. Obviousness Over Weinreich in View of Robertson (SNQ No. 2)

A claim chart setting forth a detailed explanation of the pertinence and manner of applying Weinreich in view of Robertson to claims 1 and 7 of the '985 patent is set forth below. These claims are obvious over Weinreich in view of Robertson, and therefore Weinreich in view of Robertson renders them invalid under 35 U.S.C. § 103(a). For the convenience of the Examiner, the Requester has divided up the elements of each claim as shown below (identified with bracketed letters and numbers) to facilitate easier comparison of the claim language with the disclosures of the prior art. No change of meaning is intended. Unless otherwise noted, underlining and highlighting of text and images reproduced from the prior art were added by the Requester for clarity and emphasis.

Robertson individually anticipates claims 1 and 7 under 35 U.S.C. § 102(e) for the reasons expressed in Part VII.A, above. It is established law that “a rejection for obviousness under § 103 can be based on a reference which happens to anticipate the claimed subject matter.” *In re Meyer*, 599 F.2d 1026, 1031, 202 U.S.P.Q. 175, 179 (C.C.P.A. 1979). As an additional and independent ground for rejection, these claims should be rejected as obvious under § 103(a) over Weinreich in view of Robertson.

It would have been obvious to one of ordinary skill in the art to combine Weinreich and Robertson to provide the alleged inventions recited in claims 1 and 7. Both references provide solutions to the same problems purportedly addressed in the '985 patent, including the ability to store and maintain relationships between users through a computerized database. A person of ordinary skill in the art could easily have substituted any implementation detail or feature in Weinreich for one disclosed in Robertson to yield results that would have been predictable to one of ordinary skill in the art.

As explained in Part III.B above, in order to overcome Weinreich, which was cited during the original prosecution, the Examiner added the following limitation to claims 1 and 7: “wherein the key words include a minimum or maximum relationship coefficient data value indicating a maximum or minimum degree of relationship between the target members and the particular member.” Notice of Allowance (December 9, 2004), at pages 3, 4.

The system disclosed in Robertson, however, fully discloses that limitation and therefore raises a substantial new question of patentability. In particular, Robertson provides a search function in which a user can specify the maximum degrees of separation between the user and other users who are located in response to the search. A user can specify a “Friends of Friends” search, for example, in which users identified by the search have at most two degrees of separation with the user. (Robertson, 14:63-67 (“The Friends of Friends system allows a first member to search for the names of contacts of their contacts who live in the same city as the first member [and] are affiliated with a group with which the first member is also affiliated.”).) The user can also specify a minimum of three degrees of separation by selecting a search criteria for a “Friends of Friends of Friends” search. (Robertson, 15:35-41.) Robertson, therefore, discloses that the keywords of the search criteria can include a minimum or maximum relationship coefficient data value indicating a maximum or minimum degree of relationship between the user and target users. One of ordinary skill in the art would be motivated to implement this modification to achieve the benefit of allowing users to perform such searches based on minimum and maximum relationship coefficients. For at least these reasons, claims 1 and 7 are obvious over Robertson in view of Weinreich.

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 2 – Obviousness of Claims 1 and 7 U.S. Patent No. 6,175,831 (Weinreich) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
<p>1. A server connected to terminals used by members via a network, the server being configured to establish and update relationships between the members, the server comprising:</p>	<p><i>Weinreich discloses a server connected to terminals used by members via a network (e.g., web server 35 connected to user computers 14 over network 11):</i></p> <p>“Referring to FIG. 1, there is generally shown a networking database system (NDS) 10 in accordance with the present invention. The NDS 10 includes <u>a plurality of computers 14, each of which is coupled to a network 11, and, in turn, to a database service provider (DSP) 12. Each computer 14, of which one is shown in some detail and two others are represented in block form, is typically a personal computer, such as a Windows-based workstation, having a memory 24 containing communications software 27 and a modem 20 (or some other form of Internet connectivity, such as a T-1, ISDN line, etc.).</u> Communications software 27 may be any software suitable for telecommunications, and is preferably browser or e-mail software. Modem 20 is used with communications software 27 for <u>communication over network 11 with a DSP 12, more particularly a web server 35 of DSP 12.</u>” (Weinreich, 5:23-38.)</p> <p>“<u>Web server 35 is typically a programmed computer, more specifically one which supports a HyperText Transfer Protocol (http), that handles requests for records, documents and other services, and transmits such information over network 11. Network 11 is, for example, the Internet.</u>” (Weinreich, 5:39-43.)</p> <p><i>The server in Weinreich is configured to establish and update relationships between the members:</i></p> <p>“It is, therefore, an object of the present invention to provide a networking database in which a plurality of individuals register and become respectively linked with one or more other registered individuals by defined relationships.” (Weinreich, 2:21-26.)</p> <p>“At step 803, it is determined whether the input person, in this context a USER2, is unknown. If so, a suitable message is displayed at step 803A, and an e-mail is sent to USER2</p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 2 – Obviousness of Claims 1 and 7 U.S. Patent No. 6,175,831 (Weinreich) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
	<p>inviting USER2 to join DSP 12 and confirm the relationship with USER1 and <u>a new record for USER2 is established in database 70.</u>” (Weinreich, 14:29-34.)</p> <p><i>Further details about how Weinreich establishes and updates human relationships are provided in the discussion accompanying the claim limitations below.</i></p>
<p>[a] a database configured to store personal attributes of each member, the personal attributes including</p>	<p><i>Weinreich discloses a database (e.g., database 70):</i></p> <p>“Database server 45 is generally configured as <u>an SQL database</u>, using software programming such as that available from Oracle, Informix, Microsoft, or Sybase, and is operable to transmit and receive information between COLD FUSION 60 and a database 70. <u>Database 70 is a typical storage medium as is well-known, more specifically database 70 is a conventional relational database.</u>” (Weinreich, 6:4-10.)</p> <p><i>Weinreich discloses that the database (e.g., database 70) is configured to store personal attributes of each member:</i></p> <p>“For convenience, references in the following discussion to individuals, users and persons should be construed synonymously, and <u>references to an individual in the context of database 70 should be understood to mean a record (or group of records) associated with the individual.</u>” (Weinreich, 6:53-57.)</p> <p><i>The specific personal attributes are detailed below.</i></p>
<p>[a1] an identification code, [a2] a name,</p>	<p><i>Weinreich discloses that the personal attributes include an identification code and a name.</i></p> <p><i>Weinreich discloses several different alternative types of identification codes (e.g., valid e-mail address), and a name (e.g., last name):</i></p> <p>“In step 601, a display screen of information is shown to the user, who in this context and others that follow is referred to as USER1, on display 23. It is to be understood that USER1 may be any user of DSP 12. Using input device 21, <u>USER1 is required to enter specified personal</u></p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 2 – Obviousness of Claims 1 and 7 U.S. Patent No. 6,175,831 (Weinreich) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
	<p><u>information, preferably at least a last name and a valid e-mail address.</u> It should also be understood that currently <u>multiple users cannot use the same e-mail address and still have different records in database 70.</u>" (Weinreich, 7:9-17.)</p>
<p>[a3] a specialized field, and</p>	<p><i>Weinreich discloses that the personal attributes include a specialized field (e.g., aliases, occupation, hobbies, etc):</i></p> <p>"When a user registers with DSP 12 and becomes a member, the user may list <u>various personal and professional information including e-mail address(es), last name, first name, aliases, occupation, geography, hobbies, skills or expertise, and the like.</u>" (Weinreich, 18:2-9.)</p>
<p>[a4] relationship coefficient data indicating degrees of relationship between each member and other members;</p>	<p><i>Weinreich discloses that the personal attributes include relationship coefficient data indicating degrees of relationship between each member and other members.</i></p> <p><i>In particular, Weinreich discloses that the database includes records for each user and whether it has established a relationship with another identified user.</i></p> <p>"At step 806 it is determined whether a relationship between USER1 and USER2 has already been proposed by USER2, and is pending confirmation from USER1. If yes, <u>the database 70 confirms the relationship and a message is presented to USER1 at step 806A indicating that the relationship was confirmed.</u>" (Weinreich, 14:43-48.)</p> <p><i>The data in the database is used to indicate the degrees of relationship between users and other users, including "first," "second" degree relationships (or beyond):</i></p> <p>"At step 1005, a determination is made as to whether the entered e-mail address is listed in database 70. . . If the output of 1005 is yes, then step 1006 is called to determine whether a connection has been found between the user and the search criteria, e.g., geography, occupation, etc. . . If, however, a connection is found, then <u>step 1007 is called to determine whether the connection in step 1006 is only a "first degree"</u></p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 2 – Obviousness of Claims 1 and 7 U.S. Patent No. 6,175,831 (Weinreich) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
	<p><u>relationship</u>. A first degree relationship is one wherein a user has a confirmed relationship with another user in the database 70 (or by the other user listing him in the database 70). <u>A "second degree" relationship is when the connection includes a first degree relationship, as between USER1 and USER2, and a separate defined relationship as between USER2 and USER3, and the connection is made between USER1 and USER3 by the chain of two linked defined relationships.</u> Thus, an N degree relationship is a chain of N linked first degree relationships.” (Weinreich, 21:64-22:16.)</p>
<p>[b] a message communicator</p>	<p><i>Weinreich discloses a message communicator (e.g., web server 35 or mail server 55) that is responsible for receiving messages from and communicating messages to member terminals:</i></p> <p>“<u>Web server 35</u> is typically a programmed computer, more specifically one which supports a HyperText Transfer Protocol (http), <u>that handles requests for records, documents and other services, and transmits such information over network 11.</u> Network 11 is, for example, the Internet.” (Weinreich, 5:39-43.)</p> <p>“<u>Mail server 55</u> is a conventional device that reads text messages inbound on network 11, such as electronic mail (e-mail), <u>that is communicated to web server 35 and sends the text message outbound on network 11.</u>” (Weinreich, 6:16-19.)</p>
<p>[b1] configured to communicate a first message from one member to another member and</p>	<p><i>Weinreich discloses that the message communicator is configured to communicate a message to another member (e.g., a request by USER1 to create a relationship with USER2):</i></p> <p>“In the embodiment, referring to FIGS. 9A-9B, at the Website 90 personal profile screen 102, <u>a user may add a new relationship by clicking on ‘Add New Relationships’.</u> <u>The user is then required to submit selected information.</u> <u>In the preferred embodiment, the information is input into</u></p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 2 – Obviousness of Claims 1 and 7 U.S. Patent No. 6,175,831 (Weinreich) in View of U.S. Patent No. 6,269,369 (Robertson)</p>												
	<p><u>four separate fields displayed on profile page 102: first name, last name, e-mail address, and relationship type</u> (father, mother, employee, etc.) To initiate the process, the user is required to at least enter a last name, an e-mail address and a relationship type.” (Weinreich, 14:13-22.)</p> <p><i>The message is then communicated to the second member:</i></p> <p>“At step 803, it is determined whether the input person, in this context a USER2, is unknown. If so, a suitable message is displayed at step 803A , and <u>an e-mail is sent to USER2 inviting USER2 to join DSP 12 and confirm the relationship with USER1</u> and a new record for USER2 is established in database 70.” (Weinreich, 14:29-34.)</p>												
<p>[b2] configured to communicate a respective response to the first message from the another member to the one member, the response establishing a relationship between the one member and the another member;</p>	<p><i>Weinreich discloses that the message communicator is configured to communicate a response to the first message from the another member to the one member, the response establishing a relationship between the one member and the another member (e.g., USER2 accepting or confirming the relationship with USER1, upon which USER1 receives a notification):</i></p> <p><i>In particular, USER2 can confirm the relationship with USER1. This mechanism is shown below:</i></p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>These are relationships pending your confirmation</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">click to reclassify</td> <td style="width: 20%; text-align: center;">confirm</td> <td style="width: 20%; text-align: center;">deny</td> </tr> <tr> <td>John Smith, Jsmith@aol.com is your brother</td> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> </tr> <tr> <td></td> <td style="text-align: center;">confirm</td> <td style="text-align: center;">deny</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> </tr> </table> </div> <p><i>(Fig. 9A (partial figure shown).)</i></p> <p><i>As an alternative embodiment, USER2 can add a new relationship with USER1. If USER1 has also added a relationship with USER2, the relationship is confirmed and a second message is communicated to USER1’s terminal:</i></p> <p>“At step 806 it is determined whether a relationship between USER1 and USER2 has already been proposed by USER2, and is pending confirmation from USER1. If yes, <u>the database 70 confirms the relationship and a message</u></p>	click to reclassify	confirm	deny	John Smith, Jsmith@aol.com is your brother	<input type="radio"/>	<input type="radio"/>		confirm	deny		<input type="radio"/>	<input type="radio"/>
click to reclassify	confirm	deny											
John Smith, Jsmith@aol.com is your brother	<input type="radio"/>	<input type="radio"/>											
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<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 2 – Obviousness of Claims 1 and 7 U.S. Patent No. 6,175,831 (Weinreich) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
	<p><u>is presented to USER1 at step 806A indicating that the relationship was confirmed.</u>” (Weinreich, 14:43-48.)</p>
<p>[c] a database update unit configured to update, when the relationship is established between the one member and the another member, the relationship coefficient data indicating degrees of relationship between (1) the one member and the another member, (2) the one member and members having relationships with the another member, and (3) the another member and members having relationships with the one member; and</p>	<p><i>Weinreich discloses a database update unit (e.g., database server 45, communicating with database 70, and data storage devices).</i></p> <p>“Database server 45 is generally configured as an SQL database, using software programming such as that available from Oracle, Informix, Microsoft, or Sybase, and is operable to transmit and receive information between COLD FUSION 60 and a database 70. <u>Database 70 is a typical storage medium as is well-known, more specifically database 70 is a conventional relational database.</u>” (Weinreich, 6:4-10.)</p> <p><i>The database update unit is configured to update, when the relationship is established between the one member and the another member, the relationship coefficient data (e.g., the relationship information in database 70):</i></p> <p>“At step 806 it is determined whether a relationship between USER1 and USER2 has already been proposed by USER2, and is pending confirmation from USER1. If yes, <u>the database 70 confirms the relationship and a message is presented to USER1 at step 806A indicating that the relationship was confirmed.</u>” (Weinreich, 14:43-48.)</p> <p>“At step 1005, a determination is made as to whether the entered e-mail address is listed in database 70. . . If the output of 1005 is yes, then step 1006 is called to determine whether a connection has been found between the user and the search criteria, e.g., geography, occupation, etc. . . If, however, a connection is found, then <u>step 1007 is called to determine whether the connection in step 1006 is only a "first degree" relationship.</u> A first degree relationship is one wherein a user has a confirmed relationship with another user in the database 70 (or by the other user listing him in the database 70). <u>A "second degree" relationship is when the connection includes a first degree relationship, as between</u></p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 2 – Obviousness of Claims 1 and 7 U.S. Patent No. 6,175,831 (Weinreich) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
	<p><u>USER1 and USER2, and a separate defined relationship as between USER2 and USER3, and the connection is made between USER1 and USER3 by the chain of two linked defined relationships.</u> Thus, an N degree relationship is a chain of N linked first degree relationships.” (Weinreich, 21:64-22:16.)</p> <p><i>The relationship coefficient data indicates degrees of relationship between (1) the one member and the another member, (2) the one member and members having relationships with the another member, and (3) the another member and members having relationships with the one member:</i></p> <p><i>In particular, Weinreich discloses that the database includes records for each user and whether it has established a relationship with another identified user. This is updated in database 70 when USER2 confirms a relationship with USER1.</i></p> <p><i>“At step 806 it is determined whether a relationship between USER1 and USER2 has already been proposed by USER2, and is pending confirmation from USER1. If yes, the database 70 confirms the relationship and a message is presented to USER1 at step 806A indicating that the relationship was confirmed.” (Weinreich, 14:43-48.)</i></p> <p><i>“In the case that the second individual confirms the relationship with the first individual, this confirmation creates a defined relationship between the first and second individuals. This information is stored in the database, in records respectively associated with the first and second individuals.” (Weinreich, 3:17-21.)</i></p> <p><i>The data in the database is used to indicate the degrees of relationship between users and other users, including “first,” “second” degree relationships (or beyond). This information can be “monitored” to notify the user how his relationships have compiled over a period of time. Thus, when a first user and second user create a confirmed first degree relationship, this would update the relationship status between the first user and the second user’s direct relationships to second degree relationships, and would also update the relationship status between the second user and the first user’s direct</i></p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 2 – Obviousness of Claims 1 and 7 U.S. Patent No. 6,175,831 (Weinreich) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
	<p><i>relationships to second degree relationships.</i></p> <p>“If, however, a connection is found, then <u>step 1007 is called to determine whether the connection in step 1006 is only a "first degree" relationship.</u> A first degree relationship is one wherein a user has a confirmed relationship with another user in the database 70 (or by the other user listing him in the database 70). A <u>"second degree" relationship is when the connection includes a first degree relationship, as between USER1 and USER2, and a separate defined relationship as between USER2 and USER3, and the connection is made between USER1 and USER3 by the chain of two linked defined relationships.</u> Thus, an N degree relationship is a chain of N linked first degree relationships. It is to be understood that DSP 12 could <u>monitor the number of relationships by degree number (first degree, second degree etc.)</u> and notify the user, for example, via e-mail how his relationships have compiled over a period of time.” (Weinreich, 22:5-20.)</p>
<p>[d] a data retriever configured to identify target members having personal attributes satisfying one or more key words of a search criteria, the key words including at least a relationship coefficient data value indicating the degree of relationship between the target members and a particular member;</p> <p>[e] wherein the key words include a minimum or maximum relationship coefficient data value indicating a maximum or minimum degree of relationship between the target members and the particular member.</p>	<p><i>Weinreich discloses a data retriever (e.g., web server 35 or mail server 55, database server 45, database 70, database connectivity engine 60) that is responsible for retrieving data, interacting with the database and performing identifying target members:</i></p> <p>“DSP 12, <u>in addition to web server 35, includes a database connectivity engine 60, preferably COLD FUSION™.</u> available from Allaire Corporation, connected to web server 35 for pre-processing an output from Web server 35. <u>The database connectivity engine 60 is hereinafter also referred to as COLD FUSION 60.</u> COLD FUSION 60 is a specific server side scripting language product which allows otherwise static information to be created dynamically by <u>providing an interface between web server 35 and a database server 45 using the Open Database Connectivity (ODBC) protocol.</u>” (Weinreich, 5:57-67.)</p> <p><i>Weinreich discloses that the data retriever is configured to receive one or more key words of a search criteria to locate target members:</i></p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 2 – Obviousness of Claims 1 and 7 U.S. Patent No. 6,175,831 (Weinreich) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
	<p>“In step 1001, <u>the user clicks on box 39 corresponding to ‘connect me.’</u>” (Weinreich, 21:41-42.)</p> <p>“At step 1002, a search screen is displayed, on display 23, which <u>interrogates the user for the last name or e-mail address of the person the user wishes to search.</u> However, the user may <u>also provide geographical or occupational data, or the first name of the person.</u> Other embodiments are also possible such as searches by hobbies, skills, etc. It is to be understood that, in the preferred embodiment, only an e-mail address or a last name is required at step 1002.” (Weinreich, 21:50-57.)</p> <p><i>During the original prosecution of the '985 patent, the Examiner believed that Weinreich did not disclose that the key words include at least a relationship coefficient data value indicating the degree of relationship between the target members and a particular member, wherein the key words include a minimum or maximum relationship coefficient data value indicating a maximum or minimum degree of relationship between the target members and the particular member.</i></p> <p><i>This allegedly missing element, however, is fully disclosed by Robertson, which makes clear that the key words include a minimum or maximum relationship coefficient data value (e.g., selection of “friends of friends” or “friends of friends of friends” search) indicating a maximum or minimum degree of relationship between the target members and the particular member (e.g., second or third degree relationships):</i></p> <p>“Referring now to FIG. 13, a diagram illustrating the Friends of Friends system is shown. <u>The Friends of Friends system allows a first member to search for the names of contacts of their contacts who live in the same city as the first member [and] are affiliated with a group with which the first member is also affiliated.</u>” (Robertson, 14:62-67.)</p> <p>“The present invention is not limited to the <u>search criteria or levels of separation in the preferred embodiment.</u> The database architecture in the present invention is flexible to allow <u>searches to be extended to more than one degree of separation.</u> For instance, it would be possible to add a</p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 2 – Obviousness of Claims 1 and 7 U.S. Patent No. 6,175,831 (Weinreich) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
	<p><u>Friends of Friends of Friends search feature.</u> The architecture is also flexible to allow new search criteria to be added.” (Robertson, 15:35-41.)</p> <p><i>It would have been obvious to one of ordinary skill in the art to combine the teachings of Weinreich with Robertson as both references provide solutions to the same problems purportedly addressed in the '985 patent, including the ability to store and maintain relationships between users through a computerized database.</i></p>
<p>7. A method of establishing and updating relationships between members using terminals connected to a server, the method comprising:</p>	<p><i>Claim 7 is substantially similar to claim 1, above, except that claim 7 is written as a method claim instead of an apparatus claim. In the interests of brevity, the full explanation provided in connection with claim 1 above will not be repeated here.</i></p> <p><i>As explained in connection with claim 1, Robertson discloses a method of establishing and updating human relationships between members using terminals connected to a server.</i></p>
<p>[a] storing personal attributes of each member, the personal attributes including an identification code, a name, a specialized field, and relationship coefficient data indicating degrees of relationship between each member and other members;</p>	<p><i>This limitation is substantially the same as limitation [a] of claim 1, above. In the interests of brevity, the disclosures of claim 1[a] (above) are not repeated here but are incorporated by reference.</i></p>
<p>[b] communicating a first message from one member to another;</p>	<p><i>This limitation is substantially the same as limitation [b], specifically limitation [b1] of claim 1, above. In the interests of brevity, the disclosures of claim 1[b] and 1[b1] (above) are not repeated here but are incorporated by reference.</i></p>
<p>[c] communicating a respective response to the first message</p>	<p><i>This limitation is substantially the same as limitation [b], specifically limitation [b2] of claim 1, above. In the interests</i></p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 2 – Obviousness of Claims 1 and 7 U.S. Patent No. 6,175,831 (Weinreich) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
<p>from the another member to the one member, the response establishing a relationship between the one member and the another member;</p>	<p><i>of brevity, the disclosures of claim 1[b] and 1[b2] (above) are not repeated here but are incorporated by reference.</i></p>
<p>[d] updating, when the relationship is established between the one member and the another member, the relationship coefficient data indicating degrees of relationship between (1) the one member and the another member, (2) the one member and members having relationships with the another member, and (3) the another member and members having relationships with the one member; and</p>	<p><i>This limitation is substantially the same as limitation [c] of claim 1, above. In the interests of brevity, the disclosures of claim 1[c] (above) are not repeated here but are incorporated by reference.</i></p>
<p>[e] identifying target members having personal attributes satisfying one or more key words of a search criteria, the key words including at least a relationship coefficient data value indicating the degree of relationship between the target members and a particular member;</p>	<p><i>This limitation is substantially the same as limitation [d] of claim 1, above. In the interests of brevity, the disclosures of claim 1[d] (above) are not repeated here but are incorporated by reference.</i></p>
<p>[f] wherein the key words include a minimum or maximum relationship coefficient data value indicating a maximum or minimum degree of relationship between the target members and the</p>	<p><i>This limitation is substantially the same as limitation [e] of claim 1, above. In the interests of brevity, the disclosures of claim 1[e] (above) are not repeated here but are incorporated by reference.</i></p>

U.S. Patent No. 6,879,985 Claim Language	SNQ No. 2 – Obviousness of Claims 1 and 7 U.S. Patent No. 6,175,831 (Weinreich) in View of U.S. Patent No. 6,269,369 (Robertson)
particular member.	

**C. Obviousness Over Bezos in View of Robertson (Proposed Grounds of Rejection
Arising from SNQ No. 3)**

A claim chart setting forth a detailed explanation of the pertinence and manner of applying Bezos in view of Robertson to claims 1 and 7 of the '985 patent is set forth below. These claims are obvious over Bezos in view of Robertson, and therefore Bezos in view of Robertson renders them invalid under 35 U.S.C. § 103(a). For the convenience of the Examiner, the Requester has divided up the elements of each claim as shown below (identified with bracketed letters and numbers) to facilitate easier comparison of the claim language with the disclosures of the prior art. No change of meaning is intended. Unless otherwise noted, underlining and highlighting of text and images reproduced from the prior art were added by the Requester for clarity and emphasis.

It would have been obvious to one of ordinary skill in the art to combine Robertson and Bezos to provide the alleged inventions recited in claims 1 and 7. Both references provide solutions to the same problems purportedly addressed in the '985 patent, including the ability to store and maintain relationships between users through a computerized database. Robertson and Bezos both originated with the same company (Amazon.com), and Robertson is cited on the face of Bezos. A person of ordinary skill in the art could easily have substituted any implementation detail or feature in Robertson for one disclosed in Bezos to yield results that would have been predictable to one of ordinary skill in the art.

As noted in Part V.C above at page 14, Bezos is entitled to a priority date of November 19, 1999 based on the filing date of two earlier-filed provisional applications: (1) U.S. Provisional Patent Application No. 60/166,547 by Warren Adams, et al. filed on November 19,

1999 (hereafter “Adams ’547 Provisional”), and (2) U.S. Provisional Patent Application No. 60/166,664 by Jeffrey P. Bezos, et al. filed on November 19, 1999 (hereafter “Bezos ’664 Provisional”). The citations to the prior art in the chart below, therefore, include citations to the issued Bezos ’832 patent as well as the Adams ’547 Provisional and the Bezos ’664 Provisional.³

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 3 – Obviousness of Claims 1 and 7 U.S. Patent No. 7,433,832 (Bezos) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
<p>1. A server connected to terminals used by members via a network, the server being configured to establish and update relationships between the members, the server comprising:</p>	<p><i>Bezos discloses a server (e.g., Web site server) connected to terminals used by members (e.g., customer computers 852, 854) via a network (e.g., Internet):</i></p> <p>“As depicted by this drawing, customers access the Web site 850 using <u>respective personal computers 852, 854</u> or other general-purpose computers, terminals, or clients that have <u>access to the Internet.</u>” (Bezos ’832, 19:42-45; Adams ’547 Provisional at page 1, FBM0002113.)</p> <p>“In the embodiment described herein, <u>the Web site 850 includes a computer system and associated content that are accessible via the Internet.</u> The Web site 850 may optionally include content that spans multiple Internet domains, and/or <u>may be implemented using physical servers</u> that are geographically remote from one another.” (Bezos ’832, 19:60-65; Adams ’547 Provisional at page 1, FBM0002113.)</p> <p><i>The server in Bezos is configured to establish and update relationships between the members:</i></p> <p>“In addition, one embodiment of the present invention provides a novel infrastructure that <u>captures and stores customer-to-customer relationships for future use.</u>” (Bezos ’832, 13:40-42, Bezos ’664 Provisional at page 1, FBM0001887.)</p> <p><i>Further details about how Bezos establishes and updates human relationships are provided in the discussion</i></p>

³ Citations to the two provisional applications include citations to Bates numbers, as many pertinent pages of each of these applications do not bear standard page numbers.

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 3 – Obviousness of Claims 1 and 7 U.S. Patent No. 7,433,832 (Bezos) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
	<p><i>accompanying the claim limitations below.</i></p>
<p>[a] a database configured to store personal attributes of each member, the personal attributes including</p>	<p><i>Bezos discloses a database configured to store personal attributes of each member, as explained below.</i></p> <p><i>Bezos discloses a database (e.g., customer account database 880):</i></p> <p><i>“The <u>customer account database 880</u> includes information used to populate the customer's profile page, including the customer's name, nickname, e-mail address, reviewer ranking, if any, purchase history, and an indication as to which items of information are designated as private and which are designated as public, and who may be view selected private information.” (Bezos ’832, 20:29-35; Adams ’547 Provisional at page 2, FBM0002114.)</i></p> <p><i>Bezos discloses that the database (e.g., customer account database 880) is configured to store personal attributes of each member:</i></p> <p><i>“The customer account database 880 includes information used to populate the customer's profile page, including the <u>customer's name, nickname, e-mail address, reviewer ranking, if any, purchase history, and an indication as to which items of information are designated as private and which are designated as public, and who may be view selected private information.</u>” (Bezos ’832, 20:29-35; Adams ’547 Provisional at page 2, FBM0002114.)</i></p> <p><i>The specific personal attributes are detailed below.</i></p>
<p>[a1] an identification code, [a2] a name,</p>	<p><i>Bezos discloses that the personal attributes include an identification code and a name.</i></p> <p><i>Bezos discloses several different alternative types of identification codes (e.g., nickname, name, e-mail address, Customer/user ID), and a name:</i></p> <p><i>“The <u>customer account database 880</u> includes information used to populate the customer's profile page, including the <u>customer's name, nickname, e-mail address, reviewer ranking, if any, purchase history, and an indication as to</u></i></p>

U.S. Patent No. 6,879,985 Claim Language	SNQ No. 3 – Obviousness of Claims 1 and 7 U.S. Patent No. 7,433,832 (Bezos) in View of U.S. Patent No. 6,269,369 (Robertson)
	<p>which items of information are designated as private and which are designated as public, and who may be view selected private information.” (Bezos ’832, 20:29-35; Adams ’547 Provisional at page 2, FBM0002114.)</p> <p>“The registration process may request that the customer provide information such as <u>name</u>, shipping address, billing address, and/or <u>e-mail address</u>. <u>Customers may also be identified or otherwise authenticated during sign-in, via a user ID and password . . .</u>” (Bezos ’832, 9:9-13; Adams ’547 Provisional at pages 2, 5, FBM0002114, FBM0002117; Bezos ’664 Provisional at page 2, FBM0001888.)</p> <p><i>The nickname associated with the member is also used in Bezos as an identification code:</i></p> <p>“[I]n another embodiment, <u>nicknames are unique</u>, so that two people cannot have the same public identity.” (Bezos ’832, 7:48-50; Adams ’547 Provisional at pages 4-5, FBM0002116-17.)</p> <p>“<u>Nicknames may be used by customers to quickly locate reviewer-related information</u>. For example, when someone wants to locate information on a particular customer, or locate other reviews by a particular customer, they may <u>enter the customer nickname into a search field</u> and activate a search function.” (Bezos ’832, 7:62-67; Adams ’547 Provisional at page 4, FBM0002116.)</p> <p><i>The e-mail address associated with the member is also used in Bezos as an identification code:</i></p> <p>“If the invitee e-mail address provided by customer fails to match those in a customer database associated with the Web site, a one-use token is sent to that e-mail address. The one-use token includes a link to a Web page that asks the invitee to sign-in as a customer if the invitee has already established an customer account. If the invitee does successfully sign-in as a customer, then <u>the e-mail address is stored in association with the invite's customer account</u>.” (Bezos ’832, 14:28-36; Adams ’547 Provisional at page 5, FBM0002117; Bezos ’664 Provisional at page 3, FBM0001889.)</p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 3 – Obviousness of Claims 1 and 7 U.S. Patent No. 7,433,832 (Bezos) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
<p>[a3] a specialized field, and</p>	<p><i>Bezos discloses that the personal attributes include a specialized field (e.g., hobbies, customer demographic information including profession, education, income, etc):</i></p> <p>“The customer/author profile may include one or more of the following:</p> <p>...</p> <p>11. Hobbies</p> <p>...</p> <p>14. Customer demographic information, optional including one or more of the following: geographical location, age, gender, profession, education, income, marital status, number of children, political affiliations, religious affiliations, ethnicity” (Bezos ’832, 6:13-36; Adams ’547 Provisional at pages 9-10, FBM0002121-22.)</p>
<p>[a4] relationship coefficient data indicating degrees of relationship between each member and other members;</p>	<p><i>Bezos discloses that the personal attributes include relationship coefficient data indicating degrees of relationship between each member and other members.</i></p> <p><i>In particular, Bezos discloses that the database includes records for each user and whether it has established a relationship with another identified user.</i></p> <p>“The <u>customer account database</u> 880 includes information used to populate the customer's profile page, including the customer's name, nickname, e-mail address, reviewer ranking, if any, purchase history, and an indication as to which items of information are designated as private and which are designated as public, and <u>who may be view selected private information.</u>” (Bezos ’832, 20:29-35; Adams ’547 Provisional at page 2, FBM0002114.)</p> <p>“<u>If the invitee activates the link, the invitation is considered accepted.</u> The customer may be provided with a notification that the invitee has accepted the invitation and/or view the customer's profile page.” (Bezos ’832, 14:6-9; Bezos ’664 Provisional at pages FBM0001897, FBM0001899.)</p> <p>“The <u>e-mail addresses and customer IDs</u> that a customer</p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 3 – Obviousness of Claims 1 and 7 U.S. Patent No. 7,433,832 (Bezos) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
	<p>has <u>already sent an invitation to</u> are tracked.” (Bezos ’832, 14:23-24; Bezos ’664 Provisional at page 4, FBM0001890.)</p> <p><i>The data in the database is used to indicate the degrees of relationship between users and other users, including direct relationships, and “second” degree relationships (e.g., “friends of friends”):</i></p> <p>“The <u>profile page may include</u> one or more of the following:</p> <p>...</p> <p>3. <u>The other members of the customer's Personal Purchase Circle (Friends of Friends).</u>” (Bezos ’832, 15:56-16:5; Bezos ’664 Provisional at pages 1-2, FBM0001887-88.)</p> <p>“A customer can selectively allow those in the customer's Personal Purchase Circle to view who else is in the customer's Personal Purchase Circle. Those in the customer's Personal Purchase Circle who are permitted view who else is in the customer's Personal Purchase Circle are termed ‘Friend's of Friends.’ <u>If, for example, Brian, Warren, and Maryam make up Ken's Personal Purchase Circle, then if so allowed, Maryam may be informed that Brian and Warren are also part of Ken's Personal Purchase Circle.</u>” (Bezos ’832, 15:9-17; Bezos ’664 Provisional at pages 1-2, FBM0001887-88.)</p>
<p>[b] a message communicator</p>	<p><i>Bezos discloses a message communicator (e.g., customer information sharing application) that is responsible for receiving messages from and communicating messages to member terminals:</i></p> <p>“Once a person has been added to a customer's Personal Purchase Circle, <u>a notification or invitation may be provided to the added person, also termed an invitee.</u> For example, the added person may be notified via e-mail or a message on the merchant's Web site that she or he has been added to the customer's Personal Purchase Circle. The notification may contain a link to the customer's profile page, described below, to provide easy access. <u>If</u></p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 3 – Obviousness of Claims 1 and 7 U.S. Patent No. 7,433,832 (Bezos) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
	<p><u>the invitee activates the link, the invitation is considered accepted. The customer may be provided with a notification that the invitee has accepted the invitation and/or view the customer's profile page.</u> (Bezos '832, 13:66-14:9; Bezos '664 Provisional at pages FBM0001897, FBM0001899.)</p> <p>“The Web site 850 also includes review processing and <u>customer information sharing applications 872</u> which includes the basic functionality for receiving customer reviews and review evaluations, as well as for <u>processing user instructions relating to the sharing of customer purchase information and other private information</u>, as previously discussed.” (Bezos '832, 20:18-24; Bezos '664 Provisional at page 1, FBM0001887.)</p>
<p>[b1] configured to communicate a first message from one member to another member and</p>	<p><i>Bezos discloses that the message communicator is configured to communicate a message to another member (e.g., a request by a first customer to create a relationship with an invitee by giving the invitee access to the customer's Personal Purchase Circle):</i></p> <p>“In setting up a Personal Purchase Circle, the customer may be presented with a form that includes one or fields or links <u>allowing the customer to designate who is allowed to view the customer's purchases</u>. The designation may be in the form of a person's e-mail address, name, nickname, or other identifying information.” (Bezos '832, 15:34-39; Bezos '664 Provisional at pages 1, 2, FBM0001887, FBM0001888.)</p> <p><i>The message is then communicated to the second member:</i></p> <p>“Once a person has been added to a customer's Personal Purchase Circle, <u>a notification or invitation may be provided to the added person, also termed an invitee</u>. For example, the added person may be notified via e-mail or a message on the merchant's Web site that she or he has been added to the customer's Personal Purchase Circle.”</p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 3 – Obviousness of Claims 1 and 7 U.S. Patent No. 7,433,832 (Bezos) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
	<p>(Bezos '832, 13:66-14:4; Bezos '664 Provisional at pages FBM0001897, FBM0001899.)</p>
<p>[b2] configured to communicate a respective response to the first message from the another member to the one member, the response establishing a relationship between the one member and the another member;</p>	<p><i>Bezos discloses that the message communicator is configured to communicate a response to the first message from the another member to the one member, the response establishing a relationship between the one member and the another member (e.g., the invitee accepting or confirming the relationship with the customer and/or adding the customer to the invitee's Personal Purchase Circle, upon which the customer receives a notification):</i></p> <p>“In setting up a Personal Purchase Circle, the customer may be presented with a form that includes one or fields or links <u>allowing the customer to designate who is allowed to view the customer's purchases</u>. The designation may be in the form of a person's e-mail address, name, nickname, or other identifying information.” (Bezos '832, 15:34-39; Bezos '664 Provisional at pages 1, 2, FBM0001887, FBM0001888.)</p> <p>“Once a person has been added to a customer's Personal Purchase Circle, <u>a notification or invitation may be provided to the added person, also termed an invitee</u>. For example, the added person may be notified via e-mail or a message on the merchant's Web site that she or he has been added to the customer's Personal Purchase Circle. The notification may contain a link to the customer's profile page, described below, to provide easy access. <u>If the invitee activates the link, the invitation is considered accepted. The customer may be provided with a notification that the invitee has accepted the invitation and/or view the customer's profile page.</u>” (Bezos '832, 13:66-14:9; Bezos '664 Provisional at pages FBM0001897, FBM0001899.)</p>
<p>[c] a database update unit configured to update, when the relationship is established between the one member and</p>	<p><i>Bezos discloses a database update unit (e.g., customer information sharing application 872 communicating with customer account database 880, and data storage devices).</i></p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 3 – Obviousness of Claims 1 and 7 U.S. Patent No. 7,433,832 (Bezos) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
<p>the another member, the relationship coefficient data indicating degrees of relationship between (1) the one member and the another member, (2) the one member and members having relationships with the another member, and (3) the another member and members having relationships with the one member; and</p>	<p>“The Web site 850 also includes review processing and <u>customer information sharing applications 872</u> which includes the basic functionality for receiving customer reviews and review evaluations, as well as <u>for processing user instructions relating to the sharing of customer purchase information and other private information</u>, as previously discussed. The review processing and customer information sharing applications 872 access a review database 878 and a <u>customer account database 880.</u>” (Bezos ’832, 20:18-26; Adams ’547 Provisional at page 2, FBM0002114.)</p> <p>“The <u>customer account database 880</u> includes information used to populate the customer's profile page, including the customer's name, nickname, e-mail address, reviewer ranking, if any, purchase history, and an indication as to which items of information are designated as private and which are designated as public, and <u>who may be view selected private information.</u>” (Bezos ’832, 20:29-35; Adams ’547 Provisional at page 2, FBM0002114.)</p> <p><i>The database update unit is configured to update, when the relationship is established between the one member and the another member, the relationship coefficient data (e.g., the customer information sharing instructions in customer account database 880):</i></p> <p>“<u>If the invitee activates the link, the invitation is considered accepted.</u> The customer may be provided with a notification that the invitee has accepted the invitation and/or view the customer's profile page.” (Bezos ’832, 14:6-9; Bezos ’664 Provisional at pages FBM0001897, FBM0001899.)</p> <p>“The <u>e-mail addresses and customer IDs</u> that a customer has <u>already sent an invitation to</u> are tracked.” (Bezos ’832, 14:23-24; Bezos ’664 Provisional at page 4, FBM0001890.)</p> <p><i>The relationship coefficient data indicates degrees of relationship between (1) the one member and the another member, (“Maryam” and “Ken”) (2) the one member and</i></p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 3 – Obviousness of Claims 1 and 7 U.S. Patent No. 7,433,832 (Bezos) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
	<p><i>members having relationships with the another member (“Maryam” and “Brian” or “Warren”), and (3) the another member and members having relationships with the one member (“Ken” and friends of “Maryam”).</i></p> <p><i>For example, as demonstrated below, after Ken added Maryam to his Personal Purchase Circle, Maryam was able to see that she is a member of Ken’s Personal Purchase Circle (and thus directly connected to him), and is a “friend of friend” with other members of Ken’s Personal Purchase Circle (such as “Warren” and “Brian”).</i></p> <p><i>It is clear from the disclosures of Bezos that the converse would be true as well: As Ken is now a member of Maryam’s Personal Purchase Circle, he would now be “friends of friends” with the other members of Maryam’s Personal Purchase Circle.</i></p> <p>“A customer can selectively allow those in the customer's Personal Purchase Circle to view who else is in the customer's Personal Purchase Circle. <u>Those in the customer's Personal Purchase Circle who are permitted view who else is in the customer's Personal Purchase Circle are termed ‘Friend's of Friends.’</u> If, for example, Brian, Warren, and Maryam make up Ken's Personal Purchase Circle, then if so allowed, Maryam may be informed that Brian and Warren are also part of Ken's Personal Purchase Circle.” (Bezos '832, 15:9-17; Bezos '664 Provisional at pages 1-2, FBM0001887-88.)</p>
<p>[d] a data retriever configured to identify target members having personal attributes satisfying one or more key words of a search criteria, the key words including at least a relationship coefficient data value indicating the degree of relationship between the target members and a particular member;</p>	<p><i>Bezos discloses a data retriever (e.g., search function or search feature interacting with customer account database 880) that is responsible for retrieving data, interacting with the database and performing identifying target members:</i></p> <p>“For example, when someone wants to locate information on a particular customer, or locate other reviews by a particular customer, they may enter the customer nickname into a search field and <u>activate a search function</u>. The requester is then presented with the customer's public profile page, including the customer's reviews or links to the customer's reviews. This <u>search</u></p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 3 – Obviousness of Claims 1 and 7 U.S. Patent No. 7,433,832 (Bezos) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
<p>[e] wherein the key words include a minimum or maximum relationship coefficient data value indicating a maximum or minimum degree of relationship between the target members and the particular member.</p>	<p><u>feature allows users to quickly and easily find pages and reviews associated with a given reviewer and nickname.</u>" (Bezos '832, 7:63-8:4; Adams '547 Provisional, pages 4, 10-11, FBM0002116, FBM0002122-23.)</p> <p>"A viewer can access a public profile page by activating a link within or adjacent to a review provided by the customer, by typing in the customer's name, and/or by <u>searching on the customer's name or nickname.</u>" (Bezos '832, 6:58-61; Adams '547 Provisional at pages 4, 10-11, FBM0002116, FBM0002122-23.)</p> <p><i>Bezos discloses that the data retriever is configured to receive one or more key words of a search criteria to locate target members:</i></p> <p>"For example, when someone wants to locate information on a particular customer, or locate other reviews by a particular customer, they may enter the customer nickname into a search field and <u>activate a search function.</u> The requester is then presented with the customer's public profile page, including the customer's reviews or links to the customer's reviews. This <u>search feature allows users to quickly and easily find pages and reviews associated with a given reviewer and nickname.</u>" (Bezos '832, 7:63-8:4; Adams '547 Provisional, pages 4, 10-11, FBM0002116, FBM0002122-23.)</p> <p>"A viewer can access a public profile page by activating a link within or adjacent to a review provided by the customer, by typing in the customer's name, and/or by <u>searching on the customer's name or nickname.</u>" (Bezos '832, 6:58-61; Adams '547 Provisional at pages 4, 10-11, FBM0002116, FBM0002122-23.)</p> <p>"The <u>profile page may include</u> one or more of the following:</p> <p>...</p> <p>3. <u>The other members of the customer's Personal Purchase Circle (Friends of Friends).</u>" (Bezos '832, 15:56-16:5; Bezos '664 Provisional at pages 1-2, FBM0001887-88.)</p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 3 – Obviousness of Claims 1 and 7 U.S. Patent No. 7,433,832 (Bezos) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
	<p><i>The remainder of this limitation is fully disclosed by Robertson, which makes clear that the key words include a minimum or maximum relationship coefficient data value (e.g., selection of “friends of friends” or “friends of friends of friends” search) indicating a maximum or minimum degree of relationship between the target members and the particular member (e.g., second or third degree relationships):</i></p> <p><i>“Referring now to FIG. 13, a diagram illustrating the Friends of Friends system is shown. <u>The Friends of Friends system allows a first member to search for the names of contacts of their contacts who live in the same city as the first member</u> [and] are affiliated with a group with which the first member is also affiliated.” (Robertson, 14:62-67.)</i></p> <p><i>“The present invention is not limited to the <u>search criteria or levels of separation in the preferred embodiment</u>. The database architecture in the present invention is flexible to allow <u>searches to be extended to more than one degree of separation</u>. For instance, it would be possible to add a <u>Friends of Friends of Friends search feature</u>. The architecture is flexible to allow new search criteria to be added.” (Robertson, 15:35-41.)</i></p> <p><i>It would have been obvious to one of ordinary skill in the art to combine the teachings of Bezos with Robertson as both references provide solutions to the same problems purportedly addressed in the '985 patent, including the ability to store and maintain relationships between users through a computerized database.</i></p>
<p>7. A method of establishing and updating relationships between members using terminals connected to a server, the method comprising:</p>	<p><i>Claim 7 is substantially similar to claim 1, above, except that claim 7 is written as a method claim instead of an apparatus claim. In the interests of brevity, the full explanation provided in connection with claim 1 above will not be repeated here.</i></p> <p><i>As explained in connection with claim 1, Robertson discloses a</i></p>

<p>U.S. Patent No. 6,879,985 Claim Language</p>	<p>SNQ No. 3 – Obviousness of Claims 1 and 7 U.S. Patent No. 7,433,832 (Bezos) in View of U.S. Patent No. 6,269,369 (Robertson)</p>
	<p><i>method of establishing and updating human relationships between members using terminals connected to a server.</i></p>
<p>[a] storing personal attributes of each member, the personal attributes including an identification code, a name, a specialized field, and relationship coefficient data indicating degrees of relationship between each member and other members;</p>	<p><i>This limitation is substantially the same as limitation [a] of claim 1, above. In the interests of brevity, the disclosures of claim 1[a] (above) are not repeated here but are incorporated by reference.</i></p>
<p>[b] communicating a first message from one member to another;</p>	<p><i>This limitation is substantially the same as limitation [b], specifically limitation [b1] of claim 1, above. In the interests of brevity, the disclosures of claim 1[b] and 1[b1] (above) are not repeated here but are incorporated by reference.</i></p>
<p>[c] communicating a respective response to the first message from the another member to the one member, the response establishing a relationship between the one member and the another member;</p>	<p><i>This limitation is substantially the same as limitation [b], specifically limitation [b2] of claim 1, above. In the interests of brevity, the disclosures of claim 1[b] and 1[b2] (above) are not repeated here but are incorporated by reference.</i></p>
<p>[d] updating, when the relationship is established between the one member and the another member, the relationship coefficient data indicating degrees of relationship between (1) the one member and the another member, (2) the one member and members having relationships with the another member, and (3) the another member and members having relationships with the one</p>	<p><i>This limitation is substantially the same as limitation [c] of claim 1, above. In the interests of brevity, the disclosures of claim 1[c] (above) are not repeated here but are incorporated by reference.</i></p>

U.S. Patent No. 6,879,985 Claim Language	SNQ No. 3 – Obviousness of Claims 1 and 7 U.S. Patent No. 7,433,832 (Bezos) in View of U.S. Patent No. 6,269,369 (Robertson)
member; and	
[e] identifying target members having personal attributes satisfying one or more key words of a search criteria, the key words including at least a relationship coefficient data value indicating the degree of relationship between the target members and a particular member;	<i>This limitation is substantially the same as limitation [d] of claim 1, above. In the interests of brevity, the disclosures of claim 1[d] (above) are not repeated here but are incorporated by reference.</i>
[f] wherein the key words include a minimum or maximum relationship coefficient data value indicating a maximum or minimum degree of relationship between the target members and the particular member.	<i>This limitation is substantially the same as limitation [e] of claim 1, above. In the interests of brevity, the disclosures of claim 1[e] (above) are not repeated here but are incorporated by reference.</i>

D. Obviousness Over Robertson in view of Weinreich and Bezos (Proposed Grounds of Rejection Arising from SNQ No. 4)

As explained in Part VII.B and VII.C, above, claims 1 and 7 are invalid as obvious: (1) over Weinreich in view of Robertson; and (2) over Bezos in view of Robertson. For the same reasons explained above, yet another rejection can be entered based on obviousness over Robertson in view of Weinreich and Bezos. The rationale and motivation for combining these references with each other is provided above in Parts VII.B and VII.C above.

VIII. List of Exhibits

Exhibit A U.S. Patent No. 6,879,985 to Hikaru Deguchi, et al.

- Exhibit B U.S. Patent No. 6,269,369 to Brian D. Robertson
- Exhibit C U.S. Patent No. 7,433,832 to Jeffrey P. Bezos, et al.
- Exhibit D U.S. Provisional Patent Application No. 60/166,547 by Warren Adams, et al.
- Exhibit E U.S. Provisional Patent Application No. 60/166,664 by Jeffrey P. Bezos, et al.
- Exhibit F U.S. Patent No. 6,175,831 to Andrew P. Weinreich, et al.
- Exhibit G Mekiki's Disclosure of Asserted Claims and Infringement Contentions [Patent L.R. 3-1, 3-2], served in *Mekiki Co. v. Facebook, Inc.*, No. 10-cv-2721 (N.D. Cal. Nov. 19, 2010)
- Exhibit H Japanese Patent Application 2000-316496 (filed on October 17, 2000) and English translation thereof

IX. Conclusion

The prior art discloses, teaches or suggests the subject matter of the '603 Patent in such a manner that SNQs are raised for each of claims 1, 2, 4, 21, 22, and 31. Accordingly, the Requester requests that the Patent Office grant this request, initiate *inter partes* reexamination and enter an Office Action adopting the rejections proposed in this Request with special dispatch.

Dated: **February 7, 2011**

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CERTIFICATE OF SERVICE

I hereby certify, pursuant to 37 C.F.R. § 1.915(b)(6), that on **February 7, 2011** I caused a true and correct copy of the foregoing REQUEST FOR *INTER PARTES* REEXAMINATION to be served via First Class U.S. Mail on the following:

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US006879985B2

(12) **United States Patent**
Deguchi et al.

(10) **Patent No.:** US 6,879,985 B2
(45) **Date of Patent:** Apr. 12, 2005

(54) **HUMAN RELATIONSHIPS REGISTERING SYSTEM, METHOD AND DEVICE FOR REGISTERING HUMAN RELATIONSHIPS, PROGRAM FOR REGISTERING HUMAN RELATIONSHIPS, AND MEDIUM STORING HUMAN RELATIONSHIPS REGISTERING PROGRAM AND READABLE BY COMPUTER**

(75) Inventors: **Hikaru Deguchi**, Tokyo (JP); **Kenichi Ninomiya**, Tokyo (JP)

(73) Assignees: **Mekiki Co., Ltd.**, Tokyo (JP); **Mekiki Creates Co., Ltd.**, Tokyo (JP)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 445 days.

(21) Appl. No.: **09/978,030**

(22) Filed: **Oct. 17, 2001**

(65) **Prior Publication Data**

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(30) **Foreign Application Priority Data**

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Oct. 9, 2001 (JP) 2001-311528

(51) **Int. Cl.**⁷ **G06F 17/00**

(52) **U.S. Cl.** **707/101; 707/102; 707/201; 707/205**

(58) **Field of Search** 707/1-10, 100-104.1, 707/200-205

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,175,831 B1 * 1/2001 Weinreich et al. 707/10
6,363,394 B1 * 3/2002 Rajarajan et al. 707/102

* cited by examiner

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(57) **ABSTRACT**

To provide a human relationships registering system, a method and a server for registering human relationships, a program for registering human relationships, and a medium storing human relationships registering program and readable by a computer, all of which are used to establish wide and close relationships with members having a variety of occupations or engaged in various technical fields and to obtain expert knowledge or information. The human relationships registering system comprises first data processing units **2** and **3** including sections for receiving personal data of a new member, and a second data processing unit including a section for storing the received personal data. The second data processing unit stores the personal data of the new member in correlation to an existing member when the existing member confirms the new member.

10 Claims, 10 Drawing Sheets

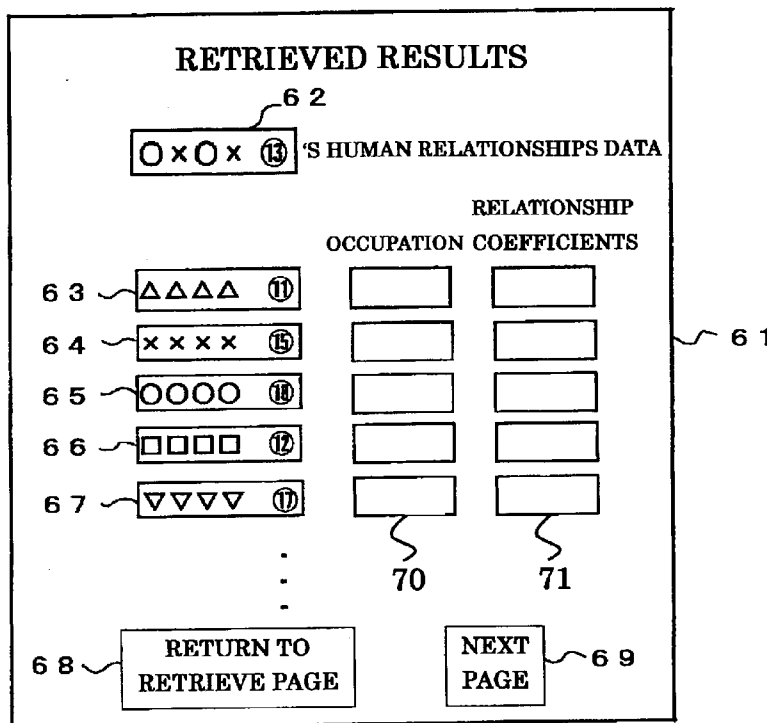


Fig. 1

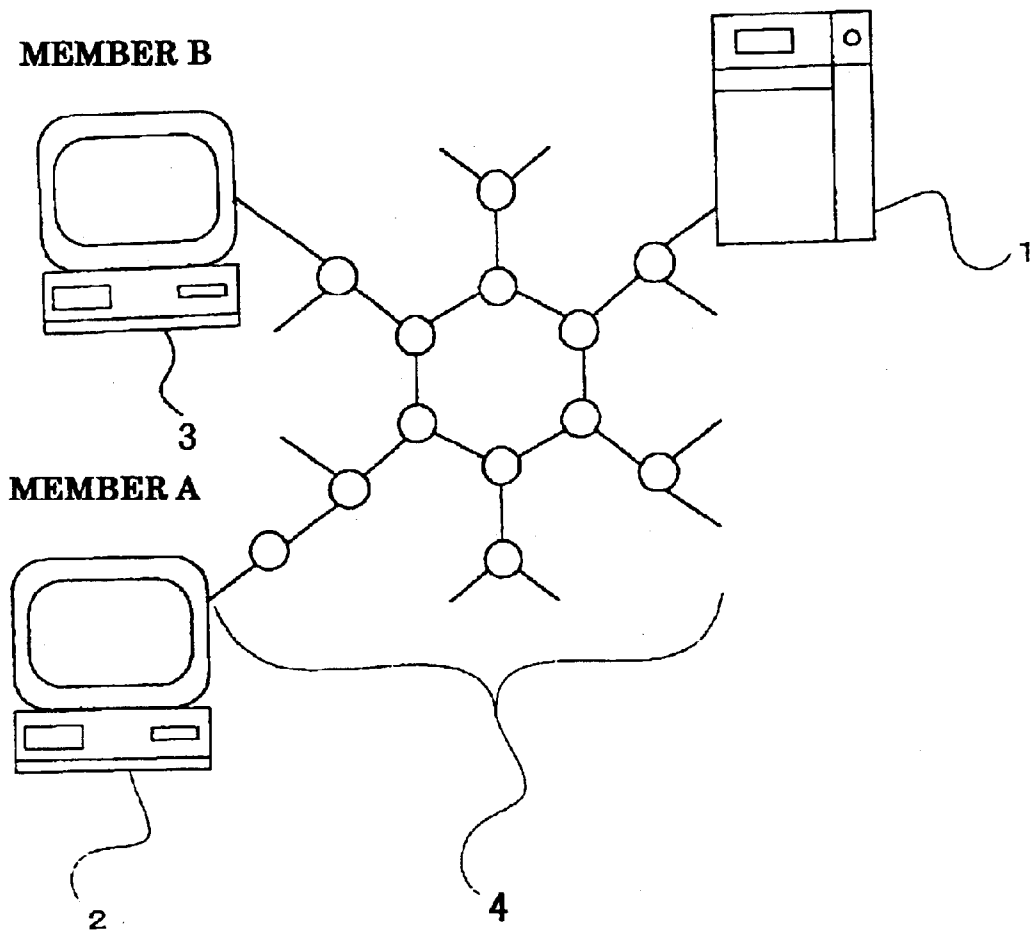


Fig. 2

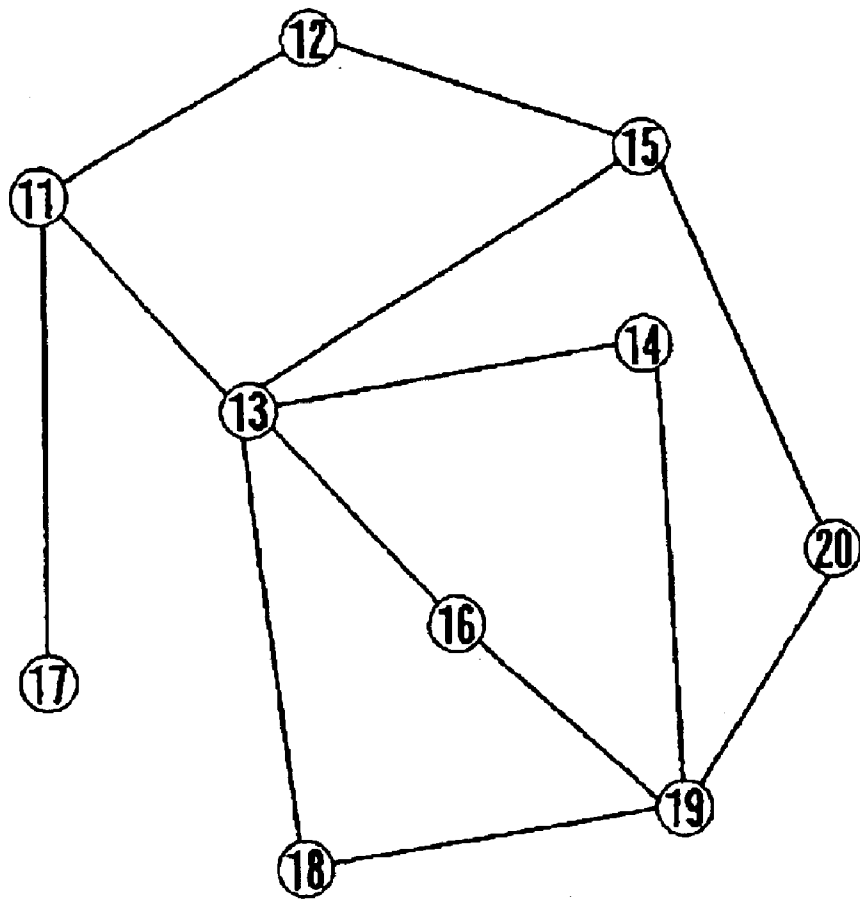


Fig. 3

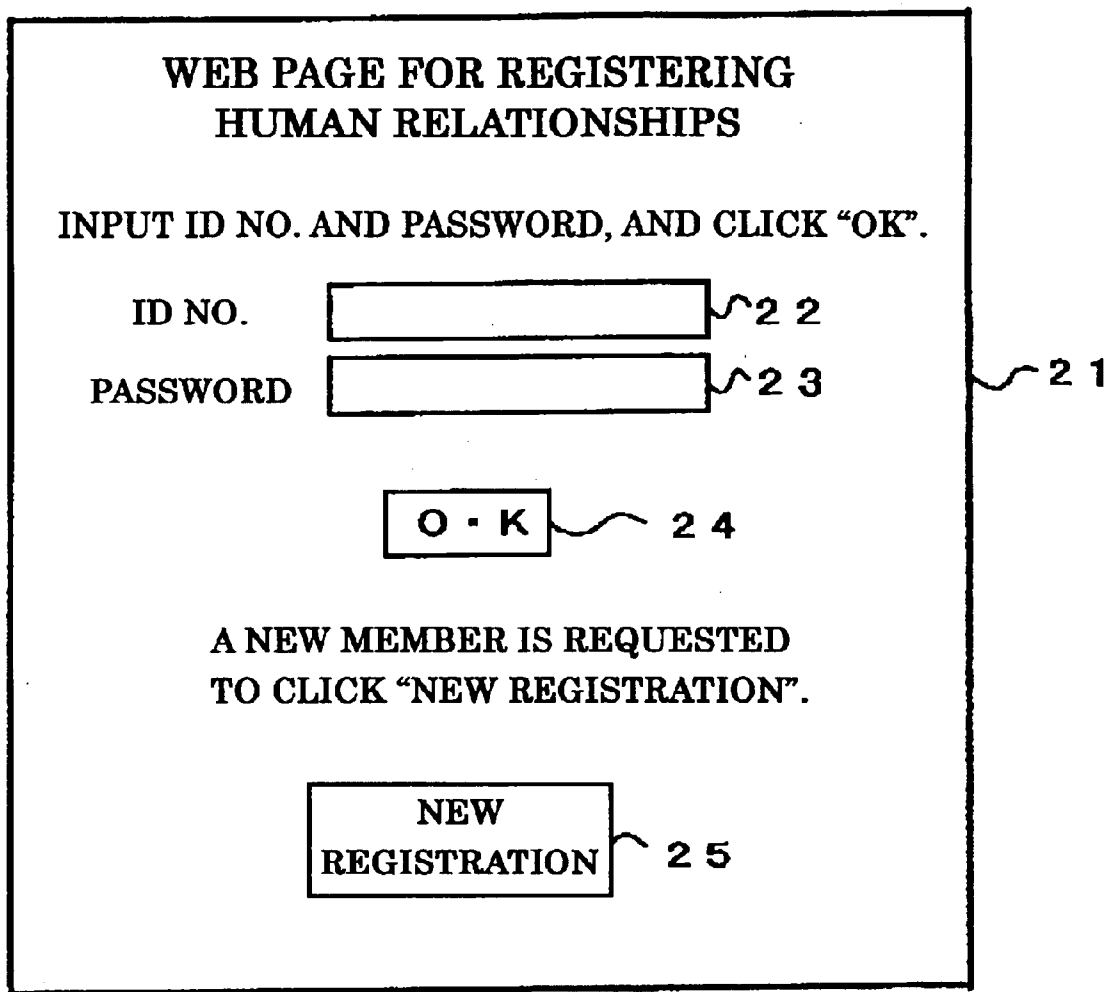


Fig. 4

NEW MEMBER'S PAGE

NAME	<input type="text"/>	32	
INTRODUCER	<input type="text"/>	33	
OCCUPATION	<input type="text"/>	34	
ADDRESS	<input type="text"/>	35	
PHONE NO.	<input type="text"/>	36	
E-MAIL ADD.	<input type="text"/>	37	
TECH. FIELD	<input type="text"/>	38	
	PASSWORD	<input type="text"/>	40
<input type="button" value="OK"/>		39	

31

Fig. 5

A NEW MEMBER MR. OR MS ○○○○ WISHES YOU
TO INTRODUCE HIM OR HER TO THE SYSTEM.

PLEASE CLICK "CONFIRMATION" BUTTON
AFTER YOUR CONFIRMATION.

NEW MEMBER

NAME	<input type="text"/>	4 2
OCCUPATION	<input type="text"/>	4 3
TECH. FIELD	<input type="text"/>	4 4

4 5

4 1

Fig. 6

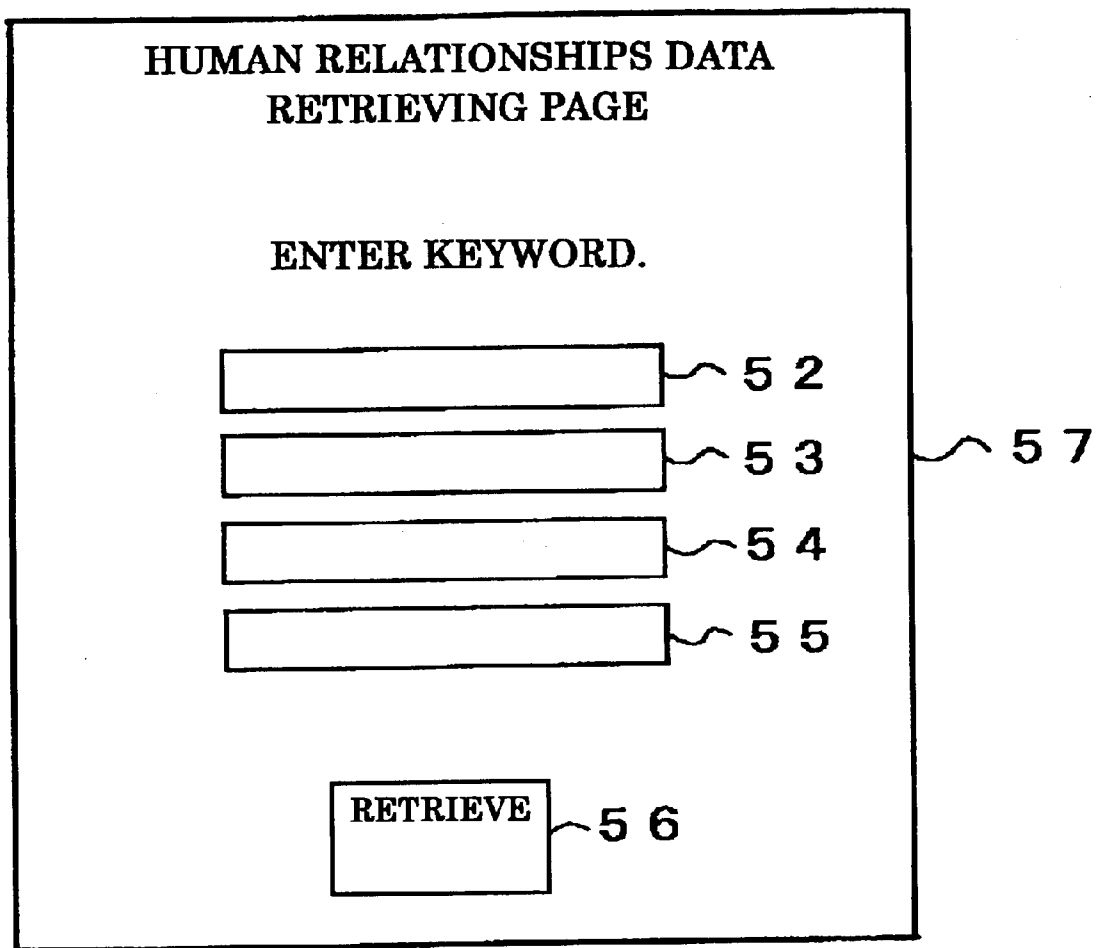


Fig. 7

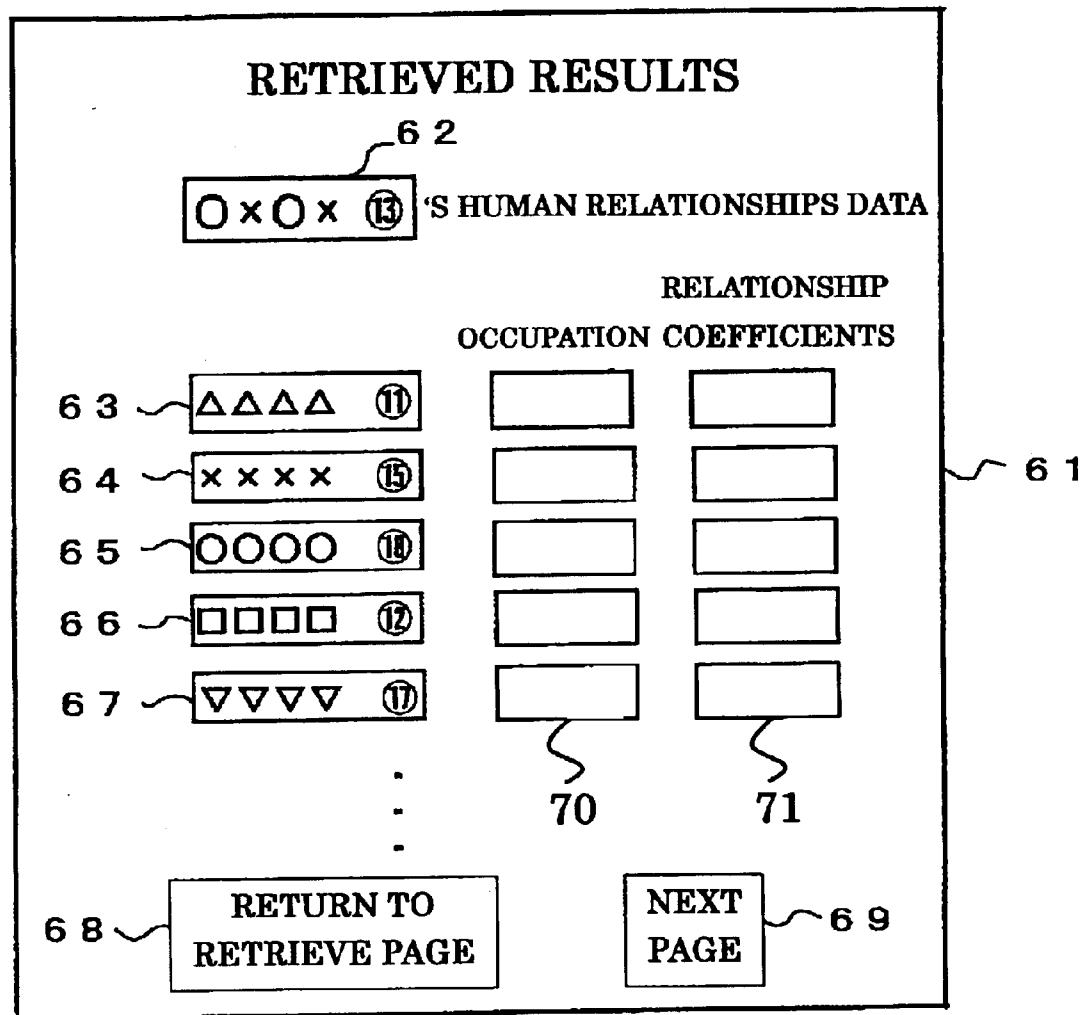
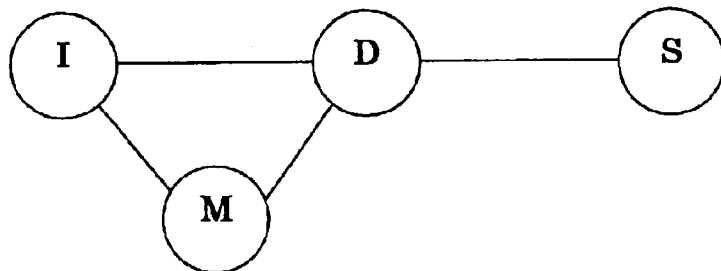


Fig. 8

(a)



(b)



(c)

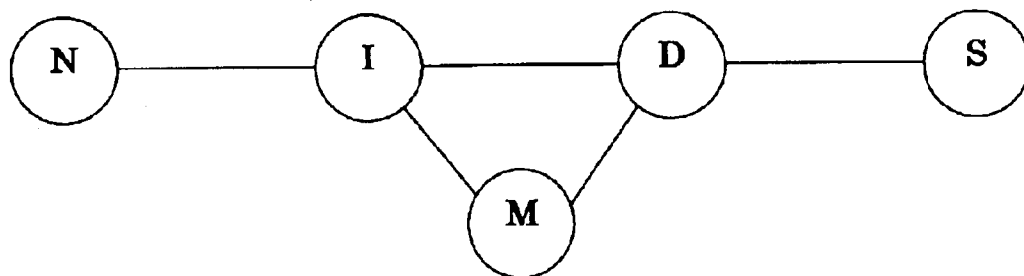


Fig. 9

(a)

	ID-M	ID-I	ID-D	ID-S
ID-M	—	1.0	0.5	0.25
ID-I	1.0	—	1.0	0.5
ID-D	0.5	1.0	—	1.0
ID-S	0.25	0.5	1.0	—

(b)

	ID-M	ID-I	ID-D	ID-S
ID-M	—	1.0	1.0	0.5
ID-I	1.0	—	1.0	0.5
ID-D	1.0	1.0	—	1.0
ID-S	0.5	0.5	1.0	—

(c)

	ID-M	ID-I	ID-D	ID-S	ID-N
ID-M	—	1.0	1.0	0.5	0.5
ID-I	1.0	—	1.0	0.5	1.0
ID-D	1.0	1.0	—	1.0	0.5
ID-S	0.5	0.5	1.0	—	0.25
ID-N	0.5	1.0	0.5	0.25	—

Fig. 10

ID CODES	NAMES	INTRODUCERS	TECH. FIELDS	...
ID-M	M	I	LAW	
ID-I	I	D	LAW	
ID-D	D	-	BUSINESS ADMINISTRATION	
ID-S	S	D	EDUCATION	

**HUMAN RELATIONSHIPS REGISTERING
SYSTEM, METHOD AND DEVICE FOR
REGISTERING HUMAN RELATIONSHIPS,
PROGRAM FOR REGISTERING HUMAN
RELATIONSHIPS, AND MEDIUM STORING
HUMAN RELATIONSHIPS REGISTERING
PROGRAM AND READABLE BY
COMPUTER**

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates to a human relationships registering system, a method and a server for registering human relationships, a program for registering human relationships, and a medium storing human relationships registering program and readable by a computer, all of which are used to establish wide and close human relationships.

2. Description of the Related Art

Up to now, there has been no efficient system or method which is usable in order to get acquainted with specialists in various particular fields and obtain expert knowledge or information.

Each person has been required to make every effort in order to establish wide and close relationships with a great number of people. There has been no system which actively supports such a person.

SUMMARY OF THE INVENTION

Problems to be Solved by the Invention

The present invention is intended to provide a human relationships registering system, a method and a server for registering human relationships, a program for registering human relationships, and a medium for storing human relationships registering program and readable by a computer, all of which are used to establish wide and close human relationships.

Further, the invention aims at providing a human relationships registering system, a method and a server for registering human relationships, a program for registering human relationships, and a medium storing human relationships registering program and readable by a computer, all of which are used to establish wide and close relationships with specialists in various particular fields and obtain expert knowledge or information.

Means to Solve the Problems

In order to accomplish the foregoing object of the invention, there is provided a human relationships registering system comprising:

a first data processing unit including a section for inputting personal data of new members;

and a second data processing unit including a section for storing the personal data of the new members, and storing the personal data of the new members by confirming relationships of the new members with existing members and correlating the new members with the existing members.

With the foregoing system, new members are not registered until they are confirmed by existing members, so that it is possible to maintain reliable human relationships between members. Further, new members are correlated to existing members, which enable members to know their relationships with one another and create their own human relationships data. A personal computer or a server computer is applicable as a data processing unit in order to easily create human relationships data of a great number of members.

A further human relationships registering system comprises a first data processing unit connected to the Internet and having an input section, and a second data processing unit connected to the first data processing unit via the Internet, registering names of members received via the input section and storing data concerning the members. The data of new members received via the first data processing unit are confirmed by existing members, and are registered thereafter. The second data processing unit stores the new members in correlation with the existing members.

In this system, the first and second data processing units are provided at different locations and are connected via the Internet, which enables a number of members can gain access to the processing units from any location in order to register themselves. Therefore, this system is very convenient to use.

In the foregoing case, new members may be registered after they confirm their own data.

It is preferable to store data concerning occupations of new members to be registered. This is effective in enabling members to know specialists in various particular fields and obtain expert knowledge or information. In short, human relationships data are usable as one of effective measures for carrying out business activities.

It is preferable to store relationships coefficients representing degrees of relationships between particular members who agree to establish human relationships therebetween, and store relationships coefficients of members who are related to the members who agree to establish human relationships. The relationships coefficients may be effective in establishing wide and close relationships between members in a variety of technical fields, and promoting personal influences and contribution to the society.

Relationships between members can be objectively known on the basis of the relationships coefficients.

It is preferable to get agreement between existing members using e-mails. For this purpose, e-mails may be exchanged between members when it is necessary to establish relationships between them. In such a case, members may get acquainted with other members even when they do not know of one another directly. This is effective in increasing the relationships coefficients.

The first data processing unit has a display to indicate a number of members and personal data thereof. The display shows human relationships data between members out of basic data in which new members are correlated with existing members. When a particular member is specified by the input section of the first data processing unit, the display preferably shows the specified member in such a manner that it is correlated to particular existing members.

A method of registering human relationships comprises a first data processing step for connecting to the Internet and receiving data via the Internet, and a second data processing step for registering a plurality of members' names received in the first data processing step and storing personal data of the members. In the second data processing step, data of a new member received via the Internet are registered after referring them back to an existing member, so that the new member's data are stored as basic data in correlation with the existing member.

This method is easily and effectively applicable to and used by the human relationships registering system which operates via the Internet.

In the foregoing method, new members are preferably registered after they confirm their own data. Further, it is preferable to store data concerning occupations, technical fields and so on of the new members. Still further, when

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relationships are established between existing members upon their agreement, it is preferable to store relationships coefficients therebetween and relationships coefficients of members related to the existing members. The agreement between particular existing members is preferably reached by exchanging-mails.

The registered human relationships data are preferably used in the following steps:

creating human relationships data on the basis of basic data in which a plurality of members are correlated; indicating personal data of members;

and indicating the created human relationships data.

In this case, it is preferable to select a particular member in the first data processing step, and to indicate members who are correlated to the selected particular member as well as human relationships data.

In order to use the registered human relationships data, a member inputs his or her identification code in the first data inputting step. Once identified, the member is allowed to gain access to his or her registration and personal data. This prevents the foregoing data from being infinitely retrieved by members, and protects the data.

As another way of using the registered data, a member may specify a particular occupation and/or technical field in order to indicate members classified in the specified occupation and/or technical field. Therefore, the member can easily retrieve data of the desired members out of the human relationships data.

In a still further way of using the registered data in which relationships coefficients between members are stored, a member specifies a particular member in the first data processing step, and indicates not only the human relationships data of the specified member but also those of the members correlated to the specified member and the relationships coefficients between the indicated members. This enables the member to easily know the relationships between the members and the relationships coefficients between them. In this case, it is also possible to indicate the members with a particular occupation and/or in a particular technical field, and the members correlated to the foregoing members. It is also possible to indicate the members having the relationships coefficients above a certain value. Therefore, the member can easily find desired members.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 schematically shows how a human relationships registering system is constituted via a general communication line such as an Internet.

FIG. 2 is a schematic human relationships diagram created by the human relationships registering system.

FIG. 3 shows an example of a Web page used for entering the Web site offered by the human relationships registering system.

FIG. 4 shows an example of Web page used for registering a personal data of a new member at the human relationships registering system.

FIG. 5 shows an example of a Web page that an existing member uses for confirming a personal data of a new member.

FIG. 6 shows an example of Web page used for retrieving data in the human relationships registering system.

FIG. 7 shows an example of a Web page used for indicating retrieved data.

FIG. 8 is another schematic human relationships diagram created by the human relationships registering system.

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FIG. 9 is a graph showing relationships coefficient between members which are stored in the server 1.

FIG. 10 shows an example of personal data stored in the server 1.

DESCRIPTION OF REFERENCE NUMERALS

- 2, 3 personal computers as first data processing units
- 1 server as a second data processing unit
- 4 Internet.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The invention will be described with respect to a human relationships registering system shown in the accompanying drawings. FIG. 1 schematically shows that this system is constituted using the Internet.

Referring to FIG. 1, members are accessible via the Internet 4 to a server 1 as a second data processing unit from their personal computers 2 and 3 as first data processing units. Each personal computer comprises a computer body, an input section such as a keyboard, mouse and so on, a display, a memory such as a RAM, a hard disc, and so on. The server 1 is similar to the personal computer. The personal computer may include a printer in order to print data.

The server 1 provides a Web site for constituting the human relationships registering system, stores names and personal data of registered members, and has a database for retrieving the names and personal data of the registered members. The Web site of the server 1 is assigned an address for the Internet 4.

Each of the personal computers 2 and 3 stores a browser in the storage such as a hard disc in order to perform communications via the Internet 4. The personal computer 2 or 3 activates the browser and specifies an address, thereby connecting to the Web site of the human relationships registering system offered by the server 1.

An input section of the personal computer 2 or 3 transmits registering data to the server 1 via the Internet 4. When a registration keyword or the like is inputted, the server 1 retrieves necessary data. The retrieved data are indicated on a display of the personal computer 2 or 3.

The use of the human relationships registering system will be described with reference to FIGS. 1 to 7. FIG. 2 is a schematic diagram showing human relationships data which are created by the human relationships registering system. FIG. 3 shows an example of a Web page used for entering the Web site offered by the server 1. FIG. 4 shows an example of a Web page used for registering a personal data of a new member at the human relationships registering system. FIG. 5 shows an example of a Web page an existing member uses for confirming a personal data of a new member. FIG. 6 shows an example of a Web page used for retrieving data in the human relationships registering system. FIG. 7 is an example of a Web page used to show retrieved results.

A new member is registered in the human relationships registering system (called the "system" hereinafter) as shown in FIGS. 3 and 4. For convenience of description, it is assumed that an existing member A with the personal computer 2 (called the "computer 2") is going to introduce a new member B who has the personal computer 3 and wishes to enter the system.

When the new member B enters the system by himself or herself, he or she activates the browser of the computer 3,

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inputs a Web site address and gains access to the server 1 via the Internet 4. The computer 3 receives the Web page 21 as shown in FIG. 3 from the server 1 and indicates it on the display. The new member B clicks a new registration button 25 on the Web page 21, so that a signal is transmitted to the server 1. The computer 3 receives the Web page 31 as shown in FIG. 4 from the server 1 and indicates it on the display.

In FIG. 3, reference numeral 22 denotes a column to input an identification code, and reference numeral 23 denotes a column to input a password. By the way, the identification code and the password are inputted in the columns 22 and 23 when an existing member gains access to the server 1. Thereafter, the existing member can access the server 1 after pushing an OK button 24.

Referring to FIG. 4, the new member B enters his or her name 32, occupation 34, address 35, telephone number 36, e-mail address 37, technical field 38 and password 40 as well as the introducer's name 33. Confirming the entered data, the new member B clicks an OK button 39. Thereafter, the data will be transmitted to the server 1 via the Internet 4.

The computer 2 of the introducer A (i.e. the existing member A) receives Web page 41 as shown in FIG. 5 from the server 1 in response to an e-mail. The Web page 41 indicates the new member B's name, occupation, technical field in columns 42, 43 and 44. Confirming the contents, the introducer A clicks a confirmation button 45 on the Web page 41. Thereafter, a confirmation signal is sent to the server 1. In response to the confirmation signal, the server 1 stores the new member B's personal data and password in correlation with the introducer A. FIG. 4 shows only some examples of data to be stored with respect to the new member B. The following data may be added: a new member's age, academic backgrounds, occupational backgrounds, qualifications and so on. The entered data can be updated in the server 1 whenever there are changes after the registration.

Alternatively, the introducer A may register the new member B. In this case, the introducer A enters the personal data of the new member B (shown in FIG. 4) using his computer 2 in order to send them to the server 1. Thereafter, the computer 3 of the new member B receives the personal data from the server 1 by an e-mail. Confirming the received data, the new member B returns the confirmation signal to the server 1. Thus, the new member B will be registered in the server 1.

Further, when receiving an e-mail address of the new member B from the introducer A, the server 1 may send an e-mail to the new member B in order to urge the new member B to register his or her personal data. Upon receiving the personal data of the new member B, the server 1 stores the received data in correlation with the introducer A's name and so on.

The new member's data are confirmed by the introducer, and are stored in correlation with the introducer. The server 1 creates human relationships data and a human relationships diagram showing the human relationships on the basis of the relationships between the new member and the introducer. At the time of registration, a new member is assigned an identification code (ID No.).

The registered member can establish relationships with existing members, and obtain a relationship coefficient indicating degrees of relationships. For this purpose, members may send protocol e-mails to particular existing members. For instance, a sender may indicate that he or she respects or admires an existing member and wishes to establish relationships with the existing member, and so on. Such a

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protocol e-mail may be sent to the existing member as an e-mail via the server 1. In response to the protocol e-mail, the existing member may meet the sender's request, and establish the relationships with the sender. Therefore, the sender can be related to the receiver (i.e. the existing member), and obtain a relationships coefficient. As will be described later, the relationships coefficient is maximum when the relationships are directly established between members while the relationships coefficient becomes smaller when the relationships are indirectly established via other members. In other words, it is possible to objectively known a degree of relationships on the basis of the relationships coefficients.

The human relationships registering system shown in FIG. 1 and the human relationships diagram will be utilized as described hereinafter.

The server 1 creates a human relationships diagram as shown in FIG. 2 on the basis of the basic data in which members are registered in correlation with one another, and on the basis of agreements between members who have exchanged protocol e-mails. The server 1 sends the human relationships diagram to the computer 3. In FIG. 2, reference numerals 11 to 20 denote members, and lines denote members who are correlated with one another after exchanging protocol e-mails and agreeing to establish relationships. Further, relationships coefficients of the correlated members may be indicated in the human relationships diagram.

Relationships coefficients are updated each time new human relationships are established between registered members. The updated relationship coefficients are stored in the server 1. Therefore, latest relationships can be known even after relationships are changed between registered members.

Referring to FIG. 2, the member 13 is directly related to the members 11, 14, 15, 16 and 18 while the member 13 is indirectly related to the members 12, 17, 19 and 20. Further, it is possible to indicate all the members having relationships coefficients which are larger than a predetermined value. Still further, it is possible to indicate occupations and technical fields of members.

The following describe how the human relationships registering system is actually operated with reference to FIGS. 3, 6 and 7. It is assumed here that the member B activates a browser of the computer 3 and connects to the server 1 via the Internet 4. The Web page 21 (shown in FIG. 3) is indicated on the display of the computer 3. The member B enters his or her identification code (ID No.) and password on the columns 22 and 23 via the input section, and clicks the OK button 24. The input data are sent to the server 1, which confirms whether the identification code agrees with the password, and indicates a Web page 57 (shown in FIG. 6) on the display of the computer 3.

The identification codes are usually assigned to the members by the server 1. Alternatively, members' e-mail addresses may be used as identification codes.

In order to know the human relationships of the member 13 (shown in FIG. 2), the member B enters the data concerning the member 13 on the columns 52 to 55, clicks a retrieve button 56. Then, the Web page 61 (shown in FIG. 7) is indicated on the display of the computer 3, and indicates on columns 63 to 67 the members 11, 15, 18, 12, 17 and so on who are related to the member 13. The occupations and relationship coefficients of the members 11, 15, 18, 12, 17 and so on are indicated on columns 70 and 71. In this case, it is possible to indicate only the members whose relationship coefficients exceed the predetermined

value. A plurality of retrieval keywords may be input in the columns 52 to 55. Further, the Web page 61 may indicate technical fields and so on of the related members.

In order to retrieve data concerning members having particular occupations or engaged in particular technical fields, the member B enters keywords of the particular occupations or technical fields in the columns 52 to 55. The entered data are sent to the server 1, which retrieves desired data and indicates them on the computer 3. Alternatively, personal data of the retrieved members may be indicated by double clicking the columns 63 to 67.

Further, the relationship coefficients may be used as the keywords for the retrieval. In other words, it is possible to retrieve members who are related to a particular member (who may be a retrieving member) and have the relationships coefficient of a particular value.

According to the invention, it is possible to get acquainted with specialists in various particular fields by indicating occupations and technical fields of members with the human relationships diagram. Therefore, the invention is useful in order to obtain expert knowledge or information. In short, the human relationships diagram can be applied as one of effective business measures.

Referring to the indicated relationships coefficients of members, some members who are not directly related to a desired member shown in the human relationship diagram can find an introducer (another member) related to the desired member.

The relationships coefficients will be described in detail. FIGS. 8(a) to 8(c) show examples of human relationship diagrams created as human relationships data. The human relationships change from a state (a) to a state (b) and to a state (c). In these drawings, characters M, I, D, S and N denote members who are connected by lines when relationships are established therebetween.

Referring to FIG. 8(a), the member M is directly related to the member I, and is indirectly related to the members D and S. The term "directly" means that the relationship is established between the members M and I by exchanging the protocol e-mails therebetween. The term "indirectly" means that the member M has no direct relationship with the members D and S. In short, the member M is related to the members D and S via the member I.

In FIG. 8(b), the members M and D are directly related to each other by exchanging the protocol e-mails.

FIG. 8(c) shows that the member N is directly related to the member I by exchanging the protocol e-mails, and is indirectly related to the members M, D and S via the member I.

FIGS. 9(a) to 9(c) are tables showing examples of relationships coefficients of the members stored in the server 1. These tables correspond to FIGS. 8(a) to 8(c), respectively. Characters ID-M, ID-I, ID-D, ID-S and ID-N denote the identification codes of the members M, I, D, S and N. The figures in FIGS. 9(a) to 9(c) are the relationship coefficients between members.

A maximum relationships coefficient "1.0" is assigned when members are directly related to each other. The relationships coefficient "1.0" is halved as the number of intermediate members increases. In short, a relationship coefficient "0.5" is assigned to a first member and a third member when a first member is related to a third member via a second member who is directly related to the first member. A minimum relationship coefficient "0.25" is assigned to a first member and a fourth member when the first member is

related to the fourth member via the second member and the third member who is directly related to the second member.

Referring to FIG. 9(a), the relationships coefficients assigned to the member M are "1.0" based on direct relationship to the member I, "0.5" based on relationship to the member D via the member I, "0.25" based on relationship to the member S via the members I and D.

In the example shown in FIG. 9(b), if the member M is directly related to the member D (by exchanging the protocol e-mails), the relationships coefficient is changed to "1.0" between the members M and D. Further, the relationships coefficient is changed to "0.5" between the member M and the member S who is directly related to the member D. Needless to say, the relationship coefficient remains "1.0" between the member M and I who are directly related.

As shown in FIG. 9(c), the relationships coefficient "1.0" is assigned to the member N who is directly related to the member I. The relationships coefficient "0.5" is assigned to the member N who is related to the members D and M via the member I. The relationships coefficient "0.25" is assigned to the member N who is related to the member S via the members I and D.

As described above, it is possible to objectively know degrees of the human relationships on the basis of the relationship coefficients. The following describe a case in which the member S (shown in FIG. 8(a)) retrieves data of existing members using a keyword "law" representing a technical field.

FIG. 10 shows an example of personal data of the members M, I, D and S which are stored in the server 1. In response to the keyword "law" entered by the member S, the server 1 retrieves and outputs data concerning the members M and I who are practicing the law. In this case, the relationships coefficients between the member S and the members M and I (shown in FIG. 8(a)) may be also indicated. This enables the member S to check the presence of the member whose relationship coefficient is high to the member S. Further, the server 1 may indicate a human relationships diagram concerning the members S, M and I (shown in FIG. 8(a)). On the basis of the human relationships diagram, the member S who is retrieving the data can confirm the degree of relationships with the members M, I and himself or herself. For example, the member S can know that he or she is accessible to the member I via the member D who is directly related to the members I and S.

When a computer-readable recording medium such as a CD-ROM which stores the program for executing the human relationships registering method of the invention is used, another computer (not shown) can function as a server by reading the stored program similarly to the server 1.

Although the invention has been described with respect to one embodiment thereof, it will be understood that various modifications or alterations are possible without departing from the spirit of the present invention. For instance, a plurality of computers may be connected to a server using a dedicated line such as a LAN in place of the Internet. The Web pages are simply shown as examples, and may be configured as desired.

EFFECTS OF THE INVENTION

The invention is effective and useful when persons create human relationships data in order to get acquainted with specialists in various particular fields, and obtain expert knowledge or information.

According to the invention, the relationships coefficients are not assigned until relationships are established between

members after mutual agreements are reached. The invention actively assists persons to establish wide and close relationships between members registered in the human relationships registering system.

Further, when some member retrieves data on existing members, relationship coefficients of the retrieving member and the existing members whose data are being retrieved are indicated. The retrieving member can select at least members who are close to him or her.

What is claimed is:

1. A server connected to terminals used by members via a network, the server being configured to establish and update relationships between the members, the server comprising:

a database configured to store personal attributes of each member, the personal attributes including an identification code, a name, a specialized field, and relationship coefficient data indicating degrees of relationship between each member and other members;

a message communicator configured to communicate a first message from one member to another member and configured to communicate a respective response to the first message from the another member to the one member, the response establishing a relationship between the one member and the another member;

a database update unit configured to update, when the relationship is established between the one member and the another member, the relationship coefficient data indicating degrees of relationship between (1) the one member and the another member, (2) the one member and members having relationships with the another member, and (3) the another member and members having relationships with the one member; and

a data retriever configured to identify target members having personal attributes satisfying one or more key words of a search criteria, the key words including at least a relationship coefficient data value indicating the degree of relationship between the target members and a particular member;

wherein the key words include a minimum or maximum relationship coefficient data value indicating a maximum or minimum degree of relationship between the target members and the particular member.

2. The server of claim 1, wherein the key words further include the name, identification code, and a specialized field of the target members.

3. The server of claim 1, wherein a new member is granted membership when (1) an existing member enters at least the name and specialized field of the new member into a second message, and transmits the second message to the new member, and (2) the new member receives the second message, and verifies the name and specialized field of the new member.

4. The server of claim 1, wherein a new member is granted membership when (1) the new member enters at least the name and specialized field of the new member into a second message, and transmits the second message to an existing member, and (2) the existing member receives the second message, and verifies the name and specialized field of the new member.

5. A human relationships registering program implemented by the server of one of claims 2, 3, 4, wherein the server is a computer.

6. A recording medium for storing the human relationships registering program of claim 5, wherein the human relationships registering program is readable by the computer.

7. A method of establishing and updating relationships between members using terminals connected to a server, the method comprising:

storing personal attributes of each member, the personal attributes including an identification code, a name, a specialized field, and relationship coefficient data indicating degrees of relationship between each member and other members;

communicating a first message from one member to another;

communicating a respective response to the first message from the another member to the one member, the response establishing a relationship between the one member and the another member;

updating, when the relationship is established between the one member and the another member, the relationship coefficient data indicating degrees of relationship between (1) the one member and the another member, (2) the one member and members having relationships with the another member, and (3) the another member and members having relationships with the one member; and

identifying target members having personal attributes satisfying one or more key words of a search criteria, the key words including at least a relationship coefficient data value indicating the degree of relationship between the target members and a particular member;

wherein the key words include a minimum or maximum relationship coefficient data value indicating a maximum or minimum degree of relationship between the target members and the particular member.

8. The method of claim 7, wherein the keywords further include the name, identification code, and specialized field of the target members.

9. The method of claim 7, wherein a new member is granted membership by the following steps:

entering at least the name and specialized field of the new member, into a second message, by an existing member;

transmitting the second message from the existing member to the new member; and

verifying the name and specialized field of the new member, indicated in the second message, by the new member.

10. The method of claim 7, wherein a new member is granted membership by the following steps:

entering at least the name and specialized field of the new member, into a second message, by the new member;

communicating the second message from the new member to the existing member; and

verifying the name and specialized field of the new member, indicated in the second message, by the existing member.



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Robertson

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(45) **Date of Patent:** **Jul. 31, 2001**

(54) **NETWORKED PERSONAL CONTACT MANAGER**

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(73) Assignee: **Amazon.Com Holdings, Inc.**, Seattle, WA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(51) **Int. Cl.**⁷ **G06F 3/00**

(52) **U.S. Cl.** **707/10; 709/201; 709/202; 709/203; 709/300; 709/217; 709/218; 709/219; 707/1; 707/104; 707/501; 707/513; 707/201; 345/327; 345/331**

(58) **Field of Search** **709/300, 201, 709/202, 203, 217, 218, 219; 707/1, 104, 501, 513, 10, 201; 345/327, 331**

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Primary Examiner—Dung C. Dinh

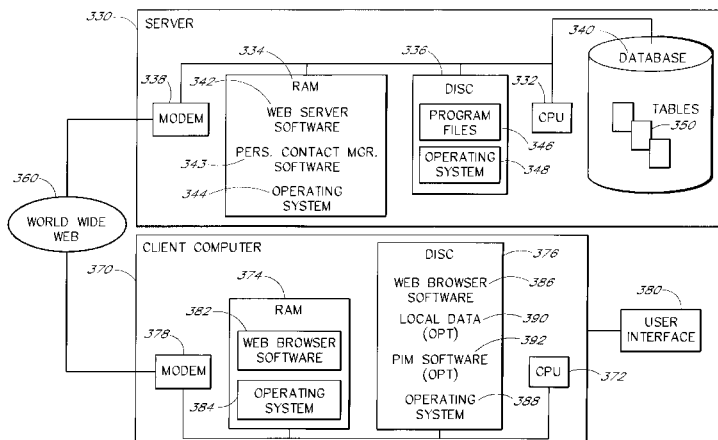
Assistant Examiner—Hieu C. Le

(74) *Attorney, Agent, or Firm*—Knobbe, Martens, Olson & Bear, LLP.

(57) **ABSTRACT**

A network-computer-based personal contact manager system is disclosed wherein users of networked clients maintain and update a set of user information which is stored in a relational database on a networked server. The personal contact manager system allows each user to specify on an individual basis which of their contacts are permitted to access respective datums of their user information. In some cases, and assuming permission is granted, the system will issue notifications (e.g., by e-mail) to a user’s contacts when the user changes his information or when a preset event, such as a birthday, as defined by the user, is to occur. The system also allows users to find contacts based on common group affiliations and notifies users when there are coincidences in their data (e.g., travel plans, astrological compatibility). The personal contact manager system supports the retrieval of information on the contacts of contacts, assuming such as permission has been granted by the contacts and their contacts, and can also be used to synchronize the server database with a PIM database of the user and any contacts of the user whoe have the appropriate permissions.

16 Claims, 14 Drawing Sheets



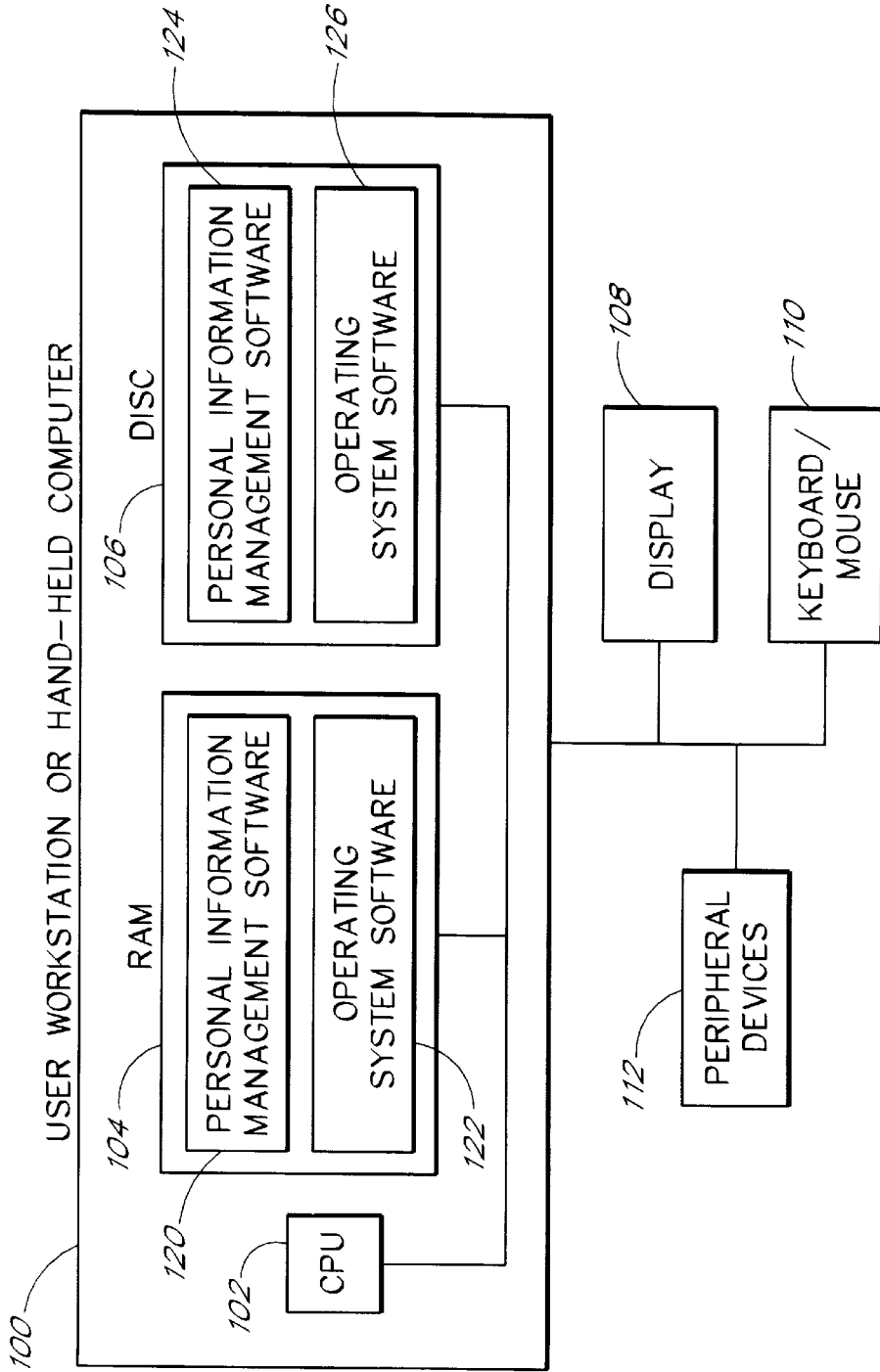


FIG. 1
(PRIOR ART)

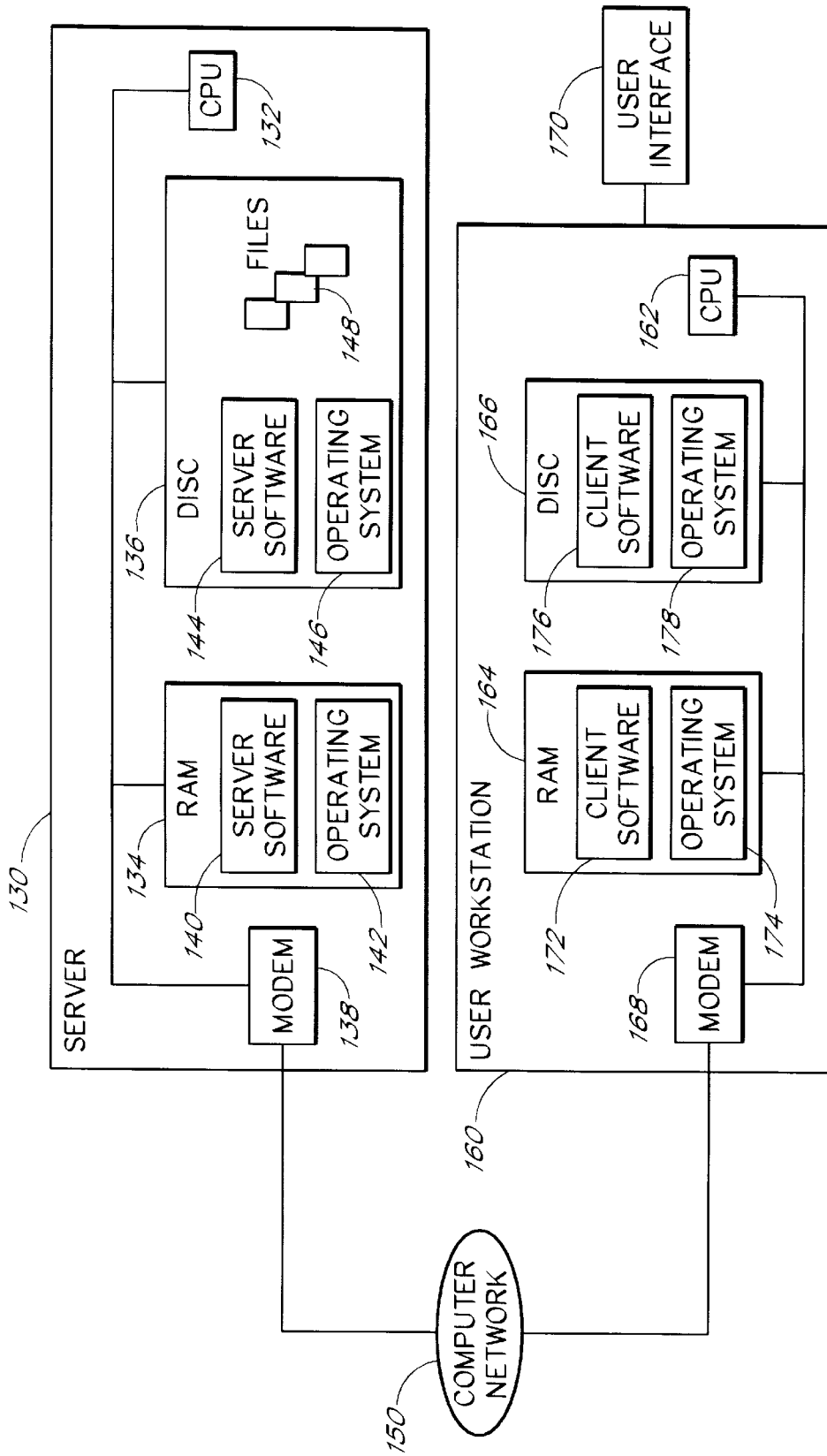


FIG. 2
(PRIOR ART)

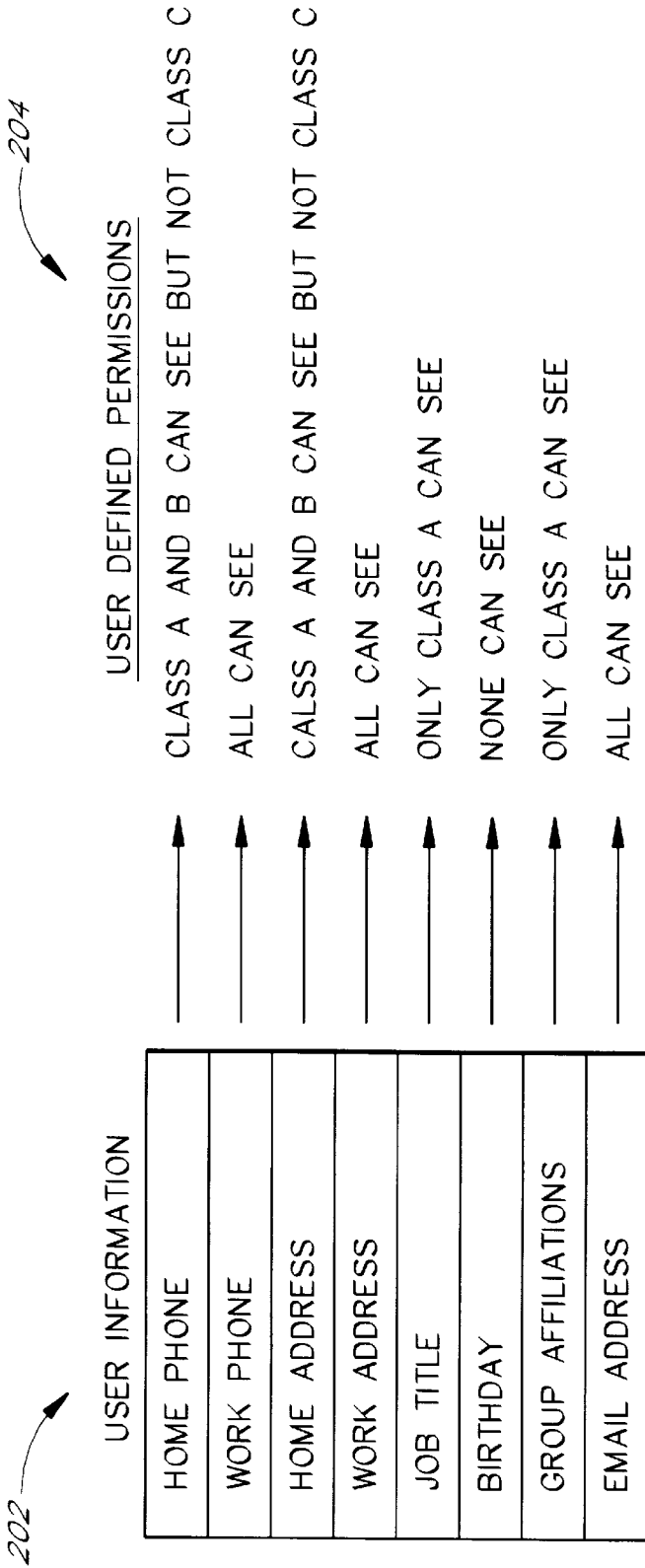


FIG. 3
(PRIOR ART)

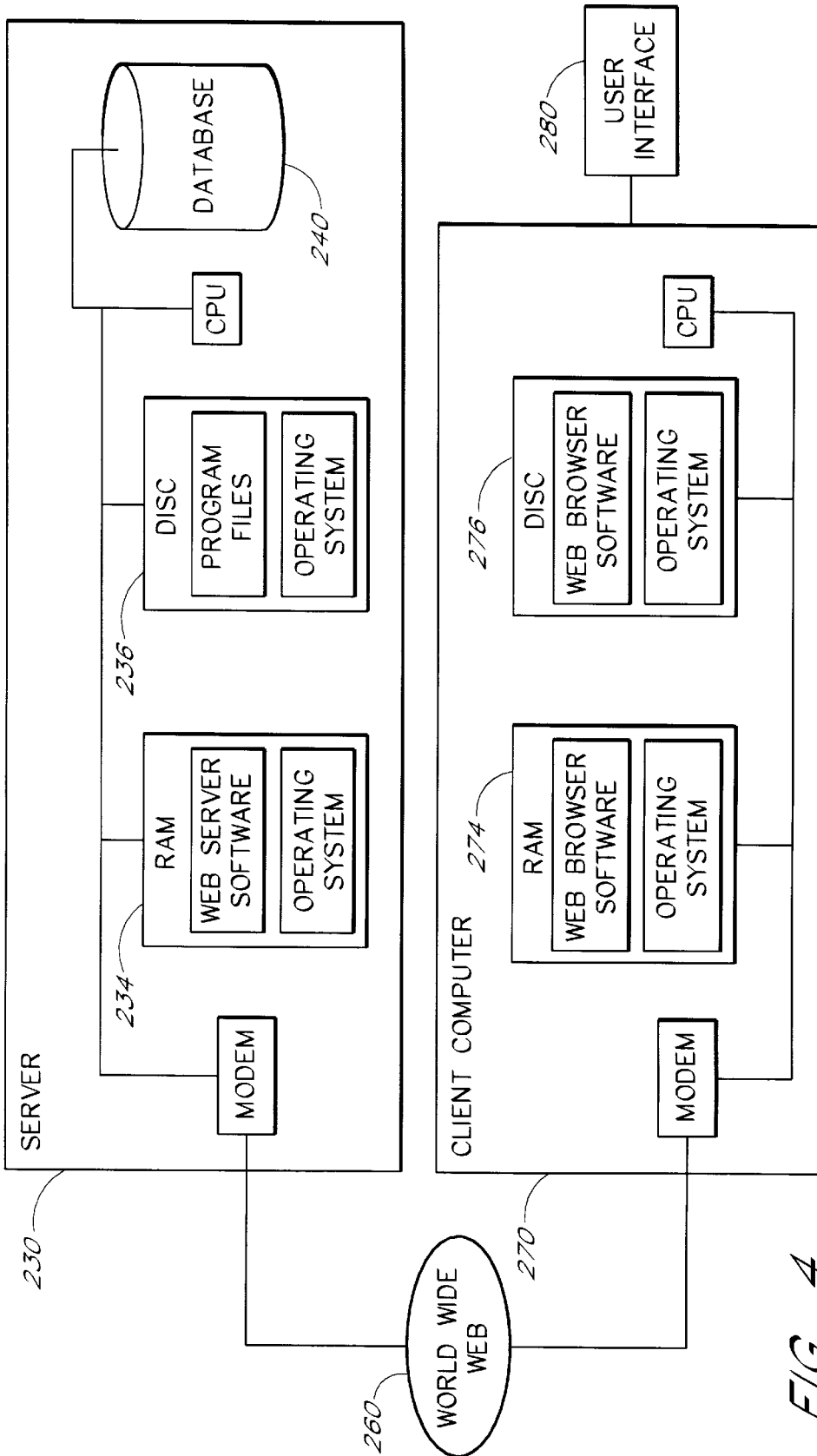


FIG. 4
(PRIOR ART)

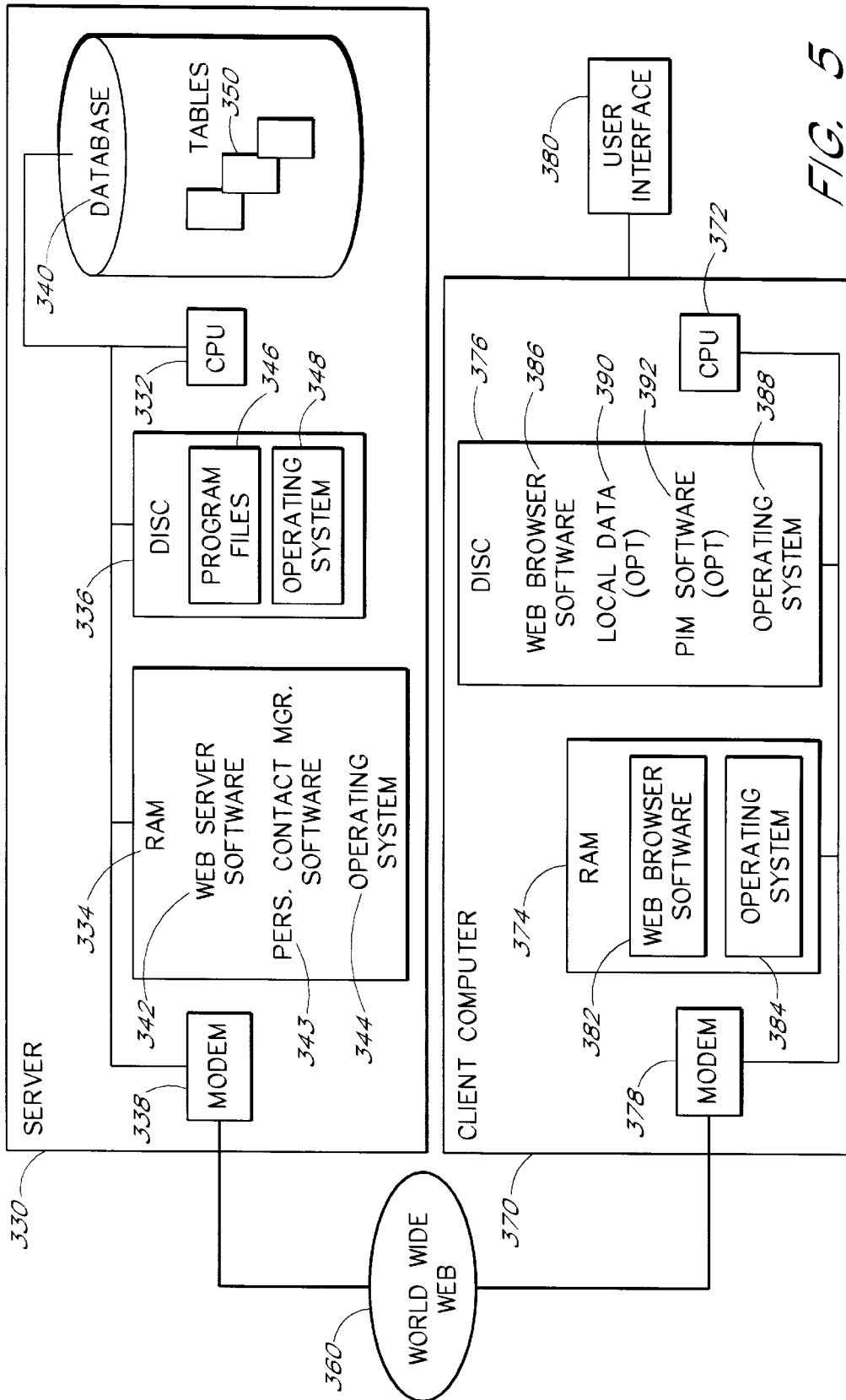


FIG. 5

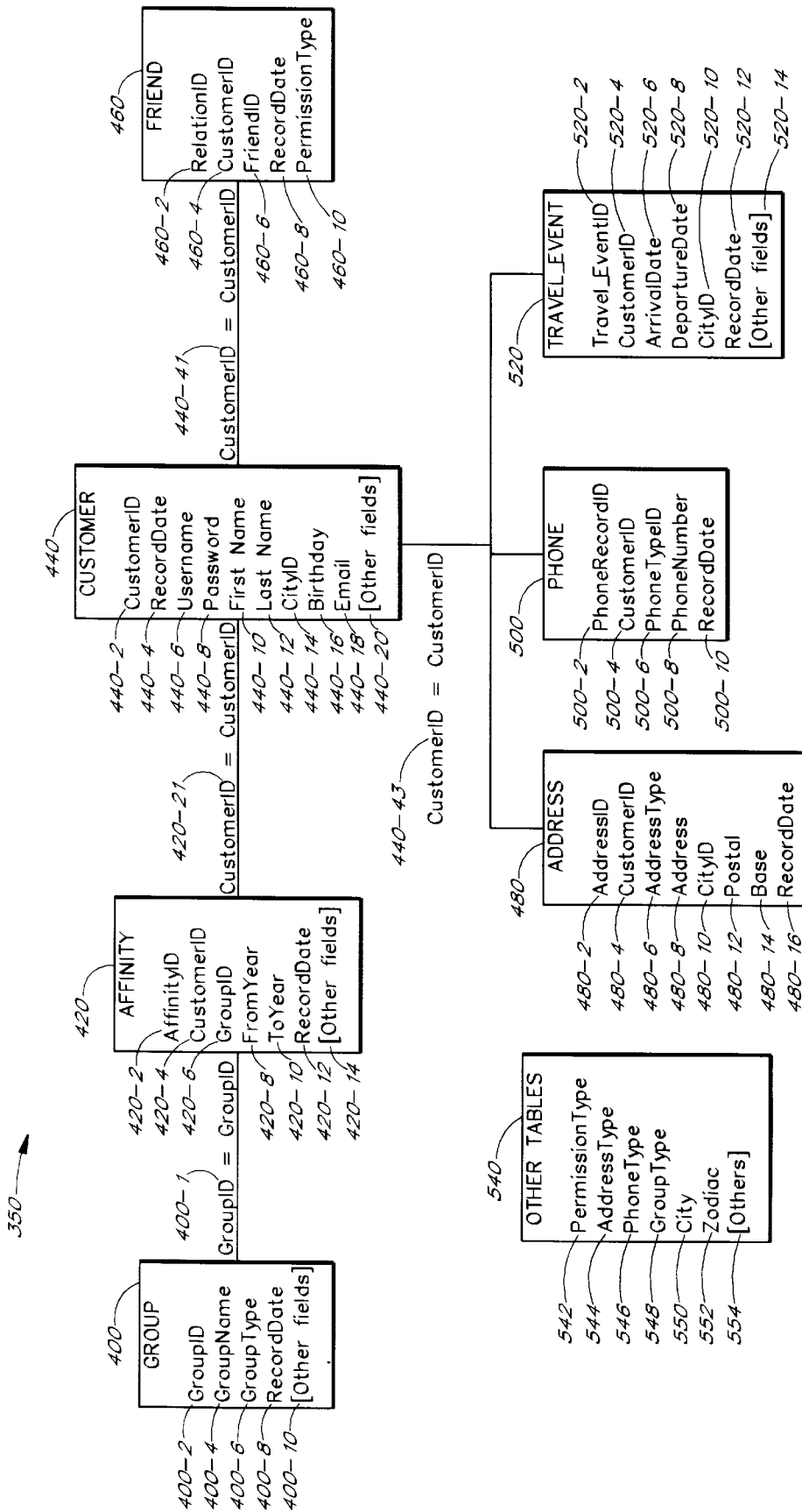


FIG. 6

560 →

PSEUDO REGISTRATION FORM

Name	<input type="text"/>	560-2
HomeAddress	<input type="text"/>	560-4
Home Phone	<input type="text"/>	560-6
Work Address	<input type="text"/>	560-8
Work Phone	<input type="text"/>	560-10
Birthday	<input type="text"/>	560-12
Your High School	<input type="text"/>	560-14
Year of Enrollment	<input type="text"/>	560-16
Graduation Year	<input type="text"/>	560-18
Your College	<input type="text"/>	560-20
Year of Enrollment	<input type="text"/>	560-22
Graduation Year	<input type="text"/>	560-24
<input type="button" value="Submit"/>		560-26

FIG. 7

580

PSEUDO GROUP LIST FORM

580-2

Following are the other members who went to your college at about the same time.

580-4

Click on the boxes next to the names of the people you'd like to add to your Address Book.

580-6

580-8

State University, 1982-1986

580-14

580-10

580-12

John Doe (Graduated 1985)

Robert Johnson (Graduated 1986)

Jane Smith (Graduated 1986)

580-16

Submit

FIG. 8

600

PSEUDO PERMISSION FORM

600-2

Click on the boxes next to the Permission Levels that you would like to grant to your new contact

600-4

John Doe

600-7 600-6 Crossing Paths Notification Permission

600-9 600-8 Personal Information

600-10 Work Information

600-12 Birthday Notification

600-14 Friend of Friends Information

600-16

Submit

FIG. 9

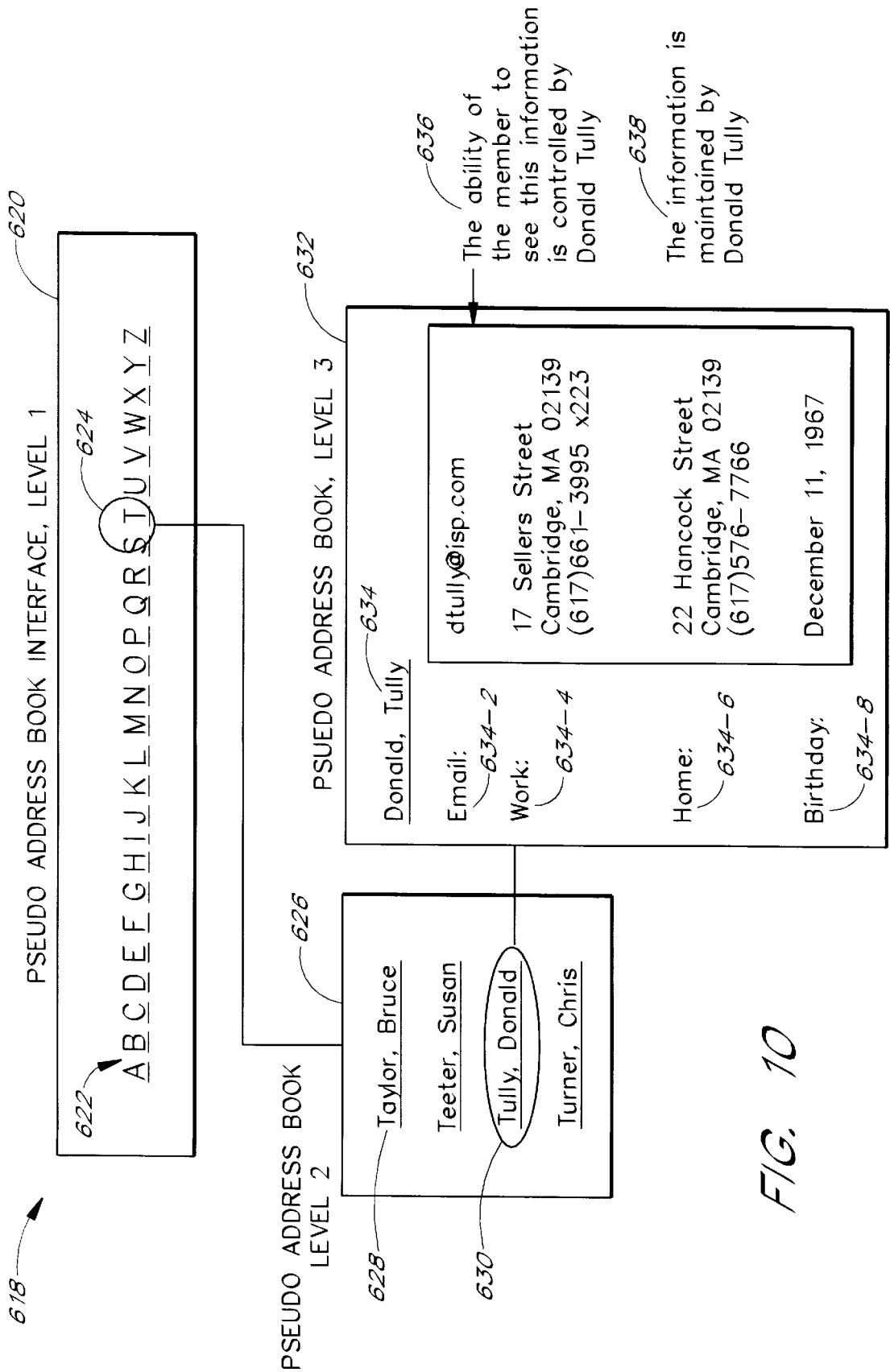


FIG. 10

650 →

PSEUDO MEMBER UPDATE

Member Update *650-2*
December 7, 1998

The following of your contacts have upcoming birthdays: *650-4*

- Avery Rogers (Dec. 11) *650-6*
- Jane Bigelow (Dec. 14) *650-6*

Your contacts have registered the following address changes: *650-8*

- Tom Kohn
 - New work address: *650-10*
1000 Wilson Boulevard
Arlington, Va 22229
 - New work phone: *650-12*
703-558-3312

The following new members have affiliated with the same groups as you: *650-14*

- Gary Clayton (State College, 1985) *650-16*

The following members have linked to you and have requested that you reciprocate: *650-18*

- Jun Ohama *650-20*
- Lee Rogers *650-20*

You have scheduled a trip to Phoenix on December 14. The following of your contacts live in Phoenix or will be in Phoenix on that date: *650-22*

- Andrew Kress *650-24*
- Taylor Pierce *650-24*

According to Astrology, the following of your contacts are compatible with you today (Libras) *650-26*

- Bryan Jamieson *650-28*
- Anne Thierry *650-28*

FIG. 11

PSEUDO ADD TRAVEL FORM 660

660-2
Traveling To City:

660-4
State:

660-6
Country:

660-8
Arrive in City on Date:

660-10
Leave City on Date:

660-20
How to get in touch while in this City:

PSEUDO CROSSING PATH LIST 670

670-2
The following of your contacts will be in Chicago while you are there.

670-4
Check the boxes next to their names if you would like to inform them that you will be visiting Chicago.

670-6
People Who Live in Chicago

- Scott Ullem
- Taylor Pierce
- Betsy Klein

670-8
People Who Will be Visiting Chicago

- Tania Gutsche

670-10

FIG. 12

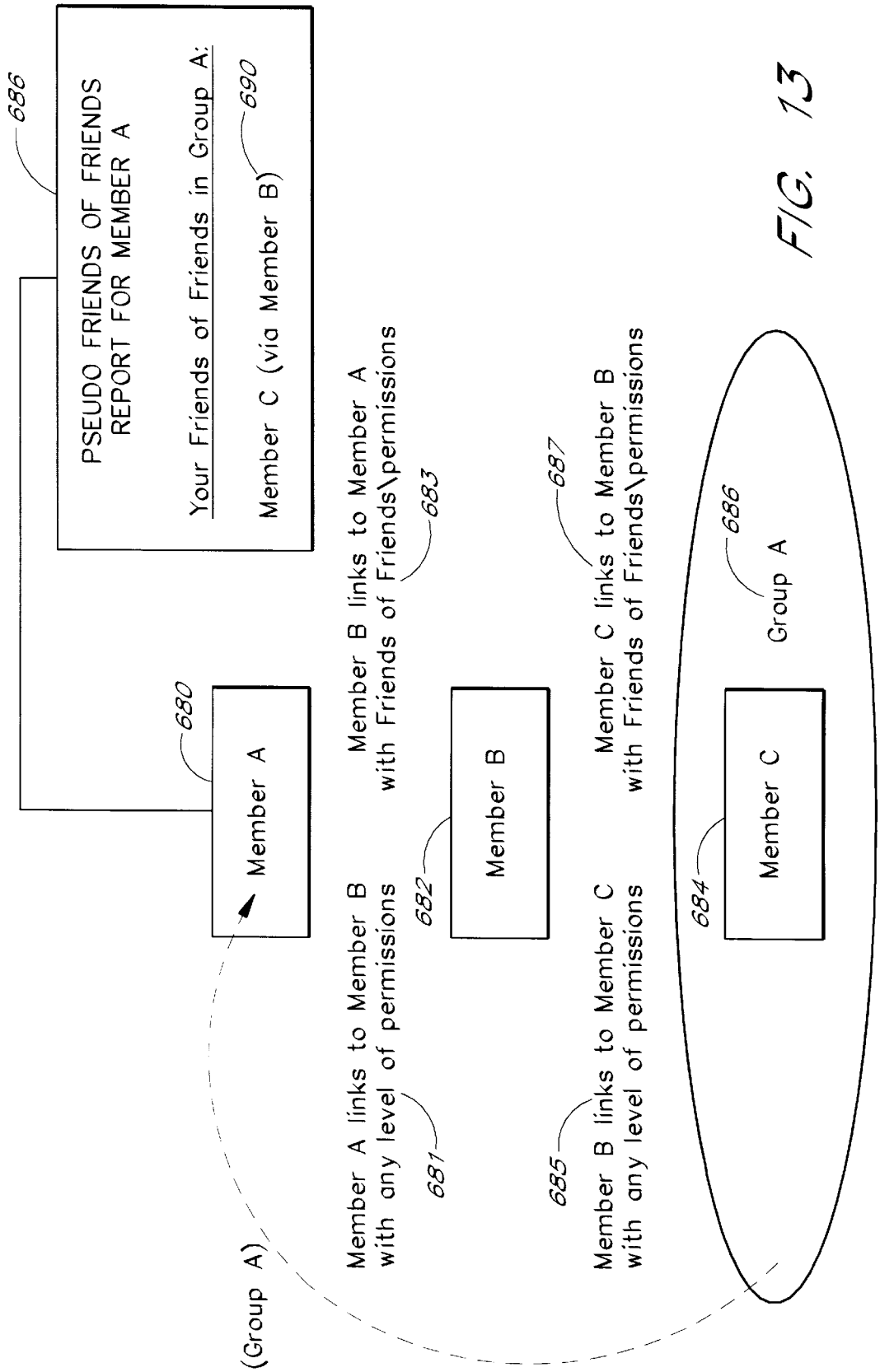
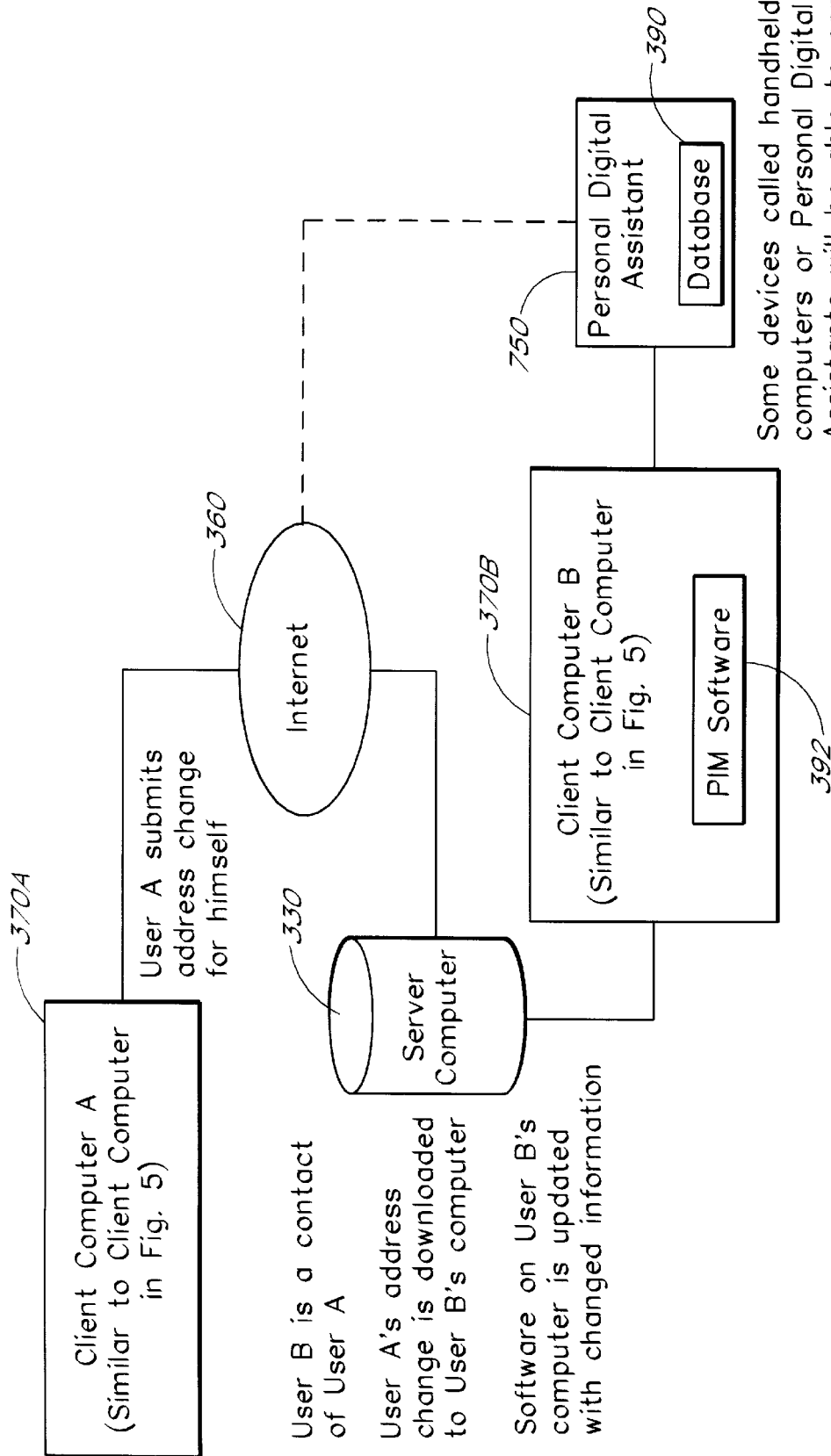


FIG. 13



Some devices called handheld computers or Personal Digital Assistants will be able to connect to the Internet directly without having to be fed information by Client Computer B.

FIG. 14

NETWORKED PERSONAL CONTACT MANAGER

The present invention relates generally to computer software used to manage contact information—such as mailing addresses, e-mail addresses, phone numbers, and birthdays—and more specifically to a method of creating links between members over a network and providing information to each member based on levels of permission maintained by the other members to which they are linked.

BACKGROUND OF THE INVENTION

Several types of prior art for managing contact information exist, including Personal Information Management software applications, Groupware Applications, and Internet-based “White Pages” and e-mail services.

Personal Information Management Software

As represented generally in FIG. 1, in a typical prior art Personal Information Management (PIM) software application (e.g., Lotus Organizer, Microsoft Outlook, or U.S. Robotics Palm Pilot), a PIM software application **120**, **124** that stores contact information in a database resides on a workstation or handheld computer **100** having a central processing unit **102**, a display **108**, a keyboard and/or mouse **110**, a primary memory **104** (e.g., random access memory) for program execution, a secondary memory **106** (e.g., a hard disc) for program storage, and peripheral devices **112**. As is well known, programs, such as the PIM software **120**, are executed in the RAM **104** by the CPU **102** under control of the operating system software **122**, **126**.

In the prior art, users themselves enter the contact information that they want to store in the PIM software. A variety of methods exist for entering this contact information. It may be entered manually using the keyboard, imported from an existing file on their computer, or imported via a peripheral device such as a business card scanner. The defining characteristic of this class of prior art is that the input of the contact information is performed by the user of the software and, when the information changes, the user must modify the information himself. What this class of prior art lacks is a means for information to be shared between multiple users and a means for a given user to post changes to his own information for the benefit of others.

Groupware Applications

As generally represented in FIG. 2, in a typical prior art Groupware application. (e.g., Lotus Notes), a user workstation **160** accesses information stored on a central server computer **130** over a computer network **150**, such as a Local Area Network or Intranet. The server system consists of a central processing unit **132**, a primary memory **134** (e.g., random access memory) for program execution, a secondary storage device **136** (e.g., a hard disc) for program storage, and a modem **138** or other device for connecting to the computer network. The user workstation **160** is the same as the user workstation **100** described in reference to FIG. 1 with the addition of a modem **162** or other device for connecting to the computer network. The file server or database contains data files **148** that can be accessed only by authorized users. The user uses client software **174**, **176** running on the user workstation **160** to access the files **148** under the mediation of server software **140**, **144** running on the server **130**.

Typically, in such a system a central system administrator organizes users into classes and the creator of a file **148** determines what classes of users may view the file. The rules governing which individual users or classes of users have the authorization to view a particular file **148** may be stored

as part of the file itself. Alternatively, these rules are based upon the hierarchical directory structure of the file server in which the file is stored. That is, a particular user may view files in one directory but not another.

FIG. 3 represents a common deployment of a contact management system based on Groupware. Each user enters information **202** about himself and specifies a set of permissions **204** that define what classes of users are able to view various pieces of the information **202**. What this deployment of the prior art lacks is the ability to authorize viewing privileges on a user-by-user basis rather than on a class-by-class basis. For instance, a user would be able to grant access to his home phone number **206** to the Human Resources department of his employer (e.g., Class A) while denying access to the same information to his co-workers (e.g., Class C). The user would not be able to give access to his home phone number selectively to a first co-worker while denying it to a second co-worker if both co-workers were part of the same class of users as organized by the central system administrator. Furthermore, such a system would lack a practical notification methodology. There would be no way for a user to specify “notify me when the first co-worker changes his information but not when the second co-worker changes his information.”

Internet-Based “White Pages” and E-Mail Directory Services

In a typical prior art “white pages” or e-mail service, client computers and a server computer are connected via the World Wide Web as depicted in FIG. 4. A user subscribes to a White Pages or E-Mail service via a client computer **270** operating a web browser **282** or other software application residing in memory **274** that allows it to display information downloaded from a server computer **230** over the World Wide Web **260**. The server computer system accesses a database **240** containing contact information entered by registered users. The service enables users to view contact information entered by other users. The authorization scheme may allow all users to limit certain classes of users from viewing certain parts of their user record as represented in FIG. 3. However, there are no linkages between individual users and thus users cannot restrict the viewing of their information on a user-by-user basis. Furthermore, users cannot be notified when information for particular users has changed.

SUMMARY OF THE INVENTION

The present invention is a computer-network-based contact management system that allows members to create and maintain contact with other members and determine on a person-by-person basis what information to share or withhold. The system is based on a relational database scalable to millions of users that resides on a server computer.

The invention was developed shortly after the advent of the World Wide Web, which promoted millions of people worldwide to connect their computers with a standard protocol, a phenomenon which made the invention practical and beneficial.

When a user becomes a member of the system, the member associates himself with any number of affinity groups and creates a data record for himself by entering information in specific data fields. Based on the affinity groups with which the user has associated himself, the system then informs the user of other members in the same groups and allows the user to establish a link to any of those members on an individual basis.

For each second user to which a first user has established a link, the second user can specify which data fields in his

data record can be viewed by the first user. Each second user to which the first user has established a link is informed that a link has been established. The second user can in turn decide whether or not to establish a link to the first user. If the second user chooses to establish a link to the first user, he can specify which data fields in his personal data record can be viewed by the first user. In addition, each time a new user associates himself with a group with which an existing user has associated himself, the present invention informs the existing user that the new user has joined that group and allows the existing member to establish a link to the new user.

For each first user, the present invention maintains a database of information about the second users to whom the first user has established a link. The personal address book of the first user contains the information in the data fields that the second users have given the first user permission to view. Whenever a second user changes any information in any data field of his data record, the information in that field is automatically updated in the information database of each first user whom he has given permission to view the information in that data field.

In addition, if a first user has given a second user the proper form of data field permission for the personal data record of the first user, the present invention will inform the second user whenever first user's birthday or anniversary is approaching, whenever the first user will be travelling in the vicinity of the second user, and whenever the astrological sign of the first user is compatible with the astrological sign of the second user.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings, which are incorporated in and form a part of this specification, illustrate embodiments of the invention and, together with the description, serve to explain the principles of the invention, wherein:

FIG. 1 depicts a computer loaded with Personal Information Management software;

FIG. 2 generally depicts the data schema of a category of prior art known as groupware applications;

FIG. 3 shows a common scheme for authorizing permission to view information in the prior art;

FIG. 4 depicts two computers interconnected via the Internet, one of which is a server connected to a database and the other of which represents a user's client workstation, both of which are configured according to the prior art;

FIG. 5 depicts two computers interconnected via the Internet, one of which is a server connected to a database and the other of which represents a user's client workstation, both of which are configured according to the present invention;

FIG. 6 represents an object model of the key tables in the relational database maintained on the server computer in the preferred embodiment of the present invention;

FIG. 7 represents a pseudo graphical user interface in which a user enters information in specific data fields to create a personal data record;

FIG. 8 represents a pseudo graphical user interface for listing other users with the same group affiliation as that specified by a first user;

FIG. 9 represents a pseudo graphical user interface for specifying what type of data fields from a first user's personal data record to which the first user wishes to grant a specific second user access;

FIG. 10 represents a pseudo graphical user interface that displays the information stored in a user's personal address book;

FIG. 11 represents a pseudo graphical user interface that provides a first user with specific information that has changed about the other users to which the first user is linked;

FIG. 12 represents a pseudo graphical user interface that allows a first user to enter travel information and find out which contacts have overlapping travel schedules

FIG. 13 represents a pseudo graphical user interface that allows a first user to gather information about the contacts of his contacts; and

FIG. 14 is a data flow diagram of an alternative embodiment of the present invention where a personal digital assistant is synchronized with a server database of user information.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Reference will now be made in detail to the preferred embodiments of the invention, examples of which are illustrated in the accompanying figures. While the invention will be described in conjunction with the preferred embodiments, it will be understood that they are not intended to limit the invention to those embodiments. On the contrary, the invention is intended to cover alternatives, modifications and equivalents, which may be included within the spirit and scope of the invention as defined by the appended claims.

As represented in FIG. 5, the preferred embodiment follows a standard Internet architecture, in which client computers 370 and a server computer 330 are connected via the World Wide Web 360 and modems 338, 378 or other communications channels. A user accesses the server 360 via a client computer 370 operating a web browser 382 or other software application residing in memory 374 that allows it to display information downloaded from a server computer 330. The server computer system 330 runs server software 342, including the network-computer-based personal contact manager 343 of the present invention, which interacts with the client computers 370 and a user information database 340. In a commercial embodiment of the present invention, the personal contact manager 343 is the heart of a Web-based personal contact management service called PlanetAll. The database 340 contains contact information entered by registered users. The personal contact manager 343 in some situations will notify a set of users of updates made to the database 340 by another user to whom the notified set is related.

A distinction over the prior art is that the database 340 in the present invention is necessarily a relational database built from a set of relational tables 350. In the conventional manner, both the server 330 and the clients 370 include respective storage devices, such as hard disks 336 and 376 and operate under the control of operating systems 344, 384 executed in RAM 334, 374 by the CPUs 332, 372. The server storage device 336 stores program files 346 and the operating system 348. Similarly, the client storage devices 376 store the web browser software 386 and the operating systems 388. In an alternative configuration, in which the client is a personal information manager (PIM), such as the U.S. Robotics Palm Pilot, the disc 376 can also include a local PIM database 390 and PIM software, which performs data management and synchronization functions.

FIG. 6 outlines the data structure of the relational database 340 in the preferred embodiment, in which seven tables 350 are employed to enable most of the functionality of the present invention:

- (1) Customer Table 440;
- (2) Friend Table 460;
- (3) Group Table 400;

- (4) Affinity Table **420**;
- (5) Address Table **480**;
- (6) Phone Table **500**; and
- (7) Travel Event Table **520**;

The Customer Table **440** contains one record for each unique user. The key field in this table is CustomerID **440-2**. All information stored in the various database tables relating to a particular member is linked together by a unique number in this field. Other important fields in this table include information used by users to login to the system (Username **440-6** and Password **440-8**), information which helps users identify each other (First Name **440-10**, Last Name **440-12**, and E-mail **440-20**), information required to provide Birthday Notification (Birthday **440-16**) and information required to provide Crossing Paths notification (CityID **440-14**). Each record in the Customer Table **440** is time-stamped via the RecordDate field **440-4**. Other fields **440-22** can also be included in the Customer Table **440** (and the other tables as well).

The Friend Table **460** is a key to the present invention because it relates users to each other. Each record in the table represents a relationship between one user, identified by CustomerID **460-4**, and another, identified by FriendID **460-6**, with a certain level of permissions **460-10**. The user interface of the present invention provides a multitude of ways for users to view information about other users, and every one of these ways relies on a database query of the Friend Table **460** to determine the list of other users whose information a particular user may see. Each record is time-stamped via the RecordDate field **460-8** so that users may be notified when their contacts' records change. Each record is uniquely identified by a RelationID **460-2**.

The Group Table **400** contains one record for each unique group with which users may affiliate. Each group is identified by a GroupName **400-4** and GroupType **400-6**. Examples of these groups would be GroupName **400-4**= "Massachusetts Institute of Technology" (GroupType="University") and GroupName **400-4**= "Sigma Chi" (GroupType="Fraternity"). Each record has a time-stamp **400-8** and a unique identifier **400-2**.

Each record of the Affinity Table **420** relates a user, identified by CustomerID **420-4**, to a group, identified by GroupID **420-6**. If a user affiliates with six groups, there would be six records in the Affinity Table **420**. This table stores information about the time period of a user's affiliation with a particular group in the FromYear and ToYear fields **420-8**, **420-10** so that the system may help users find their contemporaries. Each record is time-stamped **420-12** so that the system may report to users when other users join the group, has a unique identifier **420-2** and can include additional fields **420-14**.

The Address Table **480** stores information for any number and kind of addresses for a particular user, identified by CustomerID **480-4**. For instance, if a user wants to make his home address, work address and summer home address available to his contacts, there would be three records for that user in the Address Table **480**, each being identified in part by an appropriate AddressType **480-8** (e.g., home, work, summer home). Each record is time-stamped **480-16** so that the system can notify users when their contacts have added or modified address information and has a unique identifier **480-2**. Address information is conventional, including street Address **480-8**, CityID **480-10**, Postal code **480-12**, and military Base **480-14** fields.

The Phone Table **500** is directly analogous to the Address Table **480**, but it stores telephone and fax number information instead of address information. Each record is identified

by a unique PhoneRecordID **500-2** and includes the CustomerID **500-4** of the user whose phone information is contained in the record, a phone type ID **500-6** indicating, e.g., whether the record is for a telephone or fax, the phone number **500-8** and a time-stamp **500-10**.

The Travel Event Table **520** stores information about users' travel plans. This table is required to notify users when their travel plans intersect with the travel plans of their contacts. A record in the Travel Event Table **520** includes the CustomerID **520-4** of the user whose travel information is contained in the record, arrival and departure dates **520-6**, **520-8** and a CityID **520-10** identifying the travel destination. Each record is uniquely identified by a Travel_EventID **520-2** and is time-stamped with a RecordDate **520-14**.

In the preferred embodiment, a multitude of other tables **540** are used to enable a variety of user services. The Permission Type Table **542** contains one record for each of the varieties of permission levels the system allows members to assign to their contacts in the Friend Table **460**. In the preferred embodiment, as illustrated in FIG. 9, permission information is grouped into five categories for the purpose of user interface simplicity (crossing paths notification permission **600-6**, personal information **600-8**, work information **600-10**, birthday notification **600-12**, and friends of friends information **600-14**). However, the Permission Type table **542** could just as easily be structured to allow members to grant and deny access to information on a field by field basis.

The City Table **550** stores latitude and longitude information for two million cities to enable the system to notify users when their contacts travel within a defined geographical radius. The Zodiac Table **552** allows the system to associate birthdays with signs of the Zodiac and thereby notify which of their contacts have compatible astrological signs on a particular day. The AddressType, PhoneType and GroupType tables **544**, **546**, **548** define the types of address, phone and group that can be defined in the respective Address, Group and Phone tables **480**, **400**, **500**. The advantage of this normalized relational database architecture is that it permits scaling and speed far in excess of any embodiment of the prior art.

FIGS. 7 through 12 display pseudo software graphical user interfaces (GUIs). In the preferred embodiment, the web server software **342** on the server computer **330** displays these GUIs via the computer communications interface **360** on the user interface **380** of the user workstation computer **370**. The database and communications operations necessary to perform the described functions are controlled by the personal contact manager **343**, which employs where necessary the services of the web server software **342**. For example, the personal contact manager **343** updates the database tables **350** when a user submits a new home address and then determines whether any of that user's contacts need to be notified of the change. If so, the personal contact manager **343** will issue the notifications via the web server software **342**. It should be assumed, unless a statement to the contrary is made, that all of the operations described herein which are aspects of the present invention are embodied by the personal contact manager **343**.

Referring now to FIG. 7, a pseudo GUI **560** is shown that allows members to enter information about themselves in order to create a personal data record. Users can enter information in this GUI in various data fields. In the preferred embodiment, these fields include: Name **560-2**, Home Address **560-4**, Home Phone **560-6**, Work Address **560-8**, Work Phone **560-10**, Birthday **560-12**, High School **560-14**, Year of High School Enrollment **560-16**, High School Graduation Year **560-18**, College **560-20**, Year of College Enrollment **560-22**, and College Graduation Year **560-24**.

In certain of these data fields, the user can specify groups with which he wishes to affiliate himself, and the beginning and ending dates of the affiliation. In the preferred embodiment, the data fields High School **560-14** and College **560-20** represent categories of groups. In the data field Year of High School Enrollment **560-16**, the user enters the beginning date of the affiliation with the group specified in the data field High School **560-14**. In the data field High School Graduation Year **560-18**, the user enters the ending date of the affiliation with the group specified in the data field High School **560-14**. In the data field Year of College Enrollment **560-22**, the user enters the beginning date of the affiliation with the group specified in the data field College **560-20**. In the data field College Graduation Year **560-24**, the user enters the ending date of the affiliation with the group specified in the data field College **560-20**. In both of these cases, the beginning date and ending date establish a date range during which time the user was affiliated with the group in question.

Once the user of the client computer **370** (FIG. **5**) enters information in each data field in the GUI **560** shown in FIG. **7**, he clicks the Submit button **560-26** (or performs some equivalent action) and the information entered is transferred via the computer communications network **360** (FIG. **5**) to the server computer **330**, where the server personal contact manager software **343** stores the information in the appropriate tables **350** of a database **340**.

Referring now to FIG. **8**, a pseudo GUI **580** is shown that allows a first user to select other users they wish to add to their personal address book. The list of contacts is created based on the group affiliation information the first user enters in the data fields College **560-20**, Year of College Enrollment **560-22**, and College Year of Graduation **560-24** in the Pseudo Registration GUI **560** shown in FIG. **7**. A similar GUI **580** would exist for the group specified in the data field High School **560-14** in the pseudo **560** GUI shown in FIG. **7**.

In each version of the GUI **580** shown in FIG. **8**, a text description **580-2** at the top of the GUI explains to the first user that other members have been found who had the same affiliation as the first user during the same period of time as the first user. The name **580-6** of the group in which the first and second users share an affiliation is displayed and the date range **580-8** of the first user's affiliation with that group is displayed.

If a second user whose personal information is stored in the tables **350** of the database **340** on the server computer **330** has specified the same group affiliation as that specified by the first user in the College **560-20** data field, and that second user has specified a date range for that affiliation that intersects with the date range specified by the first user in the Year of College Enrollment **560-22** and College Graduation Year **560-24** data fields, the Name **580-10** of the second user and the ending date **580-12** of the second user's affiliation with that group are displayed.

A second text description **580-4** at the top of the GUI **580** instructs the first user to select any of the second users listed whom the first user wishes to add to his personal address book. If the first user wishes to add a second user to his personal address book, the first user clicks the checkbox **580-14** to the left of the Name **580-10** (e.g., "John Doe") for that second user. Once the first user has finished specifying the users he wants to add to his address book, he clicks the Submit button **580-16**, and the information entered is transferred via the computer communications network **360** to the server computer **330** where it is stored in the appropriate tables **350** of the database **340**.

A pseudocode description of the actions performed by the personal contact manager software **343** to display the group member list is shown in Appendix A. This pseudocode fragment (and the others that follow) is written in a structured English that is similar to computer languages such as Pascal, FORTRAN and C. The pseudocode fragments are not described herein as they are self-explanatory. The tables and fields referred to in the pseudocode fragments correspond to the tables and fields described in reference to FIG. **6**.

Referring now to FIG. **9**, a pseudo GUI **600** is shown allowing a first user to specify which types of data fields from the first user's personal data record to grant a specific second user permission to view. If a first user specifies a second user whom the first user would like to add to his personal address book, as explained in the description of FIG. **8**, the second user will receive notification (issued by the contact manager program **343**—FIG. **5**) that the first user has "linked" to him. If the second user chooses to return the link to the first user, the preferred embodiment of the present invention will display the pseudo GUI **600** shown in FIG. **9** with the name of the first user **600-5**, allowing the second user to set data field permissions for the first user. Unlike the prior art, which does not allow the first user to specify data field permissions for individual other users, the preferred embodiment of the present invention allows the first user to specify permissions separately for each individual other user in whose personal database the first user has chosen to be included.

A text description **600-2** at the top of the pseudo GUI in FIG. **9** instructs the first user to specify which types of data fields from the first user's personal data record to allow to appear in the personal address book of the second user, whose name **600-4** is shown below. Several types of data field permission are listed, each with a check box to the left enabling the first user to select or deselect the permission type. For example, to grant the second user **600-4** permission to view the information from the first user's personal data record indicated by the permission type denoted "Crossing Paths Notification Permission," the first user would check the box **600-7** to the left of the permission type Crossing Paths Notification Permission **600-6**. To deny the second user **600-4** permission to view the information from the first user's personal data record indicated by the permission type denoted "Personal Information," the first user would uncheck the box **600-9** to the left of the permission type Personal Information **600-8**.

In the preferred embodiment of the present invention, the levels of permission are as follows: Crossing Paths Notification Permission **600-6**, Personal Information **600-8**, Work Information **600-10**, Birthday Notification **600-12**, and Friends of Friends Information **600-14**. However, the present invention is not limited to the levels of permission shown in the preferred embodiment. The present invention is flexible to allow permission categories to be modified as needed.

Each permission type allows the second user to view information from the first user's personal data record in specific data fields, according to a specific set of rules. In the preferred embodiment of the present invention, these permission rules are as follows:

If member A links to member B, member A can grant any of the permissions discussed below to member B.

Even if member B does not reciprocate the link to member A, an e-mail forwarding address for member B will be included in the Virtual Address Book for member A. For example, the e-mail address

“memberB@planetall.com,” which maps to the actual e-mail address that member B has entered into his/her own record, will appear in member A’s Virtual Address Book, but nothing else.

When member A first links to member B, member B is notified on the Web site and in an e-mail.

If member B elects not to grant any permissions to member A, member A will not appear in member B’s Virtual Address Book.

If member B grants any permissions to member A, a listing in member B’s Virtual Address Book will be created for member A, and the listing will contain whatever information member A has given permission for member B to see.

If member B grants Personal Information **600-8** permission to member A, member B’s home address and phone number (if available) will appear in member A’s Virtual Address Book and member A will be informed when member B changes the relevant information in his/her own listing.

If member B grants Work Information **600-10** permission to member A, member B’s work address and phone number (if available) will appear in member A’s Virtual Address Book and member A will be informed when member B changes the relevant information in his/her own listing.

If member B grants Crossing Paths Notification Permission **600-6** to member A, member A will be able to be informed when member B will be in the same city as member A. If member A and member B are both based in the same city, member A will only be informed when member A and member B are traveling to the same destination.

If member B grants Birthday Notification **600-12** permission to member A, member B’s birthday and anniversary (if available) will appear in member A’s Virtual Address Book and member A will be notified when member B’s birthday or anniversary are approaching.

If member B grants Friends of Friends Information **600-14** permission to member A, if member A searches for information about the contacts of his/her contacts, such as who lives in a particular city or is associated with a particular group, information from member B’s circle of contacts will be included in the search results, if applicable.

Either member can modify permissions at any time.

Either member can delete the other member as a contact at any time.

Pseudocode descriptions of the actions performed by the personal contact manager software **343** to display address information of contacts and to perform birthday and address change notifications are shown in Appendices B, C and D, respectively. Each of these operations depends on which permissions respective users have been granted by the owner of the information.

Once the first user has finished specifying the data field permissions for the second user **600-4**, he clicks the Submit button **600-16** and the information entered is transferred via the computer communications network **360** to the server computer **330** where it is stored in the appropriate tables **350** of the database **340** (see FIG. **5**). A pseudocode description of the actions performed by the personal contact manager software **343** to enable a user to change the permissions of contacts is shown in Appendix H.

Referring now to FIG. **10**, a pseudo GUI **618** that displays the information stored in a user’s personal address

book is shown. The information in a user’s personal address book is stored in the appropriate tables **350** of the database **340** on the server computer **330**, to which the client computer **370** is connected via the world wide web **360** (see FIG. **5**). The information in each user’s personal address book is customized for that user, as described below. Each first user’s personal address book contains information about each second user who has given the first user permission to view information in the second user’s personal data record **636**. Which categories of each second user’s information are displayed in the first user’s personal address book is controlled completely by the second user, as explained in the description of FIG. **9**. In addition, each second user’s information is entered and maintained completely by the second user (e.g., “Donald Tully”), as explained in the description of FIG. **7**.

FIG. **10** illustrates the Address Book pseudo GUI **620** at three levels, in which each next level allows the user to view progressively more detail about the contacts in his personal address book.

In level 1 **620** of the pseudo address book GUI **618**, each letter of the alphabet is shown **622**. By clicking on any letter of the alphabet **622**, a first user can display a listing of the contacts whose last names begin with the letter of the alphabet selected, and about whom information is stored in the first user’s personal address book. This information is displayed in the level 2 **626** of the pseudo address book GUI. For example, if the first user clicks on the letter “T” **624** in level 1 **620** of the pseudo address book interface, all contacts whose last names begin with the letter T and about whom information is stored in the first user’s personal address book will be displayed **628** in level 2 **626** of the pseudo address book GUI.

In level 2 **626** of the pseudo address book GUI, a listing of the second users whose last names begin with the letter of the alphabet selected in level 1 **620** of the pseudo address book GUI, and about whom information is stored in the first user’s personal address book, is shown. By clicking on any second user’s name, the first user can display the information about that second user stored in the first user’s personal address book. This information is displayed in level 3 **632** of the pseudo personal address book GUI. For example, if the first user clicks on the second user name “Tully, Donald” **630**, the information pertaining to Donald Tully stored in the first user’s personal address book will be displayed in level 3 **632** of the pseudo address book GUI.

In level 3 **632** of the pseudo address book GUI, information **634** is shown about a specific second user that is stored in a first user’s personal address book. Only the categories of information from the second user’s personal data record that the second user gave the first user permission to view are displayed. The second user’s information is entered and maintained completely by the second user.

In the preferred embodiment of the present invention, the second user’s e-mail address **634-2** is displayed if the second user gave the first user any type of data field permission. The second user’s work address and phone number **634-4** are displayed only if the second user gave the first user Work Information permission. The second user’s home address and phone number **634-6** are displayed only if the second user gave the first user Personal Information permission. The second user’s birthday and birth year **634-8** are displayed only if the second user gave the first user Birthday Notification permission. These permission rules are simply examples from the preferred embodiment. The present invention is not limited to the permission rules used in the preferred embodiment.

A pseudocode description of the actions performed by the personal contact manager software **343** to display the address book listing is shown in Appendix B.

Referring now to FIG. **11**, a member update pseudo GUI **650** is shown. This pseudo GUI **650** provides a first user with specific information that has changed about the other users to which the first user is linked, plus new information about contacts to whom the first user may wish to link. The information displayed in a user's member update is stored in the appropriate tables **350** of the database **340** on the server computer **330**, to which the client computer **370** is connected via the world wide web **360**. The member update pseudo GUI **650** is automatically displayed on the user interface **380** of the user workstation **370**, at an interval preset by the user. For example, FIG. **11** displays a hypothetical member update **650-2** released on Dec. 7, 1998. The information displayed in the data fields below is information that has changed between Dec. 7, 1998 and the date of the previous update, the interval between which has been previously specified by the user. The information shown in each user's member update is customized for that user, as described below.

In a first portion of the member update pseudo GUI **650** shown in FIG. **11**, if one or more of the second users who have linked to a first user and have provided Birthday Notification permission to the first user have upcoming birthdays, a text description **650-4** alerts the first user of the upcoming birthday(s). The names and birthdays **650-6** for those second users are listed below. In the preferred embodiment of the present invention, the first user will receive this notification 2 weeks, 1 week, 2 days, and 1 day in advance of a particular upcoming birthday, and on the actual date of the birthday. The first user does not need to collect and input the birthday dates for each second user who has linked to the first user. Each second user's birthday information is entered and maintained completely by the second user, as shown in the Birthday field **560-12** of FIG. **7**, the registration form pseudo GUI **560**.

In another portion of the member update pseudo GUI shown in FIG. **11**, if one or more of the second users who have linked to the first user and have provided Personal Information permission or Work Information permission to the first user have changed their work or home address, a text description **650-8** alerts the first user. If a second user has changed his work address information and has given the first user Work Information permission, the second user's new work address information **650-10**, **650-12** is displayed. If a second user has changed his home address information and has given the first user Personal Information permission, the second user's new home address information is displayed.

Each second user's address information is entered and maintained completely by the second user, as shown in the registration form pseudo GUI **560** of FIG. **7**. After changing his address information in his personal data record, the second user does not need to specify that the new address information be provided to each first user to whom he has linked and given the proper form of data field permission. The new address information is provided to each first user quickly and automatically. In addition, the architecture of the present invention is scalable to include millions of users.

In another portion of the member update pseudo GUI **650** shown in FIG. **11**, if one or more members has affiliated with a group with which the first user is also affiliated, a text description **650-14** will alert the first user. The name of the second user, the name of the group in which the first and second users share an affiliation, and the ending date of the second user's affiliation with that group are displayed **650-16**.

This portion of the registration form pseudo GUI **650** functions similarly to the group list form pseudo GUI shown in FIG. **8**. If a new second user who fills out a registration form such as the pseudo GUI in FIG. **7**, and therefore whose personal information is stored in the tables **350** of the database **340** on the server computer **330** has specified the same group affiliation as that specified by the first user in the College **560-20** data field, and that second user has specified a date range for that affiliation that intersects with the date range specified by the first user in the Year of College Enrollment **560-22** and College Graduation Year **560-24** data fields, the Name of the second user and the ending date of the second user's affiliation with that group **650-16** are displayed. Similarly, if the first user and the new second user were affiliated during an intersecting period of time with the group specified in the data field High School **560-14** in the pseudo GUI **560** shown in FIG. **7**, the Name of the second user and the ending date of the second user's affiliation with that group **650-16** are displayed.

A pseudocode description of the actions performed by the personal contact manager software **343** to display a list of service members who have recently joined a user's groups (i.e., members who are not current contacts of the user) is shown in Appendix E.

If the first user wishes to add contact information to his personal address book for any of the second users listed **650-16**, the first user can do so in a GUI similar to the group list form pseudo GUI **580** shown in FIG. **8**. Each second user to whom the first user has initiated a link will then be informed of the link, and can then return the link and specify data field permissions for the first user, if any, as explained in the description of FIG. **9**.

A pseudocode description of the actions performed by the personal contact manager software **343** to identify people who have linked to a particular user are shown in Appendix E.

In another portion of the member update pseudo GUI **650** shown in FIG. **11**, if a second user has initiated a link to a first user, the first user will be automatically notified **650-18** that a link has been made. For each second user that has initiated a link, the user's name **650-20** is shown. If the first user wishes, the first user can then return the link and specify data field permissions for the second user, if any, as explained in the description of FIG. **9**.

Another section **650-22** of the member update pseudo GUI **650** shown in FIG. **11** is used to inform a first user when the travel plans he has entered into the system overlap with the travel plans that any of his contacts has entered into the system, as long as the contact has granted the first user Crossing Paths Notification permission.

This system, termed "Crossing Paths Notification" in the preferred embodiment of the present invention, operates as follows. The home city or "base city" for each user is determined from information entered by that user in the Home Address data field **560-4**, as explained in the description of FIG. **7**. The "City" table **550** (FIG. **6**) stored on the server computer **330** includes 1.7 million names of cities around the world. Each of these cities is associated with a precise latitude and longitude. If the user's base city cannot be matched to a city in the "City" table, the user can add the new city to the "City" table by giving the name of another city that is already in the "City" table that is nearby the user's base city. The user's base city is assigned the same latitude and longitude as the existing city. This information is used to associate each user with a precise longitude and latitude, and determine all cities within a 29-mile radius of the user's base city.

Whenever a user is planning to travel, he can specify the dates during which he will be away and the city he will be visiting. If a second user has granted a first user Crossing Paths Notification permission, and the first user has entered a Travel Event to a city that is within a 29-mile radius of the base city of the second user, the first user will be notified **650-22** (FIG. 11) that he will be crossing paths with the second user **650-24** (e.g., "Andrew Kress"), as long as the second user has not also scheduled a travel event for the same time period. In another scenario, if a second user has granted a first user Crossing Paths Notification permission, and the first user has entered a travel event to a city that is within a 25-mile radius of a city to which the second user has scheduled a travel event during the same time period, the first user will be notified **650-22** that he will be crossing paths with the second user **650-24**. Travel events are described more fully in reference to FIG. 12.

The Crossing Paths Notification system is able to handle multiple cities in a single day. For instance, if a first user lives in Boston but is traveling to New York on March 5, then the first user will be informed if any contacts will be crossing paths on that day in either city. In addition, this system is scalable to millions of users. A pseudocode description of the actions performed by the personal contact manager software **343** to enable a user to receive crossing paths notification is shown in Appendix I.

The final section **650-26** of the member update pseudo GUI **650** shown in FIG. 11 is used to inform a first user which of his contacts has an astrological sign compatible with that of the first user on the date of the member update. Each member is associated with one of the twelve astrological signs based on the information he entered in the Birthday data field **560-12** in the registration form pseudo GUI **560** shown in FIG. 7. Each day of the year is mapped to one of these twelve signs. This information is stored in the appropriate table **350** in the database **340** on the server computer **330**. On a given day, all of a member's contacts who are associated with "sign of the day" are deemed to be compatible with the member. Only the names of contacts who have given the first user Birthday Notification permission will be shown in the member update pseudo GUI for the first user. A pseudocode description of the actions performed by the personal contact manager software **343** to enable a user to receive notification of compatible contacts is shown in Appendix J.

The permission rules used in reference to FIG. 11 are simply examples from the preferred embodiment. The present invention is not limited to the permission rules used in the preferred embodiment.

Referring now to FIG. 12, a pseudo Add Travel Form GUI **660** and a pseudo Crossing Paths List GUI **670** are shown. These two screens are used in the Crossing Paths Notification System. If a first member is planning a trip, the first member can use the pseudo Add Travel Form GUI **660** to add a Travel Event, in which he specifies the location **660-2**, **660-4**, **660-6**, dates **660-8**, **660-10**, and contact information **660-20** for the intended trip. In the pseudo Crossing Paths List GUI **670**, the first member is informed which of the second members to whom he is linked and who have granted him Crossing Paths Permission will be in the vicinity of the city to which the first user is travelling, during the time period of the specified Travel Event. The first user can then use the pseudo Crossing Paths List GUI **670** to select which of the displayed second users the first user would like to inform of the first user's specified Travel Event.

The pseudo Add Travel Form **660** is displayed on the user interface **380** (FIG. 5) of a user's client computer **370** when

the user chooses to schedule a Travel Event. The user enters information about his scheduled trip in the data fields shown. In the Traveling To City field **660-2**, the user enters the name of the city to which he is traveling. In the State field **660-4**, the user enters the name of the state in which is located the city to which he is traveling. In the Country **660-6** field, the user enters the name of the country in which the city to which he is traveling is located. The information entered in these three fields **660-2**, **660-4**, **660-6** is used to locate the city for the Travel Event in the City table **550** on the server computer **330**. The exact latitude and longitude of the Travel Event city is then determined and a list is created of all cities located within a 25-mile radius of the Travel Event city. In the Arrive in City on Date field **660-8**, the user enters the first date on which he will be in the Travel Event city. In the Leave City on Date field **660-10**, the user enters the date beginning on which he will no longer be in the Travel Event city. The information entered in these two fields **660-8**, **660-10** is used to determine the date range for the Travel Event. Finally, in the How to Get in Touch While in This City data field **660-20**, the user enters the method for contacting him during the Travel Event. After the user has finished entering information in the pseudo Add Travel Form GUI (**12-1**), the information entered is stored by the personal contact manager **343** in the Travel_Event table **520** on the server computer **330**.

The pseudo Crossing Paths List **670** is displayed on the user interface **380** of the first user's client computer **370** after a first user has scheduled a Travel Event user the pseudo Add Travel Form **660**. A text message **670-2** issued by the personal contact manager **330** informs the first user that one or more of his contacts will be in the same city as the first user during the first user's scheduled Travel Event. Those contacts (e.g., Scott Ulem, Taylor Pierce, Betsy Klein) who live in the city of the first user's scheduled Travel Event are listed **670-6**, as well as those contacts (e.g., Tania Gutsche) who will be visiting the city of the first user's scheduled Travel Event **670-8**. The contacts listed in the field **670-6** are those second users who have granted the first user Crossing Paths Permission, and who have listed in the Home Address field **560-4** (FIG. 7) of their Personal Data Record the city of the first user's scheduled Travel Event, or any city within a 25-mile radius of the first user's scheduled Travel Event. The contacts listed in the field **670-8** are those second users who have granted the first user Crossing Paths Permission, and who have scheduled a Travel Event to the city of the first user's scheduled Travel Event, or any city within a 25-mile radius of the first user's scheduled Travel Event, during the date range of the first user's scheduled Travel Event. For each contact name listed in both fields **670-6**, **670-8**, the first user can choose to inform that contact of the first user's scheduled Travel Event by clicking on the checkbox to the left of that contacts name. When the first user is finished selecting contacts, he then clicks the Submit button **670-10**, which copies the information entered to the server computer (**5-45**) to be stored in the tables **350** by the networked personal contact manager **343**. For each second user whom the first user selected, the second user is informed, in a screen similar to the pseudo Member Update GUI shown in FIG. 11, of the first user's Travel Event and the means of contacting the first user **660-20** during the Travel Event.

Referring now to FIG. 13, a diagram illustrating the Friends of Friends system is shown. The Friends of Friends system allows a first member to search for the names of contacts of their contacts who live in the same city as the first member are affiliated with a group with which the first member is also affiliated. When a user performs a Friends of

Friends search, the personal contact manager 343 displays, via the web server software 342, the results of the search on the user interface 380 (FIG. 5) of the first user's client computer 370 in a GUI similar to a pseudo Friends of Friends report GUI 688. After locating a second member with a friend of a friend, the first member can then link to that second member in order to add the second member to the first user's Personal Address Book, as explained in the descriptions of FIG. 8 and FIG. 9 above.

In the preferred embodiment of the personal contact manager 343, the Friends of Friends system operates as follows. If a Member A 680 is linked to a Member B 682 with any level of permissions 681 and the Member B 682 is linked to a Member C 684 with any level of permissions 685, then if Member C 684 grants to Member B 682 Friends of Friends permissions 687 and Member B 682 also grants to Member A 680 Friends of Friends permissions 683, then Member A is eligible to receive Friends of Friends notification about Member C. When a first user performs a Friends of Friends search, the results of the search will include all second users who have affiliated themselves with a group with which the first user is affiliated and all second users who live in the same city in which the first user lives, so long as the first user is eligible to receive Friends of Friends notification about those second users, as described above. For example, if Member A and Member C both belong to Group A 686, and Member A is eligible to receive Friends of Friends notification about Member C, then the result of Member A's Friends of Friends search 688 generated by the personal contact manager 343 will include Member C 690.

A pseudocode description of the actions performed by the personal contact manager software 343 to perform a search for friends and friends of friends in a specific city is shown in Appendix G.

The present invention is not limited to the search criteria or levels of separation in the preferred embodiment. The database architecture in the present invention is flexible to allow searches to be extended to more than one degree of separation. For instance, it would be possible to add a Friends of Friends of Friends search feature. The architecture is also flexible to allow new search criteria to be added.

Referring to FIG. 5, in each of the embodiments described above, the user information is stored on the server 330 and all user access to the user information mediated by a client web browser 382, the web server software 342 and the server personal contact manager software 343. In an alternative embodiment, which is configured for personal information managers (PIMs), such as the U.S. Robotics Palm Pilot, a user is able to synchronize their user information and their PIM database 390 through an importation/synchronization function performed by the personal contact manager software 343. The synchronization operation can be performed in either direction (i.e., client to server or server to client). The server personal contact manager software 343 will then use the web server software 342 to communicate with the PIM software 392 of the user's contacts, if applicable, and, in accordance with the permission scheme already described, synchronize the databases 390 in the contacts' PIMs. All database, personal contact management and linking operations already described are operable in the alternative embodiment, except the GUIs might be different, depending on the graphical capabilities of the client 370 running the PIM program 392. Thus, the alternative embodiment allows full synchronization of PIMs and the server database 340.

A data flow diagram illustrating the operation of the alternative embodiment is shown in FIG. 14. In the illus-

trated situation a user A submits an address change from their client computer 370A. In response to the update, the personal contact manager 343 running on the server 330 updates user A's address information in the server database 340 (not shown) and issues an update notification to the client computer 370B used by user B, who is a contact of user A. This alternative embodiment assumes that user B has a PIM (also referred to as a personal digital assistant or PDA) that they would like to synchronize with the server database 340. In such a case PIM Software 392 running on the client 370B performs the synchronization operation based on the user A address update information provided by the server 330. Following the synchronization operation, the PDA database 390 has the same information for user A as the server database 340. Alternatively, the PDA 750 can be coupled directly to the Internet (indicated by the dashed line), in which case it operates substantially as a typical client computer 370 described in reference to FIG. 5. However, one difference is that the PDA 750 maintains its own database 390 instead of relying solely on the server database 340.

While the present invention has been described with reference to a few specific embodiments, the description is illustrative of the invention and is not to be construed as limiting the invention. Various modifications may occur to those skilled in the art without departing from the true spirit and scope of the invention as defined by the appended claims.

APPENDIX

Display Group Member List

```

Submit group name.
Match group name to GroupID in Group table.
Join Affinity table to Customer table and CustomerPrefs
table based on CustomerID.
Show contact information from Customer and Customer-
Prefs tables when the the Affinity table contains a record
matching the CustomerID to the specified GroupID.
    
```

APPENDIX B

Display Address Book Listing

```

if MemberFriend AND a Reciprocated Link then
If have Personal or Professional Permissions then
    Show person's real email address.
else
    Show person's PlanetAll address.
end if
If have Personal Permission and Biography Exists then
    Show Biography.
end if
If (have Personal or Professional Permissions) AND uni-
versal resource locator (URL) exists then
    Show URL.
end if
If (Person is visible in group and Group Perms>0) AND
you have Common Groups then
    Show the groups you have in common.
end if
If Person is in one of more of your personal email lists
then
    Show the lists the person belongs to.
end if
    
```

If have Personal Permissions and Phone Type is one of personal phone types then
 Show phone.
 end if
 If have Professional Permissions and phone type is one of professional phone types then
 Show phone.
 end if
 If have Personal Permissions and address Type is one of personal address types then
 Show address.
 if address is in USA then
 Show map link.
 end if
 end if
 If have Professional Permissions and address type is one of professional address types then
 Show address.
 if address is in USA then
 Show map link.
 end if
 end if
 If have Professional Permissions and Professional Info Exists then
 Show the professional info the person has entered.
 end if
 If have Occasions Permissions and Birthday exists then
 Show the contact's birthday.
 end if
 If have Occasions Permissions and Anniversary exists then
 Show the contact's Anniversary.
 end if
 If contact has entered spouse's name then
 Show spouse's name.
 end if
 If contact has entered self description then
 Show self description.
 end if
 else if MemberFriend AND a Non-Reciprocated Link then
 Show message person has not linked back and give link so person can email the unlinked person to tell them they have linked to them. (after com/ASP rewrite will not show email so spammers can't make lists).
 end if

APPENDIX C

Birthday Notification

Birthdays are determined by the DayOfYear field in the customers table.
 Create a list of all my contacts:
 Go to the Friend table and select all Customers where FriendID=my CustomerID.
 For each of my contacts, check to see if the DayOfYear is within seven days of the current DayOfYear.
 Select the DayOfYear from the Customers table for all of the customers in my list of contacts.
 If the DayOfYear is within seven days of the current DayOfYear, then select the name of the customer.

Display the names of all my contacts who have birthdays in the next seven days.

APPENDIX D

Address Change Notification

To determine which of a member's contacts' addresses have changed:
 Create a list of all my contacts:
 Go to the Friend table and select all Customers where FriendID=my CustomerID.
 Find out which of these contacts have changed their addresses:
 Link the Customers table and find records for my contacts where AddressID is greater than the lowest Address ID having a date greater than the date on which my last email update was sent.
 Find out which of these contacts have given me permission to see the address information that has changed:
 Make sure that the appropriate permission appears in the record in the friend table linking me to the contact.
 Display information for these contacts.

APPENDIX E

Show New Group Members

Create a list of all my groups:
 Go to the affinity table and select all the records for my CustomerID Select the GroupID for each of the records.
 Do not include other customers' private groups to which I have been added For each of my affinity records, check to see that Group Perms are>0.
 Create a list of all my contacts:
 Go to the Friend table and select all Customers where FriendID=my CustomerID.
 Create a list of people who joined my groups:
 Go to the affinity table and select all the affinity records for my groups. Select only affinity records for customers who joined the group after I joined.
 Select affinity records where the date of the record is after the date for my affinity record in the same group.
 Select only affinity records for people who joined the groups after my last email was sent.
 Select affinity records where the date of the record is after my Sent date in the Email table.
 Do not include people that are in my list of contacts:
 Select only affinity records where the CustomerID is not included in the list of all my contacts.
 Select the CustomerID from each affinity record in the list of people who joined my groups.
 Go to the Customers table to find the name of each customer who joined my groups.

APPENDIX F

People Who Have Linked To You

Linking the Friends table and the Customers table based on the CustomerID field, select the following information from the two tables:
 CustomerID from the Friends table.

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First Name from the Customers table.
 Last Name from the Customers table.
 Record Date from the Friends table.
 Permission level from the Friends table.

Where my CustomerID is not among the CustomerIDs 5
 found in the following search:
 CustomerID in the Friends Table is my CustomerID
 AND the Record Date from the Friends table is within
 the last 30 days
 AND I haven't already linked to the person 10

APPENDIX G

Search for Friends of Friends in a Particular City

Specify City. Match to CityID in City table. 15
 Create a list of all my contacts
 Go to the Friend table and select all Customers where
 FriendID=my CustomerID
 Make a temporary table linking the Friends table to itself
 called Friend_1 and establish the following relationships: 20
 CustomerIDs for the contacts of my contacts appear in
 the Customer field of the Friends table
 CustomerIDs for my contacts appear in the Friend field
 of the Friends table 25
 CustomerIDs for my contacts also appear in the Customer
 field of the Friends_1 table (this is how the
 tables are joined)
 My Customer ID appears in the Friend field of the
 Friend_1 table 30
 The Friend and Friend_1 tables are joined on t
 Show information for the contacts of my contacts (i.e.
 the Customers from the
 Friends table) where the following conditions are true:
 The Friends of Friends permission was granted from 35
 the contacts of my contacts to my contacts.
 The Friends of Friends permission was granted from
 my contacts to me.
 The contact does not already appear in the list of all
 my contact created above. 40
 The city for the contact of my contact matches the
 specified city.

APPENDIX H

Change Permissions 45

Join the Customer table to the Friend table based on
 CustomerID.
 Create a list of all my contacts:
 Go to the Friend table and select all Customers where 50
 FriendID=my CustomerID.
 Show First Name and Last Name for my contacts from the
 Customer table.
 Allow me to pick a name from this list as the contact
 whose permissions I would like to change. 55
 Display the permission level that I have given this contact.
 It is stored as the PermissionType field in the Friend
 table.
 Allow access to the PermissionType for this record in the
 Friend table. 60

APPENDIX I

Crossing Paths Notification

Create a list of all my contacts: 65
 Go to the Friend table and select all Customers where
 FriendID=my CustomerID.

20

Create a list of all my contacts' travel events:
 Go to the Queue Travel Event table and select all
 QueueIds where the CustomerID is in my list of
 contacts.
 Do not include trips for people who linked to me but
 did not give me crossing paths permission:
 Check the permissions field in the Friend table for
 each of my contacts to see if I have crossing paths
 permissions.
 Do not include trips if my contact specified that I
 should not be informed:
 For each of my contacts' trips, check the Travel
 Exception table to see if my CustomerID is
 included in the list of people who should not be
 informed of the trip.
 Create a list of my location for the next seven days:
 Select the arrival date, departure date, and city for all
 my trips in Queue Travel Event for the next seven
 days.
 For days when I am not travelling, select my city from
 the customers table.
 Select from the list of my friends' trips, all the trips to
 cities that are within 3000 latitude and 3000 longitude
 to my location for each of the next seven days.
 Go to the Customers table and find the names of all the
 people with whom I will be crossing paths.
 Select first name and last name from the customers table
 for all the CustomerIDs in the list of my contacts trips

APPENDIX J

Compatible Contacts

Create a list of all my contacts:
 Go to the Friend table and select all Customers where
 FriendID=my CustomerID.
 Determine my Zodiac sign:
 Select my DayOfYear from the Customers table.
 Select the Zodiac sign from the Zodiac table where my
 DayOfYear is between the DayFrom and DayTo
 fields.
 Determine my compatible Zodiac sign for today:
 Go to the Horoscope table and select the Compatible
 field from the row for my Zodiac sign and today's
 date.
 Find my compatible contacts for today:
 Select the DayFrom and DayTo fields from the Zodiac
 table for my compatible zodiac sign.
 Select my contacts from the list of all my contacts
 whose DayOfYear is between the DayFrom and
 DayTo fields for my compatible sign.
 What is claimed is:
 1. A networked contact management system, comprising:
 a database which contains personal records of multiple
 users, each record including multiple fields, including
 fields for storing personal contact information; and
 contact manager software which provides restricted
 access to the database through an interface in which (1)
 users select other users from the database to include in
 their own, respective virtual personal address books
 without the need to enter information for such users, (2)
 if a first user selects a second user to include in the first
 user's virtual personal address book, the second user is
 provided an option to specify the types of information

of the second user's personal record to be viewable by the first user, (3) users directly update their own respective personal records within the database, and (4) the personal records stored within the database are at least partially viewable as virtual address book entries, so that updates made by users to their own respective personal records are reflected automatically within the virtual personal address books of other users without the need to propagate or separately apply the updates to individual address books.

2. The networked contact management system as in claim 1, wherein the interface further provides the second user an option to grant permission to the first user to be notified of at least one type of occasion.

3. The networked contact management system as in claim 2, wherein the at least one type of occasion includes at least one of the following: (a) a birthday of the second user, (b) an anniversary of the second user, and (c) a correspondence in schedules of the first and second users.

4. The networked contact management system as in claim 1, wherein the database contains information about a plurality of affinity groups, and the contact manager software implements functions for (a) allowing the multiple users to select and join individual affinity groups, (b) notifying a new member of an affinity group of existing members of the affinity group, and (c) presenting the new member an option to select individual members of the affinity group to add to the new member's personal address book.

5. The networked contact management system as in claim 4, wherein the contact manager software automatically notifies existing members of the affinity group of new members.

6. The networked contact management system as in claim 1, wherein the contact manager software receives and stores information about travel plans of individual users, and uses the information about travel plans to detect that a user and a contact of the user will be in the same location at the same time.

7. The networked contact management system as in claim 1, wherein the contact manager software automatically notifies the first user when the second user modifies a datum of the second user's personal record that the first user is permitted to view.

8. The networked contact management system as in claim 1, further comprising synchronization software which synchronizes a personal digital assistant (PDA) device with a user's virtual personal address book over a computer network.

9. A networked personal contact management system, comprising:

- a database which contains personal data records of a plurality of users, at least some of the data records including contact information of respective users; and
- a server system which provides restricted access to the database through an interface that provides functions

for each user to at least (a) directly modify the user's own respective personal data record within the database, (b) select other users from the database to add to a virtual personal address book of the user, and (c) specify, on a user-by-user basis, permissions for other users to view the personal data record of the user through virtual virtual personal address books of such other users;

wherein users directly view the data records of other users through the virtual address books according to said permissions, so that updates by users to their own respective personal records are reflected automatically within the virtual personal address books of other users.

10. The networked personal contact management system as in claim 9, wherein the interface allows each user to grant said permissions separately for each of a plurality of data types.

11. The networked personal contact management system as in claim 9, wherein the server system notifies the user of at least one of the following types of occasions associated with a contact of the user: (a) a birthday of the contact, (b) an anniversary of the contact, and (c) a correspondence in schedules of the user and the contact.

12. The networked personal contact management system as in claim 9, wherein the database contains information about a plurality of affinity groups, and the server system implements functions for (a) allowing the plurality of users to select and join individual affinity groups, (b) notifying a new member of an affinity group of existing members of the affinity group, and (c) presenting the new member an option to select individual members of the affinity group to add to the new member's virtual personal address book.

13. The networked personal contact management system as in claim 12, wherein the server system automatically notifies existing members of the affinity group of new members.

14. The networked personal contact management system as in claim 9, wherein the server system receives and stores information about travel plans of individual users, and uses the travel plans to detect that the user and a contact of the user will cross paths.

15. The networked personal contact management system as in claim 9, wherein the server system automatically notifies the user when contacts recorded within the user's virtual personal address book modify their respective contact information displayed within the virtual personal address book.

16. The networked personal contact management system as in claim 9, further comprising synchronization software which synchronizes a personal digital assistant (PDA) device with a user's virtual personal address book over a computer network.



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(45) **Date of Patent:** **Oct. 7, 2008**

(54) **METHODS AND SYSTEMS FOR DISTRIBUTING INFORMATION WITHIN A DYNAMICALLY DEFINED COMMUNITY**

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(75) Inventors: **Jeffrey P. Bezos**, Greater Seattle Area, WA (US); **Warren Adams**, Seattle, WA (US); **Kenneth L. Dinovo**, Seattle, WA (US); **Ryan J. Snodgrass**, Kirkland, WA (US); **Brian Robertson**, Boston, MA (US); **Jennifer A. Jacobi**, Seattle, WA (US)

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(73) Assignee: **Amazon.com, Inc.**, Seattle, WA (US)

WO WO 99/23591 5/1999

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1635 days.

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(22) Filed: **Nov. 17, 2000**

(Continued)

Related U.S. Application Data

(60) Provisional application No. 60/166,547, filed on Nov. 19, 1999, provisional application No. 60/166,664, filed on Nov. 19, 1999.

Primary Examiner—Robert M. Pond

(74) *Attorney, Agent, or Firm*—Knobbe, Martens, Olson & Bear LLP

(51) **Int. Cl.**
G06F 17/30 (2006.01)

(57) **ABSTRACT**

(52) **U.S. Cl.** **705/26; 705/27**

(58) **Field of Classification Search** **705/26–27**
See application file for complete search history.

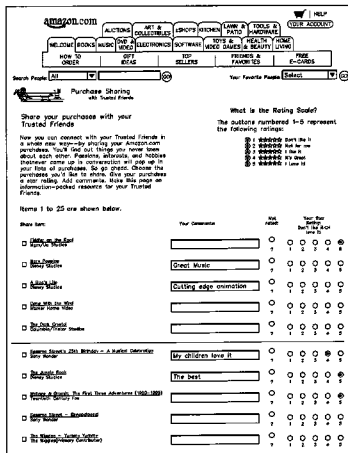
One embodiment of the present invention distributes data via a network to remotely located users. Historical purchase information for a first user is stored in a database. Authorization is received over a network from the first user allowing a second user to view at least a portion of the historical purchase information. In addition, the first user selectively specifies which historical purchase information may be viewed by the second customer. An electronic notification is transmitted to the second user, wherein the notification informs the second user of the first user's authorization.

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29 Claims, 19 Drawing Sheets



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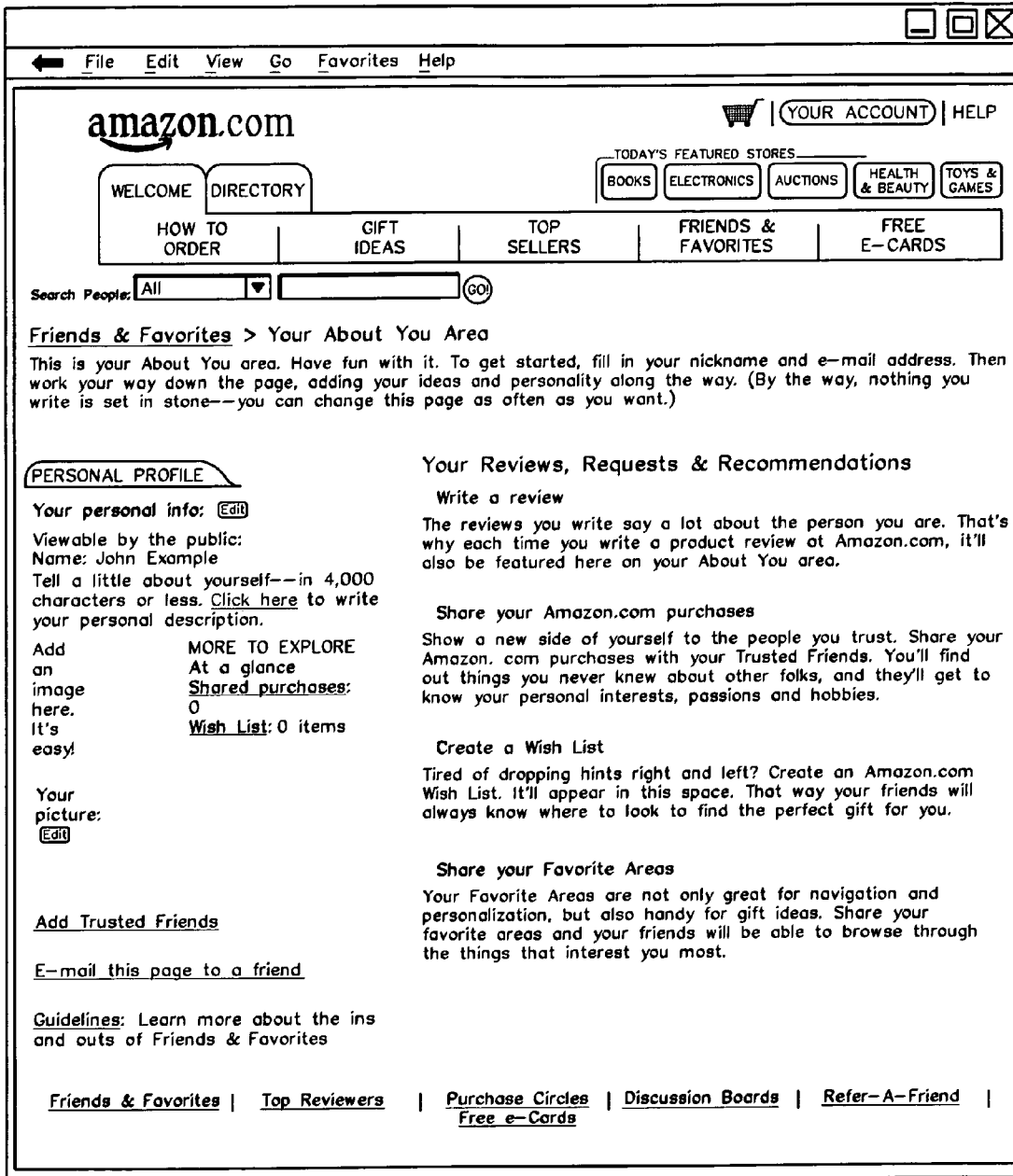



FIG. 1A

The screenshot shows the Amazon.com website interface. At the top left is the Amazon logo. To the right are links for 'YOUR ACCOUNT' and 'HELP'. Below these are navigation buttons for 'WELCOME' and 'DIRECTORY'. A section titled 'TODAY'S FEATURED STORES' includes buttons for 'BOOKS', 'ELECTRONICS', 'AUCTIONS', 'HEALTH & BEAUTY', and 'TOYS & GAMES'. A horizontal menu contains 'HOW TO ORDER', 'GIFT IDEAS', 'TOP SELLERS', 'FRIENDS & FAVORITES', and 'FREE E-CARDS'. The breadcrumb trail reads: 'Friends & Favorites > Your About You Area > Edit your personal description'. The main heading is 'Who Are You?'. Below it is the text: 'This is your chance to share a bit about yourself (4,000 characters or less). Have fun.' The 'Describe yourself:' label is followed by a text area containing 'I like to read history-related books and novels.' Below the text area is a note: '(All personal descriptions are automatically public.)'. A 'Submit' button is located to the right. At the bottom, there is a section 'Not sure what to say? Let these questions help you get started:' followed by a bulleted list of six questions. Finally, a 'Guidelines:' section provides a link to learn more about the 'Friends & Favorites' feature.

FIG. 1B

amazon.com  [YOUR ACCOUNT](#) | [HELP](#)

WELCOME | DIRECTORY


TODAY'S FEATURED STORES: [BOOKS](#) | [ELECTRONICS](#) | [AUCTIONS](#) | [HEALTH & BEAUTY](#) | [TOYS & GAMES](#)

[HOW TO ORDER](#) | [GIFT IDEAS](#) | [TOP SELLERS](#) | [FRIENDS & FAVORITES](#) | [FREE E-CARDS](#)

Your About You Area > Edit your picture


Here's what your picture area looks like today


Come on! Let's see those pearly whites! If you don't have your picture on your Amazon.com About You area, or if you have one you'd like to change, this is the place for you.


 Adding or replacing a picture is easy. Just enter the URL where your image is stored. We'll take care of the rest. Your URL must start with http:// and end with .gif, .jpg or .jpeg. Images sizes are automatically scaled to 70 x 100 pixels. Enter image URL here:


No picture on hand? We'll loan you one of these zany placeholders—as long as you promise to come back and plug in a real picture later on. Deal? Deal.

Placeholder Images:












FIG. 2

amazon.com YOUR ACCOUNT | HELP

TODAY'S FEATURED STORES

BOOKS ELECTRONICS AUCTIONS HEALTH & BEAUTY TOYS & GAMES

WELCOME DIRECTORY

HOW TO ORDER GIFT IDEAS TOP SELLERS FRIENDS & FAVORITES FREE E-CARDS

Search People: Your Favorite People:

Friends & Favorites > Your About You Area

PERSONAL PROFILE


Your personal info: [Edit](#)

Viewable by the public:
Nickname: johnnyex

Viewable by Trusted Friends only:
Name: John Example
E-mail: jexample@example.com

Your personal description: [Edit](#)

Viewable by the public:
About me: I like to read history-related books and novels.



MORE TO EXPLORE
At a glance
Shared purchases: 2
(Trusted Friends only)
Wish List: 0 of 1 items
purchased (Viewable by
you only)

Your picture: [Edit](#) Favorite People: 1

your FAVORITE PEOPLE

All Favorite People
[Doug Vaughn](#)

Favorite People
list [Edit](#)

[Add Trusted Friends](#)

[E-mail this page to a friend](#)

Guidelines: Learn more about the ins and outs of Friends & Favorites

Your Reviews, Requests & Recommendations

Your Shared Purchases *** viewable by Trusted Friends only *** [Edit](#)

BOOK COVER ART

Voice over IP Fundamentals
by Jonathan Davidson, et al

Our Price: \$50.00
Usually ships in 24 hours
Cisco Pr
Hardcover - 408 pages
1 edition (March 27, 2000)

Johnny's Rating: ★★★★★ Last updated Jul 6, 2000

[See your shared purchases](#)

Your Wish List [Edit](#)

DVD COVER ART

More Barney Songs DVD
~ Barney

List Price: \$24.99
Our Price: \$21.24
You Save: \$3.75 (15%)
Usually ships in 2-3 days
Not Rated
Region 1 encoding (US and Canada only)

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Your Favorite Areas are not only great for navigation and personalization, but also handy for gift ideas. Share your favorite areas and your friends will be able to browse through the things that interest you most.

[Friends & Favorites](#) | [Top Reviewers](#) | [Purchase Circles](#) | [Discussion Boards](#) | [Refer-A-Friend](#) | [Free e-Cards](#)

FIG. 3A

amazon.com

WELCOME BOOKS MUSIC DVD & VIDEO ELECTRONICS SOFTWARE TOYS & VIDEO GAMES HEALTH & BEAUTY HOME LIVING

AUCTIONS ART & COLLECTIBLES zSHOPS KITCHEN LAWN & PATIO TOOLS & HARDWARE

HOW TO ORDER GIFT IDEAS TOP SELLERS FRIENDS & FAVORITES FREE E-CARDS

SEARCH PEOPLE

WELCOME TO Friends & Favorites

Welcome, John Example! (if you're not John Example, [click here.](#))

You've already added names to your Favorite People list. Now add some more! Find people you know using the Search box located on this page. Go to [Amazon.com's Top Reviewers page](#) and track down reviewers whose opinions you respect. Be sure to [update your About You area](#) so that people can get to know you.

your PARTICIPATION
Favorite People: 1
Shared Purchases: 0
Items on Wish List: 1

your FAVORITE PEOPLE

- Your About You Area
- Wish List
- Purchase Circles
- Discussion Boards
- Top Reviewers
- Refer-A-Friend
- Free e-Cards
- Add a Reminder

#3 Angel Lee
 Reviews written: 256
 Helpful votes: 1976

#4 Donald W. Mitchell
 Reviews written: 372
 Helpful votes: 2840

▶ See the Top Reviewers List

Have feedback or suggestions? [Share them with us now.](#)

[Guidelines:](#) Learn more about the ins and outs of Friends & Favorites

Doug Vaughn recently reviewed:

Tides of War: A Novel of Alcibiades and the Peloponnesian War
 by Steven Pressfield

Doug Vaughn's Rating and Review
 ★★★★★ If it weren't true it would be hard to believe
 Those who have read Pressfield's previous book, Gates of Fire, will have a hard time recognizing this novel as being the same author's work. Whereas that one was focused on a single battle and thus had a limited time and place imposed on the action, Tides of War deals with the entire Peloponnesian war (all 27 years) and is all over the place in both time and location. One problem, for sure, for many readers will be the 'voice' of the story. It is told by someone who gets it from his grandfather... [see entire review](#)

In the Newport Beach, Ca Purchase Circle:

The Power Game: How Washington Works
 by Hedrick Smith

▶ See more unique Newport Beach, CA bestsellers

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- Add Trusted Friends

Friends & Favorites | Top Reviewers | Purchase Circles | Discussion Boards | Refer-A-Friend | Free e-Cards

FIG. 3B

amazon.com HELP

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[WELCOME](#) [BOOKS](#) [MUSIC](#) [DVD & VIDEO](#) [ELECTRONICS](#) [SOFTWARE](#) [TOYS & VIDEO GAMES](#) [HEALTH & BEAUTY](#) [HOME LIVING](#)
[HOW TO ORDER](#) [GIFT IDEAS](#) [TOP SELLERS](#) [FRIENDS & FAVORITES](#) [FREE E-CARDS](#)

Search People: Your Favorite People:

[Friends & Favorites](#) > [Your About You Area](#) > [Reviews](#)

PERSONAL PROFILE [Claim your reviews](#)

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Viewable by the public:
Nickname: johnnyex

Viewable by Trusted Friends only:
Name: John Example
E-mail: jexample@example.com

Your personal description: [Edit](#)

Viewable by the public:
About me: I like to read history-related books and novels.

Add an image here. It's easy!

Your picture: [Edit](#)

MORE TO EXPLORE
At a glance
Shared purchases: 0 (Trusted Friends only)
Wish List: 0 of 1 items purchased (Viewable by you only)
Favorite People: 1

your FAVORITE PEOPLE

All Favorite People
[Doug Vaughn](#)

Favorite People list [Edit](#)

[Add Trusted Friends](#)

[E-mail this page to a friend!](#)

Guidelines: Learn more about the ins and outs of Friends & Favorites.

Your Private Reviews (View your public reviews) 1 of 1

(DVD) **Mary Poppins DVD**
 ~ Julie Andrews
~~List Price: \$29.99~~
You Save: \$9.00 (30%)
 Usually ships in 2-3 days
 Rated G
 Region 1 encoding (US and Canada only)

★★★★ Great music, great fun! June 20, 2000

As my 2.5 year old son loves this movie, I have had to watch it at least 20 times. Yet I still enjoy it. The music and lyrics are great fun, and I find myself humming the tunes hours after each viewing. The acting is excellent, and the characters are charming.

Your Private Reviews (View your public reviews) 1 of 1

FIG. 3C

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[WELCOME](#) | [BOOKS](#) | [MUSIC](#) | [DVD & VIDEO](#) | [ELECTRONICS](#) | [SOFTWARE](#) | [TOYS & VIDEO GAMES](#) | [HEALTH & BEAUTY](#) | [HOME LIVING](#)

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- [Robert Stevenson \(1\)](#)

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~Richard Rodgers, Oscar Hammerstein II

Mary Poppins (1964)

DVD COVER ART

List Price: ~~\$29.99~~
Our Price: **\$19.49**
You Save: **\$10.50 (35%)**

Release Date: July 4, 2000. You may still order this title. We will ship it to you as soon as it is available

Rated:
Starring: [Julie Andrews](#), [Dick Van Dyke](#), et al.
Director: [Robert Stevenson \(1\)](#)

Edition Details:

- Region 1 encoding (US and Canada only)
- Color, Animated
- The Making of "Mary Poppins"
- Widescreen anamorphic format
- ASIN: 6305878323 [Click here for more technical details about this edition...](#)

Other Formats: [VHS](#), [DVD](#)
Amazon.com Sales Rank (DVD): 86

READY TO BUY?

Shopping with us is 100% safe. Guaranteed.

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Customers who bought this DVD also bought:

- Annie (November 7, 1999) VHS; Clamshell
- Pete's Dragon (November 3, 1977)~Helen Reddy; VHS; Clamshell
- Toy Story (November 22, 1995)~Tom Hanks; VHS; Clamshell

[Click here for more suggestions...](#)

Auctions and zShops sellers and our other stores recommend:

- [Dick Van Dyke~Mary Poppins 8x10 Photo \(Price: \\$6.99\)](#)

Customer Reviews of the Day (what's this?)
Write an online review and share your thoughts with other viewers!

5 of 5 people found the following review helpful:

★★★★★ **Is it impossible to make films like this anymore?** July 3, 1999

Reviewer: [A viewer](#) from Deltona, FL
This movie is now 35 years old. It is smart, funny, fresh and as limber as the day it was released in August of 1964.

Was this review helpful to you? YES NO

11 of 12 people found the following review helpful:

★★★★★ **FANTASTIC FANTASY** January 7, 2000

Reviewer: [Bob \(see more about me\)](#)
To date, it is hard to think of a movie that intergrated story, charcter, musical numbers, animation and live action as enchantingly as Mary Poppins.

Was this review helpful to you? YES NO

[Friends & Favorites](#) | [Top Reviewers](#) | [Purchase Circles](#) | [Discussion Boards](#) | [Refer-A-Friend](#) | [Free e-Cards](#)

FIG. 4

amazon.com (YOUR ACCOUNT) | HELP

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WELCOME DIRECTORY DVD

ADVANCED SEARCH BROWSE GENRES TOP SELLERS NEW & FUTURE RELEASES FRIENDS & FAVORITES AWARDS & RECOMMENDATIONS BARGAIN DVD

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- [Robert Stevenson](#)

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To improve your recommendations, change your rating:

Not Rated

★★★★★

★★★★★


★★★★★

★★★★★

★★★★★

I own it

Write Your Own Review
Under 13? Want to make your voice heard? Write your review [here!](#)

 Hello, Johnny Example. (If you're not Johnny Example, [click here](#))

Mary Poppins DVD
~ Julie Andrews

Join the conversation! Write a review of this item and share your thoughts. Please be sure to focus your comments on the DVD. Read our review guidelines for more information. You can also look at some example customer reviews before you write your own.

OK. Let's get started!

On a scale of 1 to 5 stars, with 5 stars being the best,

1. How do you rate this DVD?

2. Please enter a title for your review:

3. Type your review in the space below:
(maximum of 1,000 words)

4. Display this information with your review:

Your public nickname: dweiss
(If you're not dweiss, [click here](#).)

Keep me anonymous

5. Where in the world are you?
(Example: Seattle, WA USA)

FIG. 5

amazon.com | HELP **YOUR ACCOUNT**

AUCTIONS ART & COLLECTIBLES zSHOPS KITCHEN LAWN & PATIO TOOLS & HARDWARE
 WELCOME BOOKS MUSIC DVD & VIDEO ELECTRONICS SOFTWARE TOYS & VIDEO GAMES HEALTH & BEAUTY HOME LIVING
 HOW TO ORDER GIFT IDEAS TOP SELLERS FRIENDS & FAVORITES FREE E-CARDS

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 2 [Frank Behrens](#)
 3 [Angel Lee](#)
 4 [Donald W. Mitchell](#)
 5 [Michael Woznicki](#)
 6 [Francis J. McIneney](#)
 7 [Robert Morris](#)
 8 [Doug Vaughn](#)
 9 [Irvin Goodman](#)
 10 [kex86](#)
 11 [Gabrielle deLourdes-Re...](#)
 12 [tropic_of_cr](#)
 13 [svrano](#)
 14 [R.D. Allison](#)
 15 [Michael J. Edelman](#)
 16 [Scott Ryan](#)
 17 [Heath McEwan](#)
 18 [toolpig](#)
 19 [Derek Mok](#)
 20 [Rebecca](#)
 21 [Bob](#)
 22 [W.D. Peckenpaugh](#)
 23 [Turgay BUGDACIGIL, FreemageOnl...](#)
 24 [Roy R. Behrens](#)
 25 [shadowfire - mygotto](#)
 27 [Laura Haggarty](#)
 28 [Barron T. Laycock - Alex Leslie](#)
 30 [Rick](#)
 31 [Bonnie Gilbert](#)
 32 [David Scott Roberts](#)
 33 [allen smolling](#)
 34 [Marmez1@aol.com](#)
 35 [ambulocetus - Laurie Shallah](#)
 37 [Robertino](#)

The ballots are in. The votes have been counted. Let's hear it for our Top Reviewers-- selected by Amazon.com customers like you. These clear-minded critics voiced their opinions about Amazon.com items. In turn, they supplied their fellow shoppers with helpful, honest, tell-it-like-it-is product information. Please join us as we salute this topnotch group of review writers.

Questions about Top Reviewers? Get answers [here](#).

page 1 of 11 | [next](#)

1 [Harriet Klausner](#)
Total reviews written: 621
 I was an acquisitions librarian in Pennsylvania and wrote a monthly review column of recommended reads. I found I liked reviewing and went on to freelance after my son was born.
 I have 2 dogs, a carin and a pom, and four cats. Oh, I have a 21 year old....[more](#)

2 [Frank Behrens](#)
Total reviews written: 341
 Retired Junior High School teacher who now has a wonderful time lecturing about musical history and writing reviews for local publications up in New Hampshire and Vermont. Laments the death of the American Musical Comedy and the emphasis on....[more](#)

3 [Angel Lee](#)
Total reviews written: 256
 I am 25 years old & live in Cleveland, Oh. I work at home as a powerseller on Ebay. I love all arts & crafts. Some of my favorites are bookbinging, paper arts, marbling, papermaking, rubber stamping, collage, origami, calligraphy....[more](#)

4 [Donald W. Mitchell](#)
Total reviews written: 372
 My real passion is helping other to become much more effective in their lives from a professional and personal point of view. I want people to be about to use these improved lives to add goodness for those they care about.
 This desire to serve is... [more](#)

FIG. 6

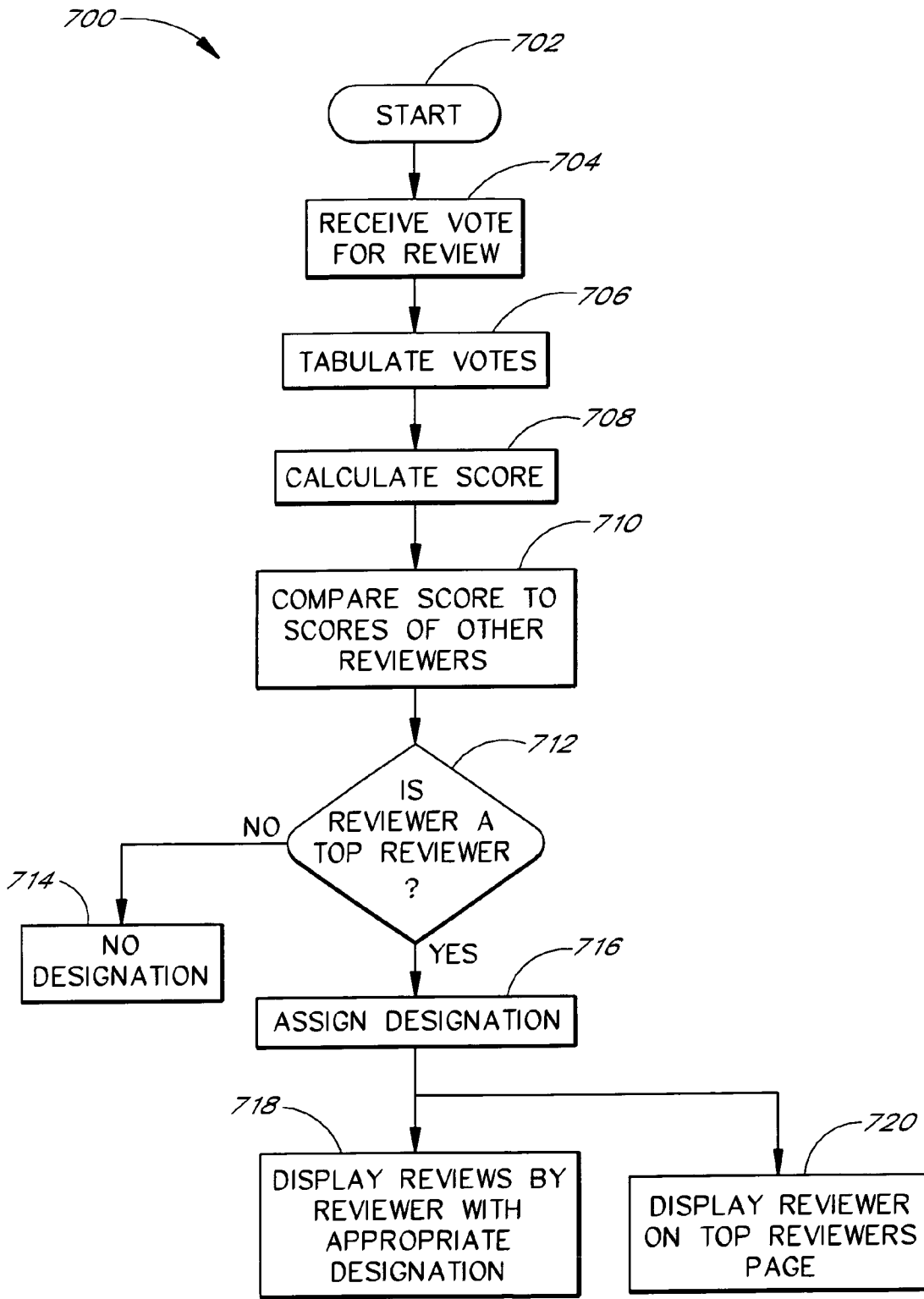


FIG. 7

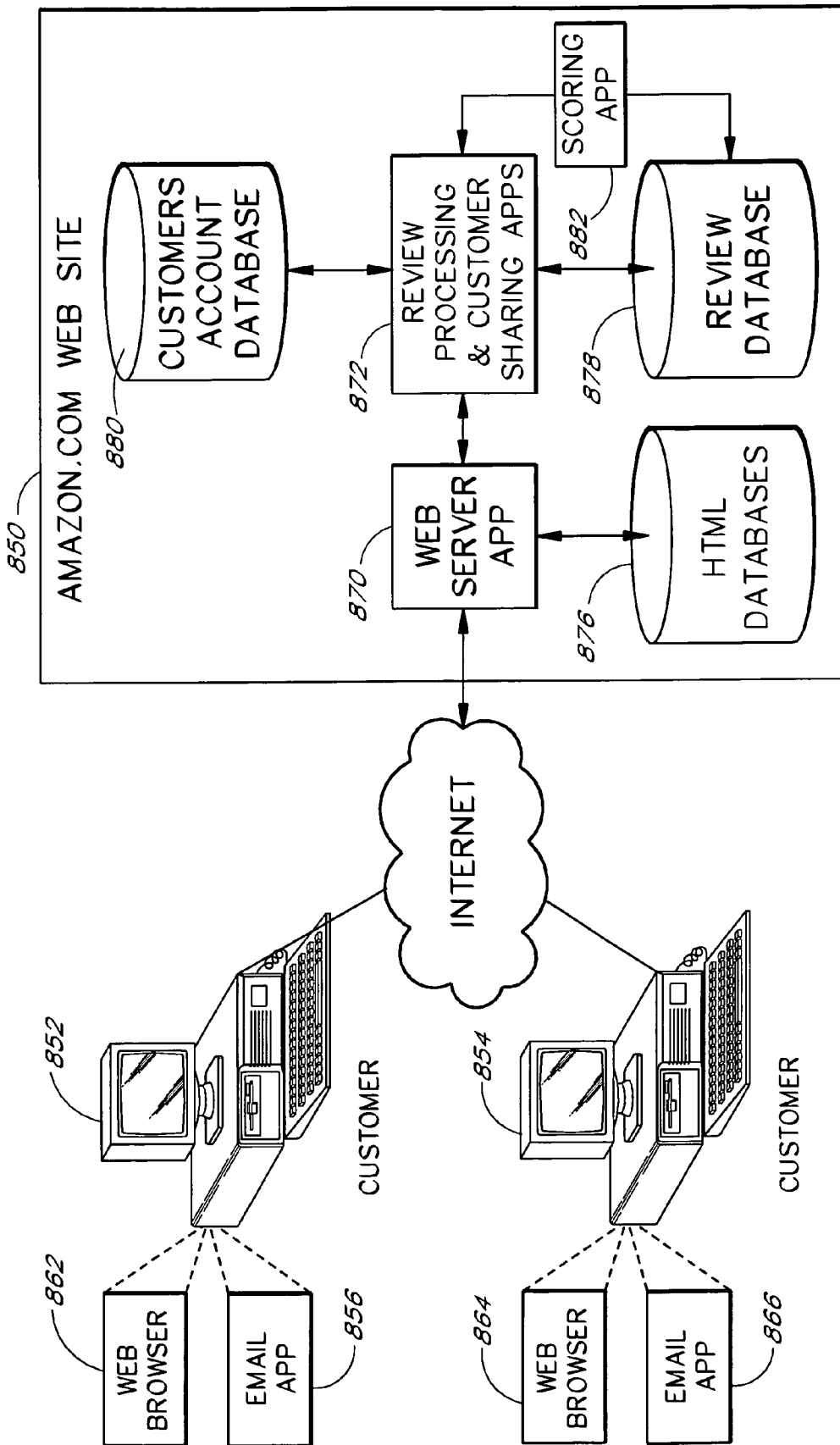


FIG. 8

amazon.com YOUR ACCOUNT | HELP

WELCOME | DIRECTORY TODAY'S FEATURED STORES

DVD | BOOKS | HEALTH & BEAUTY | zSHOPS | MUSIC

▶ INTERENATIONAL | ▶ TOP SELLERS | ▶ FRIENDS & FAVORITES | ▶ FREE E-CARDS | ▶ PLAYSTATION2

Search People: Your Favorite People:

Friends & Favorites > Friends & Favorites FAQ

Friends & Favorites: Frequently Asked Questions

- 1. What is Friends & Favorites?**

Friends & Favorites is an Amazon.com service that puts you in touch with opinion and information from people who matter to you. Just add your friends and favorite reviewers to your Favorite People list. We'll gather up reviews, recommendations and opinions from your Favorite People and put it all right in front of you.
- 2. What's a Favorite People list?**

Your Favorite People list is a group of other Amazon.com shoppers, friends, and favorite reviewers that you like and trust. If one of those people has created an About You area, or if you know that person's e-mail address, add him or her to your Favorite People list. Then, whenever one of your Favorite People writes a review, or comes up with an interesting recommendation, we'll put it on your customized Friends & Favorite home page. That way, you can keep track of people and opinions that matter.
- 3. Why should I participate?**

Once you build your Favorite People list, your Friends & Favorites home page will begin to fill up with valuable, relevant product information. It's a fantastic way for you and your circle of friends to find great new products and become better-informed consumers.
- 4. I want to get involved. Where do I start?**

First off, you can read up on all the great customers who are involved at Amazon.com. Visit our Top Reviewers page or search our directory to see if your friends have created a page devoted to their reviews, recommendations, and ideas. When you find someone who's interesting to you, just click the yellow Add button in the top right-hand corner of their page and they'll be automatically added to your list.
- 5. What's a Trusted Friend?**

A Trusted Friend is a person who has permission to see a private view of your About You area. This private view can include personal information like name or e-mail and items from your list of Shared Purchases. Trusted Friends appear in your Favorite People list with a star icon next to their name.
- 6. What happens when I click the Upgrade button on someone's About You area?**

We add that person to your group of Trusted Friends and dispatch an e-mail on your behalf. The e-mail notifies him or her of Trusted Friend status and offers an invitation to visit your "About You" page.
- 7. What happened to my Member Page?**

Your Member Page has changed a bit. It's now called your About You area. Though the name is different and the layout is new, the information on the page is still the same. Now it's just easier to read and prettier to look at. We've also made it easier to edit and add information to this page. Just click on the edit buttons to see instructions for adding and editing information in those specific areas.

FIG. 9A

8. What's an About You area?

Your About You area is the place at Amazon.com where others can learn more about you. You can do all sorts of things to spruce it up. Write a little blurb about yourself. Add your photo. Write a product review. Create a Wish List. There's even a private area of your About You area where you are able to share your purchases with Trusted Friends.

9. How do I turn off my About You area?

No problem. Please send e-mail to community-help@amazon.com and our customer service department will accommodate your request.

10. I've noticed a page with objectionable content. What should I do?

If you feel another person has created an About You Area that contains objectionable content, please send e-mail to community-help@amazon.com and we will investigate the matter promptly. You can read our full guidelines [here](#).

11. What is purchase sharing?

Purchase sharing is your opportunity to share a list of your purchases (including personal ratings and comments for each) with your group of Trusted Friends. Your Shared Purchases page is the part of your About You area that shows your Amazon.com purchases, comments, and ratings. Unlike the other areas of your About You area, your Shared Purchases page can be accessed only by the Trusted Friends that you invite or by anyone if you decide to make it public.

12. Why should I share my purchases?

Purchase sharing is a great tool for helping your Trusted Friends become better-informed consumers, and for letting them get to know you a little bit better. By sharing stories about purchases—great deals, regrets, mistakes, etc.—you and your Trusted Friends will be able to learn from your experiences and discover smarter, more efficient ways to shop.

13. How do I access someone else's Shared Purchases page?

If your friend hasn't made their Shared Purchases public you need an invitation. In this case you could wait to be invited by someone else, but we recommend that you take one of these more proactive approaches:

- Create your own Shared Purchases area, invite your friend, and encourage him or her to return the favor and invite you to his or hers Shared Purchase area.
- Add the person you want to be able to see your page to your group of Trusted Friends. As part of this process, he or she will receive an e-mail on your behalf inviting him or her to visit your Shared Purchases area.
- Call your friend, tell him or her about purchase sharing, and ask if s/he is interested in sharing information with you.

14. May I choose which purchases appear on my Shared Purchase page?

Definitely. When you set up your Shared Purchases page, you decide which purchases you want to share with your friends and which ones you'd like to keep private. Each time you buy something new, we'll ask whether you want to add it to your Shared Purchases. If you change your mind, you can add and delete purchases, comments, and ratings from your Shared Purchases page at any time.

15. Who can access my Shared Purchases page?

Unless you make your Shared Purchases public only the people you invite as Trusted Friends will be able to access your Shared Purchases page at Amazon.com. When these people respond to your invitation, they become Trusted Friends on your Favorite People list. You'll know who these people are because they'll have a star next to their name when you view your Favorite People list. (You can add and delete names from your Trusted Friends list at any time.)

16. How does Amazon.com keep my purchase information secure?

We take customer privacy very seriously at Amazon.com. The people you've invited to be Trusted Friends are able to see your Shared Purchases page only if they are logged into Amazon.com's secure server and recognized in our database as your Trusted Friends. If for any reason you decide that you no longer want a person to have access to your purchase information, you can delete that person's name from your group of Trusted Friends, and he or she will no longer be able to access your Shared Purchases page.

Go back to the [Friends & Favorites](#) home page.

[Friends & Favorites](#) | [Top Reviewers](#) | [Purchase Circles](#) | [Discussion Boards](#) | [Refer-A-Friend](#) | [Free e-Cards](#)

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- Use [Your Account](#) to view or change your orders.

Shipping & Returns

- See our [Shipping Rates & Policies](#)
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FIG. 9C

amazon.com HELP

WELCOME BOOKS MUSIC DVD & VIDEO ELECTRONICS SOFTWARE TOYS & VIDEO GAMES HEALTH & BEAUTY HOME LIVING

HOW TO ORDER GIFT IDEAS TOP SELLERS FRIENDS & FAVORITES FREE E-CARDS

Search People:
Your Favorite People:

Purchase Sharing
with Trusted Friends

Share your purchases with your Trusted Friends

Now you can connect with your Trusted Friends in a whole new way--by sharing your Amazon.com purchases. You'll find out things you never knew about each other. Passions, interests, and hobbies that never came up in conversation will pop up in your lists of purchases. So go ahead. Choose the purchases you'd like to share. Give your purchases a star rating. Add comments. Make this page an information-packed resource for your Trusted Friends.

What is the Rating Scale?

The buttons numbered 1-5 represent the following ratings:

- 1 ★★★★★ Don't like it
- 2 ★★★★★ Not for me
- 3 ★★★★★ I like it
- 4 ★★★★★ It's Great
- 5 ★★★★★ I Love it!

Items 1 to 25 are shown below.

Share Item:	Your Comments:	Not rated:	Your Star Rating: Don't like it -> love it!
<input type="checkbox"/> <u>Fiddler on the Roof</u> Mgm/Uca Studios	<input type="text"/>	?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input checked="" type="radio"/> 5
<input type="checkbox"/> <u>Mary Poppins</u> Disney Studios	<input type="text" value="Great Music"/>	?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="checkbox"/> <u>A Bug's Life</u> Disney Studios	<input type="text" value="Cutting edge animation"/>	?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="checkbox"/> <u>Gone With the Wind</u> Warner Home Video	<input type="text"/>	?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="checkbox"/> <u>The Dark Crystal</u> Columbia/Tristar Studios	<input type="text"/>	?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="checkbox"/> <u>Sesame Street's 25th Birthday - A Musical Celebration</u> Sony Wonder	<input type="text" value="My children love it"/>	?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input checked="" type="radio"/> 4 <input type="radio"/> 5
<input type="checkbox"/> <u>The Jungle Book</u> Disney Studios	<input type="text" value="The best"/>	?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input checked="" type="radio"/> 5
<input type="checkbox"/> <u>Wallace & Gromit: The First Three Adventures (1990-1995)</u> Twentieth Century Fox	<input type="text"/>	?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input checked="" type="radio"/> 5
<input type="checkbox"/> <u>Sesame Street - Elmopalooza!</u> Sony Wonder	<input type="text"/>	?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="checkbox"/> <u>The Wiggles - Yummy Yummy</u> The Wiggles(Primary Contributor)	<input type="text"/>	?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5

FIG. 10A

<input type="checkbox"/> <u>Tarzan</u> Disney Studios	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		?	1	2	3	4	5
<input type="checkbox"/> <u>The Wiggles - Wiggle Time</u> The Wiggles(Primary Contributor)	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		?	1	2	3	4	5
<input type="checkbox"/> <u>Sesame Street - 1 2 3 Count With Me</u> Muppets(Primary Contributor)	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		?	1	2	3	4	5
<input type="checkbox"/> <u>Little Bear: Meet Little Bear</u> Little Bear(Primary Contributor), Maurice Sendak (Primary Contributor)	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		?	1	2	3	4	5
<input type="checkbox"/> <u>Best of Kermit on Sesame Street</u> Alice Dinnean(Actor), et al	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		?	1	2	3	4	5

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FIG. 10B

amazon.com (YOUR ACCOUNT) | HELP

WELCOME | DIRECTORY TODAY'S FEATURED STORES
DVD | BOOKS | HEALTH & BEAUTY | zSHOPS | MUSIC

▶ INTERENATIONAL | ▶ TOP SELLERS | ▶ FRIENDS & FAVORITES | ▶ FREE E-CARDS | ▶ PLAYSTATION2

Search People: (GO) Your Favorite People: (GO)

[Friends & Favorites](#) > [Your About You Area](#) > [Favorite People](#) > [Invite Trusted Friends](#)

Trusted Friends are people who have permission to see a private view of your About You area. This private view can include personal information like name or e-mail and items from your list of Shared Purchases. Trusted Friends appear in your Favorite People list with a star icon next to their name.

The people whose e-mail addresses you enter in the text box below will be notified of their Trusted Friend status and invited to visit your About You area.

Enter the e-mail addresses of the people you'd like to add as Trusted Friends

JohnDoe@example

Please separate each address with a coma.
(e.g. janedoe@company.com, johndoe@school.edu, etc.)

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FIG. 11A

amazon.com HELP

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Search People: (GO) Your Favorite People: (GO)

[Your About You Area](#) > [Favorite People](#) > [Edit](#)

Update your Favorite People List
 The following are your Favorite People. You can change status of Favorite People or remove them from your list right here.

Your Favorite People:	<input checked="" type="radio"/> Trusted Friends	Favorite People:	Delete
Doug Vaughn	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
<input type="button" value="Save Changes"/>			

Trusted Friends in the making
 You've previously invited the following people to become Trusted Friends, but they have not responded. If you want to send another note to any of these people, delete them from this list, and send them another e-mail.

People you've invited:	Delete
JohnDoe@example	<input type="checkbox"/>
<input type="button" value="Save Changes"/>	

Receiving e-mails from others
 I'd rather not receive e-mail each time I'm added to a person's group of Trusted Friends.

Find out more about managing your Favorite People in the [Friends & Favorites FAQ](#).

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FIG. 11B

Reply
Reply All
Forward
as attachment ▼

Delete
Next | Inbox

Date: Thu, Dec 1, 2000 08:54:33 -0700 (PDT)
From: jexample@example
To: JohnDoe@example
Subject: Amazon.com Friends & Favorites: Trusted Friend Invitation

Hi !

We're happy to tell you that you've been added to John Example's group of Trusted Friends at Amazon.com. As a Trusted Friend, you now have permission to see a private view of John Example's "About You" page. This private view features personal information such as purchases, ratings, and comments that John Example has chosen to share with Trusted Friends like you.

Click on the link below to see John Example's About You area:

<http://www.amazon.com/exec/obidos/ppl/i/123ABCDEFGH/>

With Friends & Favorites, you get useful product information from friends you trust and people you respect. To learn more about this service, visit <http://www.amazon.com/friends>

jexample@example.com requested that we send this message. If you'd rather not receive an e-mail each time someone adds you as a Trusted Friend, please click the link below and update this preference.

<http://www.amazon.com/exec/obidos/customer-lonk-management/>

Amazon.com
Earth's Biggest Selection
Find, Discover, and Buy Virtually Anything
<http://www.amazon.com>

If you have questions or feedback about this Amazon.com service, please e-mail us at friends-only@amazon.com

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FIG. 12

**METHODS AND SYSTEMS FOR
DISTRIBUTING INFORMATION WITHIN A
DYNAMICALLY DEFINED COMMUNITY**

PRIORITY CLAIM

This application claims the benefit of U.S. Provisional Application No. 60/166,547, filed Nov. 19, 1999 and U.S. Provisional Application No. 60/166,664, filed Nov. 19, 1999 which are incorporated herein by reference in their entirety.

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to information distribution and filtering. More specifically, this invention relates to information processing methods for assisting users in sharing information related to transactions conducted over a network.

2. Description of the Related Art

Networked systems have become an increasingly prevalent and vital technology. Networks, such as the Internet, allow large numbers of computer systems and people to swiftly transfer data across the globe. Despite the tremendous benefits afforded by networking large numbers of systems and people together, significant challenges are posed as well. It has become increasingly difficult to evaluate the quality of data accessed over networks. The data often comes from sources unknown by the recipient. Thus each recipient often has to individually evaluate each incoming datum. Because it is impractical for individuals to evaluate large quantities of data, and because certain types of data cannot be adequately evaluated using automated systems, valuable data concealed in vast amounts of less valuable data is often ignored.

For example, online merchant Web sites commonly provide various types of informational services for assisting users in evaluating products and other offerings. Such services can greatly aid consumers in deciding which product or offering to purchase. These informational services are particularly valuable for online purchases, where customers do not have the opportunity to physically inspect or try out products.

One type of information service involves providing feedback from product users. The feedback may be in the form of reviews. These reviews may be from professional reviewers or from customers. However, in conventional systems customer reviews often lack credibility, as consumers do not know if the review is from a "crank," who disapproves of every product, or from a very easy to please customer, who likes every product. Thus, when reviews disagree, consumers do not know which review to rely upon, making the reviews less useful. Further, when there are large number of customer reviews, it may be a tedious and time-consuming process locating the more worthwhile reviews. Therefore valuable reviews are often ignored.

SUMMARY OF THE INVENTION

This invention relates to information distribution and filtering. More specifically, this invention relates to information processing methods for assisting users in sharing information related to transactions conducted over a network, including historical purchase data and product evaluations. In one embodiment, in accordance with user instructions, a dynamic customer-defined community for exchanging information over a network is created. To further aid users, in one embodiment, data is distributed over a network to large numbers of

remotely located individuals, one or more of which may provide feedback on the value or usefulness of the data.

For example, product reviews received from large numbers of product users may be distributed to large numbers of people, one or more of whom may evaluate one or more of the reviews. These evaluations may be used to indicate to readers the helpfulness or value of the reviews. Thus, one embodiment of the present invention advantageously helps on-line customers discover and evaluate products or offerings by presenting useful data or information, such as customer reviews, organized and presented so that the more useful reviews can be quickly located. By providing a system that allows customers to express their opinions and provide their expertise on products, customers can help each other determine what to buy and what to avoid. Further, customers reading other customers' reviews can rate the reviews, thereby helping identify which reviews are more useful, and which reviewers are more dependable.

The usefulness determination may be based on one or more factors. For example, the usefulness determination may be based on how similar the reviewer is in his or her opinions, interests, and preferences to those of the viewing customer. Similarly, past purchases, education level, and demographic information may also be used in helping determine the likely usefulness of a given reviewer's reviews to a given customer. Further, the usefulness determination may be based on how valuable other customers have found the reviewer's reviews, as described in greater detail below.

Customers may provide their reviews using a variety of techniques. For example, customers may provide a review by filling out a review form or other user interface. The review form may request a rating on a rating scale, a one-line review summary, the review itself, the customer's name, the customer's e-mail address, nickname, and/or other personal or identifying information, such as their photograph, geographical location, educational achievements, and so on. Customers may also be identified during sign-in, via a user ID and password, by reading a cookie stored on the customer's computer, or using other techniques, in conjunction with submitting a review. Optionally, customers may be allowed to provide reviews anonymously, that is, without identification. In one embodiment, the customer can specify whether one or more of the customer's name, e-mail addresses, and/or other personal or identifying information are to be later displayed in conjunction with the review, or if the review should be displayed anonymously.

For example, the reviews submitted by customers are later displayed in conjunction with the offer of the product for sale. For non-anonymous reviews, the reviewer's name or nickname, as selected by the reviewing customer, will be displayed in conjunction with the review. Further, non-anonymous customer reviews are optionally linked to a reviewing customer's public profile, which provides additional public information about the review author.

Customers reading the reviews can rate individual reviews based on their perceived usefulness. The review rating may include a point score and/or a "useful" or "not useful" designation. The review ratings allow identification of the more useful reviews as well as the identification of customers who tend to provide more useful reviews. Reviews provided on product detail pages may include an indication noting which reviews have been considered useful or valuable by others. Thus, customers can help other customers by not only providing product reviews, but also by rating or reviewing those reviews. This allows customers trying to decide which product to purchase to quickly focus on reviews that others have

are already designated as being useful. Further, customers reviewing products benefit by knowing they are helping others.

Further, the reviews may automatically be ranked for display, and/or filtered out, based on the votes they receive. For example, assuming multiple reviews have been submitted for a particular product, those voted to be the most useful may be displayed first (e.g., closer to the top of a product detail page). The reviews voted to be the least useful may be displayed in a less prominent location (e.g., near the bottom of a product detail page), or may be filtered out (not displayed).

Customers may be ranked based on the tally of useful and/or useless votes that they have received on their reviews. These customers may be identified with appropriate language, markers or other indicators in association with their reviews and on their profile page. For example, a reviewing customer may have a designation of "top 100" reviewer if the customer received enough "useful" votes to place the customer in the top 100 reviewers. This provides customers valuable feedback on how well they write reviews and provides a psychological incentive to improve their reviews so as to achieve a better designation.

Furthermore, customers looking for reviews by a highly rated reviewer can activate a link to view some or all of the reviews written by that reviewer. Thus, if a customer identifies a reviewer that the customer particularly likes, the customer can quickly access reviews by that reviewer. Further, when viewing reviews of a product, the customer can specify that a selected reviewer's review be presented first, at the beginning of a list of reviews. In one embodiment, the customer can specify that reviews written by a selected reviewer or reviewers by e-mailed to the customer.

In addition, another novel aspect of one embodiment of the present invention is that customers are given the ability to selectively share with other customers or people they know information about items they have purchased. A customer may be able to specify which specific individuals and/or groups the information is to be shared with. Further, the customer may specify that different types of information are to be shared with different specific individuals and/or groups.

By sharing their purchase information as well as other types of information, customers can help each other make better purchase decisions. Thus, the present invention provides an efficient and accurate method of gathering customer purchase information and opinions, and sharing that information with designated recipients. These recipients can then base at least some of their future purchase decisions on the recommendations, experiences and purchase histories of others, and in particular, people they know and/or trust.

A novel infrastructure is provided that captures and stores customer-to-customer relationships for future use. This infrastructure facilitates future sharing of other types of information such as wish list, reviews, auctions, favorite artists, instant recommendations, shipping address, and so on.

BRIEF DESCRIPTION OF THE DRAWINGS

Exemplary systems, processes, services and pages which implement the various features will now be described with reference to the following drawings, in which:

FIGS. 1A-B illustrate example profile pages for entering information related to a customer's profile;

FIG. 2 illustrates an example page used to add a picture to the profile page illustrated in FIG. 1A;

FIG. 3A illustrates an example public profile page, including profile information entered into the profile page illustrated in FIG. 1A;

FIG. 3B illustrates an example customized review page;

FIG. 3C illustrates an example page including reviews written by the user associated with the profile page illustrated in FIG. 3A;

FIG. 4 illustrates a product information page, including a review, a rating associated with the review author, and including a link to a review entry page;

FIG. 5 illustrates an example review entry page;

FIG. 6 illustrates an example page listing reviewers having selected rankings;

FIG. 7 illustrates an example online process for receiving, processing, and presenting evaluations for reviews of the type shown in FIG. 4;

FIG. 8 is an architectural schematic illustrating an exemplary set of components which may be used to implement the customer profile form, customer reviews, rating of customer reviews, rating of reviewers, and personal purchase circles;

FIGS. 9A-C illustrate an explanation page that explains what the different statuses that can be assigned by one customer to another customer;

FIGS. 10A-B illustrate an example customer purchase sharing page for specifying for which of a customer's purchases is information to be shared with designated others;

FIG. 11A illustrates an example page used by a customer to specify who may view the customer's purchase sharing page;

FIG. 11B illustrates an example page used by a customer to change the status of another user with respect to the customer and to display who has been invited to view the customer's purchase sharing page but has not responded; and

FIG. 12 illustrates an example e-mail notification informing an invitee to view a customer's purchases page.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Throughout the following description, the term "Web site" is used to refer to a user-accessible network site that implements the basic World Wide Web standards for the coding and transmission of hypertextual documents. These standards currently include HTML (the Hypertext Markup Language) and HTTP (the Hypertext Transfer Protocol). It should be understood that the term "site" is not intended to imply a single geographic location, as a Web or other network site can, for example, include multiple geographically distributed computer systems that are appropriately linked together. Furthermore, while the following description relates to an embodiment utilizing the Internet and related protocols, other networks, such as networked interactive televisions, and other protocols may be used as well. In the figures, words and phrases are underlined to indicate a hyperlink to a document or Web page related to the underlined word or phrase. In addition, unless otherwise indicated, the functions described herein are preferably performed by executable code running on one or more general purpose or computers or on servers.

The present invention relates to information processing methods for assisting users in sharing information related to transactions conducted over a network, including historical purchase data and product evaluations. In addition, in one embodiment, is related to feedback processing, and in particular to methods and systems for processing distributed feedback received over a network. Data is distributed over a network to large numbers of remotely located individuals, one or more of which may provide feedback on the value or usefulness of the data.

Advantageously, a review processing system helps customers select which items to purchase and helps customers learn about products or offerings by presenting useful infor-

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mation, such as customer-authored product reviews. Customers can thus help each other determine what to buy and what to avoid. Further, customers can rate product reviews, thereby identifying which reviews are the most useful and which reviewers tend to provide more useful reviews. For example, product reviews received from large numbers of product users by an online merchant may be distributed to large numbers of people, one or more of whom may evaluate one or more of the reviews. To help customers quickly locate the more helpful reviews, these evaluations may be aggregated and displayed in association with the reviews. Reviewer profiles are generated so that customers can better locate reviewers whose opinions they are more likely to find helpful. The review processing system may be associated with a particular merchant Web site, or may be used across multiple Web sites for several corresponding merchants.

As described in greater detail below, to further provide helpful customer generated shopping information, customers can selectively share information regarding purchases with friends, family, and others.

Because consumers or customers are very interested in product reviews by other customers, and in purchases made by those who opinions they value, a merchant which provides such customer reviews, helpful review ratings, and provides for the sharing of purchase information among customers, is more likely to be visited by additional consumers. These additional visiting consumers may make purchases at the merchant's site, thereby improving the merchants sales.

The following detailed description will first describe the process of generating customer profiles, then describe the actual review generation and display process, the process of reviewing reviews, and the process of ranking reviewers. In addition, a novel process whereby customers can automatically and selectively share their purchase information with each other will be described. Additional embodiments of the present invention will then be described with reference to the figures.

As discussed above, in addition to providing customer reviews, a profile is optionally generated for a given customer reviewer. As will be discussed in greater detail below, all or portions of the profile may be presented in conjunction with the reviewer's reviews as part of the reviewer's public profile. This provides a more tangible identity readers can better relate to, and further enhances the credibility of the reviews.

The generation of reviewer profiles will now be discussed in more detail. The customer profile is stored in a customer database located connected to the merchant's Web site. Initially, the profile may contain limited or no information. Information may be added to the profile using a variety of techniques. For example, when a customer goes through a setup process, discussed in greater detail below, a profile template or form is presented to the customer. The customer may enter profile additional information into the form and specify what additional information is to be displayed on the customer's public profile page, that is, the page or pages containing profile information viewable by the public.

In one embodiment, even if the customer has not gone through the profile setup process, when the customer writes a non-anonymous review, those non-anonymous reviews will appear either directly or as a link on a customer's public profile page, also termed a "user page" or an "about you area" page. However, in this instance, the profile page will not contain profile information received from the profile setup process.

In addition, where the reviewer has not gone through the profile generation process, in order to associate reviews with a particular reviewer, past non-anonymous reviews are ana-

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lyzed, and based on the e-mail addresses associated with the past non-anonymous reviews, the review processing system deduces which customer account or accounts are likely to be associated with the review author. Corresponding account identifiers are then included in the customer's public profile for later confirmation by the customer. An e-mail or Web site notification is optionally provided to the customer, informing the customer of the added public profile information and, where appropriate, requesting confirmation of the added information. Further, in one embodiment, the profile page will not show any customer information until the customer explicitly sets up his or her page.

The customer/author profile may include one or more of the following:

1. Author's picture
2. Author's self description
3. Author's nickname
4. Author's name
5. Author's e-mail address
6. The non-anonymous reviews that the author has written
7. The number of non-anonymous reviews that the author has written
8. The number of useful or helpful votes that each review has received
9. The number of useful or helpful votes that the author has received through his or her reviews
10. The date the customer first became a customer, registered, created the profile, and/or last edited the profile
11. Hobbies
12. Favorite sports teams
13. Previously purchased products
14. Customer demographic information, optional including one or more of the following: geographical location, age, gender, profession, education, income, marital status, number of children, political affiliations, religious affiliations, ethnicity
15. The author's preferred or favorite reviewer or reviewers

The above profile items are discussed in greater detail below.

For one or more of the above items, the customer is optionally allowed to designate which items are to be public, that is, available for viewing by anyone visiting the merchant Web site, and which items are to be private, that is, not available to the general public. For example, in one embodiment, viewing of private items is restricted to the customer. In another embodiment, viewing of private items is restricted to the customer and to those specifically designated by the customer. Optionally, the review processing system can designate certain information to be public and certain information to be private.

A preview of the public profile is presented to the customer for approval or for editing before the profile is published. Customers can then later edit their profile information, as well as the private/public designations. The edited information may be updated upon submission of the changes, or it may take a period of time until the changes are made available to others.

A viewer can access a public profile page by activating a link within or adjacent to a review provided by the customer, by typing in the customer's name, and/or by searching on the customer's name or nickname. The public profile may include or link to the customer's public profile information, non-anonymous reviews written by the customer, and other information. Furthermore, as discussed below, the reviews may optionally be displayed in conjunction or linked to customer feedback with respect to the reviews. The customer feedback may be in the form of ratings of the customer's

reviews and/or the number of “useful” and “non-useful” votes received for the reviews. In addition, the customer’s overall review rating or ranking based on ratings provided by others can be displayed. The count of all the reviews a customer has written may also be displayed. The customer may optionally

be allowed to designate some or all of this information as private or public. The profile items listed above will now be discussed in greater detail. With respect to the review author’s picture, by including a customer’s picture on the customer’s public profile page, the reviewer will have more credibility with readers of his or her review, and reader can better identify or relate to the reviewer. In one embodiment, customers can optionally supply a URL to an image, such as picture or photograph, located at another Web site. The photograph may be shown immediately with the profile once the profile is published. In one embodiment, the customer can supply any size picture, however the width and height may be restricted through the use of an appropriate image tag.

Customers may be allowed to later change the URL to their picture. Once a new URL is provided, the changed URL may be available immediately. In another embodiment, rather than provide a URL to a photograph, customers may upload a photograph to the merchant Web site, which then hosts the photograph so that it can be served to remote terminals used by viewers.

With respect to the self-description information, customers can describe themselves in a free-form manner, allowing customers to build any identity, real or imagined, for viewing by others. The self-description may be limited to a certain number of characters, such as 4,000 characters. After the self-description is submitted, any HTML tags may optionally be deleted before storing the description in the database. Customers may be allowed to designate their self-description as public or private. The self-description field may optionally pre-populate if the customer has already provided the self-description, such as during the registration process when entering a wish list.

With respect to a review author’s nickname, inclusion of a nickname as part of the customer’s profile advantageously allows customers to maintain a significant level of anonymity and to create an alter ego by posting reviews under their nickname rather than their actual name. At the same time, by including nicknames, reviews will still be attached to a tangible identity, adding credibility to the reviews and allowing readers of the review to “get to know” the reviewer.

While in one embodiment the same nickname may be used by more than one customer, in another embodiment, nicknames are unique, so that two people cannot have the same public identity. However, to allow greater freedom in choosing nickname, optionally, only active nicknames have to be unique. Thus, when a customer creating his or her profile enters a nickname, that nickname is compared to already existing customer nicknames. If someone else is using the entered nickname, then the customer may be requested to select a different nickname. The process repeats until the customer either enters or selects a unique nickname or exits the nickname selection process. In order to speed-up the selection of a nickname, the customer is optionally presented with a selection of unique nicknames from which to choose or may be assigned a nickname.

Nicknames may be used by customers to quickly locate reviewer-related information. For example, when someone wants to locate information on a particular customer, or locate other reviews by a particular customer, they may enter the customer nickname into a search field and activate a search function. The requester is then presented with the customer’s

public profile page, including the customer’s reviews or links to the customer’s reviews. This search feature allows users to quickly and easily find pages and reviews associated with a given reviewer and nickname. In one embodiment, if a searcher enters a previous customer nickname that is no longer in active use, the entered nickname will be compared against inactive or historical nicknames. If a match is found, the search is presented with the reviewer’s profile page and reviews, as well as a notification of the reviewer’s new nickname.

The customer’s nicknames as well as some or all of the other customer profile information may be used across multiple sites and electronic commerce stores associated with a merchant and/or a merchant site. For purposes of illustration, the merchant Web site in the disclosed implementation is the Web site of Amazon.com. As is well known in the field of Internet commerce, the Amazon.com site includes functionality for allowing users to browse and make online purchases from a catalog of millions of book titles, as well as to purchase toys, games, electronics, music, videos, home improvement items, cars, and the like. Amazon has an associated auction site, as well as “zShops,” and other retail stores. A selected customer nickname may be used across several or all of the sites associated with Amazon, which is a significant convenience for the customer. In another embodiment, different nicknames may be used for different related sites, as well as for unrelated sites.

To enhance user customization, customers may optionally be allowed to change their nicknames. The new nickname may be immediately available or may be available after a time lag. Optionally, a customer may be required to select a nickname and have the nickname displayed on their public profile page and/or their reviews. In another embodiment, the selection of a nickname is optional, and the user may elect to keep the nickname private. In one embodiment, in response to a search request or the activation of a nickname history link, or other user actions, a customer and/or other viewers may be presented with nickname history, that is, a list of previous nicknames associated with the customer.

To further personalize communications with customers, the customer’s nickname or actual name, as included in the customer’s profile information, may be used as part of a salutation or greeting to the customer when communicating to the customer. For example, if the customer’s name is “John Doe,” e-mails or customer-specific Web pages may include the greeting “Hi John!” or “Hello Mr. Doe.” The customer name will optionally pre-populate a profile template name field if the customer has already provided the name, such as during a customer registration process, while creating a wish list, while ordering a product, or while otherwise accessing the merchant Web site.

With respect to the author’s e-mail address, customers can choose to communicate with visitors to their public page by having their e-mail address displayed to viewers. Optionally, to better ensure the integrity of the review process, customers may be required to supply an e-mail address. The e-mail address may be displayed as soon as the profile page is published. In one embodiment, e-mail addresses do not have to be unique. If there are multiple identical e-mail address, an e-mail address selection process will use selection and validation rules. Optionally, as a default, the e-mail address is designated as “private,” that is, not displayed to the public. However, the customer can change the designation to “public,” in which case the customer’s e-mail address will be displayed on the customer’s public profile page. The e-mail

address field may optionally pre-populate if the customer has already provided the e-mail address, such as during the registration process.

In order to prevent authorized access, authentication of the customer is performed before permitting the customer to setup or edit a profile. For example, before accessing a profile page, customers may be required to register and/or to have already purchased items from an associated merchant site. The registration process may request that the customer provide information such as name, shipping address, billing address, and/or e-mail address. Customers may also be identified or otherwise authenticated during sign-in, via a user ID and password or otherwise recognized, in conjunction with submitting a review. In one embodiment, the customer can specify whether one or more of the customer's name, e-mail addresses, and/or other personal or identifying information are to be later displayed in conjunction with the review. Optionally, reviewers may be allowed to provide reviews anonymously, that is, without identification.

One embodiment of the review entry process will now be described. In one embodiment, a "review entry" link may be provided in association with a product. By activating the link, a user is presented with a review entry form. The review form accessed by the customer may request a rating on a rating scale, a grade, a one-line review summary, and/or a full textual review.

Optionally, to insure the integrity of the reviews, a potential reviewer is authenticated before being allowed to submit a review. If the potential reviewer has not yet established an account, the potential reviewer is asked to establish a customer account. Alternatively, anyone may be allowed to submit a review.

To further increase the integrity of the review process, customers may be restricted to submitting or having displayed only one review for each product. This avoids having one customer who loves or hates a product from skewing the impression upon readers by submitting multiple reviews stating one point of view. Thus, in one embodiment, a review database is analyzed to determine if the customer has previously submitted a review of a given product. If not, then the review is accepted and stored in the review database for later display.

If the customer has previously submitted a review for the product, the reviewer is so notified and prevented from submitting additional reviews for that product. In another embodiment, the new review may be accepted, but not displayed. In still another embodiment, the customer may be offered a choice of which review is to be displayed. In yet another embodiment, the new review is accepted, stored, and later displayed in association with the product, but the older review is automatically removed from display on the merchant Web site, and optionally deleted from the review database.

If the customer has not yet filled out a profile form, such a form may now be presented to the customer before the review form is provided. As previously described, personal information, such as the customer's name, the customer's e-mail address, nickname, and/or other personal or identifying information, such as photograph, geographical location, education, and so on, may be requested or some or all of the information may have already been gathered during the registration process.

The reviews submitted by customers are later displayed in conjunction with the offer of the product for sale. For non-anonymous reviews, the reviewer's name or nickname as selected by the reviewing customer, will be displayed in conjunction with the review. Further, as discussed below, non-

anonymous customer reviews optionally link to the reviewing customer's public profile provides additional information about the author of the review.

The customer may elect to have the review displayed with all or a portion of the customer's name as provided during the registration process, or may elect to have the customer's nickname displayed instead. As a default, all or a portion of the customer's nickname as entered in the customer's profile page will be displayed in association with the customer's review, unless the customer instructs otherwise. If the customer has not created a public profile, then as default, all or a portion of the customer's actual name will be displayed, subject to change by the customer. Alternatively, the consumer may elect to have the review presented anonymously, that is, without a customer identifier, such as a name or nickname.

In one embodiment, the customer's name or nickname presented in association with non-anonymous reviews is linked to the customer's profile page. Thus, when a viewer activates the link, the viewer will be presented with the customer's profile page, including the information that the customer has designated as "public," but excluding the information that the customer has designated as "private." If the review is anonymous, then the review is not linked to the customer's profile page.

The evaluation and rating of reviews will now be described in detail. To further enhance the usefulness of customer reviews, and to enable other customers to more quickly and accurately locate useful customer reviews, individual customer reviews may be rated or reviewed by others. For example, the customer reviews may be rated or voted on as "very useful," "very helpful," "useful," "helpful," "not helpful," or "not useful" by others, or the customer reviews may be rated on a point or star system, where the higher the number of points or stars, the more useful or the better the review. In one embodiment, rating of customer reviews may be restricted to other customers, as opposed to the general public reading the reviews. This enhances the reliability of the ratings, as it is less likely that the other customers will be pranksters giving random ratings than is the case with non-customers. However, in another embodiment, the rating of customer reviews may be performed by the general public, to thereby obtain a larger voting base.

To ensure the integrity of the rating process, if a customer has previously rated or reviewed a review, the customer is so notified and prevented from submitting additional ratings for that review. In another embodiment, the new rating may be accepted, but not displayed. In still another embodiment, the customer may be offered a choice of which of the customer's ratings is to be used. In yet another embodiment, the new rating is accepted, stored, and later used in rating the reviewer, but the older rating is automatically no longer user in rating and/or rating the reviewer. To further ensure the integrity of the rating process, customers are optionally prevented from rating their own reviews. Once a customer has submitted their rating of the review, the customer may be redirected back to the product item page from which the customer had previously linked to provide the rating.

The number of "useful" and/or "not useful" votes or the like that a review has received may affect how the review is displayed on the merchant Web site. In addition, the number of "useful" and/or "not useful" votes that a customer's reviews receives may affect how information about the reviewer is displayed on the Web site.

Customers may be ranked based on the tally of useful and/or useless votes, or the like, that their reviews have received. In tallying votes, a "useful" vote may have a value of

“1,” and a “not useful” vote may have a value of “-1.” For example, a reviewer with 100 “useful” votes and 20 “not useful” votes may have a tally or score of 80. In another embodiment, the tally may be based on only “useful” or on only “not useful” votes, or equivalents thereof. The “useful” and “not useful” votes may optionally be assigned different values. For example, a “useful” vote may be assigned a value of “2” and a “not useful” vote may be assigned a value of “-0.5,” so that “useful” votes are weighted more heavily than “not useful” votes.

Optionally, the tally of ratings given to anonymous reviews is tracked separately from those given to non-anonymous reviews. In addition, the total tally of all ratings may also be tracked. In one embodiment, a rating of a reviewer’s anonymous review is given less weight than that of a rating of a non-anonymous review by the reviewer. For example, a “useful” vote for a non-anonymous review by a given reviewer may be assigned a value of “2,” while a “useful” vote for an anonymous review by the given reviewer may be assigned a value of “1.” Generally, this allows non-anonymous reviews and their authors to more easily attain higher scores or ratings than anonymous reviews, thereby encouraging reviewers to provide non-anonymous reviews, which generally appear more credible to readers.

The tally or tallies discussed above may be continuously calculated in substantially real-time as new ratings are received, or periodically, such as once every day.

All or some of the ranked customer reviewers may be identified with appropriate language, markers or other indicators in association with their reviews and/or on their profile page. For example, each customer review may have the tally, score, rating and/or ranking displayed with or linked to the review. In another example, only selected reviewers are identified by their rating or score. For example, only reviewers having a tally or score above a certain amount or having a certain rating or better may be identified. Thus, in one embodiment, a reviewing customer may have a designation of “top 100” reviewer if the customer received enough “useful” votes and/or few enough “not useful” votes to place the customer in the top 100 reviewers. This provides customers valuable feedback of how well they write reviews and provides a psychological incentive to improve their reviews so as to achieve a better designation.

In one embodiment, where a “useful” or helpful vote is worth 1 point, and a “not useful” or “not helpful” vote is worth 1 point, and the customer/reviewer score is equal to the useful votes minus the not useful votes, the following or similar designations are displayed to viewers next to the reviewer’s reviews, review summaries, and/or public profile page:

Score	Designation
<250	No designation
250-999	“Trusted Reviewer”
999-4999	“Very Trusted Reviewer”
>4999	“Most Trusted Reviewer”

The reviewer may be given a reward in recognition of achieving or bettering a predetermined score, rating or ranking. For example, if the reviewer has achieved a score of better than 999, the reviewer may receive a discount, gift certificate, or free product. Other types of rewards may include having items that the reviewer is auctioning be given highlighted or given special emphasis. In addition, information, or a link to information, on the auction item or other item for sale by the reviewer may be included on the review’s profile page.

In addition, a reviewer’s rating may affect the positioning of the reviewer’s review in a group of reviews. For example, the better the rating of the reviewer, the better or higher positioning of the reviewer’s review. The review placement may be based on other factors in addition to or instead of the reviewer rating, such as on the recentness of the review, the number of similar products purchased by the reviewer from the merchant site, or other factors. Further, the placement of a given review within a group of reviews may be different from viewer to viewer.

For example, the placement of a given review may be based at least partly on the viewer’s profile and/or purchase history, and not just on the reviewer’s rating or rating. Similarly, if a reviewer has been designated as a favorite or preferred reviewer by the viewer, then a review by that reviewer may be given higher or more prominent placement. In one embodiment, the placement of a given reviewer’s review in a group of reviews may be partly based on how similar the reviewer is in his or her opinions and preferences to those of the viewing customer.

Thus, for example, if the product being reviewed is a book, the review of a first reviewer with a relatively lower rating or ranking than a second reviewer, but who has purchased several of the same or similar books as the viewer, may have a higher placement than a review from the second, higher ranked reviewer, who has purchased relatively fewer or none of the same or similar books as the viewer. However, for another viewer with different characteristics or having a different purchase history, the second reviewer’s review may have a higher placement than the first viewer.

The reviewer’s geographical location, education, expressed interest in various areas, such as history, science, and so on, as compared to that of the viewer, may affect the review placement as well. Information about the viewer’s characteristics, including the viewer’s purchase history, may be retrieved from a cookie stored on the viewer’s computer and/or retrieved from the viewer’s account information stored in a merchant database.

The placement of the customer’s own review may be given a prominent placement when the customer activates a link or otherwise accesses reviews for a particular item or product that the customer has reviewed. For example, the customer’s own review may be provided as the first review and/or may be bolded, specially colored, or otherwise emphasized.

In order to appropriately place reviews, in one embodiment the viewer’s identity is ascertained so that the viewer’s characteristics may be stored in the viewer’s customer profile, and can be located in the appropriate customer database. The viewer’s identity may be determined by reading the viewer’s cookie, by the viewer logging in to the Web site, or using other known techniques. The term “identity” is used to refer to one or more of the viewer’s actual name, the viewer’s account, the viewer’s computer, or other types of identity.

To further facilitate customers’ ability to locate useful reviews, customers looking for reviews by a highly rated reviewer can activate a link to view several or all of the reviews written by that reviewer. Thus, if a customer identifies a reviewer that the customer particularly likes, the customer can quickly access reviews for different products or items by that reviewer. Further, when viewing reviews of a product, the customer can specify that a selected reviewer’s review be presented first, at the beginning of a list of reviews. In one embodiment, the customer can specify that reviews written by a selected reviewer or reviewers be e-mailed to the customer.

In addition, a customer can request that only the reviews of reviewers having achieved a high rating should be displayed. For example, the customer can select the rating level that a

reviewer or review needs to achieve before the review is displayed to the customer. The customer can also request that the customer be notified when a particular reviewer submits a new review. The customer may request that the notifications be filtered based on the item being reviewed, the category of item being reviewed, when the particular reviewer provides a favorable review, such as a 3 star or better review. Thus, customer can quickly find out when a new, well received product is available. In addition, the customer may be request that the customer be notified whenever a new review is submitted for a selected item. The notifications are then provided in accordance with the customer's requests.

Thus, the review evaluations allow customers deciding which product to purchase to quickly focus on helpful reviews that others have already designated as being useful. In addition, a customer can quickly access reviews by reviewers whose opinion the customer values. Further, customers rating products benefit by knowing they are helping others.

In addition, another novel aspect of one embodiment of the present invention provides customers the ability to selectively and automatically share with others information about items they have purchased. The customer can specify which specific individuals and/or groups the information is to be shared with. Further, the customer may specify that different types of information are to be shared with different specific individuals and/or groups. Customers are thereby provided the ability to dynamically specify which information should be kept private and how private to keep certain information.

By selectively sharing purchase information, reviews, as well as other types of information online, customers can help each other make better purchase decisions while maintaining a desired level of privacy, thereby increasing customer satisfaction and decreasing returns. Thus, the present invention provides an efficient and accurate method of gathering and customer purchase information and opinions, and sharing that information with designated recipients. These recipients can then use the recommendations, experiences and purchase histories of others, particularly those of people they know and trust, in making their own purchase decisions.

In addition, one embodiment of the present invention provides a novel infrastructure that captures and stores customer-to-customer relationships for future use. In addition to the sharing of purchase information, the novel infrastructure facilitates the sharing of other types of customer information, such as wish lists, reviews, auctions, favorite artists, instant recommendations, shipping address, and so on.

The selective sharing of customer information will now be described. As is discussed in greater detail below, customers can define a "Personal Purchase Circle" set that includes a list or designation of people and/or groups that a customer has given permission to see his or her purchases, opinions, and/or ratings. The Personal Purchase Circle operates generally by tracking purchases of items, such as books, movies, or other items, made by the customer as well as corresponding "private" rating or reviews, and sharing the purchase and private review information with a one or more people or groups as specified by or defined by the customer. In addition, if the customer has been provided permission to see the purchases of others, that list may be provided to those who the customer has given viewing permission to. Thus, a dynamic customer-defined community for exchanging information is created. By way of example: If Ken has given Brian and Warren permission to see his purchases, and Maryam has given Ken permission to see her purchases, then Brian, Warren, and Maryam make up Ken's Personal Purchase Circle.

Once a person has been added to a customer's Personal Purchase Circle, a notification or invitation may be provided

to the added person, also termed an invitee. For example, the added person may be notified via e-mail or a message on the merchant's Web site that she or he has been added to the customer's Personal Purchase Circle. The notification may contain a link to the customer's profile page, described below, to provide easy access. If the invitee activates the link, the invitation is considered accepted. The customer may be provided with a notification that the invitee has accepted the invitation and/or view the customer's profile page.

In addition, an e-mail and/or Web notification may be provided to a customer when a member of the customer's Personal Purchase Circle bought purchased a new item or when other changes occurred to the member's profile page. Optionally, customers may request not to be sent any type of notification, or request not to be notified by e-mail but have notification provided on the merchant Web site, or request not be notified via a Web page display, but have notification provided by e-mail.

To reduce or prevent spam or unwanted e-mail, in one embodiment and an invitee will not get more than a specified number invitations from the same customer. The specified number may optionally be set by the customer and/or the Web site manager. The e-mail addresses and customer IDs that a customer has already sent an invitation to are tracked. The customer is prevented from sending more invitations to the invitee than the specified number limit.

Each address entered into the invite box may be evaluated against one or more of the following set of rules. If the invitee e-mail address provided by customer fails to match those in a customer database associated with the Web site, a one-use token is sent to that e-mail address. The one-use token includes a link to a Web page that asks the invitee to sign-in as a customer if the invitee has already established a customer account. If the invitee does successfully sign-in as a customer, then the e-mail address is stored in association with the invite's customer account.

The invitee may also be asked to establish a customer account if the invitee is not yet a customer. If the e-mail address provided by the customer does match the e-mail address of an existing customer, an e-mail is sent to the invitee, including a link to a registration page, where the invitee can apply to be a registered customer with his or her own profile page. Generally, an e-mail is sent to the specified e-mail address, where the e-mail includes links to two URLs. The first link's to the inviting customer's profile page. The second link is in the form of a one-use token in case the e-mail address of the invitee is not their primary Amazon.com account.

If the e-mail address provided by the inviting customer matches two or more customer accounts in the customer database, in one embodiment the customer account with the most recent order date will be considered the invitee. In another embodiment, the account with the most orders will be considered the invitee. The validity of e-mail addresses may be verified to prevent invitations to likely distribution lists or other suspect addresses, such as those beginning with postmaster@, root@, or administrator@. The customer may view a list of the customer's invitees as well as a list of invitees who have accepted the customer's invitation to view the customer's profile page.

A customer may selectively designate via the "profile page" which purchases, opinions and ratings are to be visible to customers within the customer's personal purchase circle. In addition, the profile page can list the other people in the customer's Personal Purchase Circle. By way of example: Brian and Warren can go to Ken's profile page to see his purchases and what Ken thought about each purchase in the

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form of a rating or other review-type. In one embodiment, the customer, Ken in this example, can edit his profile page and selectively remove and/or add information about individual item purchases to his profile page. In addition, the profile page may display other customer-related information, such as the customer's wish list, reviews, auctions, favorite artists, instant recommendations, shipping address, demographic information, other profile information, and so on.

A customer can selectively allow those in the customer's Personal Purchase Circle to view who else is in the customer's Personal Purchase Circle. Those in the customer's Personal Purchase Circle who are permitted view who else is in the customer's Personal Purchase Circle are termed "Friend's of Friends." If, for example, Brian, Warren, and Maryam make up Ken's Personal Purchase Circle, then if so allowed, Maryam may be informed that Brian and Warren are also part of Ken's Personal Purchase Circle. Optionally, Maryam can also invite Brian and Warren to her Personal Purchase Circle. In one embodiment, Maryam cannot view Brian's and Warren's purchases unless they give her their corresponding permission.

When a customer adds a "friend of a friend" to her or his own Personal Purchase Circle, the notification to the invitee will state the name or nickname of the mutual friend. For example, Warren may go to Ken's profile page and see that Brian is also in Ken's Personal Purchase Circle. Warren then invites Brian to his own Personal Purchase Circle. The notification to Brian may state that "Warren (through Ken's profile page) has invited you to his Personal Purchase Circle." Thus, the invitee knows from whose profile page the invitor learned of the invitee.

To prevent unauthorized access to setup or edit a Personal Purchase Circle, authentication of the customer is requested. In setting up a Personal Purchase Circle, the customer may be presented with a form that includes one or fields or links allowing the customer to designate who is allowed to view the customer's purchases. The designation may be in the form of a person's e-mail address, name, nickname, or other identifying information.

The selective designation of purchases for viewing by other customers will now be discussed. All or a portion of the customer's purchase history is displayed for the customer, who may then decide or designate which purchases may be viewed by those in the customer's Personal Purchase Circle and which may not be viewed. In addition, the customer can review each listed purchase. The review may be include or be in the form of a grade, a point rating, or a star rating, where for example, 1 star is the worst rating and 5 stars is the best rating, and/or provide textual comments, if so desired. Customer's may then edit all or a portion of a notification or invitation to members of the customer's Personal Purchase Circle, informing them that they are invited to view the customer's profile page. The customer may be provided with a preview of what members of the customer's Personal Purchase Circle will see when they visit the customer's profile page.

The profile page may include one or more of the following:

1. A customer's purchases and a respective rating and/or review for each purchase.
2. A customer's favorite Community Purchase Circles (i.e. MIT, NY, etc.). Community Purchase Circles, also termed as Community Interests, operates generally by tracking purchases of books, movies, or other items within particular user communities, such as particular cities, companies, universities, and the like. Additional details on a networked system for collecting and distributing. Community Interest related information are described in U.S. application Ser. No. 09/377,447, titled

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USE OF CONTACT INFORMATION TO ASSIST USERS IN EVALUATING ITEMS, filed Aug. 19, 1999, which is hereby incorporated by reference in its entirety.

3. The other members of the customer's Personal Purchase Circle (Friends of Friends)
4. The ability to reciprocate the sharing with the customer and the other members of the customer's Personal Purchase Circle.
5. A counter to count the number of page views.

With each new purchase, the customer is asked whether the customer wants to designate the purchase as private or hidden, or if the purchase information may be shared with members of his or her Personal Purchase Circle. If the customer designates the purchase as public, then the purchase and related information will be automatically shared with a customer's Personal Purchase Circle by e-mail, Web page notification, and/or the customer's profile page. In one embodiment, unless the customer explicitly states that the purchase is to be hidden or private, the purchase is shared with the Personal Purchase Circle.

One embodiment of the present invention which may be used with Amazon's one-click feature will now be described. Amazon's one-click feature is well known to those of ordinary skill in the field of Internet commerce and is the subject of U.S. Pat. No. 5,960,411, assigned to Amazon.com, which is incorporated by reference herein in its entirety. If a customer has previously set up a Personal Purchase Circle and has the one-click featured enabled, then a check box or an equivalent field will appear in the "buy" check box, indicating the customer's willingness to display the one-clicked purchased item to those in their Personal Purchase Circle.

For customers that have not yet set up a Personal Purchase Circle, a prompt to set up a Personal Purchase Circle may be displayed on a one-click "thank-you page" and/or an order or thank-you page.

A set of online services will now be described in detail. The services will initially be described with reference to example screen displays which illustrate the services from the perspective of end users. A set of example processes and executable components that may be used to implement the services will be described with reference to architectural and flow diagrams.

FIGS. 1A-B illustrate example profile pages or forms for entering information related to a customer's profile. The forms may be displayed on a Web site, such as one associated with an on-line merchant. The forms allow users to enter information about the user. Some, of the information is viewable to the public and some may be selectively shared.

As illustrated in FIG. 1A, the user can enter a nickname and the user's e-mail address. In addition, the text or a link to the text of one or more reviews written by the user will appear on the user's profile page. The user may also add a picture or graphic to the profile by activating a "Your Picture" edit button. In addition, by activating the "click here" text, the user is presented with a form wherein the user can enter a free-form textual description of his or herself. The profile page further presents in an "at a glance" section a summary of the number of purchases the user has agreed to share and the number of items on the user's wish list. By activating the "Shared Purchases" link, the user is presented with a list of the purchases the user has agreed to share with designated others, termed "trusted friends." The list of purchases may also include associated private reviews.

FIG. 1B illustrates a form used to enter the user's personal, free-form textual description. In this example, the user is limited to 4,000 characters. In addition, the personal descriptions are automatically designated as public, that is, available

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for viewing by all customers. In another embodiment, the user can selectively make the personal description public or private. Once the user has entered the personal description, the user can activate the Submit button and the review will be stored in the client account database and displayed on the user's profile page.

FIG. 2 illustrates an example page used to add a picture to the profile page illustrated in FIG. 1A. In this example, the user can enter a URL into a URL field for a location where the user has stored an image. Once the user activates the Submit button, the Web site then retrieves the image for display on the user's profile page. In addition, the image may be scaled to save on storage space and to fit in the area designated to receive the image on the profile page. The user may also select from one or more graphics or images provided on the Web site page. Once the user selects the desired graphic or image by activating a Choose button, the graphic or image will appear on the user's profile page when viewed.

FIG. 3A illustrates an example public profile page, termed an "about you area," including profile information entered into the profile page illustrated in FIG. 1. The user nickname Johnny Ex, is designated as viewable by the public so that anyone can view it. The user name, John Example, and user e-mail address JohnExample@Example, are designated as viewable only to those viewers specified by the user, who are termed "trusted friends." The personal description section displays a personal description using the form illustrated in FIG. 1B.

An "at a glance" section on the page illustrated in FIG. 3A notifies the user that the user has specified that information for 2 of the user's purchases can be shared with the trusted friends. The "at a glance" section further notifies how many other customers the user as designated as "favorite people," that is other shoppers, friends, and favorite reviewers that the user likes, trusts or whose opinions the user is interested in. The user can add a customer to the user's favorite people list, via their profile page, or via their e-mail address. Then, when one of the designated "favorite people" writes a review, or comes up with an interesting recommendation, it will be displayed on a page designated for such purposes. Thus, the user has a customized review page displaying reviews more likely to be of interest to the user. The page illustrated in FIG. 3A displays the names of the designated favorite people, wherein the names are linked to the designated persons profile page. Activating the link causes the user's browser to display the corresponding profile page.

The example profile page illustrated in FIG. 3A also displays in a "your reviews, requests, & recommendations" area the user's designated shared purchases and private ratings generated by the user. Viewing by customers of the shared purchases is restricted to customers specified by the user.

In addition, a wish list area displays items that the user has placed on their wish list. In this example, the item is designated as private, that is, not viewable by other customers.

FIG. 3B illustrates an example customized review page including reviews by the user's designated "favorite people." In addition, the page illustrated in FIG. 3 displays, in a "your participation" area, the number of favorite people designated by the user, the number of designated shared purchases, and the number of items on the user's wish list. In addition, other top reviewers images and names are displayed, along with a tally of the number of helpful votes the reviewer has received and the number of reviews written by the reviewer on the Web site. The reviewers' names are linked to their profile pages. In addition, a link is provided to a page displaying the top rated reviewers.

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The example page illustrated in FIG. 3A also displays the most popular book in the user's designated purchase circle. A purchase circle is a specialized bestseller lists, reporting best sellers, such as the top 10 or 20 best selling books, for a selected purchase group, such as for a given zip code, domain name, company, school or city.

FIG. 3C illustrates an example page including reviews written by the user associated with the profile page illustrated in FIG. 3A.

FIG. 4 illustrates a product information page for a DVD of Mary Poppins, including an editorial review and two customer reviews, a rating associated with each customer review, a ranking of the customer who authored the second customer review, and a link to a review entry page, entitled "write and online review." As illustrated in FIG. 4, associated with each customer review is a survey question asking "was this review helpful to you?" A reader can vote yes or no by activating the appropriate soft button. In addition, associated with each customer review is a tally of how many "yes" votes the review received and how many total votes were received. For example, the first review, titled "is it impossible to make films like this anymore," includes a tally indicating that 5 out of 5 people found the review helpful. The second review, titled "fantastic fantasy," includes a tally stating that 11 out of 12 people found the review helpful, indicating that the review received 11 "yes" votes and 1 "no" vote. The second review, also includes a ranking indicating that the reviewer is a "top 50 reviewer," that is, has received enough "helpful" votes to place the reviewer among those 50 reviewers having the most "helpful" votes.

As illustrated in FIG. 4, the first review is by an anonymous author, called "viewer." Therefore, no links are provided in association with the review to the reviewer's profile page. The second review was authored by "Bob." The text "Bob" is linked to Bob's profile page. Thus, by activating the link the user is presented with Bob's profile page and can learn more about Bob and read other public reviews authored by Bob. In addition, the text "top 50 reviewer," indicating the reviewer's ranking" is linked to a "top reviewers" page or page which display top ranked reviewers. The "top reviewers" page is discussed in greater detail below with reference to FIG. 6.

Activating the "write an online review" link causes the example customer review entry form illustrated in FIG. 5 to be displayed. The form includes an image of the product being reviewed, a rating entry field, a title field, and a review text field. In this example, the rating field is implemented as a drop down menu which allows the customer to give a 1-5 star rating of the item being reviewed. The review title field allows the customer to give a brief title for the customer's review. The review text field is used to received a textual review. The length of the review may be limited. In this example, the review is limited to 1,000 words, though other limitations may be used.

As illustrated in FIG. 5, the customer can specify whether the customer's public nickname is to be displayed in association with the review, or whether the review is to be displayed anonymously, that is, without the customer's nickname. The customer can also specify the customer's geographical location, including city, state and country information. In this embodiment, the customer's geographical location is displayed in association with the review even when the review is designated as anonymous. An "I own it" field allows the reviewer to indicate whether or not, the reviewer owns the item being reviewer.

FIG. 6 illustrates an example page listing reviewers having selected rankings. For example, the top or ranked reviewers pages may display information on the top 1,000 reviewers,

including their names or nicknames, all or excerpts of their personal descriptions, and optionally, a photo or image associated with a corresponding reviewer. A tally of the number of reviews authored by the reviewers is also provided. The name of each ranked reviewer is linked to their profile page, where readers can view the reviewer's profile information designated as public. In addition, the "more" text following each personal description excerpts also includes a link to the corresponding profile page.

FIG. 7 illustrates an example online process 700 for receiving, processing, and presenting evaluations for reviews of the type illustrated in FIG. 4. Beginning at state 702, the process proceeds to state 704. An evaluation in the form of a "helpful" or "not helpful" vote or the like is received. At state 706, the received vote is tabulated with previous votes received for the review. Based on the tabulated votes, at state 708 a review score is calculated for display with the review. At step 710, the reviewer's the vote is also tabulated with votes for other reviews by the reviewer and a reviewer score is calculated. At step 712 the reviewer's score is compared with that of other reviewers. Based on the comparison of the reviewer's score with the scores of others, at state 714 a determination is made as to whether the reviewer has reached a certain stature as a reviewer, that is, whether the reviewer is a "top" reviewer as defined by the review system. If the reviewer is not entitled to such as designation, then the process 700 proceeds to state 716, and no ranking designation is provided. Otherwise, the process 700 proceeds to state 718 where the appropriate designation is assigned to the reviewer based on the comparison performed at state 712. By way of example, the designation may be "Top 100 Reviewer." At state 720, the review is displayed in association with the reviewed item on a product information page, wherein the reviewer's designation is displayed in conjunction with the review. At state 722, the reviewer's name is displayed on a "top reviewers" page, such as that illustrated in FIG. 6.

FIG. 8 illustrates an exemplary commerce system, including software and hardware components for implementing a review processing and customer information sharing system in accordance with one embodiment of the invention and illustrates typical user components for accessing the system. As depicted by this drawing, customers access the Web site 850 using respective personal computers 852, 854 or other general-purpose computers, terminals, or clients that have access to the Internet. The customers may alternatively access the Web site 850 using special purpose devices. The customer computers 852, 854 may run commercially-available Web browser applications 862, 864 such as Microsoft Internet Explorer® or Netscape Navigator®, which implement the basic World Wide Web standards such as HTTP and HTML.

The computers 852, 854 may also run a commercially available e-mail application 856, 866, such as, Microsoft Outlook® or Netscape Navigator®, which may be used to receive communications from the merchant-related Web site 550. For example, the e-mail application 856, 866 may be used to receive gift reminders, as previously described. The e-mail applications 856, 866 and the browsers 862, 864 may be integrated with one another, and/or may be integrated with other application programs or the operating system.

In the embodiment described herein, the Web site 850 includes a computer system and associated content that are accessible via the Internet. The Web site 850 may optionally include content that spans multiple Internet domains, and/or may be implemented using physical servers that are geographically remote from one another. In other embodiments, the Web site 850 may be in the form of an intranet site, in which case the computers 852, 854 may be coupled to the site

solely by a private network. For example, Web site 850 may be in the form of an internal corporate store site for company employees.

In other embodiments, the Web site 850 may be replaced with another type of network site. For example, the various services described herein could alternatively be implemented on a hypertextual site or browsing area of an online services network such as America Online® or MSN®, or using interactive TV, in which case users may access the site using software that implements non-standard document formats and transfer protocols.

As further depicted by FIG. 8, the Web site 850 includes a commercially-available Web server application 870. The Web server application 870 accesses an HTML and products database 876 used to generate Web pages in response to the actions of end users. Various other back-end components (not shown) are also used for this purpose.

The Web site 850 also includes review processing and customer information sharing applications 872 which includes the basic functionality for receiving customer reviews and review evaluations, as well as for processing user instructions relating to the sharing of customer purchase information and other private information, as previously discussed. The review processing and customer information sharing applications 872 access a review database 878 and a customer account database 880. The review database 878 stores customer and professional reviews, pointers to the corresponding items being reviewed, and evaluations associated with the customer reviews. The customer account database 880 includes information used to populate the customer's profile page, including the customer's name, nickname, e-mail address, reviewer ranking, if any, purchase history, and an indication as to which items of information are designated as private and which are designated as public, and who may be view selected private information.

The scoring application 882 calculate scores for reviews and customer reviewers. As previously discussed, the scores may be based on the number of "helpful" votes a review received and/or the number of "not helpful" votes received. The scoring is used by the review processing application 872 to rank reviewers based on a tally of scores received for some or all of the reviewers written by a given customer. The score for each review is also stored in association with the review in the review database 880.

As discussed above, a customer can optionally specify that information on selected purchases is to be shared with others. Further, the customer can optionally specify with whom the purchase information is to be shared with. FIGS. 9A-C illustrate an explanation page that explains, for one embodiment, the different statuses that can be assigned by one customer to another customer and how those statuses are assigned. For example, a person can be designated as a "trusted friend," that is, someone who has permission to view private areas of the customer's profile or "about you" page and information on the customer's purchases. Additionally, as previously discussed, a customer can designate a person as a "favorite person," that is, someone whose reviews the customer is particularly interested in. Reviews authored by a designated favorite person or placed on a page customized for the customer.

FIGS. 10A-B illustrate an example customer purchase sharing page for specifying for which of a customer's purchases is information to be shared with designated others. The page or pages lists items purchased made by the customer. In association with each item is a review field and a rating field. The customer may enter a review for the item into the review field. For example, for an animated film the customer may

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enter the comment "cutting edge animation." In addition or instead, the customer can provide a point rating, such as a rating on a scale of 1 to 5, by activating the appropriate number in the rating field, which will then be marked with a dot, checkmark or the like. Otherwise, a "?" field will be marked, indicating no numerical rating has been provided.

FIG. 11A illustrates an example page used by a customer to specify who may view the customer's purchase sharing page. The customer may specify who is authorized to view the customer's purchase sharing page by entering their e-mail address into an e-mail field. In this example, the e-mail address is to johndoe@example. An invitation, such as that illustrated in FIG. 12, is then e-mailed to the specified e-mail address. The invitation notifies the invitee that he or she has been added to the customer's list of those authorized to view private information on the customer's profile page and information on the customer's purchases. In addition, a link to the customer's profile page is provided so that the invitee can activate the link and the profile page will be displayed on the invitee's computer browser.

FIG. 11B illustrates an example page used by a customer to change the status of another user with respect to the customer and to display who has been invited to view the customer's purchase sharing page but has not responded. Thus, for example, the customer can designate a listed person as a "trusted friend," that is, someone who is authorized to view the customer's purchase information, or can designate the listed person as a "favorite people," that is, as previously discussed, someone whose reviews the customer is particularly interested in, or can delete the listed person as a "favorite person" or "trusted friend." The illustrated page lists who has not responded to the customer's invitation to become a trusted friend and allows the customer to request that another invitation to e-mailed to the non-responsive person. The customer can also specify that the customer does not want to receive an e-mail notification each time the customer is designated by another as a "trusted friend."

Thus the present invention provides a review processing system that helps customers select which items to purchase by customer-authored product reviews. Further, customers can rate product reviews, thereby identifying which reviews are useful and which reviewers tend to provide more useful reviews, thereby allowing customers to efficiently locate helpful reviews. To further provide helpful customer generated shopping information, customers can selectively share information regarding purchases with friends, family, and others.

While certain preferred embodiments of the invention have been described, these embodiments have been presented by way of example only, and are not intended to limit the scope of the present invention. Accordingly, the breadth and scope of the present invention should be defined only in accordance with the following claims and their equivalents.

What is claimed is:

1. A method of allowing a first customer of an electronic commerce entity to communicate information related to the first customer's purchases to others, the method comprising: receiving over a network an authorization by the first customer for at least a second customer to view information on at least a portion of the first customer's purchases, said information identifying at least a first item as having been purchased by the first customer, and including the first customer's review of the first item; receiving over the network a selection made by the first customer of which of a plurality of items purchased by the first customer are to be exposed to the second customer as having been purchased by the first customer;

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providing an electronic notification to the second customer, wherein the notification informs the second customer of the first customer's authorization; and providing the second customer access, on a web site associated with the electronic commerce entity, to said information on at least a portion of the first customer's purchases, including the first customer's review of the first item.

2. The method as defined in claim 1, wherein the notification is provided in an e-mail message.

3. The method as defined in claim 1, wherein the notification is provided on a Web page.

4. The method as defined in claim 1, wherein the first customer's authorization includes an e-mail address of the second customer.

5. The method as defined in claim 4, further comprising including a one-use token in the notification if the second customer's e-mail address does not match any e-mail addresses stored in a customer database associated with the electronic commerce entity.

6. The method as defined in claim 1, wherein the notification includes a link to a page displaying information related to the first customer's purchases.

7. The method as defined in claim 1, further comprising notifying at least the second customer, via the web site, of who has received authorization to receive information on the first customer's purchases.

8. The method as defined in claim 1, further comprising electronically receiving authorization from the second customer for users who are authorized to view information on at least a portion of the first customer's purchases to also view information regarding at least some of the second customer's purchases.

9. The method as defined in claim 1, further comprising providing a preview to the first customer of the information on the first customer's purchases that will be accessible to the second customer.

10. The method as defined in claim 1, further comprising transacting the first customer's purchases over the network.

11. The method as defined in claim 1, further comprising receiving over the network a customer authorization for the second customer to view the first customer's wish list.

12. The method as defined in claim 1, further comprising, in response to said authorization, granting the second user access on the web site to the first customer's reviews of items associated with customer purchases that the second customer is authorized to view.

13. The method as defined in claim 1, further comprising transmitting an electronic form to the first customer listing the first customer's purchases, wherein the first customer uses the form to specify which customer purchases may be viewed by at least the second customer.

14. The method as defined in claim 1, further comprising: receiving a purchase order from the first customer; and in response to receiving the purchase order, presenting to the first customer an option to share information related to the purchase order with others.

15. A computer-implemented method of privately sharing information related to transaction histories of users, the method comprising:

transmitting at least one electronic form to a computing device for display to a first user, the at least one electronic form identifying a plurality of items ordered by the first user from an electronic catalog, as determined from a transaction record of the first user, and providing functionality for the first user to select, on an item-by-item basis, which of the items to expose to a private

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group of users as having been ordered by the first user, said private group being definable by the first user; receiving over a network, from said computing device, at least (a) the first user's designation of at least a first item, of said plurality of items, to expose to the private group of users, and (b) the first user's review of the first item; receiving, over the network, email addresses supplied by the first user of other users designated by the first user to be included in said private group; in response to receiving the email addresses supplied by the first user, automatically sending email messages to each of said other users designated by the first user to be included in the private group, said email messages inviting respective email recipients to access private information associated with the first user, and including a link to a web site on which said private information may be accessed; and controlling user access via the web site to the private information associated with the first user, including at least the first user's review of the first item, such that members of the private group are permitted to access the private information associated with the first user, and such that other users who are not members of the private group are not permitted to access the private information.

16. The method of claim 15, wherein the at least one electronic form includes, for each of the plurality of items ordered by the first user, at least (a) a field for supplying a textual comment, and (b) an area for supplying an item rating on a specified scale, and wherein resulting textual comments and item ratings supplied by the first user are made available via the web site to members of the private group.

17. The method of claim 15, wherein the private information identifies the first item as having been purchased by the first user.

18. The method of claim 15, further comprising providing the private group of users restricted access, via the web site, to a private web page that is uniquely associated with the first user, and which displays at least some of the private information.

19. The method of claim 15, further comprising notifying the first user, via a web page of the web site, of whether responses have been received to the email messages.

20. The method of claim 15, further comprising presenting to the first user a web page that lists users who are members of the private group, and which provides functionality for the first user to selectively remove a user from the private group.

21. A computer-implemented method of privately sharing item review information, the method comprising:

providing a web site that hosts an electronic catalog of items and provides functionality for users to initiate transactions in which items selected from the electronic catalog are delivered to the users;

transmitting, over a computer network, for presentation to a first user of the web site, a first web form that prompts the first user to supply a rating of, and a textual comment regarding, an item represented in the electronic catalog, said web form being associated with a transaction in which the item was delivered to the first user;

receiving, over the computer network as a result of submission by the first user of the first web form, the first user's

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review of the item, said review including the first user's rating of, and comment regarding, the item; storing the first user's review of the item in an electronic repository in association with the first user; transmitting, over the computer network, for presentation to the first user, a second web form that includes a field for the first user to supply an email address of at least one other user who is authorized by the first user to access the first user's review of the item;

receiving, over the computer network, as a result of submission of the second web form by the first user, an email address of a second user who is authorized by the first user to access the first user's review of the item;

in response to receiving the email address of the second user, automatically sending an email message to the second user, said email message inviting the second user to access private information associated with the first user via the web site, and including a link for accessing the web site; and

providing restricted access via the web site to the first user's review of the item, such that the second user has access to the first user's review, and such that other users not authorized by the first user do not have access to the first user's review.

22. The method of claim 21, wherein the first web form is dependent upon, and displays a plurality of items represented within, a transaction history of the first user, and includes fields for the first user to supply reviews of each of the plurality of items.

23. The method of claim 22, wherein the first web form provides functionality for the first user to designate, on an item-by-item basis, which of the plurality of items is/are to be exposed to the second user as being included in the first user's transaction history.

24. The method of claim 21, further comprising providing the second user restricted access via the web site to at least a portion of a transaction history of the first user, as maintained by the web site.

25. The method of claim 21, further comprising providing the second user restricted access via the web site to a portion of a transaction history of the first user, said portion being specified by the first user via the web site on an item-by-item basis.

26. The method of claim 21, wherein said restricted access is provided such that the only users who can access the first user's review of the item via the web site, other than the first user, are users specifically designated by the first user.

27. The method of claim 21, wherein the step of providing restricted access comprises providing, to a plurality of users specifically designated by the first user, access to a plurality of item reviews supplied by the first user.

28. The method of claim 21, further comprising notifying the first user, via a web page of the web site, whether the second user has responded to the email message.

29. The method of claim 21, further comprising transmitting to the first user a web page that lists users who are authorized to access the private information associated with the first user, including said review, and which provides functionality for the first user to selectively discontinue such authorization on a user-by-user basis.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,433,832 B1
APPLICATION NO. : 09/715850
DATED : October 7, 2008
INVENTOR(S) : Jeffrey P. Bezos et al.

Page 1 of 2

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title Page;

At Page 1 Item (75) Inventors, Line 2, Change "Seattle, WA" for inventor Warren Adams to --Edgartown, MA--.

At Page 1 Item (75) Inventors, Line 3, Change "Seattle, WA" for inventor Kenneth L. Dinovo to --Cambridge, MA--.

At Item (56) Page 2, Col. 2, Line 4, Under Other Publications, Change "Interent" to --Internet--.

At Column 8, Line 8 (Approx.), Change "search" to --searcher--.

At Column 8, Line 8 (Approx.), Change "is be" to --is--.

At Column 9, Line 4, Change "authorized" to --unauthorized--.

At Column 14, Line 17, Change "be" to --to be--.

At Column 14, Line 33, Change "an customer" to --a customer--.

At Column 15, Line 65-66, Change "distributing." to --distributing--.

At Column 19, Line 17, Change "step" to --state--.

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,433,832 B1
APPLICATION NO. : 09/715850
DATED : October 7, 2008
INVENTOR(S) : Jeffrey P. Bezos et al.

Page 2 of 2

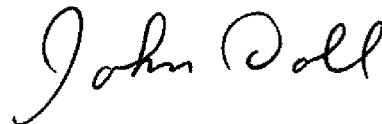
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At Column 19, Line 20, Change "step" to --state--.

At Column 21, Line 12, Change "is to" to --is a--.

Signed and Sealed this

Second Day of June, 2009



JOHN DOLL
Acting Director of the United States Patent and Trademark Office

A/PROV

PROVISIONAL APPLICATION FOR PATENT
COVER SHEET

Case No. AMAZON.054PR

Date: November 19, 1999

Page 1

11/19/99
16672 U.S. PTO

166547
11/19/99
U.S. PTO

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

ATTENTION: PROVISIONAL PATENT APPLICATION

Sir:

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR § 1.53(c).

For: **WEB-BASED METHODS FOR IDENTIFYING, PRESENTING, RATING, AND
PRESENTING RATINGS OF CUSTOMER REVIEWS OF PRODUCTS**

Name of First Inventor: Warren Adams
Residence Address:

Name of Second Inventor: Ken Dinovo
Residence Address:

Name of Third Inventor: Michael McDaniel
Residence Address:

Enclosed are:

- Specification in 23 pages.
- A check in the amount of \$150 to cover the filing fee is enclosed.
- A return prepaid postcard.
- The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Account No. 11-1410. A duplicate copy of this sheet is enclosed.

Was this invention made by an agency of the United States Government or under a contract with an agency of the United States Government?

- No.
- Yes. The name of the U.S. Government agency and the Government contract number are:

KNOBBE, MARTENS, OLSON & BEAR

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For : METHODS FOR IDENTIFYING, PRESENTING, RATING AND PRESENTING RATINGS OF CUSTOMER REVIEWS OF PRODUCTS
Attorney : Ronald J. Schoenbaum
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* A PROFESSIONAL CORPORATION * ALSO BARRISTER AT LAW (U.K.) ** U.S. PATENT AGENT

Web-Based Methods for Identifying, Presenting, Rating, and Presenting Ratings of Customer Reviews of Products

I. Objectives

To help customers discover new products, the most useful information, and other customers who have similar opinions and preferences. To empower customers to help each other determine what to buy and what to avoid. To empower customers to voice their opinions and expertise on products and to select who the experts are and which reviews are the most useful

II. Summary of the Preferred Embodiment

The existing Amazon.com retail web site allows customers to review products. In order to review a product, a customer fills out a review form. The review form requests: a rating on a rating scale, a one-line review summary, the review itself, the customer's name, and the customer's e-mail address. The customer is given the option to display the name, e-mail address, both, or neither in conjunction with the review. The reviews submitted by customers are displayed in conjunction with the offer of the product for sale.

The present invention discloses methods for identifying, presenting, rating, and presenting ratings of customer reviews of products. Customers will be identified (signed in or otherwise recognized) in conjunction with submitting a review. For non-anonymous reviews, customers can display either their nickname or name in conjunction with the review. Non-anonymous customer reviews will link to the author's html page (public profile) which will give more information about the author of the review.

Customers can rate individual reviews on their usefulness. Ratings on reviews allow identification of the most useful reviews on product detail pages. This will empower customers to select the reviews and reviewers that they think are the most and least useful.

Customers can achieve different levels of achievement based on the tally of useful and useless votes that they received on their reviews. These customers will be identified with appropriate language/markers on the site. This will give customers a sense of how well they write reviews.

All past non-anonymous reviews will be processed, and the customer account of who wrote it will be guessed by using the e-mail address that was entered.

Lists of highlighted reviews will provide places that customers will go to find good reviewers and reviews.

It will be apparent to one skilled in the art that various limitations and requirements described with respect to the preferred embodiment are not essential to the practicing of the invention.

III. Description of the Preferred Embodiment

0. Information on Public Profiles

All customers will have a Public Profile. Initially, those pages will not show anything. However, information will show up on a customer's public profile by three different ways.

- When a customer writes a non-anonymous review, and has not gone through the Public Profile Setup Process, those non-anonymous reviews will appear on the customer's Public Profile Page. (Implicit)
- Process all past non-anonymous reviews, and guess the customer account of who wrote it by using the e-mail address that was entered. Those guesses will appear on the customer's Public Profile. (Grandfathered)
- Only when a customer goes through the Setup Process, he or she will specify what additional information to display on his or her Public Profile. See below for more information. (Explicit)

Grandfathered/Implicit - this profile page will not show any customer information until the customer explicitly sets up his or her page. Notice that no information appears except for reviews and the display information that was entered in the past, and that it's different for each review.

Explicit - notice the change in display information

A customer can share the following information on their public profile:

1. author's picture (if public)
2. author's self description (if public)
3. author's nickname
4. author's name (if public)
5. author's e-mail (if public)
6. all the non-anonymous reviews that the author has written
7. the number of non-anonymous reviews that the author has written
8. the number of useful votes that each review has received
9. the number of useful votes that the author has received through his or her reviews

Authenticated customers can setup/edit their public profile. Recognized customers can now rate if a review is useful. The number of "useful" votes that a review has received will effect how it is displayed on the web site. Also the number of "useful" votes that a customer receives (via his or her reviews) will effect how he or she is displayed on the web site.

1. Writing A Review

Customers can voice their opinion about a product by writing a customer review and rating the product. Customers can make better purchasing decisions on a product by reading the customer reviews and ratings.

- Customers must be recognized to rate or write a review on a product. If a customer is new, s/he must create a customer account.
- Greet customers on the Writing a Review form.
- Customers can write a review and enter a rating on a product.
- Customers can write anonymous reviews. These anonymous reviews will not have a link and will appear on the customer's public profile page.
- Customers can either display their name or if they have Explicitly-created Public Profiles, they can choose their Public Profile settings.
- A customer can only write one review per product.
- All non-anonymous customer reviews will appear on the customer's Public Profile page.

Pages & Page Flow:

1. Sign-in Process (only if customer is not recognized), see below for sign-in pages and page flow
- 2a. Writing a review without a Explicitly-created Public Profile
- 2b. Writing a review with a Explicitly-created public profile
- 3a. Preview (non-anonymous) without a Explicitly-created public profile
- 3b. Preview (anonymous)
- 3c. Preview (non-anonymous) with a Explicitly-created public profile
4. Confirmation

2. Rating A Review

Customers can rate individual reviews on their usefulness. Ratings on reviews allow identification of the most useful reviews on product detail pages. This will empower customers to select the reviews and reviewers that they think are the most and least useful.

- Customers can either vote if the review is useful or not (including anonymous reviews)
- Keep a tally of both the "useful" and "useless" votes that a review has received. This tally will appear next to the review.
- A customer can only vote once per review.
- A customer cannot vote on his or her reviews.
- A customer can change his vote.
- After submitting their vote, customers will be redirected back to the original page and to the appropriate review for the confirmation message.
- The tally from each of three different sources will be tracked: all non-anonymous reviews, all anonymous reviews, and all total reviews.
- Updating the tally will occur every 24 hours.

Pages & Page Flow:

1. Detail Page
2. Sign-in Process (only if customer is not recognized) see below for sign-in pages and page flow
3. Confirmation
4. Profile Page
5. Sign-in Process (only if customer is not recognized) see below for sign-in pages and page flow
6. Confirmation, similar to 3.

3. Tokens Of Achievement

Customers can achieve different levels of achievement based on the tally of useful and useless votes that they received on their reviews. These customers will be identified with appropriate language/markers on the site. This will give customers a sense of how well they write reviews.

- A customer's level of achievement will be based on the number of useful and useless votes that his or her reviews have collectively received:
 - < 250 (useful - useless): nothing
 - 250-999 : "trusted reviewer" or appropriate icon
 - 999-4999 : "very trusted reviewer" or appropriate icon
 - 5000: "most trusted reviewer" or appropriate iconThe wording or level thresholds are not definite and can be easily changed.
- The count total will be updated every 24 hours.

Pages & Page Flow:

1. Detail Page - each reviewer has a different level
2. Profile Page - shows up in the summary and next to each reviews

4. Public Profiles

4.1 Picture

Gives identity and creditability to the reviewer.

- Customers can optionally supply a URL to their picture. Pictures are shown immediately. HTML design of page must be sensitive to picture links from poor performance sites.
- Customer can supply any size picture, but the width and height will be restricted through the <img tag.
- Customers can change the URL to their picture. Changes are available immediately.
- Customers have control of whether or not their picture will be displayed.

Desired:

- Customers can upload picture, and web site will host.

4.2 Nickname

Allows customers to build their alter ego. Customers can still have some level of anonymity by posting reviews under their nickname, and at the same time, reviews will still be attached to some kind of identity. Nicknames are unique, so two people can't have the same identity. Entering a search for the exact nickname should bring you to the current page. People can easily find pages and reviews.

- Customers are required to supply a nickname upon explicitly setting up a public profile. The nickname should be consistent for the whole site (i.e. shared across Auctions/zShops and retail stores). First time nickname selection is immediately available.
- Nicknames are unique. Same nickname selection rules as Auctions (for consistency).
- Customers can change their nickname. Changes can have a lag time.
- Customers are required to display at least their nickname both on their Public Profile Page ' and next to their reviews.
- Nickname will pre-populate if customers have already entered in the past (it will be made clear that it is shared with auctions, zshops, etc.).
- If a customer has not set up a public profile page, and therefore does not have a nickname, then the original name field as entered on the review will be shown.

Desired:

- Displaying a nickname history.
- Search on previous nickname.

4.3 Create Date

Desired:

- The day that a user became a customer (i.e. entered a password and e-mail) will appear on this page, and will be shared across the web site (i.e. Auctions, zShops, etc.)

4.4 Name

Name is how greet customers are greeted on the site.

- Customers are required to supply a name, and should be consistent for the whole site. Name is shown immediately
- Names are not unique.
- Customers have control of whether or not their name will be displayed on their public profile page.
- Name will pre-populate if customers have already entered in the past.

4.5 E-mail address

Customers can choose to communicate with visitors to their public page by displaying their e-mail address

- Customers are required to supply an e-mail address, and should be consistent for the whole site. E-mail address is shown immediately.
- E-mail addresses are not unique. E-mail address selection will use the current selection and validation rules.
- Customers can change their e-mail address. E-mail changes will have no lag time, but will for display in reviews.

- Customers have control of whether or not their email will be displayed (will be default off)
- E-mail address will pre-populated.

4.6 Self-description

Customers can tell as little or as much as they want about themselves. Allows customers to build their alter ego, or real identity. Gives more creditability to the customer. Self descriptions are limited to 4000 characters.

- Customers can optionally enter a self-description. The self-description is shown immediately.
- HTML tags will be stripped
- Customers can change their self-description. Self-description changes will have no lag time
- Customers have control whether or not their self description will be displayed
- Self-description will pre-populate if customers have already entered in the past from Wish List

4.7 Reviews

Reviews for a customer will be centralized on this page.

- Non-anonymous reviews for a customer will appear on this page.
- Customers cannot toggle off the display of non-anonymous reviews.
- Anonymous reviews will not appear on this page.
- The rating of the review will appear next to the review.

4.8 Token of Achievement

- A customer's token of achievement will appear on this page
- The total number of "useful" and "useless" votes that a customer's reviews received will appear on this page.
- Count of all the reviews a customer has written will appear on this page.
- Customers cannot toggle off any of the above items.

4.9 Setting Up

- To create/set up a public profile, a user must be an authenticated customer.
- All public profiles will be based on the same template/layout.
- Pages must be immediately available after setup, but the immediacy of each item on the page is listed above
- Customers will be able to preview their page before saving/publishing it.

- Display information for all non-anonymous reviews will change to the setting specified by the customer during the set up process. This display setting is universal for all reviews going forward as well (unless anonymous).

Pages & Page Flow:

1. Sign-in Process, see below for sign-in pages and page flow
- 2a. Setup Page
- 2b. Setup Page w/ nickname error
3. Preview
4. Confirm

4.10 Editing

- To edit their public profile, a customer must be authenticated.
- Customers will be able to make changes and update their public profile.
- Changes on displaying a section or not will be immediately available, but the immediacy of each item on the page is listed above.

Pages & Page Flow:

1. Sign-in Process , see below for sign-in pages and page flow
2. Edit, same as the Setup Page, but with the data pre-populated, and the page hosted by Your Account

5. Grandfathering Past Reviews

All past non-anonymous reviews will be processed, and the customer account of who wrote it will be guessed by using the e-mail address that was entered. Those guesses will appear on the customer's Public Profile. In this manner past reviews can be leveraged at launch so more traffic is driven to public profiles and a feature request of customers is met.

- All past non-anonymous reviews that can be attached to a customer account will be displayed on the customer's Public Profile.
- These grandfathered reviews will be handled as all other non-anonymous reviews (i.e. customers can rate them, the voting tally will count towards the customer, etc.)
- Customers can individually confirm if the Grandfathered reviews are theirs or not, when a customer goes through the Public Profile Setup Process.
- The display name for all confirmed grandfathered reviews that were added will change to the setting specified by the customer during the Setting Up process. This change will occur within 24 hours.
- All reviews that were not confirmed will be unattached from that customer account, changed to the anonymous state, and will not have a public page attached.
- The "useful" voting tally for the confirmed grandfathered reviews will count towards the customer's total count. The "useful" voting tally for the unconfirmed grandfathered reviews will not count towards the customer's total count.

Pages & Page Flow:

1. Sign-in Process, see below for sign-in pages and page flow

2. First Time - Confirming the past reviews are yours
3. Setup
4. Preview, similar to the Setting Up process
5. Confirmation, similar to the Setting Up process
6. Public Profile - notice the change in display information

6. Reviews On Product Detail and Customer Comments Pages

Improve the way reviews are displayed and sorted.

- Show the count of the most "useful" votes next to the review
- If non-anonymous, show the Token of Achievement of the reviewer next to the review
- If non-anonymous, the customer's name/nickname will be linked back to his or her public profile.

Pages & Page Flow:

1. Detail Page
2. Customer Comments Page, same layout as the Details Page

7. Highlighting Reviewers and Reviews

Similar to the Hot 100 list, these lists will be one of the most popular places that customers will go to find good reviewers and reviews. These lists will also do two things: 1) gives our customers an incentive to write better reviews and 2) allows our customers to easily filter through all the reviewers and reviews many ways.

Desired:

- Customers can view the most recent reviews written.
- List/Ranking the most frequented customers based on page hits, unique sessions, or a combination of
- List/Ranking of the most trusted customers based on the number of "useful" votes
- The above lists are updated every 24 hours
- Ability to surface on www.amazon.com and wherever else

8. Sign-in Process

Customers are required to be recognized customers to write a review on a product or rate a review. Customers are required to be authenticated customers to setup/edit their Public Profile.

Pages and Page Flow:

SIGN-IN MODEL 1

1. If it is not known whether the user is already a customer, prompt him or her with the sign-in page first.
2. If a user is not already Amazon.com customer, he or she can click on the registration link on the sign-in page.

SIGN-IN MODEL 2

1. If it is not known whether the user is already a customer, prompt him or her with the sign-in page first.
2. If the user selects "No, I am a new customer", then he or she will go to the registration page.

IV. Additional Description and Features

1. Writing A Review

- Customer reviews/ratings are immediately available.
- Customers can recommend 3rd party reviews/guides.
- Customers can edit their reviews and ratings.
- Customers can change the state of their reviews from anonymous to public.
- Customers can categorized their reviews in customer-defined buckets.
- A customer can rate a product without writing a review. The interface should be designed to prevent confusion. One way is to show the aggregate rating, the number of ratings, the number of reviews, and the reviews.

2. Rating A Review

- Updating the count will be immediate.
- Customers can anonymously rate a review. This means that no one except for the customer who selected the review as useful would know. The rater will then be added to the "anonymous" bucket.
- For each review, the ability to show a list of all the customers who selected that review useful. For "anonymous" ratings, "and 10 anonymous" or other similar language will be displayed.

3. Tokens Of Achievement

- Immediately available and updated whenever someone votes.
- Ranking of all customers based on their tally count (similar to sales ranking)

4. Public Profile

- Customers can send picture, which will be scanned and hosted.
- Nickname changes are immediate.
- Customers can choose to either display their name or nickname next to their reviews, and if this preference does not exist, then default to the name information originally associated with the review)
- Name should be separated into First and Last.
- Self-description will be consistent with Wish List
- Self-description can be HTML.
- Non-anonymous reviews will be immediately available on this page after submission.
- Customers can choose from a variety of different templates to set up their public profile, or define their own template.
- Customers have control of whether or not their favorite customers list will be displayed.
- After a customer adds another customer as a favorite, it will immediately appear on this page.
- And Vice-versa, a customer can see the list of customers who added him or her as a favorite (count will also be shown). Changes to this list will appear immediately.
- Public profile page will automatically be set up when a customer writes a review, creates a public wish list, and sells an item in our Auctions and zShops stores. However, the public page setup process will be different for each path.
- Customers can share the following information:
 - Auctions Link

- Wish list
- Favorite Purchase Circles
- Favorite Products
- Favorite Artists
- Instant Recommendations
- Expertise
- Self Interview

6. Reviews On Product Detail and Customer Comments Pages

- Customers can either sort the reviews by most recent or by rating.
- The ability to display both the most recent and the top rated reviews without any duplicates on the product detail page.
- The reviews of reviewers whom a customer has added as a favorite will be preferentially displayed to the top.
- Ability to show the picture of the top rated reviewer for that product.
- Displaying the picture of the reviewer of the most useful review for a given product.
- Customers can recommend 3rd party reviews/guides.

7. Highlighting Reviewers and Reviews

- Lists are updated real-time.
- Top reviewers/reviews, part of product search results
- Editor's pick - top review each day.
- List/Ranking of most favorite customers based on how many have added that person as a favorite

9. Favorite Customers

- Customers can add other customers (i.e. their public profiles) to their favorites list. By selecting customer who they like, customers can keep track of the other customers.
- Customers can optionally add other customers to their favorites list. When a customer chooses to add someone, it is shown immediately.
- Ability to display a customer's favorites list anywhere on the site.
- Customers can view and edit their list of favorites. Changes are immediate.
- If a customer decides not to display, then the additions will be treated as anonymous.
- A customer can see the list of customers who trust him or her (except for anonymous).
- Other customers can see who trusts a customer (except for anonymous).

10. Review Watch

- Customers can get notified when someone posts a review.
- Customers can optionally subscribe to this e-mail notification service.
- Customers can view and edit the list of customers who they are getting notifications for. Changes are immediate.
- HTML version of the e-mail.
- A customer will receive a confirmation e-mail after subscribing.
- Customers will also get notified via the web site (i.e. New for you).

11. Incentive Program

12. Message Boards/Guest Book

13. Buying Guides

14. Search

- Ability to do wildcard searches on nickname (search results page)
- Ability to do wildcard searches on name (search results page)

15. Review page

- Display the review in its entirety
- Display the product rating
- Display nickname of the reviewer
- Display name of the reviewer (if public)
- Display the overall rating of the review
- Display the rating of the reviewer
- Display a link to the reviewer's public profile
- Customers can rate the review from this page.
- Customers can write their own review on the product from this page.
- Buy buttons
- Popular Purchase Circles
- Other information about the product (i.e. price, availability, etc.)
- The ability to show a list of names who rated the review useful. For "anonymous" votes, "and 10 anonymous" or other similar language will be displayed.

V. Example Web Pages

Attached hereto are printouts of 8 example web pages in accordance with at least one embodiment of the present invention. These printouts form a part of the disclosure of the specification. The copyright owner has no objection to the facsimile reproduction of the printouts as part of this document, but reserves all other copyrights whatsoever.

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[Community](#) > [Member Page](#) > **FAQ**

Frequently Asked Questions

1. What's a Member page?

Your Member Page is your homepage at Amazon.com--filled with your opinions and personality. You decide how much you feel comfortable sharing about yourself. Then start building your page. At present, these are the pieces of information that you can include on your Member Page:

- Your name or nickname
- A brief bio, your photo, and your e-mail address (all optional)
- All of the product reviews you've written
- Your "Only for Friends" area--This area, featuring your purchases, comments and ratings, can only be accessed by your friends and family. (optional)
- Your Amazon.com Wish List (optional)
- Your Auctions & zShops listings

2. Why should I create a Member Page?

A Member Page is a place where other Amazonians can come to learn more about you. Let's say someone reads one of your reviews and is really impressed by what you have to say. This person can click on your name and read a little about you and see all the other reviews you've written. It's a great way to hear other viewpoints and open up your mind to things you may never have considered before.

3. Who has access to my Member Page?

Your Member Page can be viewed by everyone in the Amazon.com community. There's just one exception--your "Only for Friends" area. As the name implies, your "Only for Friends" area can only be viewed by the close friends and family members you invite.

4. What if I want to edit my Member Page?

No problem. Your Member Page entirely edit-able. Just click on Your Account (located at the very top of every Amazon.com page). If you haven't already signed in, you'll be prompted to do so. Then you'll be directed to the Account Maintenance section. Scroll down to the "Community" area. Below you'll find a link to edit your Member Page. Just click on the link and make any changes you see fit. After all, it is your page.

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1. [What's a Member Page?](#)
2. [Why should I create a Member Page?](#)
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Your reviews. Have thoughts on theater systems? Opinions on Oprah? Insights on the Indigo Girls? When you share your product reviews with Amazon.com we'll be sure to find a home for them on your Member Page.

Your Wish List. Once you fill your Wish List with things you'd love to own, we'll add it to your Member Page. That way, every present you receive will be just right.

Your Auction and zShop listings. If you're a seller at Amazon.com Auctions or zShops, we'll showcase your wares for the world to see.

A message about privacy

Amazon.com takes customer privacy issues very seriously. Once your purchases, comments and ratings are posted, we'll allow only the people you specify to access them on our site. You can always alter who has access to your "Only for Friends" Member Page. And each time you make a new purchase, we'll ask you whether or not you want it added to the purchases that you share.

Frequently Asked Questions

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Amazon.com Community

Please sign in.

What is your e-mail address?

My e-mail address is


Do you have an Amazon.com password?

No, I am a new customer.

Yes, I have a password:

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Member Page

Member Information

[member bio](#)

[wish list](#)

[only for friends](#)

Go to [Community](#)

Warren Adams

Name: Warren Adams

Total reviews written: 0

Self-description: Colgate, HBS, PlanetAll, Amazon.com

Warren Adams currently has no reviews to share. Once written, Warren Adams's reviews will appear here.

Full search: [Books](#), [Music](#),
[DVD & Video](#), [Toys](#),
[Electronics](#), [Home Improvement](#), [Auctions](#) or
[zShops](#).

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Share thoughts about the things you've bought

Think of all the times you've asked your friends for shopping advice. Where did you buy that? Do you like it? Any regrets? The answers to these questions are incredibly valuable. The more you talk back and forth, the smarter you get. That's why we've created a place on your [Member Page](#) where you can post your Amazon.com purchases, ratings and comments to share with your close friends. Think of it as show-and-tell for grown-ups. And just like show-and-tell, you choose which purchases to show and how much to tell.

Want to join the fun? [Get Started Now](#)

Here's how it works

1. First, come up with a list of friends who'd be interested in sharing shopping experiences with you.
2. Decide which of your Amazon.com purchases you'd like to share. If you like, add comments and ratings so that your friends can see what you liked and what you weren't so crazy about.
3. We send out an e-mail message to your friends that does two things:
 - invites them to check out what you had to say about your purchases
 - asks if they'd like to return the favor and share their purchases and experiences with you.
4. If your friends agree, they become part of your Friends List. You can view their purchases, they can see yours. In no time, everybody's shopping smarter.

Want to join the fun? [Get Started Now](#)

Already set up? [Click here](#) to sign in.

A message about privacy

Amazon.com takes customer privacy issues very seriously. Once your purchases, comments and ratings are posted, we'll allow only the people you specify to access them on our site. You can always alter who has access to your "Only for Friends" Member Page. And each time you make a new purchase, we'll ask you whether or not you want it added to the purchases that you share.

Tell us what you think

Questions? Suggestions? Ideas? Let us know how you'd like to see us build this service. [E-mail](#) us.

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Amazon.com Community

New to Amazon? Register Below.

(We're asking you for this information to ensure the privacy and security of your purchase information.)

My name is:

My e-mail address:

Protect your information with a password

This will be your only Amazon.com password.

Enter a new password:

Type it again:



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Ready to create the part of your Member Page that's set aside only for friends? It's easy to do. Just follow the five steps below, and then click the Preview button. (Remember: You can update your purchases, comments and ratings at any time.)

1. Invite your friends

Tell us who you want to invite:

Enter as many of your friends' e-mail addresses as you like. Please separate each address with a comma.

(e.g. name@university.edu, name@company.com, etc.)

Note: The friends indicated above will receive an e-mail inviting them to the view the "Only for Friends" area of your Member Page. It will also ask that they share their purchases and comments with you. If they agree to share information with you, we'll send you an e-mail letting you know that you have access to their "Only for Friends" area.

2. Edit your invitation message

The invitation:

This is the message that will be sent to your friends, inviting them to share their shopping experiences with you. If you'd like to edit it and craft your own message, be our guest.

Hi!
 I'm writing you to invite you to check out my "Only For Friends" area. What's an "Only for Friends" area, you say? It's a place I've created at Amazon.com that can only be viewed by my friends and family. (If you click on the link below, you'll be able to see

3. Select and rate your Amazon.com purchases

Look at your Amazon.com purchases. (Your most recent purchases appear first.) If you see an item that you'd like to display to your friends, check the box under "Share". Feel free to add a comment and rate your purchases on a scale of one (don't like it) to five (I love it!).

Items 1 to 17 shown below.

Share:	Item:	Your Comments:	Your Star Rating:
			Don't like it < > I love it!
<input type="checkbox"/>	Permission Marketing: Turning Strangers Into Friends, and Friends into Customers By Seth Godin, Don Peppers	<input type="text"/>	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
<input type="checkbox"/>	Cornerstones of Decision Making: Profiles of Enterprise Abm By Carol Cobble, Steve Player	<input type="text"/>	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5

The Innovator's Dilemma
 By Clayton M. Christensen

 1 2 3 4 5

Mientras Mas Lo Pienso...Tu
 ~ Juan Luis Guerra

 1 2 3 4 5

Rhythm & Smoke: The Cuba Sessions
 ~ Cubamar, et al

 1 2 3 4 5

Havana Cafe
 ~ Barbarito Torres

 1 2 3 4 5

Buena Vista Social Club
 ~ Ry Cooder

 1 2 3 4 5

A Toda Cuba Le Gusta
 ~ Afro-Cuban All Stars

 1 2 3 4 5

Ojala Que Llueva Cafe
 ~ Juan Luis Guerra

 1 2 3 4 5

Ni Es Lo Mismo Ni Es Igual
 ~ Juan Luis Guerra

 1 2 3 4 5

Valuation of Intellectual Property and Intangible Assets
 By Gordon V. Smith, Russell L. Parr

 1 2 3 4 5

- Valuing Intangible Assets (Irwin Library of Investment & Finance)
 By Robert F. Reilly, Robert P. Schweihns

 1 2 3 4 5

- Patent Prosecution 1998 Supplement w/Disk And Case Digest
 By Irah Donner

 1 2 3 4 5

• Patent Law

Essentials : A Concise Guide

By Alan L. Durham



1 2 3 4 5

• Absolutely Mad Inventions

By Alford Eugene Brown(Compiler), H. A. Jeffcott (Compiler)



1 2 3 4 5

• The Inventor's Notebook (Inventor's Notebook, 2nd Ed)

By Fred E. Grissom, David Pressman



1 2 3 4 5

• Patent It Yourself (7th Ed)

By David Pressman(Illustrator), et al



1 2 3 4 5

4. Something Extra

Would you like for us to include the names of all the friends with whom you share purchase information in the "Only for Friends" area of your Member Page? (This is entirely optional. We ask because your friends may find it interesting to know the names of others that exchange information back and forth with you.)

Yes, share my Friends List

5. Preview

Before you decide to officially create this area of your Member Page, preview the information your friends will see.



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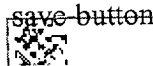


[Community](#) > [Member Page](#) > [Only For Friends](#) > **Preview**

Nicely done. A sample of the "Only for Friends" area of your Member Page is below. The following people will have access to this page:

mlazer@amazon.com chase@amazon.com ruben@amazon.com

If you like what you see, click the Create button. If you find something that you'd like to change, click the Edit button.



Welcome! Here is a list of all the Amazon.com items that Robert Jacobs couldn't resist buying. Check out what Robert Jacobs had to say about the purchases below. You may discover that you and Robert Jacobs share some unexpected things in common.

Purchases Made By Robert Jacobs

Items 1 to 10 of 15 shown below.

Item:



The Inventor's Notebook (Inventor's Notebook, 2nd Ed)

By Fred E. Grissom, David Pressman

1.

List Price: \$19.95

Our Price: \$15.96

You Save: \$3.99 (20%)

[Click here for more info](#)

Usually ships in 24 hours

Robert Jacobs's Rating and Comments:

2.

Absolutely Mad Inventions

By Alford Eugene Brown(Compiler), H. A. Jeffcott (Compiler)

List Price: \$3.95

Our Price: \$3.16

You Save: \$0.79 (20%)

[Click here for more info](#)

Usually ships in 24 hours

Robert Jacobs's Rating and Comments:

3.

Patent Prosecution 1998 Supplement w/Disk And Case

Digest

By Irah Donner

Our Price: \$105.00

[Click here for more info](#)

Special Order

Robert Jacobs's Rating and Comments:



Valuing Intangible Assets (Irwin Library of Investment & Finance)

4. By Robert F. Reilly, Robert P. Schweihs

List Price:\$95.00
Our Price: **\$66.50**
You Save:\$28.50 (30%)
[Click here for more info](#)

Usually ships in 24 hours

Robert Jacobs's Rating and Comments:

Valuation of Intellectual Property and Intangible Assets

5. By Gordon V. Smith, Russell L. Parr

Our Price: **\$175.00**
[Click here for more info](#)

Usually ships in 24 hours

Robert Jacobs's Rating and Comments:

Ni Es Lo Mismo Ni Es Igual

~ Juan Luis Guerra

List Price:\$16.97
Our Price: **\$12.99**
You Save:\$3.98 (23%)
[Click here for more info](#)

Usually ships in 24 hours

Robert Jacobs's Rating and Comments:

Ojala Que Llueva Cafe

~ Juan Luis Guerra

List Price:\$14.97
Our Price: **\$14.22**
You Save:\$0.75 (5%)
[Click here for more info](#)

Usually ships in 24 hours

Robert Jacobs's Rating and Comments:



A Toda Cuba Le Gusta

~ Afro-Cuban All Stars

List Price:\$17.97
Our Price: **\$13.99**
You Save:\$3.98 (22%)
[Click here for more info](#)

Usually ships in 24 hours

Robert Jacobs's Rating and Comments:



Buena Vista Social Club

~ Ry Cooder

9.

List Price:\$17.97
Our Price: **\$12.58**
You Save:\$5.39 (30%)
[Click here for more info](#)

Usually ships in 24 hours

Robert Jacobs's Rating and Comments: 

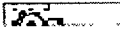
10.



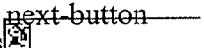
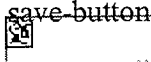
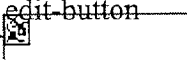
Havana Cafe
~ Barbarito Torres

List Price:\$16.97
Our Price: **\$12.99**
You Save:\$3.98 (23%)
[Click here for more info](#)

Usually ships in 2-3 days

Robert Jacobs's Rating and Comments: 

Items 1 to 10 of 15 items

View more purchases 
 OR 

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PROVISIONAL APPLICATION FOR PATENT
COVER SHEET

A/Pro

Case No. AMAZON.053PR
Date: November 19, 1999
Page 1

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

ATTENTION: PROVISIONAL PATENT APPLICATION

Sir:

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR § 1.53(c).

For: **WEB-BASED METHODS FOR ENABLING CUSTOMERS TO SHARE INFORMATION
ABOUT PURCHASES**

Name of First Inventor: Jeffrey P. Bezos
Residence Address: 2608 2nd Avenue #150
Seattle, WA 98121

Name of Second Inventor: Warren Adams
Residence Address:

Name of Third Inventor: Ken Dinovo
Residence Address:

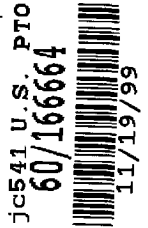
Name of Fourth Inventor: Ryan Snodgrass
Residence Address:

Enclosed are:

- Specification in 18 pages.
- A check in the amount of \$150 to cover the filing fee is enclosed.
- A return prepaid postcard.
- The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Account No. 11-1410. A duplicate copy of this sheet is enclosed.

Was this invention made by an agency of the United States Government or under a contract with an agency of the United States Government?

No.



60/166664

**PROVISIONAL APPLICATION FOR PATENT
COVER SHEET**

Case No. AMAZON.053PR

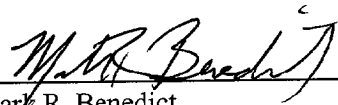
Date: November 19, 1999

Page 2

(X) Please send correspondence to:

Ronald J. Schoenbaum
Knobbe, Martens, Olson & Bear, LLP
620 Newport Center Dr., 16th Floor
Newport Beach, CA 92660

Respectfully submitted,



Mark R. Benedict
Registration No. 44,531

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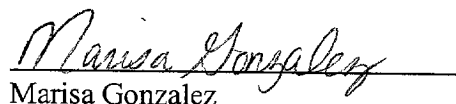
CERTIFICATE OF MAILING BY "EXPRESS MAIL"

Attorney Docket No. : AMAZON.053PR
Applicant(s) : Jeffrey P. Bezos et al.
For : WEB-BASED METHODS FOR ENABLING
CUSTOMERS TO SHARE INFORMATION
ABOUT PURCHASES
Attorney : Ronald J. Schoenbaum
"Express Mail"
Mailing Label No. : EL531035428US
Date of Deposit : November 19, 1999

I hereby certify that the accompanying

Transmittal in Duplicate; Specification in 18 pages; Check for Filing Fee; Return
Prepaid Postcard

are being deposited with the United States Postal Service "Express Mail Post Office to
Addressee" service under 37 CFR 1.10 on the date indicated above and are addressed to the
Assistant Commissioner for Patents, Washington, D.C. 20231.


Marisa Gonzalez

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** U.S. PATENT AGENT

FBM0001886

Web-Based Methods for Enabling Customers to Share Information About Purchases

Background material relevant to the present invention is disclosed in U.S. Patent Appl. No. 09/377,447 filed August 19, 1999, titled COMMUNITY-BASED RECOMMENDATIONS, which is assigned to the assignee of the present application and is hereby incorporated by reference.

I. Objectives

Give our customers the ability to share, with other customers or the people they know, information about items they have purchased. Sharing of purchases (information about) will let our customers help each other make better purchase decisions. Attempt to emulate the real world behavior of people basing purchase decisions on the recommendations of other people they trust. Create the infrastructure to capture and store customer to customer relationships for future use. This infrastructure will facilitate future sharing of other types of information such as wish list, reviews, auctions, favorite artists, instant recommendations, shipping address, etc.

II. Summary of the Preferred Embodiment

A. What customers will see

Customers can share information on their purchases with the people they know. After deciding who they want to share their information with (invitees) and reviewing and deciding which purchases to share, we will send out an invitation by e-mail with a link to the customer's public purchases to all the invitees. By clicking on the link, invitees will be directed to a page that will display the customer's purchases. In addition to viewing the customer's purchases, invitees will have the ability to reciprocally share their purchases with the customer and the other invitees.

It will be apparent to one skilled in the art that various limitations and requirements described with respect to the preferred embodiment are not essential to the practicing of the invention.

B. Terminology

Personal Purchase Circle - includes the list of people that a customer has given permission to see his or her purchases and/or the list of people whose purchases customer can see. For example: Ken has given Brian and Warren permission to see his purchases. Also, Maryam has given Ken permission to see her purchases. Brian, Warren, and Maryam make up Ken's Personal Purchase Circle.

User Page - A User Page can be an HTML page that displays the purchases that the customer has decided to make visible to his Personal Purchase Circle. In addition, the User Page can list the other people in the customer's Personal Purchase Circle. For example: Brian and Warren have to go to Ken's User Page to see his purchases and what Ken thought about each

purchase (rating). Ken can at any time edit his User Page and either take off or add purchases. In future releases, the User Page will display other information about a customer (wish list, reviews, auctions, favorite artists, instant recommendations, shipping address, etc).

Friends of Friends - Includes the ability to see who else is in a person's Personal Purchase Circle. For example: Brian, Warren, and Maryam make up Ken's Personal Purchase Circle. Friends of Friends allows Maryam to see that Brian and Warren are also part of Ken's Personal Purchase Circle. Maryam can also invite Brian and Warren to her Personal Purchase Circle. However, Maryam preferably cannot see Brian's and Warren's purchases unless they give her permissions.

III. Description of the Preferred Embodiment

Personal Purchase Circles Setup

A customer will do these things in the setup process:

1. Enter the people who can see his purchases (a.k.a. inviting them to his Personal Purchase Circle)
2. Review his purchase history, and decide which purchases he does not want anyone to see. The customer can rate each purchase during this step using a simple 5 star drop down and provide any comments if so desired. Customers will be presented with their order history in chunks of 50 or less items.
3. Edit the e-mail invite message
4. Preview what visitors will see

Setting up a Personal Purchase Circle requires a customer ID. See Authentication Model below for more details.

User Page

A user page will have the following:

- A customer's purchases and the respective rating for each purchase.
- A customer's public favorite Purchase Circles (i.e. MIT, NY, etc).
- The other members of the customer's Personal Purchase Circle (Friends of Friends)
- The ability to reciprocate the sharing with the customer and the other members of the customer's Personal Purchase Circle.
- When a customer adds a friend of a friend to their own Personal Purchase Circle, the e-mail/notification to the invitee will state the mutual friend. For example: Warren goes to Ken's User Page and see that Brian is also in Ken's Personal Purchase Circle. Warren invites Brian to his own Personal Purchase Circle. In the notification to Brian, it will state that "Warren (through Ken's Userpage) has invited you to his..."
- A counter to count the number of page views.

A customer can edit any information that is displayed in his User Page. Setting up a User Page requires a customer ID. Visitors viewing a User Page do require a customer ID. See authentication Model below for more details.

E-mail Invitations

The e-mail that will go out to everyone who was entered when setting up a Personal Purchase Circle. The e-mail will have a short URL link to the customer's User Page.

- Customers can request to not receive e-mails, but be notified only the web site (see notifications below)
- The link the customer's User Page will be a short URL.

Users will have the option to disable receipt of all e-mail invites for this feature, in the Your Account area of the site.

Establishing a Link (resolving e-mails into customer IDs)

For each address entered into the invite box, it must be evaluated against the following set of business rules:

1. If the e-mail address matches zero customers in our database, a one-use token will be sent to that e-mail address. The returning customer must either sign in as an existing customer (at which point the link is established) or create a new account.
2. If the e-mail address matches one customer in our database, a link will be automatically established. Additionally, an e-mail will be sent to that address stating with two URLs. The first will be a link to the inviter's user page. The second will be a one-use token in case the e-mail address of the invitee is not their primary Amazon.com account.
3. If the e-mail address matches two or more customer accounts in our database, we will pick the one with the most recent order date. Alternatively we could pick the account with the most orders.

Attempts will be made to verify the validity of e-mail addresses and prevent invites to obvious distribution lists or other suspect addresses (postmaster@, root@, administrator@).

Notifications

Users will get notified on the web site when a new event has occurred in his or her Personal Purchase Circle:

- When the customer has been invited to another Personal Purchase Circle. The customer will also receive this notification via e-mail, unless he or she decides not receive e-mail notification (see E-mail Notification).
- When a member of the customer's Personal Purchase Circle bought something.

Order Pages and One Click

With every purchase, we will prompt the customer if s/he would like to keep the item private from his or her Personal Purchase Circle. Items will be automatically shared with a customer's Personal Purchase Circle unless the customer explicitly states that s/he wants the item hidden.

For customers that have set up a Personal Purchase Circle and have one-click enabled, a check box will appear in the buy box that is default on, indicating their willingness to put the one-clicked item on their Personal Purchase Circle.

For customers that have not set up a Personal Purchase Circle, on the one-click thank-you page and the order-pipeline thank-you page, they will be prompted to set up a Personal Purchase Circle.

Detail Page Integration

When a book has been purchased by a customer, the other people in that customer's Personal Purchase Circle will see that the customer purchased that item when on the detail pages. The infrastructure should support displaying this information elsewhere as well (such as search results).

Blocking

To prevent spam, an invitee will not get more than a specified number invitations from the same customer. The invitee will also have the ability to not receive any invitations.

- We will keep track of all the e-mail addresses and customer IDs that a customer has already sent an invite to, and not let them send it to the same person more than x times.
- We will not send an invite to an e-mail address if the customer has explicitly said that he or she does not want any e-mail from Amazon.com.
- Metrics will be in place to determine if we need to add functionality to limit the # of people that someone is linking to
- Users will have the option to disable receipt of all e-mail invites for this feature, in the Your Account area of the site.

Managing Your Personal Purchase Circle

Customers can view their Personal Purchase Circle, and have the ability to remove or add people.

- Display the e-mail address if we have not established a link. If we have established a link, then the customer's full name will be displayed. See Establishing a Link above for more details.
- We will indicate with an icon who can see a customer's purchases, and with a separate icon, which purchases that the customer can see. Customers will be able to access all the User Pages that he has access to from these pages.

Permissions

There will be three types of permission for this embodiment:

- Purchases - access to view the customer's purchases
- Friends of Friends - access to view the customer's personal purchase circle. For this project, this will be turned on for everyone by default but they will have the option to disable this feature.
- Favorite Purchase Circles - access to view the customer's favorite purchase circles. For this project, this will be turned on for everyone but they will have the option to disable this feature.

V. Page Structure

PERSONAL PURCHASE CIRCLE SETUP PROCESS

<u>Page</u>	<u>New Users</u>	<u>Recognized Customers</u>	<u>Non-recognized Customer</u>
Signin Page	register.html	signin.html	
Signin Page w/ error		signin_error.html	
Setup Page <= 25		setup_less25.html	
Setup Page > 25		setup_25plus.html , setup_25plus2.html	
Setup Page w/ error		setup_error.html	
Preview		setup_preview.html	
Confirmation		setup_confirmation.html	

LOGIN PROCESS FROM INVITATION E-MAIL

<u>Page</u>	<u>New Users</u>	<u>Recognized Customers</u>	<u>Non-recognized Customer</u>
E-mail Invitation		login_invite_email.html	
Signin Page	register.html	signin.html	
Signin Page w/ error		signin_error.html	
Denied Access Page		login_denied.html	
Request Confirmation Page		login_request_confirmation.html	
Customer Page		customerpage.html	

RECIPROCAL AND FRIENDS OF FRIENDS LINKING PROCESS

<u>Page</u>	<u>Does have Personal Purchase Circle</u>	<u>Doesn't have a Personal Purchase Circle</u>
Customer Page	customerpage.html	
Page after clicking on the invite button	customerpage_confirmation.html	setup_w_link.html

MANAGEMENT SECTION IN YOUR ACCOUNT

<u>Page</u>	<u>Everyone</u>
Management Page	management.html

VI. Example Web Pages

Attached hereto are printouts of 8 example web pages in accordance with at least one embodiment of the present invention. These printouts form a part of the disclosure of the specification. The copyright owner has no objection to the facsimile reproduction of the printouts as part of this document, but reserves all other copyrights whatsoever.

H:\DOCS\ASF\ASF-1223.DOC
111999



Frequently Asked Questions

1. What's a Member page?

Your Member Page is your homepage at Amazon.com--filled with your opinions and personality. You decide how much you feel comfortable sharing about yourself. Then start building your page. At present, these are the pieces of information that you can include on your Member Page:

- Your name or nickname
- A brief bio, your photo, and your e-mail address (all optional)
- All of the product reviews you've written
- Your "Only for Friends" area--This area, featuring your purchases, comments and ratings, can only be accessed by your friends and family. (optional)
- Your Amazon.com Wish List (optional)
- Your Auctions & zShops listings

2. Why should I create a Member Page?

A Member Page is a place where other Amazonians can come to learn more about you. Let's say someone reads one of your reviews and is really impressed by what you have to say. This person can click on your name and read a little about you and see all the other reviews you've written. It's a great way to hear other viewpoints and open up your mind to things you may never have considered before.

3. Who has access to my Member Page?

Your Member Page can be viewed by everyone in the Amazon.com community. There's just one exception--your "Only for Friends" area. As the name implies, your "Only for Friends" area can only be viewed by the close friends and family members you invite.

4. What if I want to edit my Member Page?

No problem. Your Member Page entirely edit-able. Just click on Your Account (located at the very top of every Amazon.com page). If you haven't already signed in, you'll be prompted to do so. Then you'll be directed to the Account Maintenance section. Scroll down to the "Community" area. Below you'll find a link to edit your Member Page. Just click on the link and make any changes you see fit. After all, it is your page.

[Go back to Member Page home.](#)

1. [What's a Member Page?](#)
2. [Why should I create a Member Page?](#)
3. [Who has access to my Member Page?](#)
4. [What if I want to edit my Member Page?](#)

Want to join the fun?
~~Get started now!~~



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Hello, Warren Adams. Welcome back! (If you're not Warren Adams, [click here.](#))

[View your Member Page](#)

What's on your Amazon.com Member Page?

A bit about you. Tell us your name or nickname and share a couple words about yourself. If you like, you can add your picture to your page.

Your reviews. Have thoughts on theater systems? Opinions on Oprah? Insights on the Indigo Girls? When you share your product reviews with Amazon.com we'll be sure to find a home for them on your Member Page.

Your Wish List. Once you fill your Wish List with things you'd love to own, we'll add it to your Member Page. That way, every present you receive will be just right.

Your Auction and zShop listings. If you're a seller at Amazon.com Auctions or zShops, we'll showcase your wares for the world to see.

A message about privacy

Amazon.com takes customer privacy issues very seriously. Once your purchases, comments and ratings are posted, we'll allow only the people you specify to access them on our site. You can always alter who has access to your "Only for Friends" Member Page. And each time you make a new purchase, we'll ask you whether or not you want it added to the purchases that you share.

Frequently Asked Questions

1. [What's a Member Page?](#)
2. [Why should I create a Member Page?](#)
3. [Who has access to my Member Page?](#)
4. [What if I want to edit my Member Page?](#)

Tell us what you think

Questions?
Suggestions? Ideas?
Let us know how you'd like to see us build this service.
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Amazon.com Community

Please sign in.

What is your e-mail address?

My e-mail address is


Do you have an Amazon.com password?

No, I am a new customer.

Yes, I have a password:

[Forgot your password?](#)



If you received an error message when you tried to use our secure server, sign in using our . If you select the secure server, the information you enter will be encrypted.

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Member Page

Member Information

[member bio](#)

[wish list](#)

[only for friends](#)

Go to [Community](#)

Warren Adams

Name: Warren Adams

Total reviews written: 0

Self-description: Colgate, HBS, PlanetAll, Amazon.com

Warren Adams currently has no reviews to share. Once written, Warren Adams's reviews will appear here.

Full search: [Books](#), [Music](#),
[DVD & Video](#), [Toys](#),
[Electronics](#), [Home Improvement](#), [Auctions](#) or
[zShops](#).

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Share thoughts about the things you've bought

Think of all the times you've asked your friends for shopping advice. Where did you buy that? Do you like it? Any regrets? The answers to these questions are incredibly valuable. The more you talk back and forth, the smarter you get. That's why we've created a place on your [Member Page](#) where you can post your Amazon.com purchases, ratings and comments to share with your close friends. Think of it as show-and-tell for grown-ups. And just like show-and-tell, you choose which purchases to show and how much to tell.

Want to join the fun? [Get Started Now](#)

Here's how it works

- 1 First, come up with a list of friends who'd be interested in sharing shopping experiences with you.
- 2 Decide which of your Amazon.com purchases you'd like to share. If you like, add comments and ratings so that your friends can see what you liked and what you weren't so crazy about.
- 3 We send out an e-mail message to your friends that does two things:
 - invites them to check out what you had to say about your purchases
 - asks if they'd like to return the favor and share their purchases and experiences with you.
- 4 If your friends agree, they become part of your Friends List. You can view their purchases, they can see yours. In no time, everybody's shopping smarter.

Want to join the fun? [Get Started Now](#)

Already set up? [Click here](#) to sign in.

A message about privacy

Amazon.com takes customer privacy issues very seriously. Once your purchases, comments and ratings are posted, we'll allow only the people you specify to access them on our site. You can always alter who has access to your "Only for Friends" Member Page. And each time you make a new purchase, we'll ask you whether or not you want it added to the purchases that you share.

Tell us what you think

Questions? Suggestions? Ideas? Let us know how you'd like to see us build this service. [E-mail us](#).

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Amazon.com Community

New to Amazon? Register Below.

(We're asking you for this information to ensure the privacy and security of your purchase information.)

My name is:

My e-mail address:

Protect your information with a password

This will be your only Amazon.com password.

Enter a new password:

Type it again:



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[Community](#) > [Member Page](#) > [Only For Friends](#) > **Set Up**

Ready to create the part of your Member Page that's set aside only for friends? It's easy to do. Just follow the five steps below, and then click the Preview button. (Remember: You can update your purchases, comments and ratings at any time.)

1. Invite your friends

Tell us who you want to invite:

Enter as many of your friends' e-mail addresses as you like. Please separate each address with a comma.

(e.g. name@university.edu, name@company.com, etc.)

Note: The friends indicated above will receive an e-mail inviting them to view the "Only for Friends" area of your Member Page. It will also ask that they share their purchases and comments with you. If they agree to share information with you, we'll send you an e-mail letting you know that you have access to their "Only for Friends" area.

2. Edit your invitation message

The invitation:

This is the message that will be sent to your friends, inviting them to share their shopping experiences with you. If you'd like to edit it and craft your own message, be our guest.

3. Select and rate your Amazon.com purchases

Look at your Amazon.com purchases. (Your most recent purchases appear first.) If you see an item that you'd like to display to your friends, check the box under "Share". Feel free to add a comment and rate your purchases on a scale of one (don't like it) to five (I love it!).

Items **1 to 17** shown below.

Share:

Item:

Your Comments:

Your Star Rating:

Don't like it <-> I love it!

[Permission Marketing: Turning Strangers Into Friends, and Friends into Customers](#)
By Seth Godin, Don Peppers

1
 2
 3
 4
 5

[Cornerstones of Decision Making: Profiles of Enterprise Abm](#)
By Carol Cobble, Steve Player

1
 2
 3
 4
 5

FW Second page in signup for Personal Purchase Circles

- The Innovator's Dilemma
 By Clayton M. Christensen
 1 2 3 4 5
- Mientras Mas Lo Pienso...Tu
 ~ Juan Luis Guerra
 1 2 3 4 5
- Rhythm & Smoke: The Cuba Sessions
 ~ Cubamar, et al
 1 2 3 4 5

- Havana Cafe
 ~ Barbarito Torres
 1 2 3 4 5
- Buena Vista Social Club
 ~ Ry Cooder
 1 2 3 4 5
- A Toda Cuba Le Gusta
 ~ Afro-Cuban All Stars
 1 2 3 4 5
- Ojala Que Llueva Cafe
 ~ Juan Luis Guerra
 1 2 3 4 5
- Ni Es Lo Mismo Ni Es Igual
 ~ Juan Luis Guerra
 1 2 3 4 5

- Valuation of Intellectual Property and Intangible Assets
 By Gordon V. Smith, Russell L. Parr
 1 2 3 4 5
 - Valuing Intangible Assets (Irwin Library of Investment & Finance)
 By Robert F. Reilly, Robert P. Schweih
 1 2 3 4 5
 - Patent Prosecution 1998 Supplement w/Disk And Case Digest
 By Irah Donner
 1 2 3 4 5

• Patent Law Essentials : A Concise Guide
By Alan L. Durham

1 2 3 4 5

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By Alford Eugene Brown(Compiler), H. A. Jeffcott (Compiler)

1 2 3 4 5

• The Inventor's Notebook (Inventor's Notebook, 2nd Ed)
By Fred E. Grissom, David Pressman

1 2 3 4 5

• Patent It Yourself (7th Ed)
By David Pressman(Illustrator), et al

1 2 3 4 5

4. Something Extra

Would you like for us to include the names of all the friends with whom you share purchase information in the "Only for Friends" area of your Member Page? (This is entirely optional. We ask because your friends may find it interesting to know the names of others that exchange information back and forth with you.)

Yes, share my Friends List

5. Preview

Before you decide to officially create this area of your Member Page, preview the information your friends will see.



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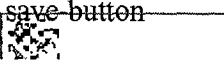
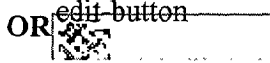
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[Community](#) > [Member Page](#) > [Only For Friends](#) > **Preview**

Nicely done. A sample of the "Only for Friends" area of your Member Page is below. The following people will have access to this page:

mlazer@amazon.com chase@amazon.com ruben@amazon.com

If you like what you see, click the Create button. If you find something that you'd like to change, click the Edit button.  OR 

Welcome! Here is a list of all the Amazon.com items that Robert Jacobs couldn't resist buying. Check out what Robert Jacobs had to say about the purchases below. You may discover that you and Robert Jacobs share some unexpected things in common.

Purchases Made By Robert Jacobs

Items **1 to 10** of 15 shown below.

Item: 

1.  **The Inventor's Notebook (Inventor's Notebook, 2nd Ed)**
By Fred E. Grissom, David Pressman

List Price: \$19.95

Our Price: **\$15.96**

You Save: \$3.99 (20%)

[Click here for more info](#)

Usually ships in 24 hours

Robert Jacobs's Rating and Comments: 

2. **Absolutely Mad Inventions**
By Alford Eugene Brown(Compiler), H. A. Jeffcott (Compiler)

List Price: \$3.95

Our Price: **\$3.16**

You Save: \$0.79 (20%)

[Click here for more info](#)

Usually ships in 24 hours

Robert Jacobs's Rating and Comments: 

3. **Patent Prosecution 1998 Supplement w/Disk And Case Digest**
By Irah Donner

Our Price: **\$105.00**

[Click here for more info](#)

Special Order

Robert Jacobs's Rating and Comments: 

List Price:\$17.97
Our Price: \$12.58
You Save:\$5.39 (30%)
[Click here for more info](#)

Usually ships in 24 hours

Robert Jacobs's Rating and Comments: 

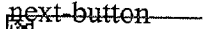
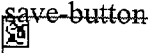
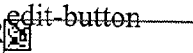
10.  **Havana Cafe**
~ Barbarito Torres

List Price:\$16.97
Our Price: \$12.99
You Save:\$3.98 (23%)
[Click here for more info](#)

Usually ships in 2-3 days

Robert Jacobs's Rating and Comments: 

Items **1 to 10** of 15 items

View more purchases 
 **OR** 

[Amazon.com Home](#) | [Books](#) | [Music](#) | [DVD & Video](#) | [Toys & Games](#) | [Electronics & Software](#) | [Home Improvement](#)
| [Auctions](#) | [zShops](#) | [1-Click Settings](#) | [Shopping Cart](#) | [Your Account](#) | [Help](#) | [Sell Items](#)

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US006175831B1

(12) **United States Patent**
Weinreich et al.

(10) **Patent No.:** **US 6,175,831 B1**
(45) **Date of Patent:** **Jan. 16, 2001**

(54) **METHOD AND APPARATUS FOR CONSTRUCTING A NETWORKING DATABASE AND SYSTEM**

(75) Inventors: **Andrew P. Weinreich; Mark R. Salamon; Shoshana Zilberberg; Nicole D. Berlyn; Leann Mitchell; Cliff Rosen; Adam Seifer; Justin Green**, all of New York; **David Haber**, Great Neck; **David Samuels**, Atlantic Beach; **Ron Chibnik**, New York; **Scott Clifford**, East Moriches, all of NY (US); **Chandrasekhar Boddu**, Piscataway, NJ (US)

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5,822,523 * 10/1998 Rothschild et al. 395/200
5,826,269 * 10/1998 Hussey 707/10

(73) Assignee: **six degrees, inc.**, New York, NY (US)

(*) Notice: Under 35 U.S.C. 154(b), the term of this patent shall be extended for 0 days.

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(21) Appl. No.: **08/785,559**
(22) Filed: **Jan. 17, 1997**

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Primary Examiner—Wayne Amsbury
Assistant Examiner—Thu-Thao Havan
(74) *Attorney, Agent, or Firm*—Pennie & Edmonds LLP

(51) **Int. Cl.**⁷ **G06F 17/30**
(52) **U.S. Cl.** **707/10; 707/130; 707/104; 345/333; 364/918**
(58) **Field of Search** 707/130, 10, 104, 707/511; 395/200; 370/407; 706/47, 60; 345/333; 358/402, 440, 444; 705/14; 434/350; 364/918

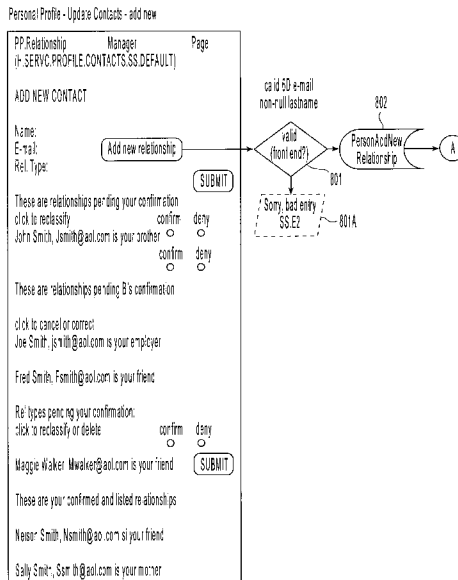
ABSTRACT

(57) A networking database containing a plurality of records for different individuals in which individuals are connected to one another in the database by defined relationships. Each individual has the opportunity to define the relationship which may be confirmed or denied. E-mail messaging and interactive communication between individuals and a database service provider provide a method of constructing the database. The method includes having a registered individual identify further individuals and define therewith a relationship. The further individuals then, in turn, establish their own defined relationships with still other individuals. The defined relationships are mutually defined.

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36 Claims, 33 Drawing Sheets



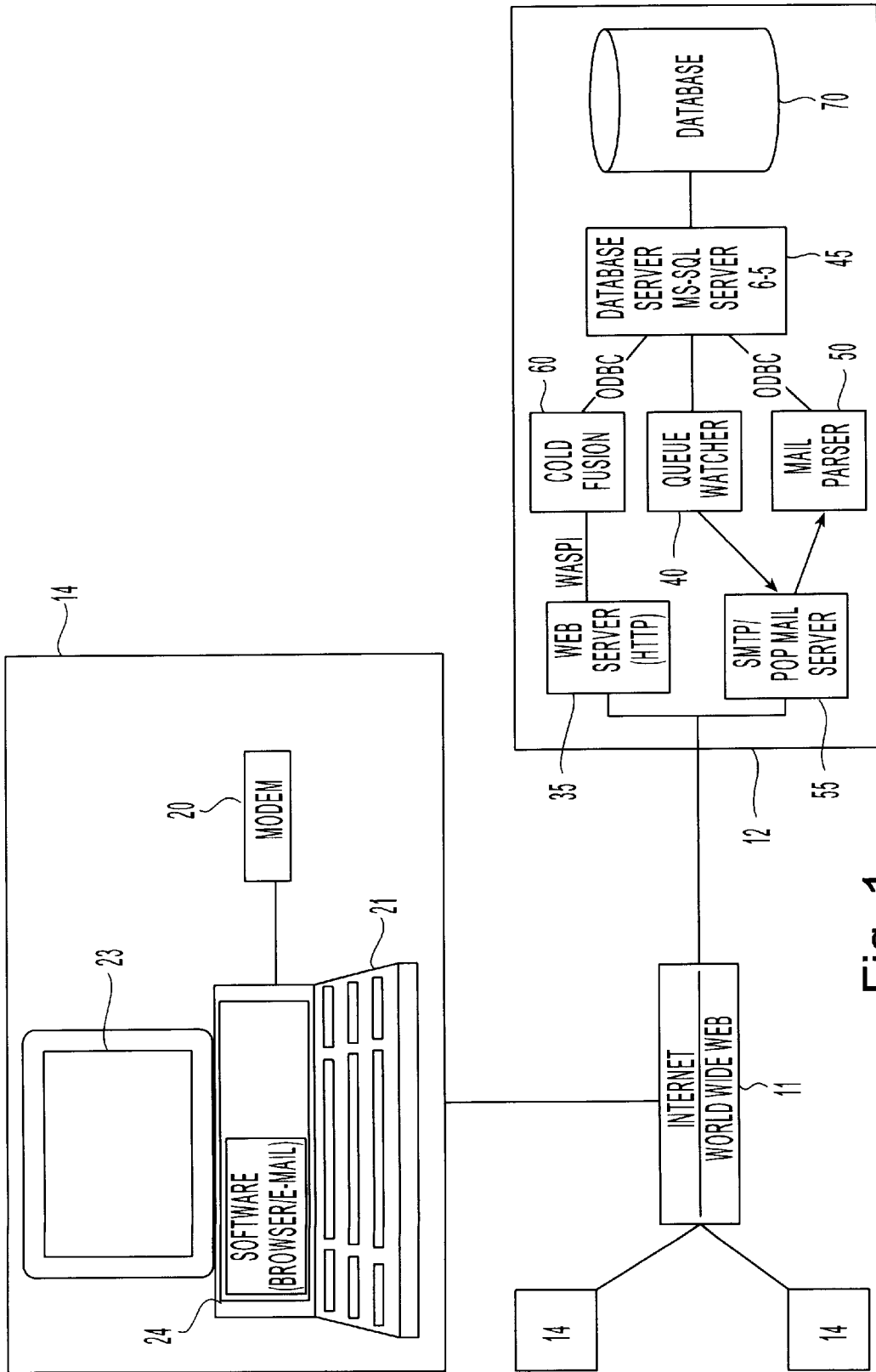


Fig. 1

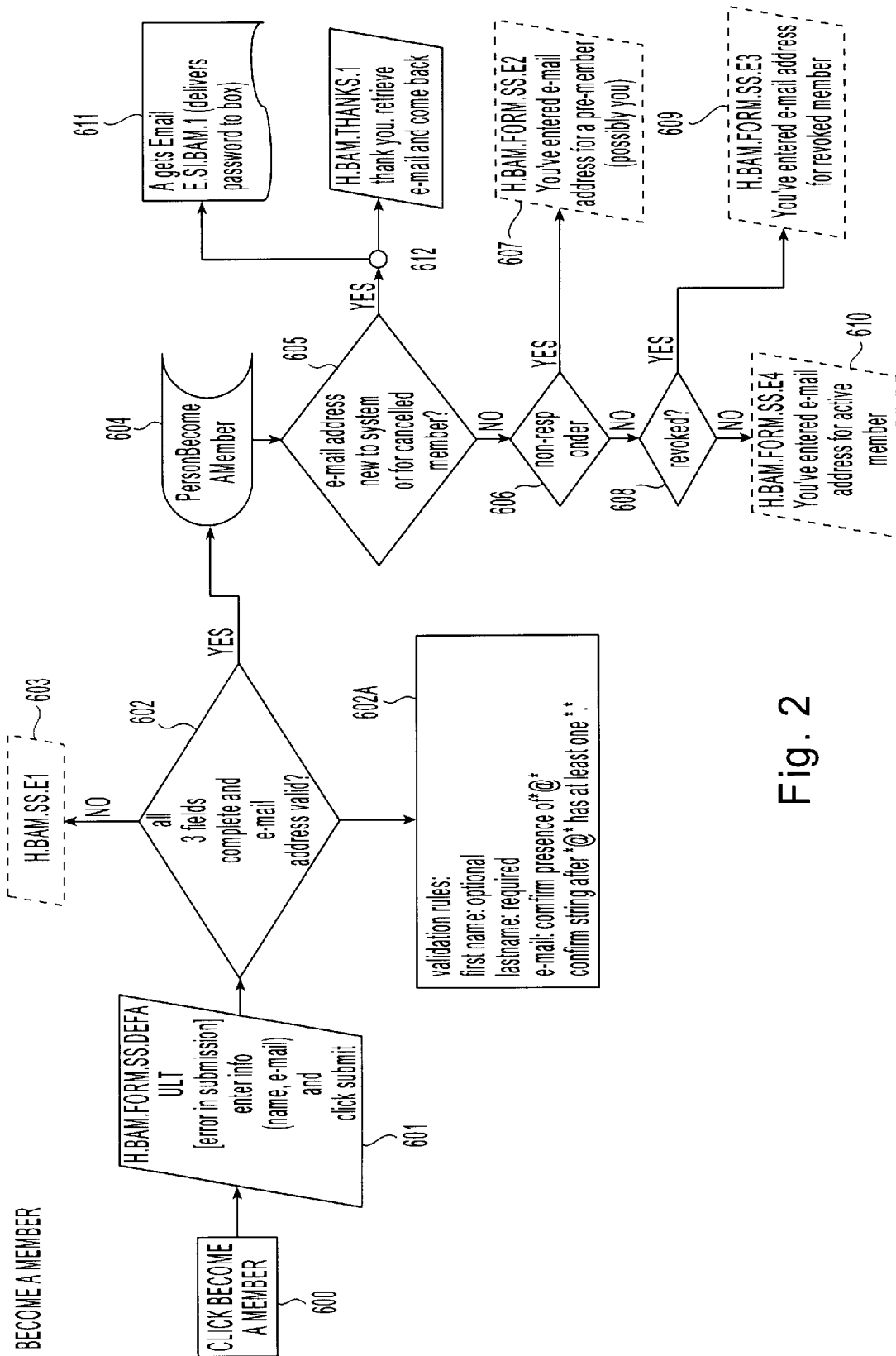


Fig. 2

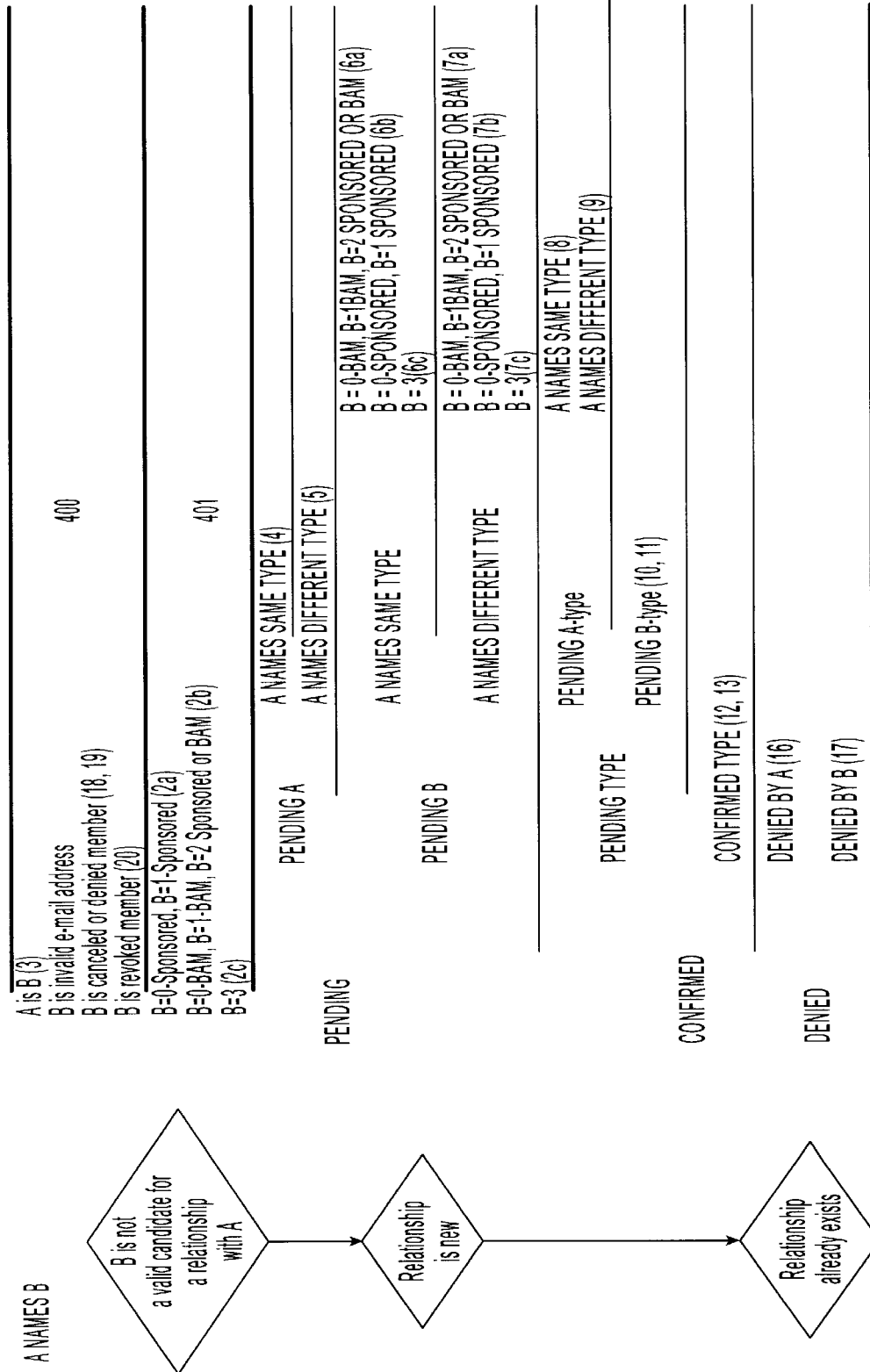


Fig. 3

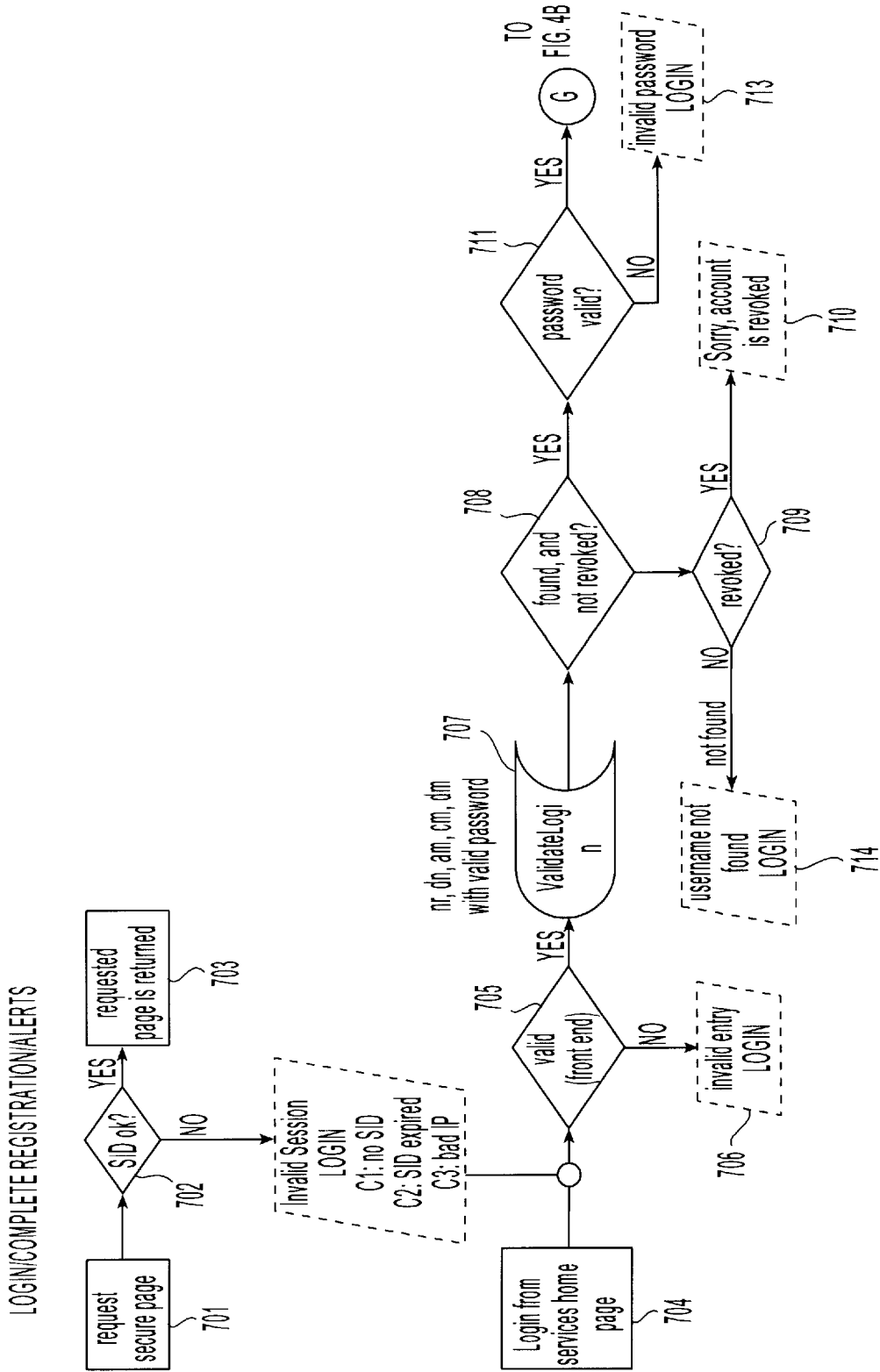


Fig. 4A

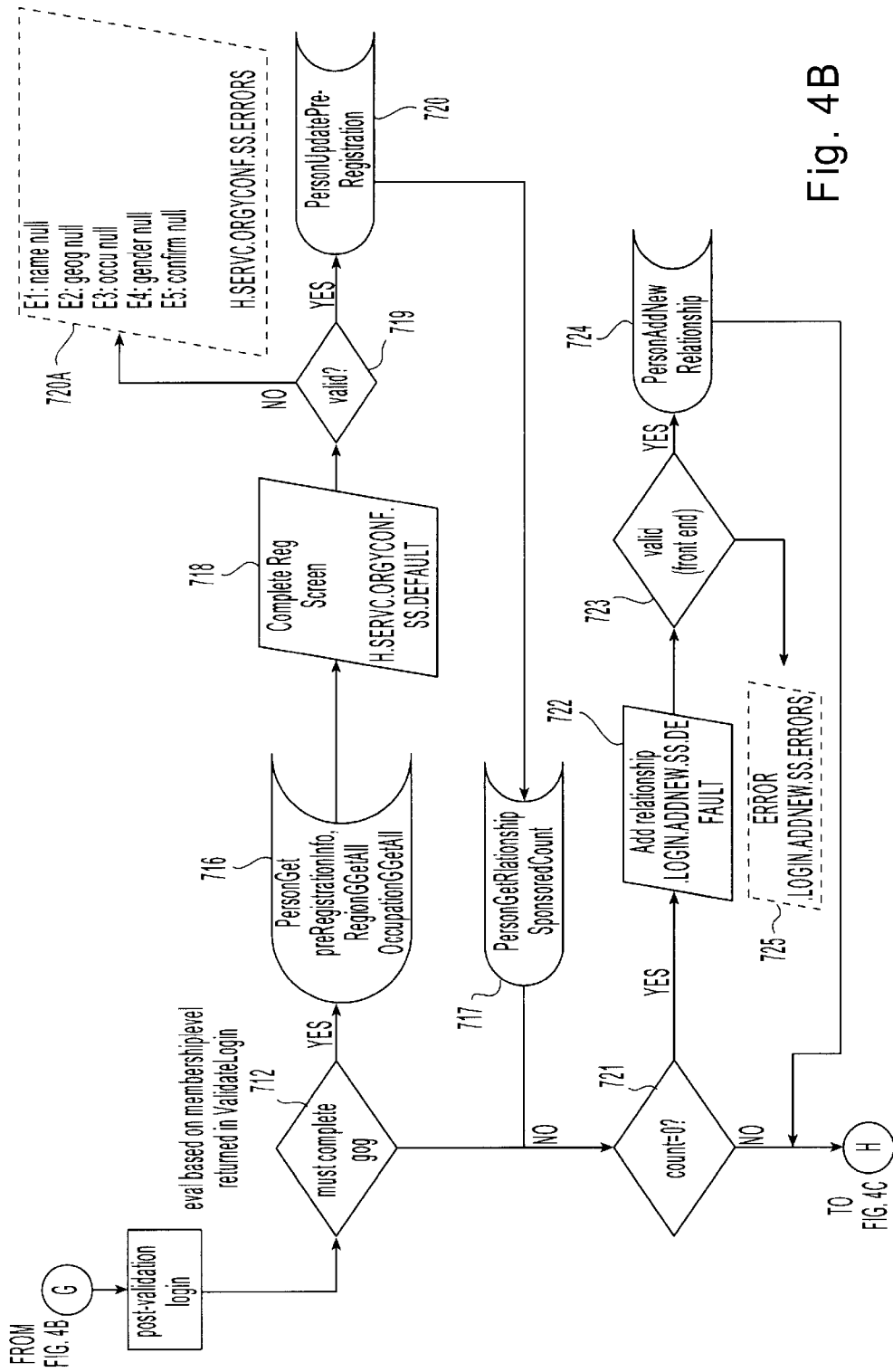


Fig. 4B

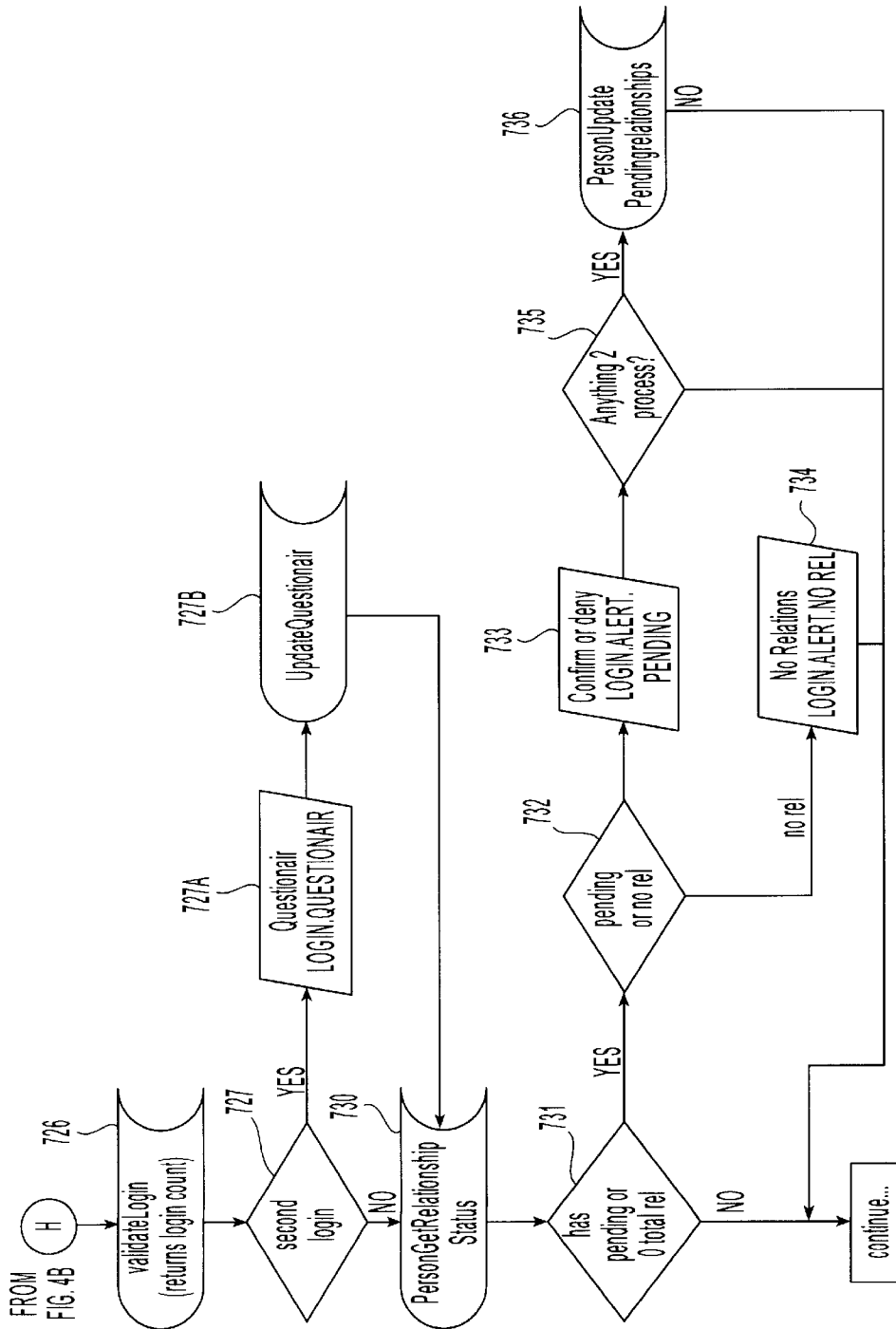
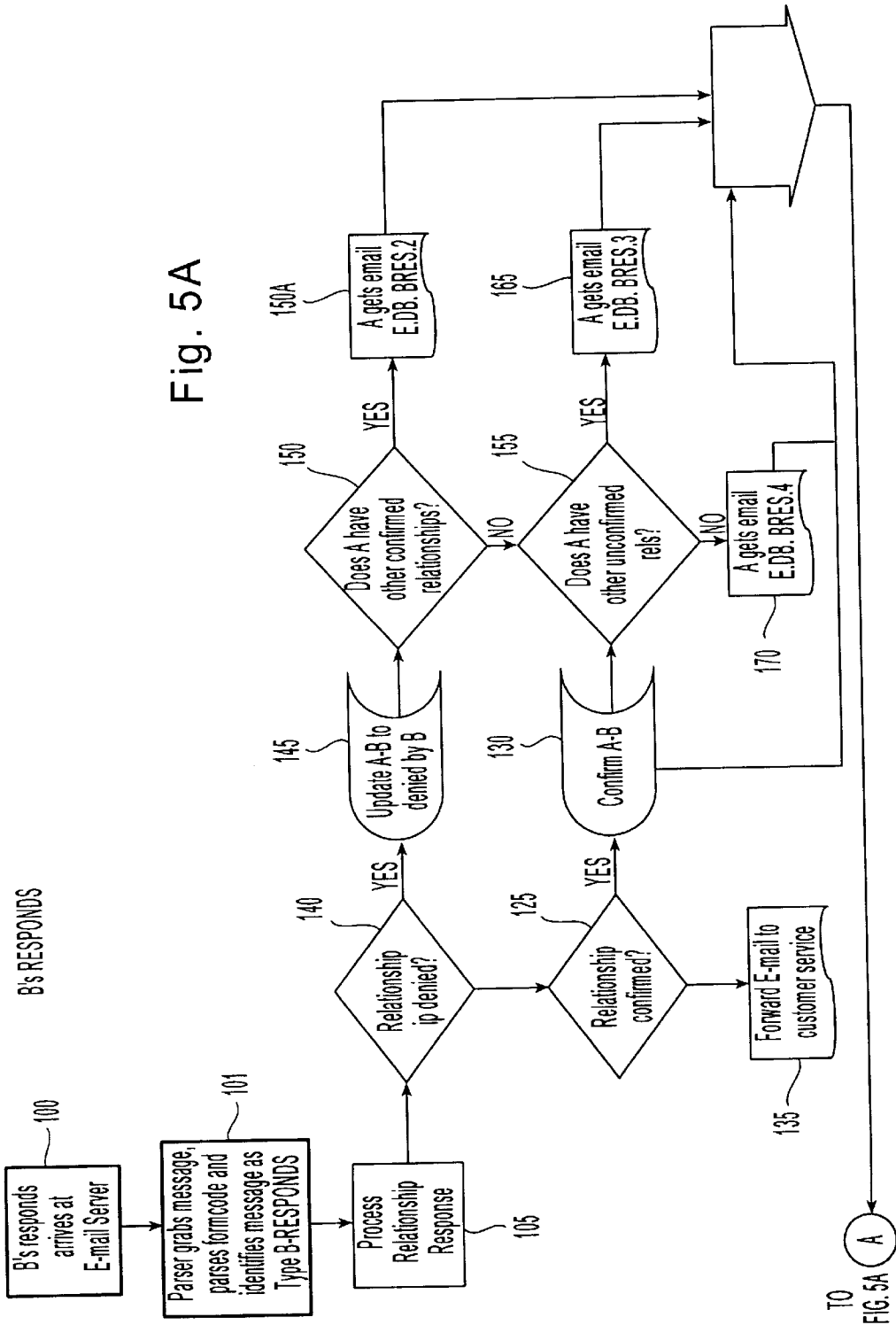


Fig. 4C



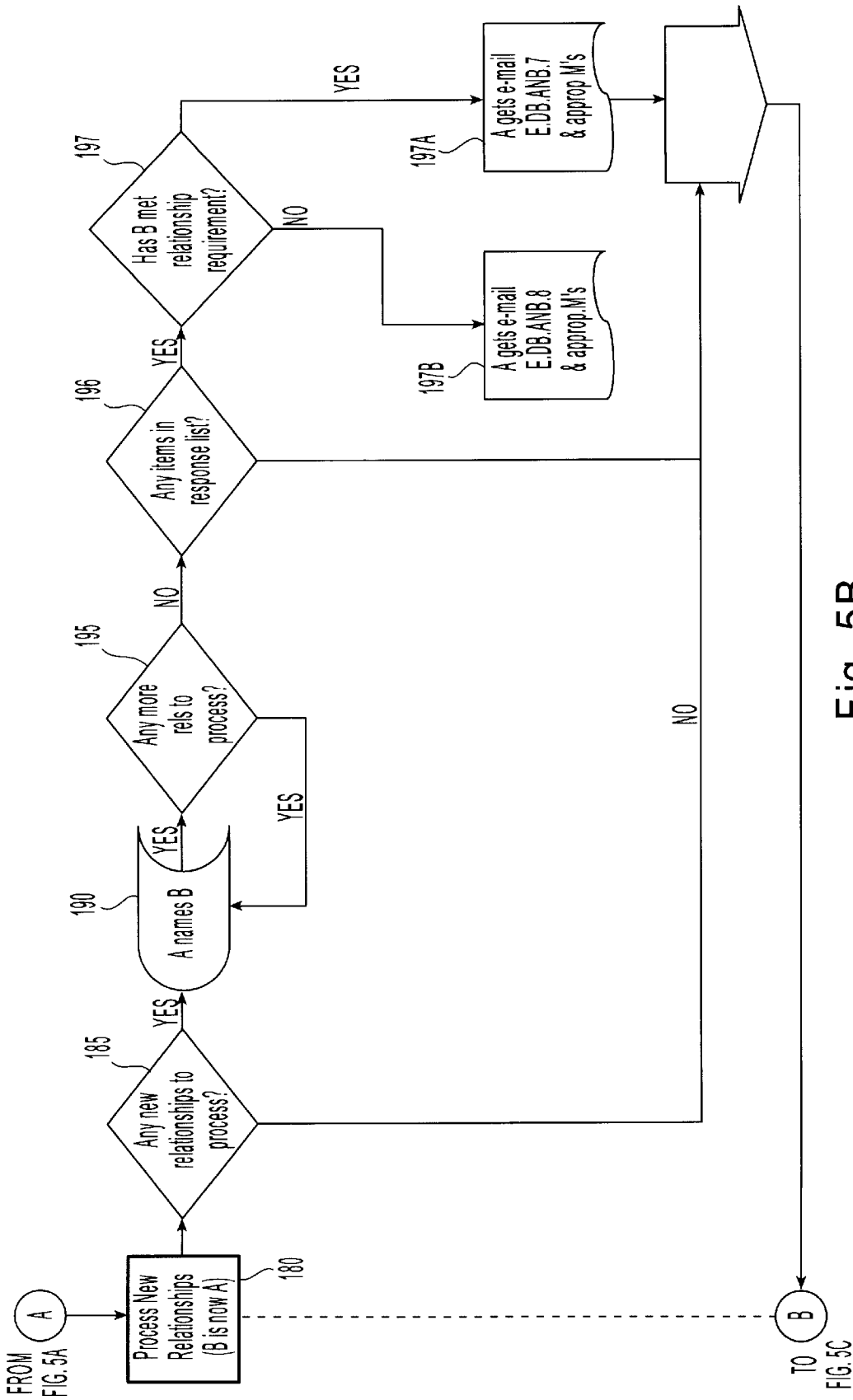


Fig. 5B

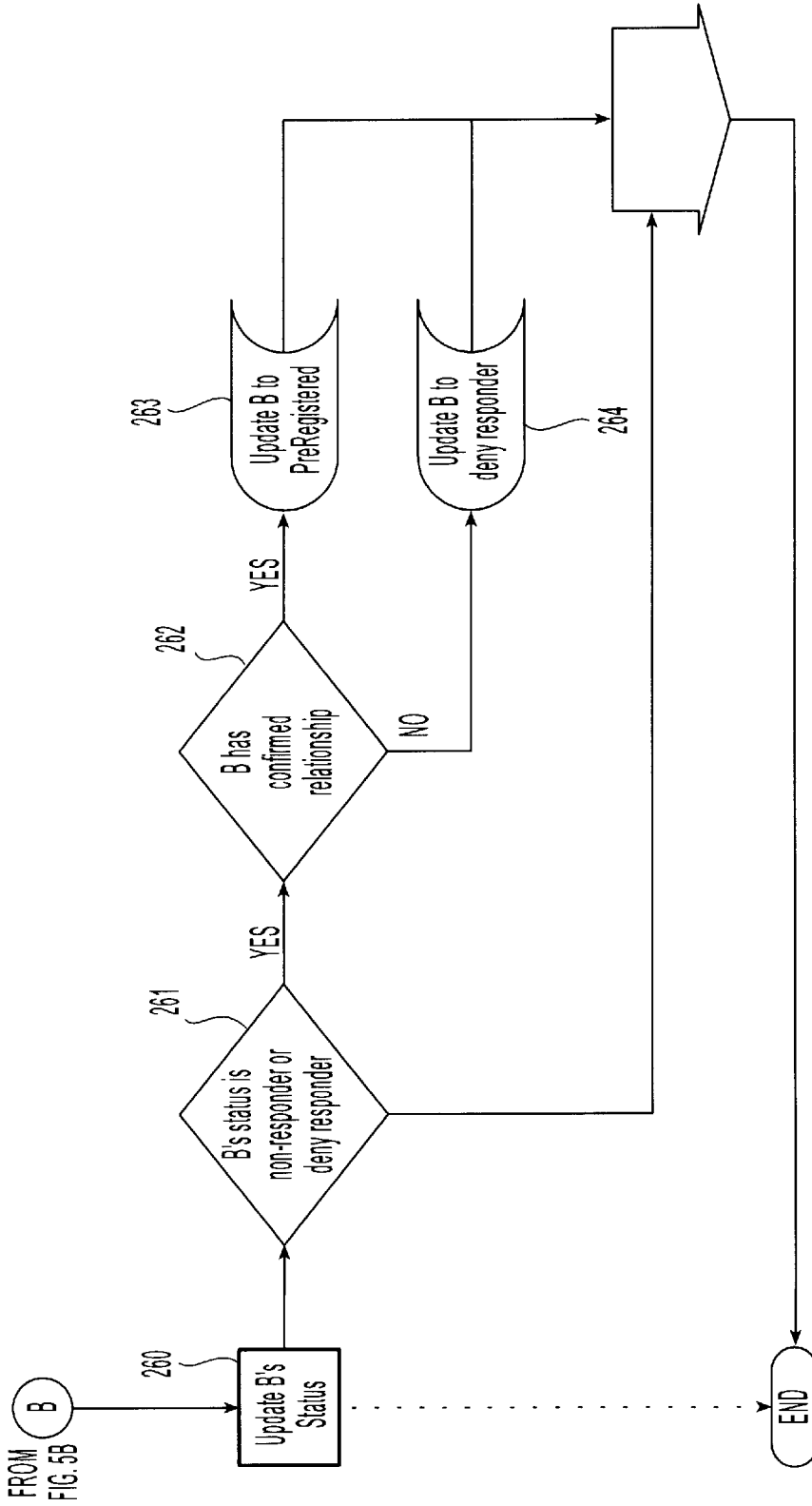


Fig. 5C

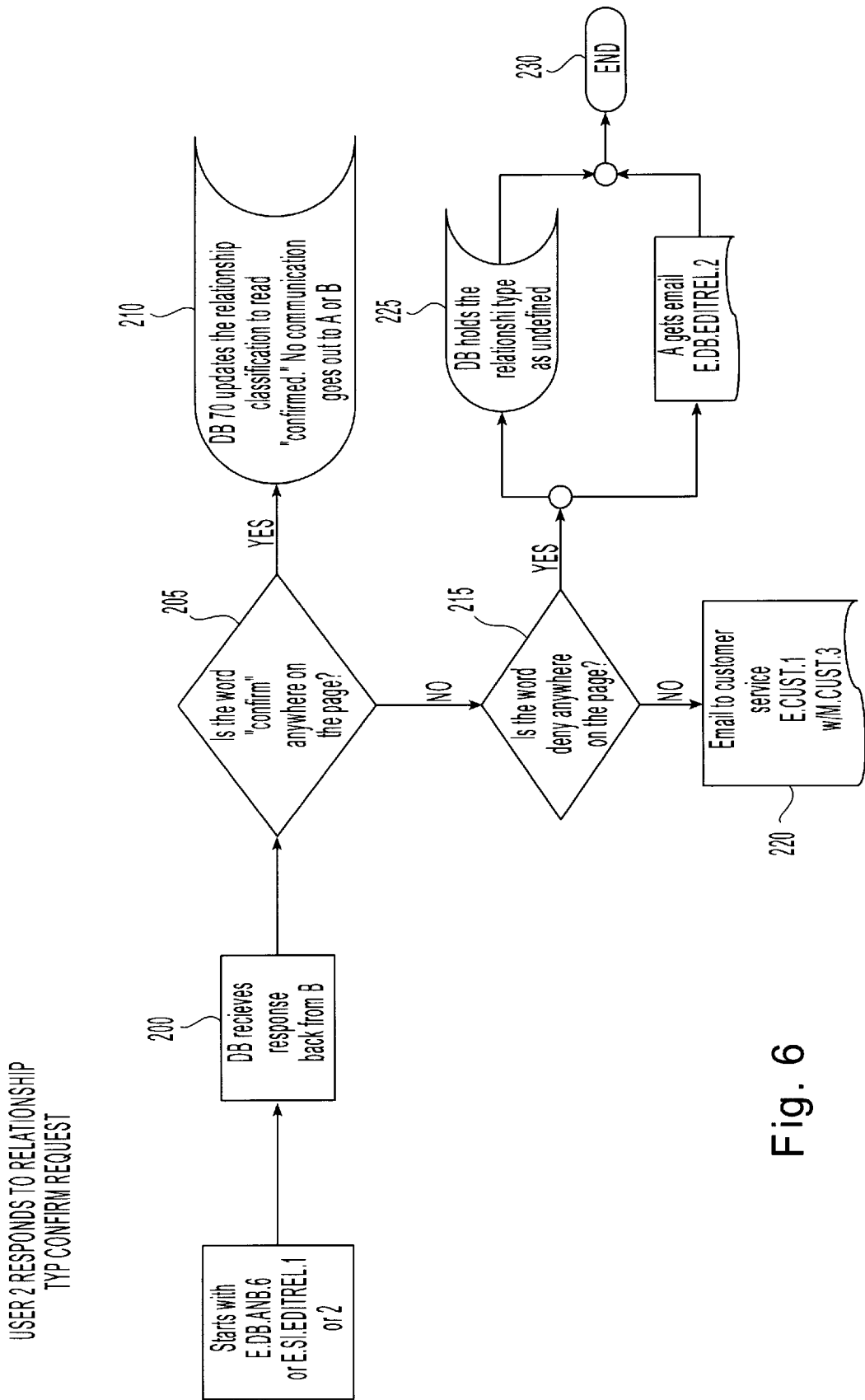


Fig. 6

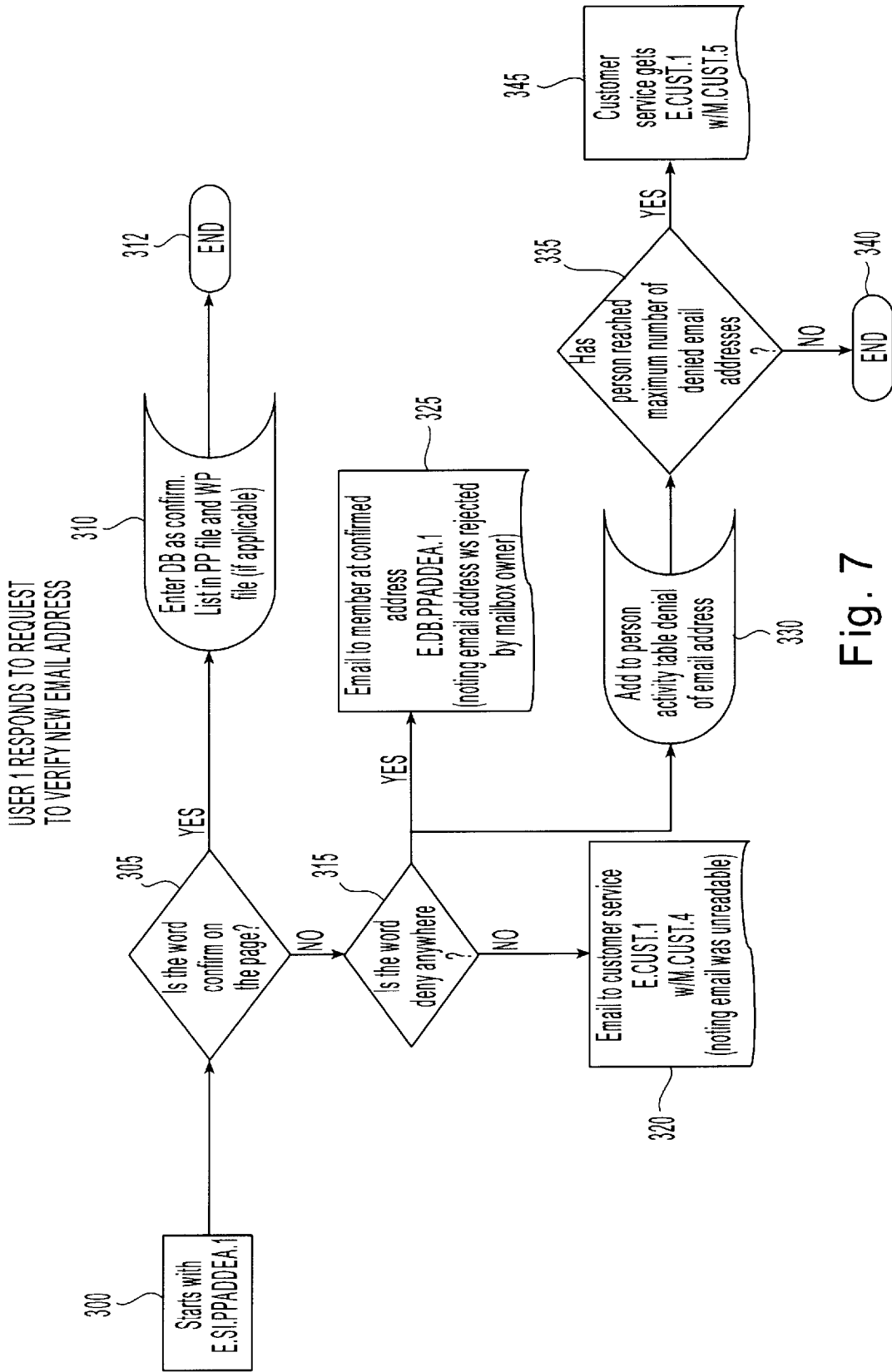


Fig. 7

Services Home Page

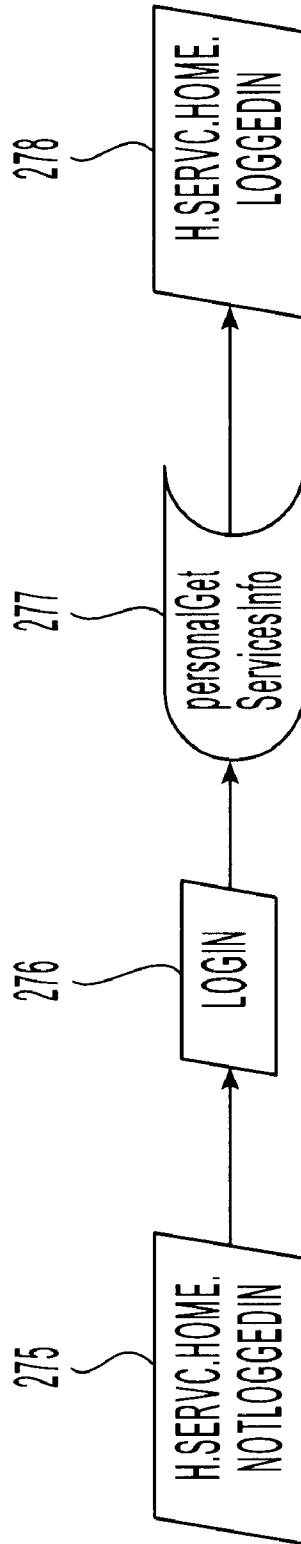


Fig. 8

Personal Profile - Update Contacts - add new

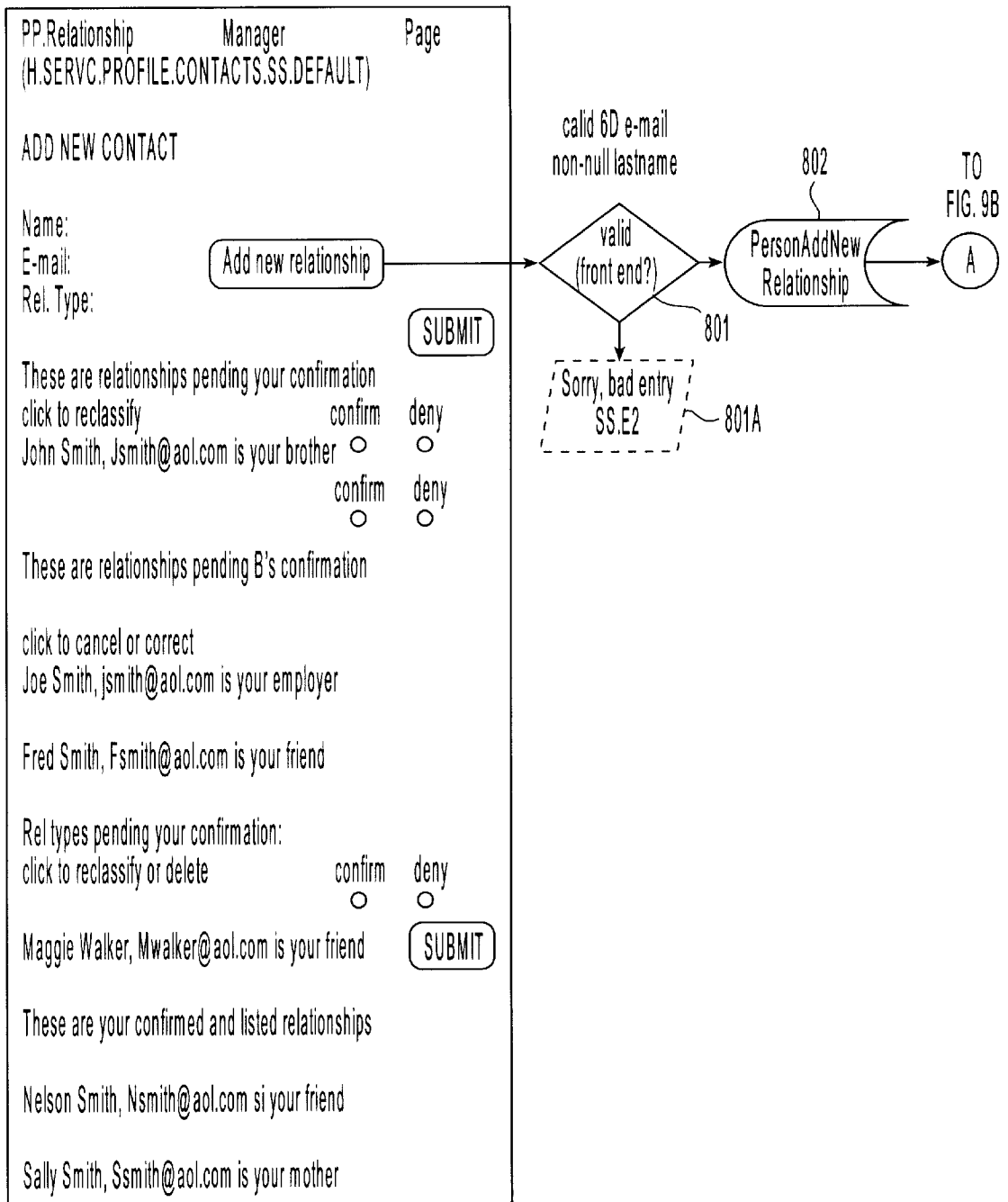


Fig. 9A

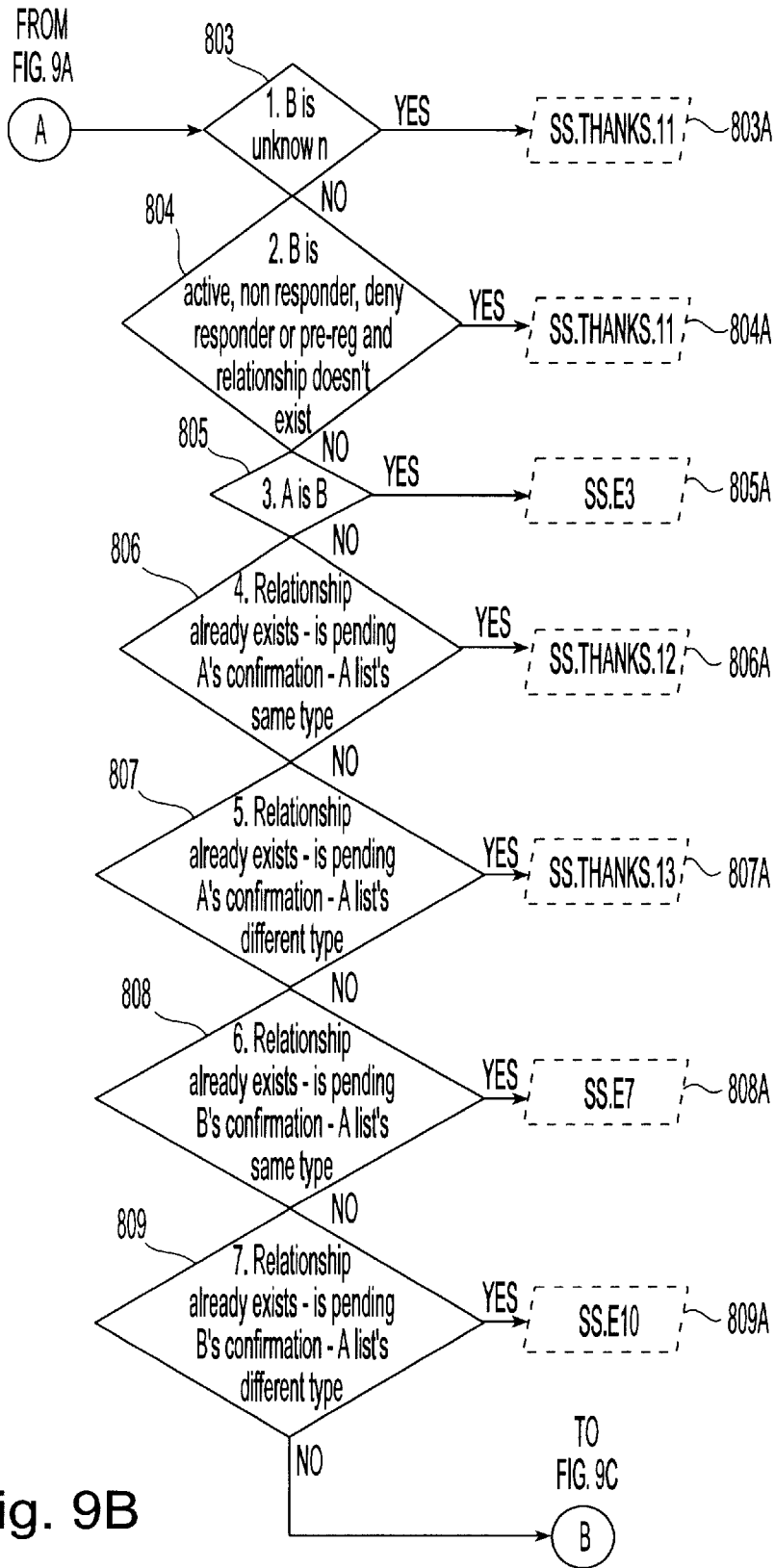


Fig. 9B

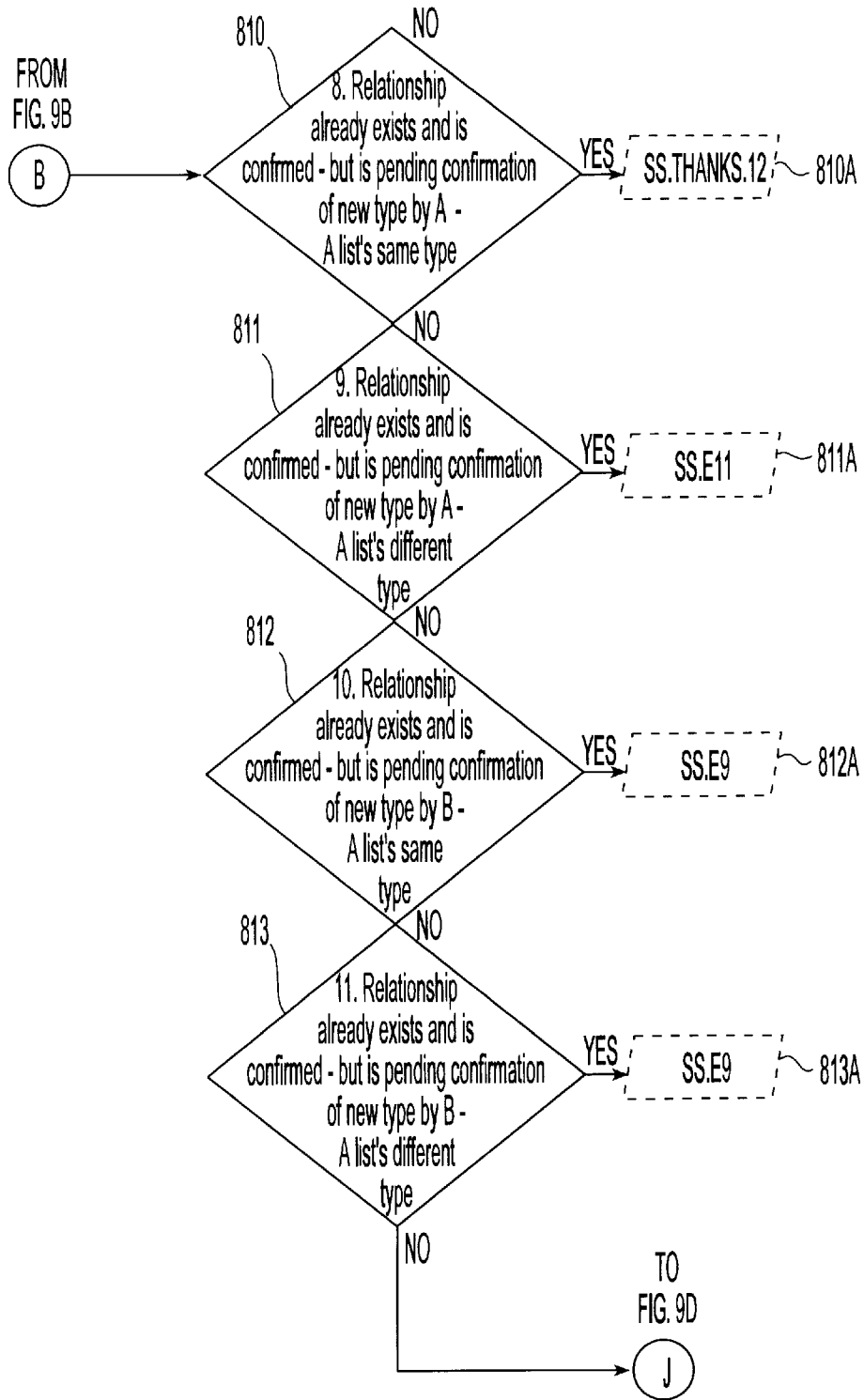


Fig. 9C

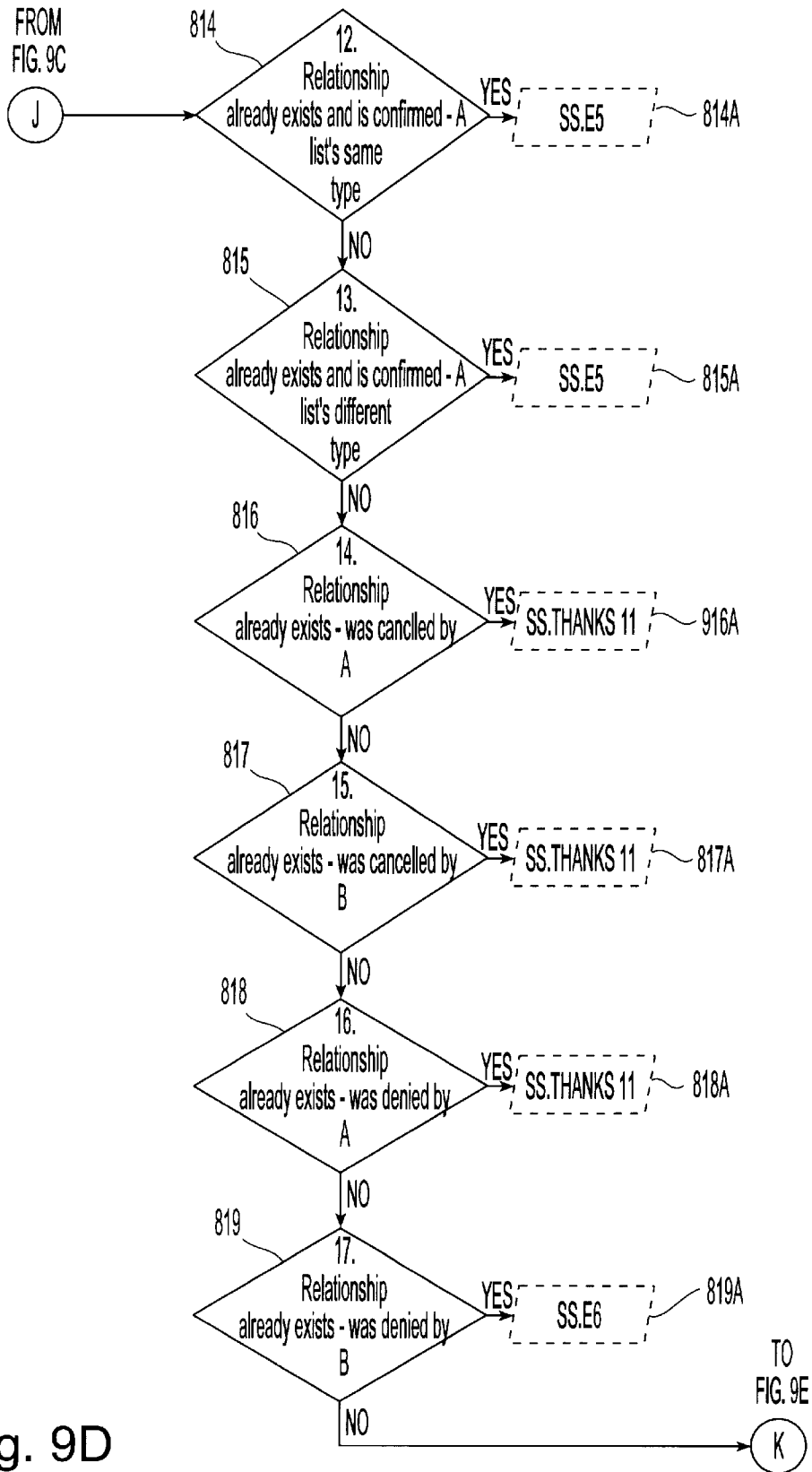


Fig. 9D

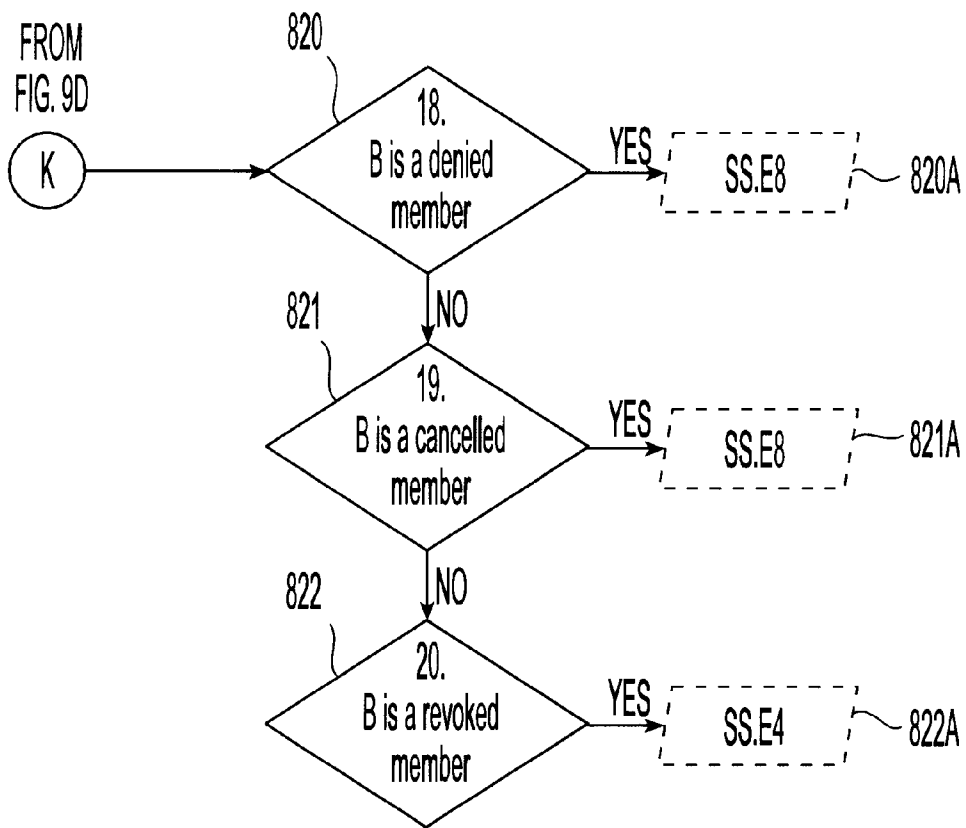


Fig. 9E

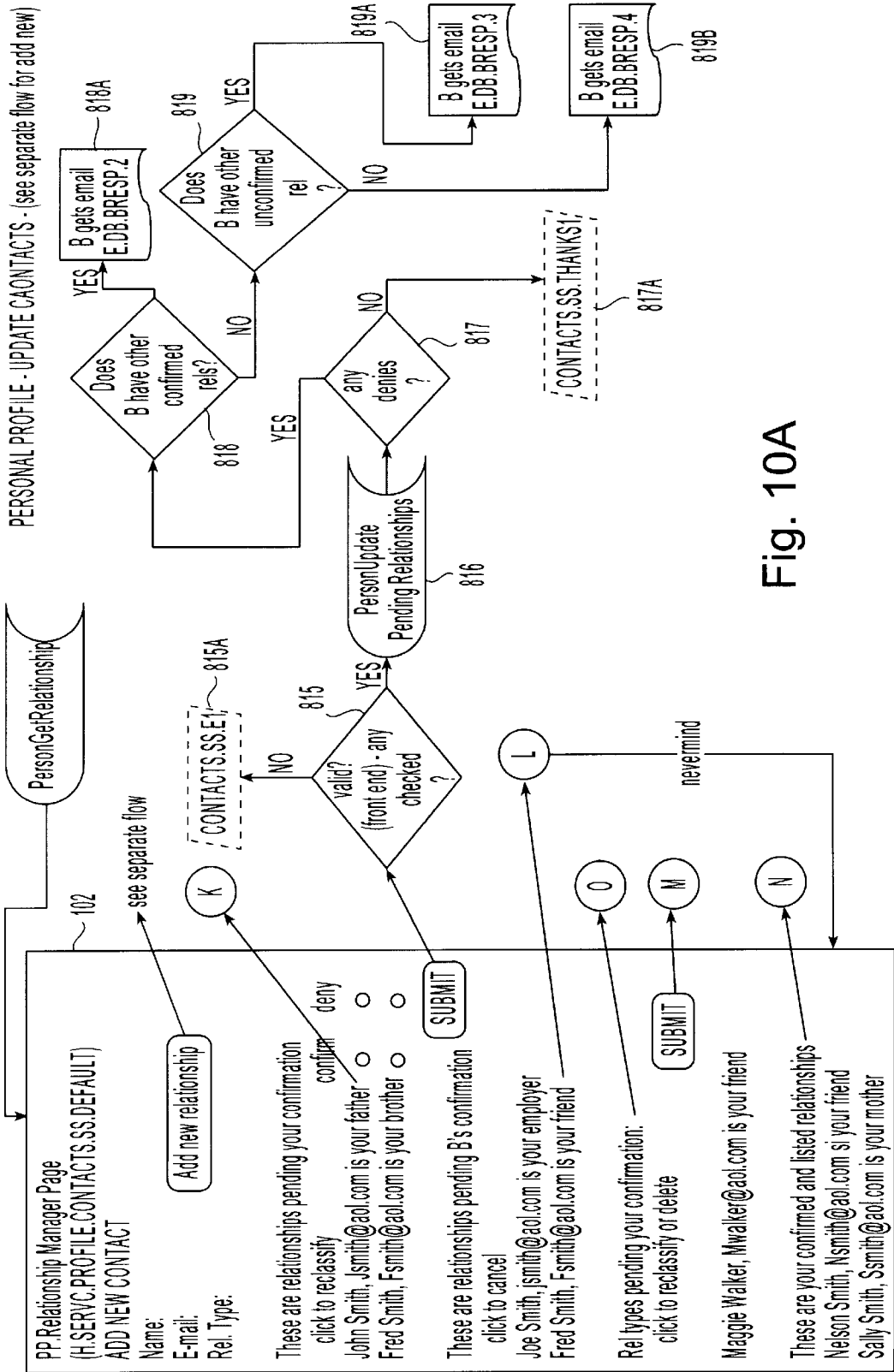


Fig. 10A

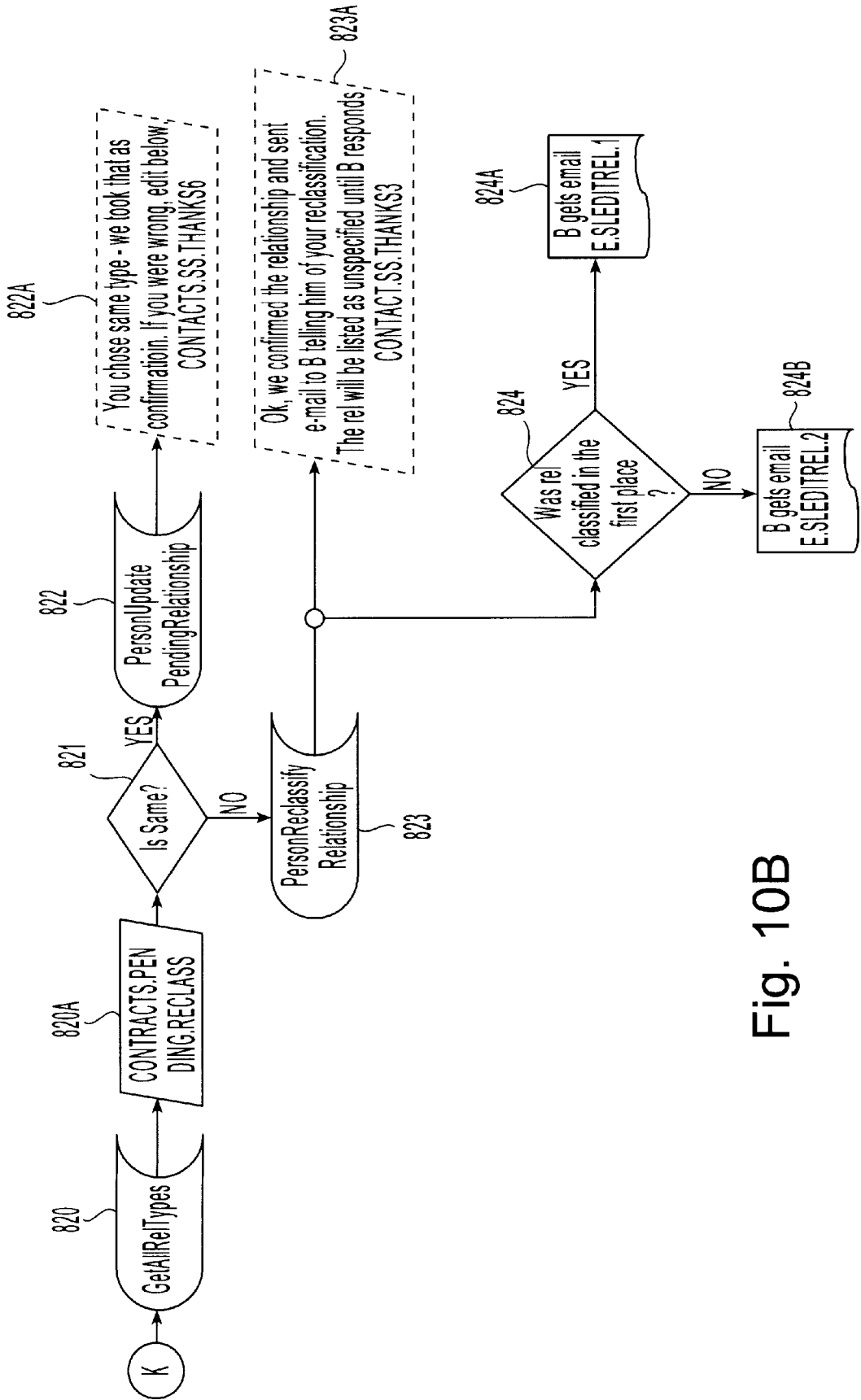


Fig. 10B

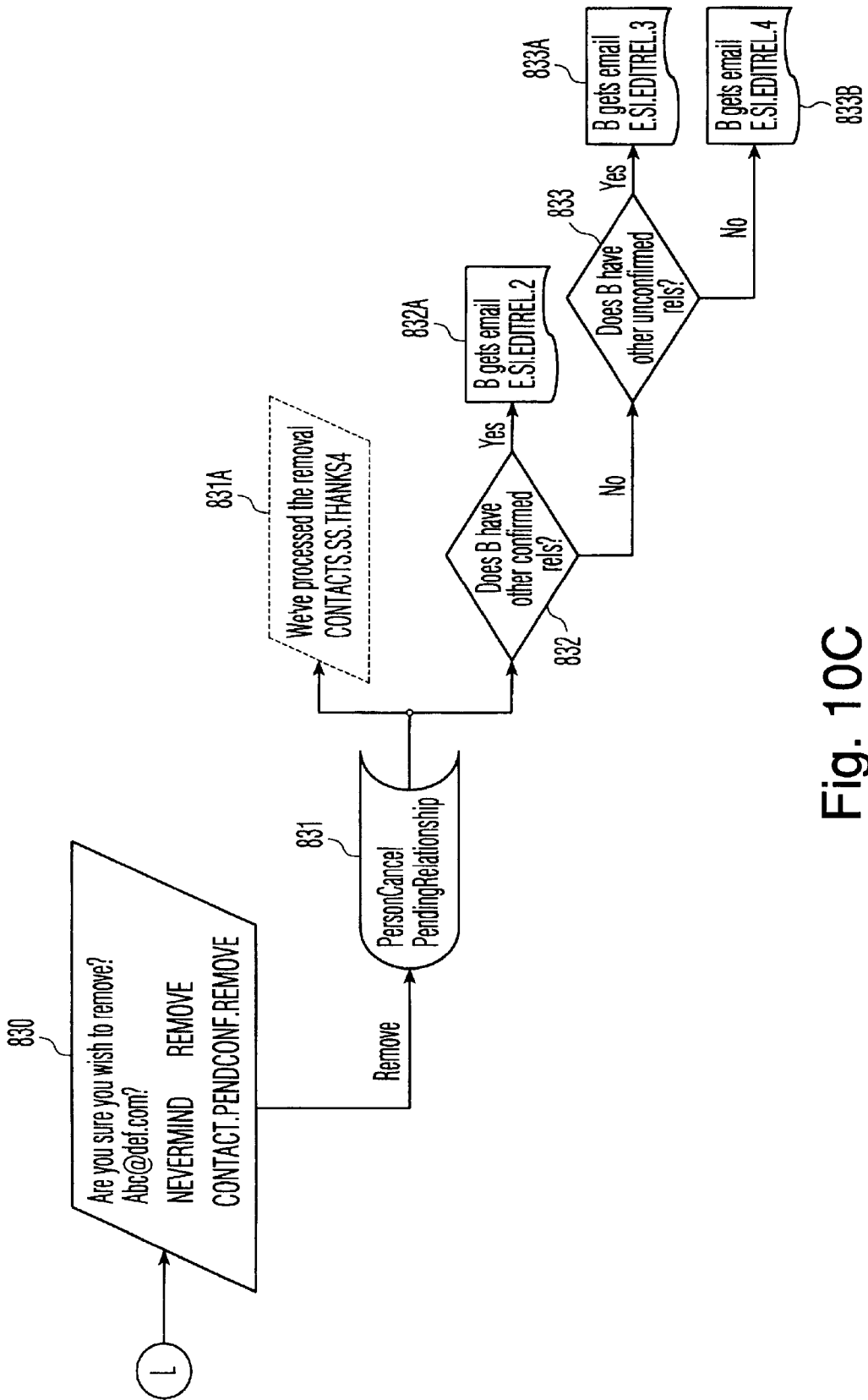


Fig. 10C

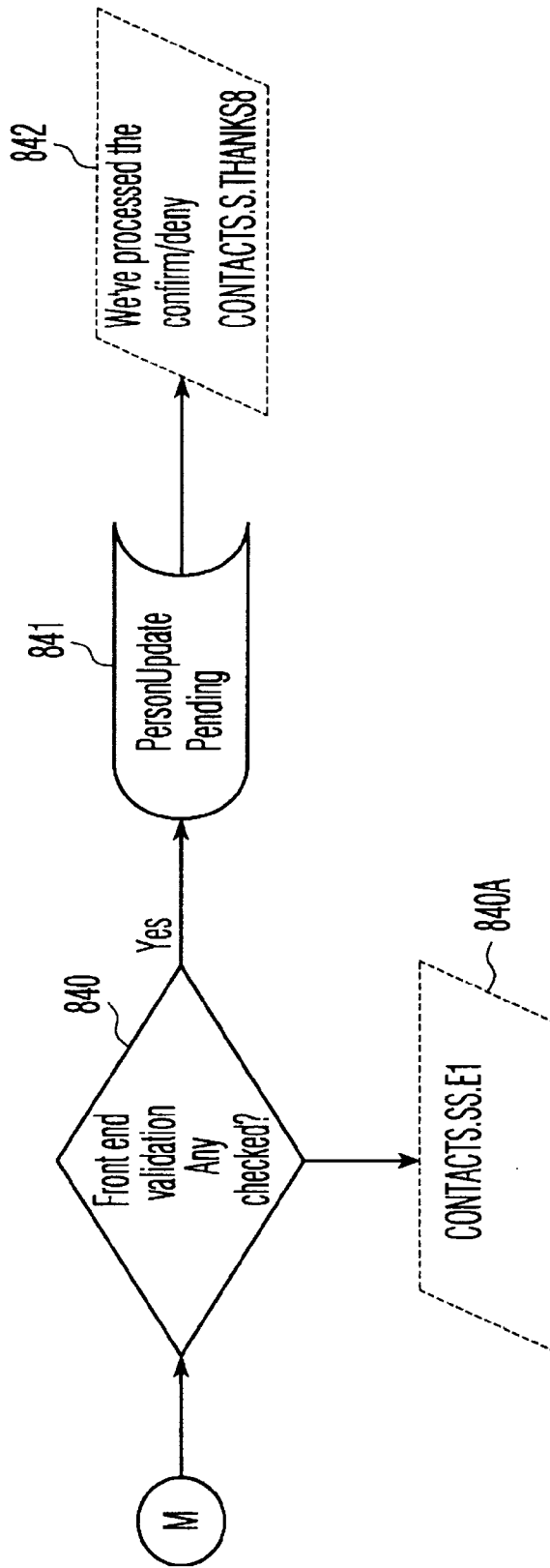


Fig. 10D

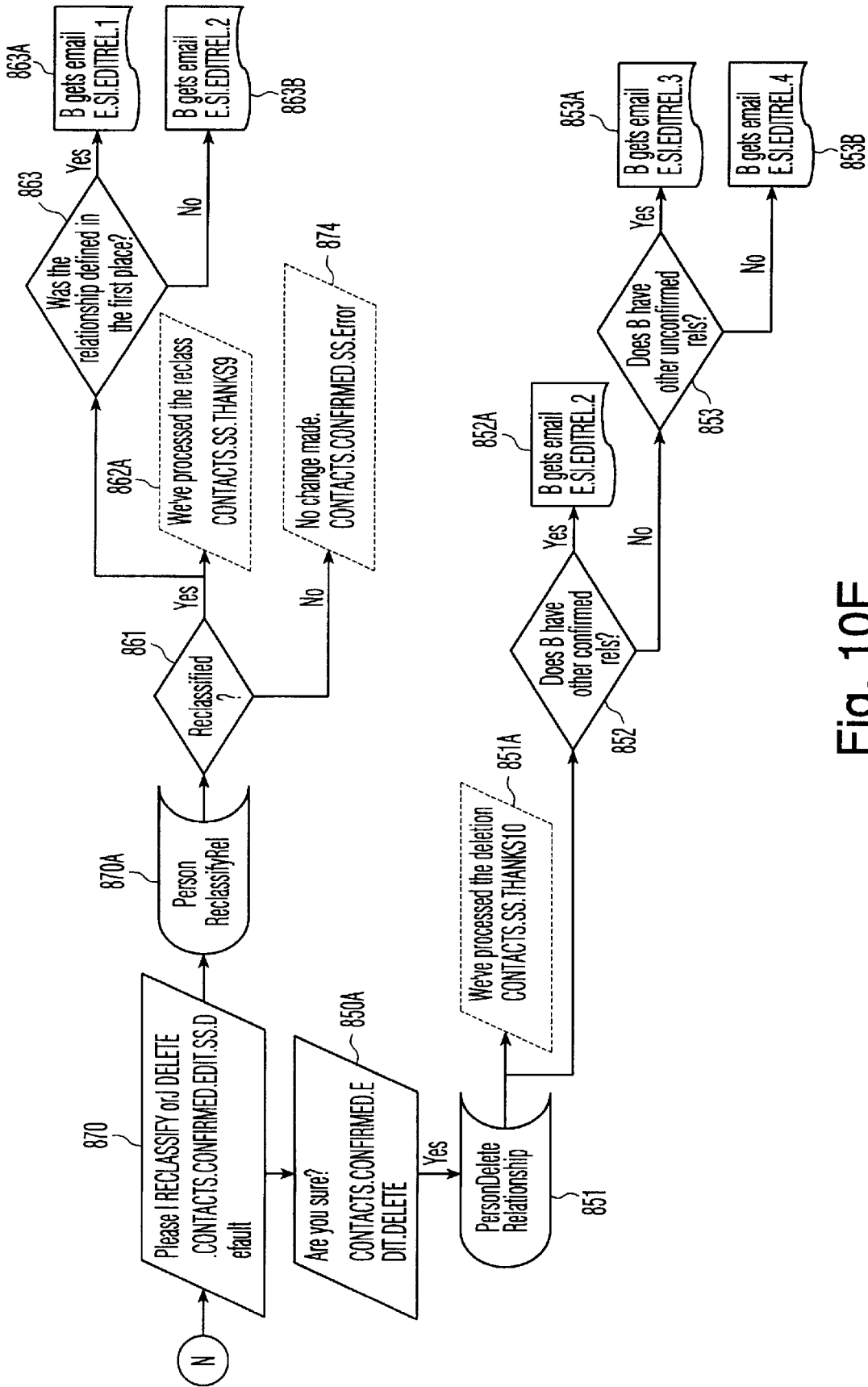


Fig. 10E

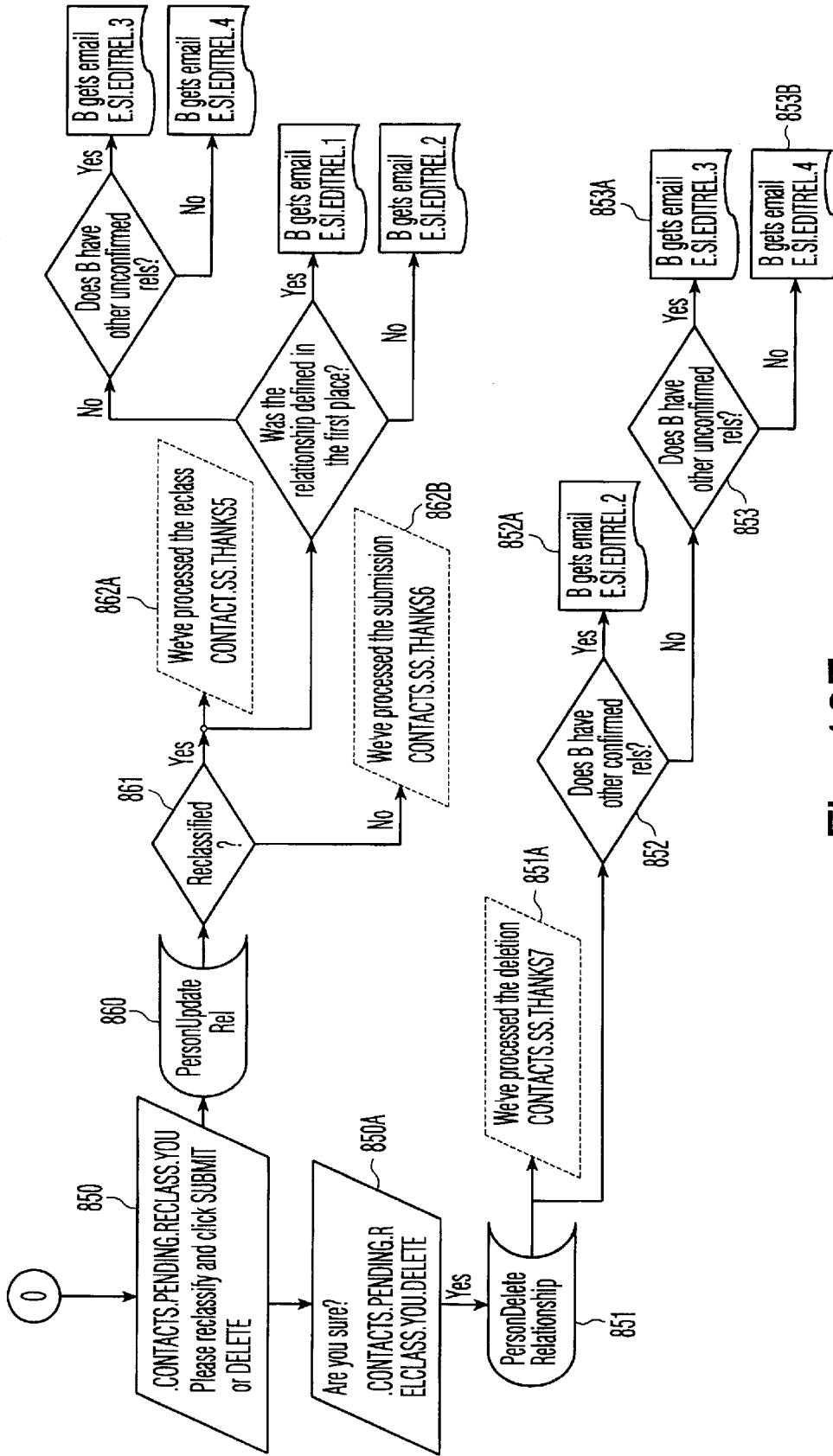


Fig. 10F

[H.SERV.C.PROVFILE.HOME.1]

Page welcomes member and displays entire profile as listed and gives options to edit

Welcome FN LN
Member since x/xx/xx
You last visited
You last updated PP

Name, aliases	EDIT
Gender	EDIT
Email address	EDIT
Password - type below <input type="text"/> <input type="text"/>	submit
Geography	EDIT
Occupation	EDIT
Hobby	EDIT
Skills	EDIT
White Pages Listing Name Email Address Phone	EDIT
Update contacts (Relationship manager)	EDIT
Cancel Membership	EDIT

Fig. 11

PERSONAL PROFILE - Edit White Pages

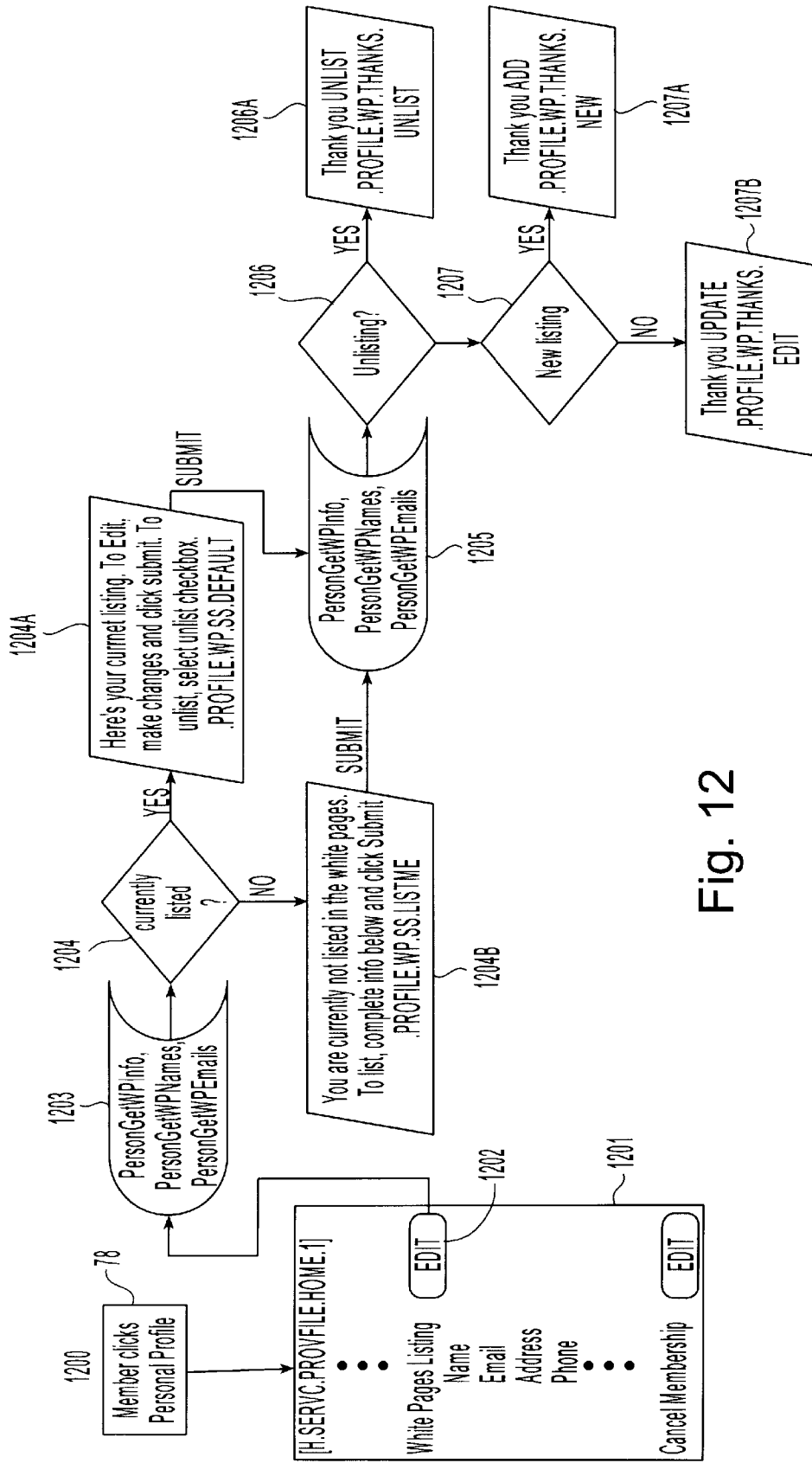


Fig. 12

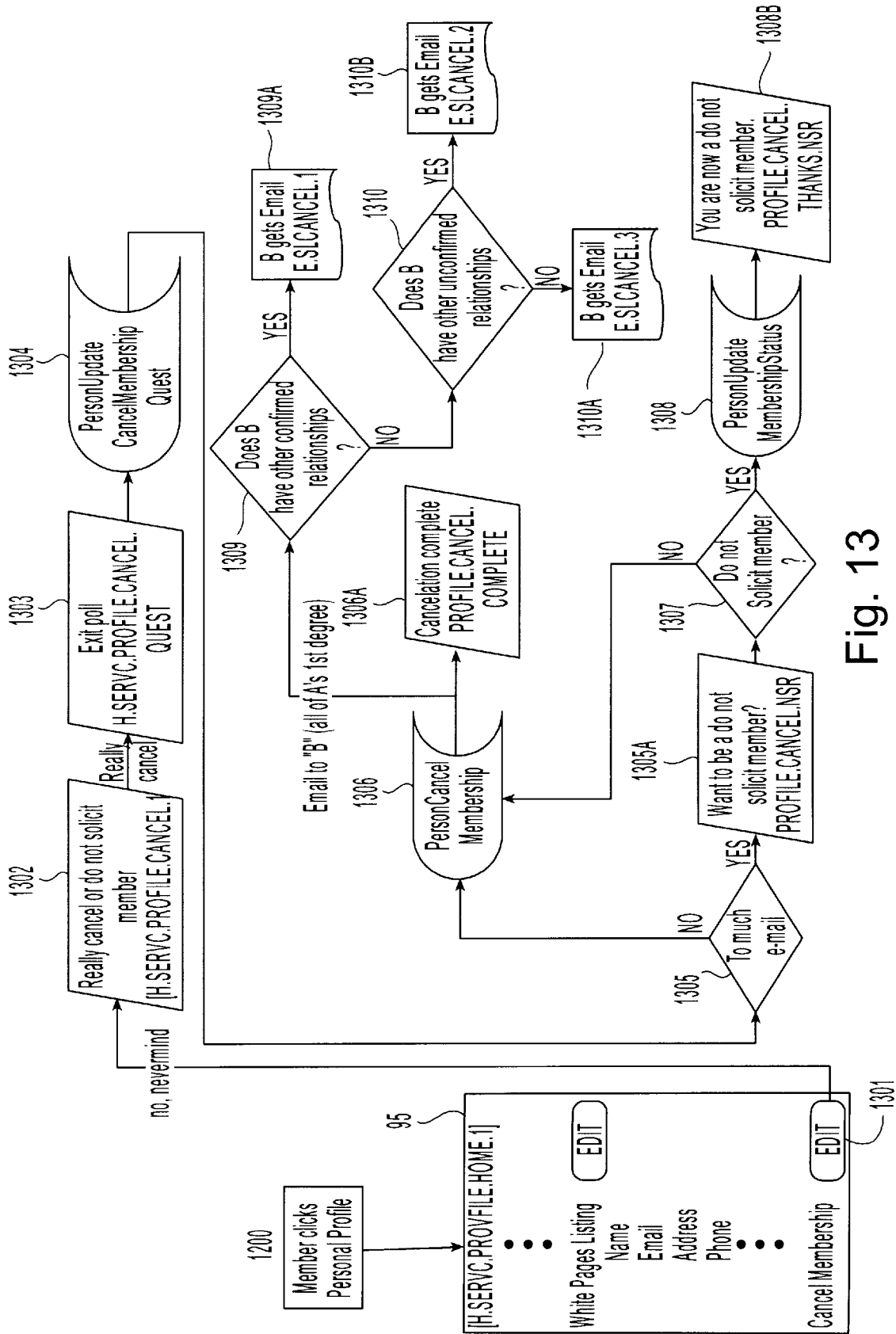


Fig. 13

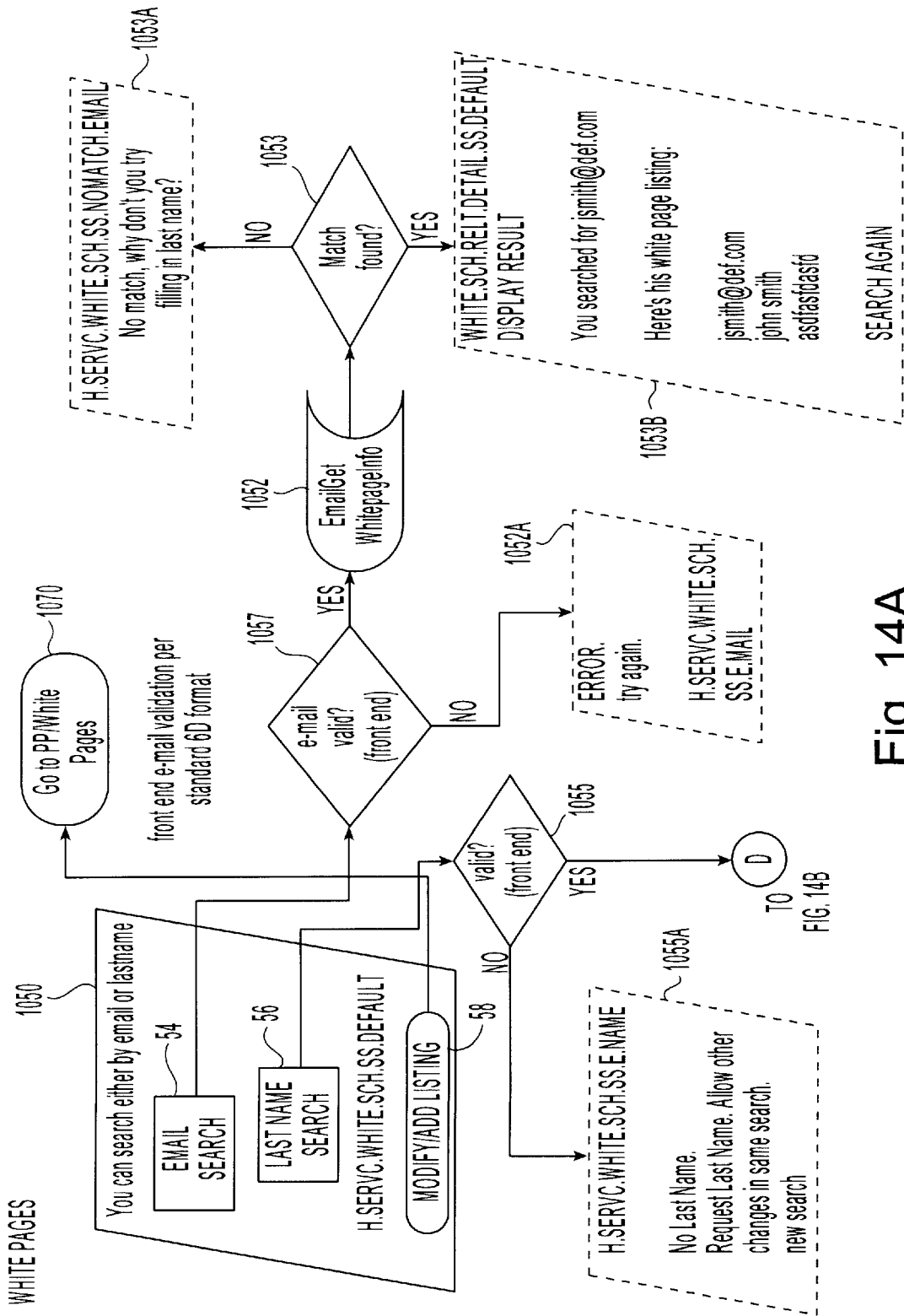


Fig. 14A

FIG. 14B

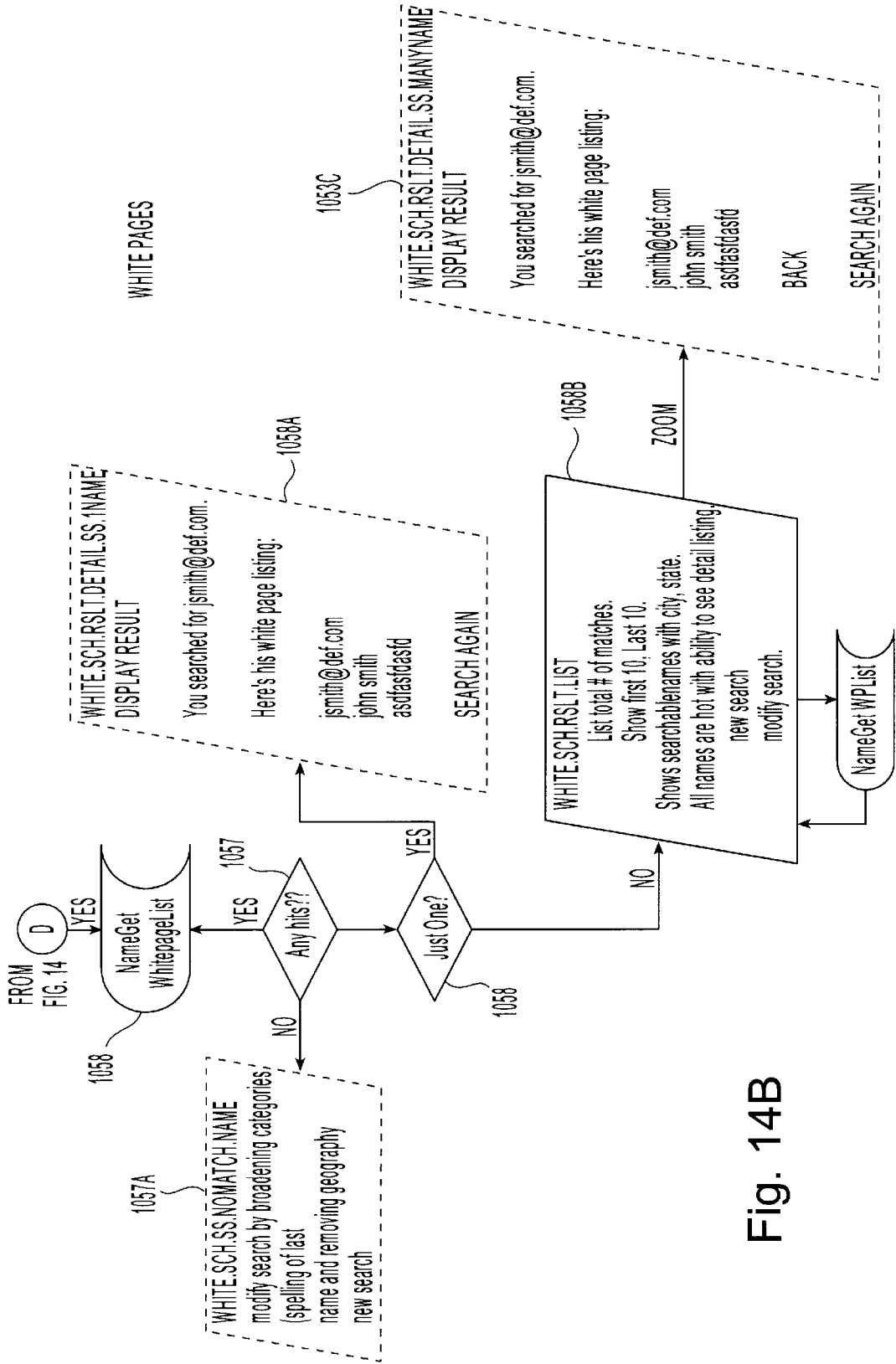


Fig. 14B

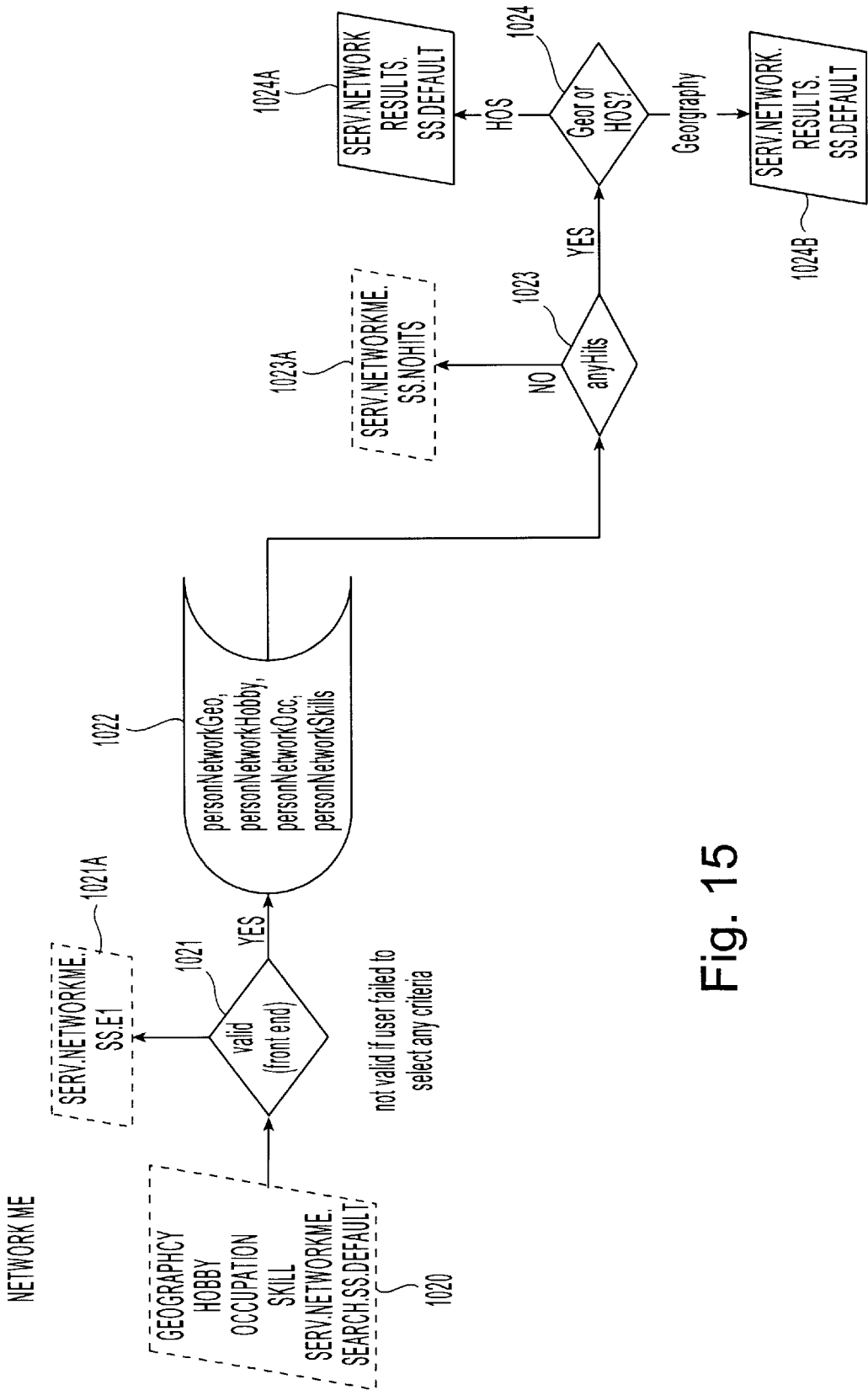


Fig. 15

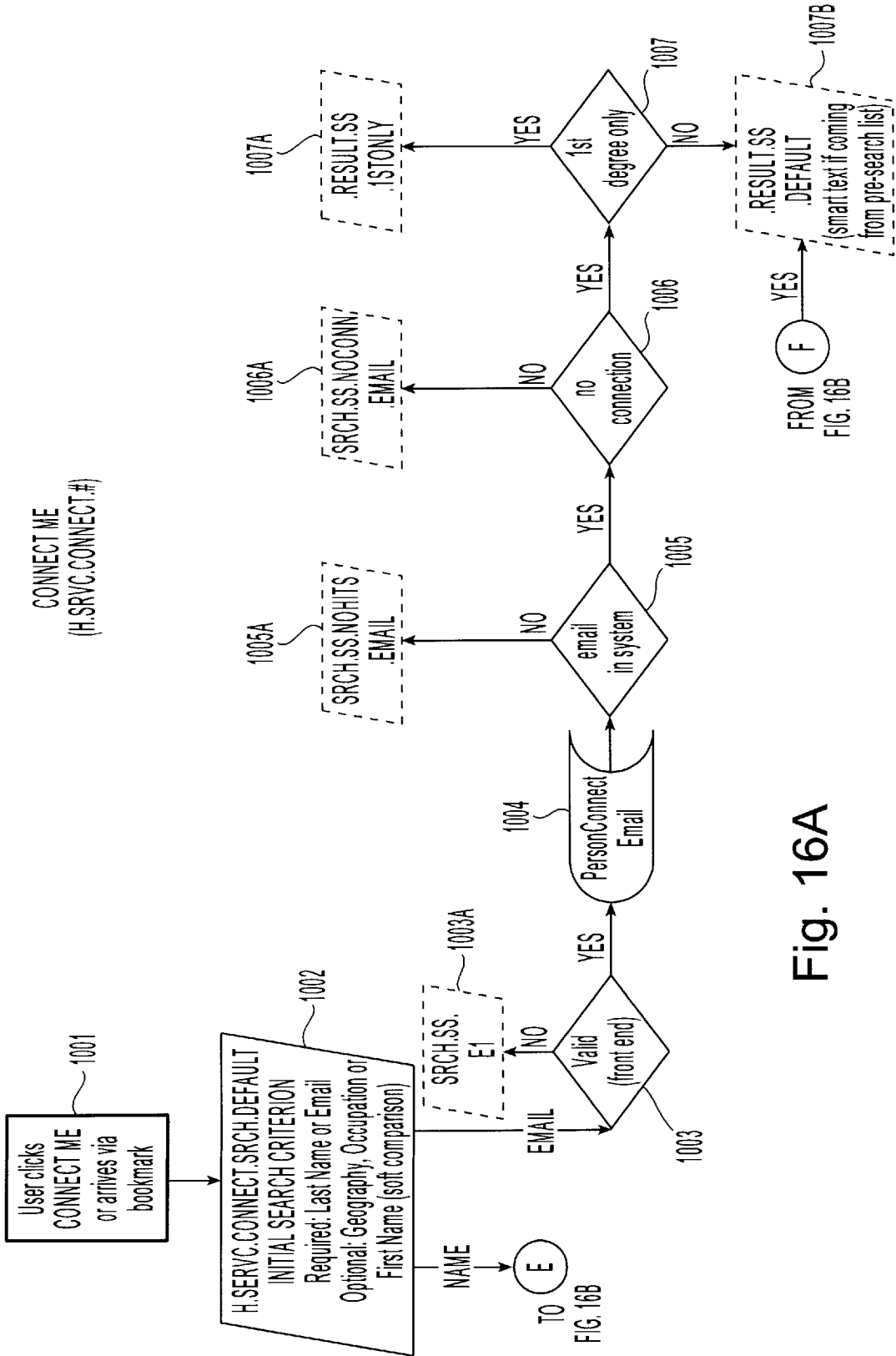


Fig. 16A

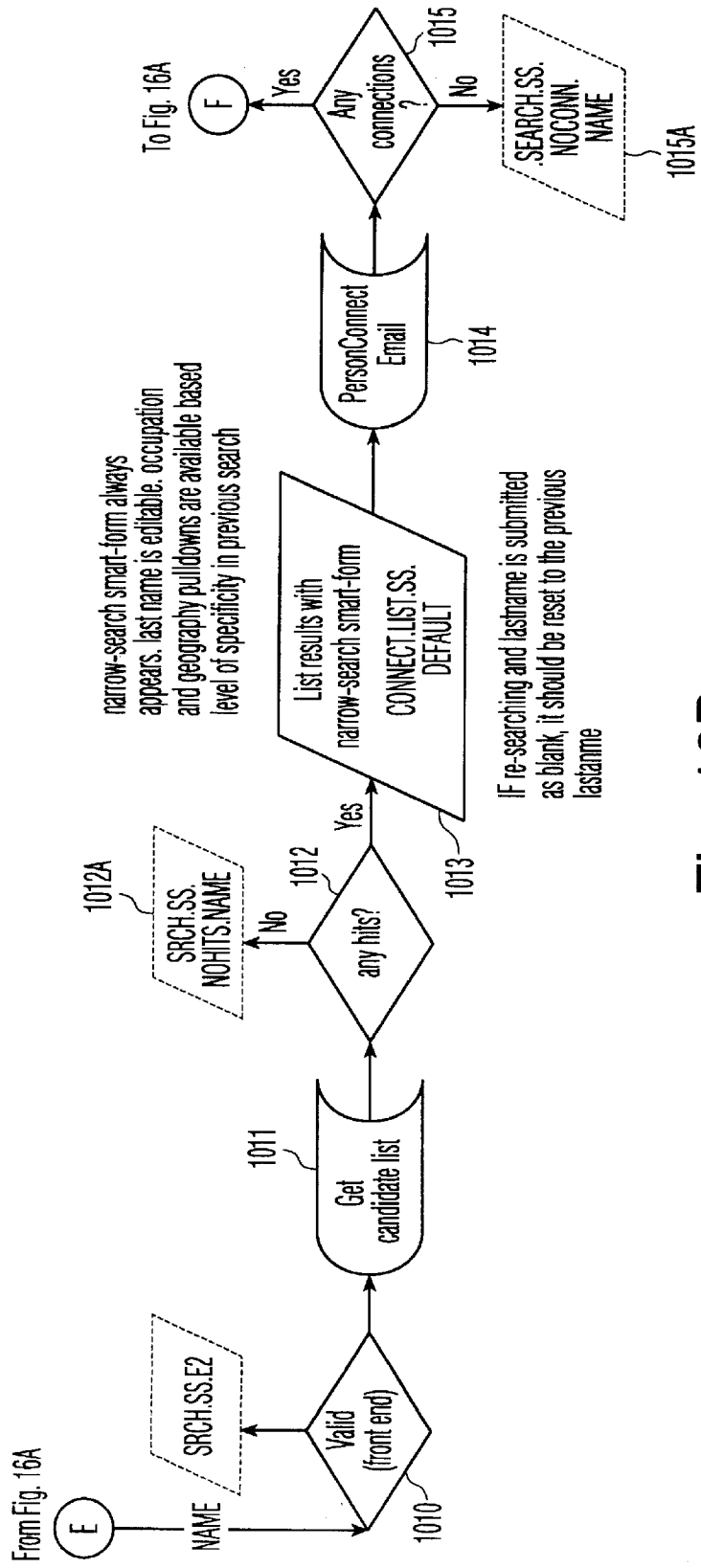
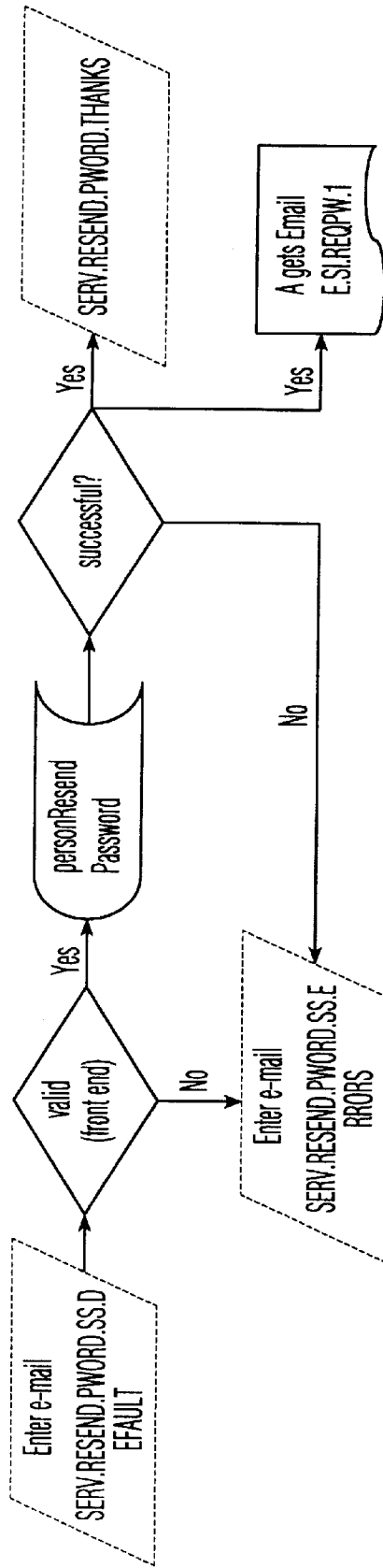


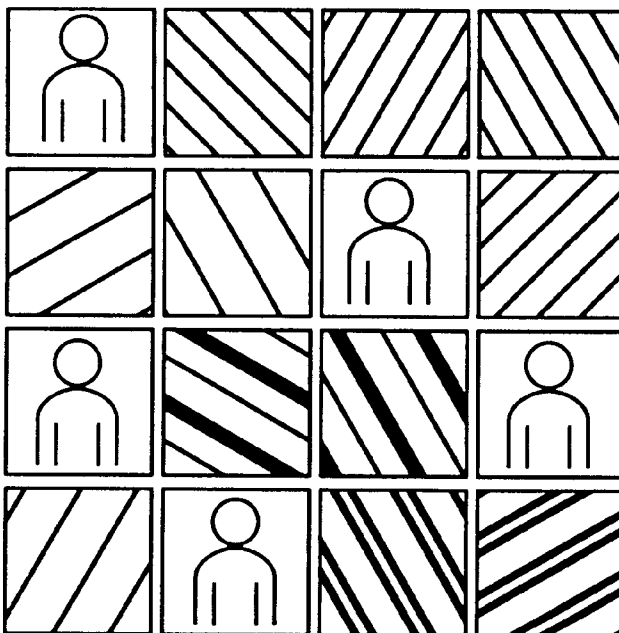
Fig. 16B



- E1: invalid e-mail address (front end)
- E2 - e-mail address not in system
- E3 - e-mail address for canceled member
- E4 - e-mail address for revoked member
- E5 - e-mail address for denied member
- E6 - exceeded daily resend limit

Fig. 17

It's all about who you know.



sixdegrees™

a free networking service

about
sixdegrees

services

become
a member

Fig. 18

METHOD AND APPARATUS FOR CONSTRUCTING A NETWORKING DATABASE AND SYSTEM

MICROFICHE APPENDIX

A Microfiche Appendix containing computer source code is attached. The Microfiche Appendix comprises 7 sheets of microfiche having 607 frames, including one title frame.

The Microfiche Appendix contains material which is subject to copyright protection. The copyright owner has no objection to the reproduction of such material, as it appears in the files of the Patent and Trademark Office, but otherwise reserves all copyright rights whatsoever.

1. Field of the Invention

The present invention is directed to a networking database having a plurality of records corresponding to individuals, more particularly to a networking database in which the records of registered individuals are linked by defined relationships to a record of one or more other individuals.

2. Background of the Invention

The concept of networking, that is, expanding one's knowledge of other people for a personal or professional advantage, is as old as politics. The advance of technology has made it easier for a person to contact another, but it still requires person-to-person contact.

With the remarkable spread of the Internet and the World Wide Web ("the Web") (collectively, the "Internet"), in recent years, electronic mail, or e-mail systems, have become well-known to the public. E-mail systems are used to transmit information among users, wherein each "user" is identified by a unique e-mail address.

Commonly, an e-mail address is assigned to each employee of large corporations or organizations for communication with colleagues or clients, as well as for internal communications between co-workers. The same is true of universities which often assign an e-mail address to each of their students, professors, and staff. Outside of these relationships, one may also obtain an e-mail address using on-line services, such as America Online and CompuServe, or more specialized e-mail providers, such as MCI Mail, and other Internet-access providers. Needless to say, to communicate by e-mail, one generally must first know the intended recipient's address. E-mail address directories may or may not be available to the general public.

Obtaining e-mail service from a private company is often expensive and, in many cases, the services provided are more expansive than a customer would like to endure. Thus, the service can be cumbersome and hard to comprehend for the user.

Recently, however, some firms have started e-mail systems that are free to consumers. For example, Juno Online Services offers an e-mail service wherein a user is assigned an e-mail address in exchange for a profile describing themselves and their tastes. The Juno system provides software that is loaded onto the hard drive of the user's computer system to be used and provides the user with the ability to read incoming e-mail messages and send e-mail messages. The Juno system, however, does not allow the user to send or receive attachments such as computer records containing graphics or spreadsheets along with an incoming or outgoing e-mail message. Moreover, Juno, in exchange for using the system, sends advertisements to the user based upon the personal information requested, which includes hobbies, traits, education, occupation, etc. This potentially becomes a significant nuisance. In addition, the system is

generally slower than other systems because of the added text from the advertisements. This is problematic, especially, when the user is anxiously awaiting an e-mail message.

These e-mail systems are useful for e-mail advertising and marketing. They generate money based on subscription cost or by advertising to the user. However, they are otherwise limited in their usefulness to the users of the system.

OBJECT AND SUMMARY OF THE INVENTION

As realized by the present applicants, these prior art systems do not provide any mechanism whereby one user can take advantage of the database comprised of the authorized users of e-mail systems for personal and/or professional gain. As also realized by the inventors, if an individual can register with the database, for example, by providing professional and personal data, and perhaps other selected criteria common to all (or significant numbers of the users), the user consequently can be linked to a plurality of other such individuals who have similarly provided information based on defined linking relationships.

It is, therefore, an object of the present invention to provide a networking database in which a plurality of individuals register and become respectively linked with one or more other registered individuals by defined relationships.

It is another object to provide a method of constructing such a networking database.

It is yet another object to allow a user to perform a search using the database and the defined relationships in order to determine specific information about a registered user.

The present invention is thus broadly directed to a networking database and a method of constructing a networking database. The invention also relates to applications of the networking database in commercial enterprise.

In one embodiment, the method of the present invention is directed to constructing a networking database by having a first user sponsor a second user using a first defined relationship, wherein the second user confirms the sponsored defined relationship, and in turn, sponsors a third user using a first (or a different) defined relationship. The confirmation of a defined relationship and the sponsoring of the third user renders the second user a member of the database. The third user, upon sponsoring a fourth user and confirming the proposed defined relationship with the second user, also is in the database. Thus, a link is established between the first and fourth users, who it is assumed do not know each other, through the second and third users, through a chain of three defined relationships. In this manner, by each sponsored user confirming the original sponsored defined relationship and in turn sponsoring one or more other users, the database grows in size, arithmetically, geometrically, or exponentially as the case may be.

In a preferred embodiment, the method of constructing the database concerns issuing an e-mail from a database service provider to a first individual. The individual is invited to respond to the delivered e-mail by providing selected information. The selected information includes, for example, a name and an e-mail address of a second individual that the first individual proposes to sponsor for membership in the database, a description of a relationship between the first individual and the second individual, and perhaps selected information about the first individual. The first individual preferably returns the selected information by e-mail to the database service provider. The database service provider scans the incoming e-mail from the first individual, extracts from the e-mail message the information

concerning the second individual, and then generates and transmits to the second individual an e-mail message inviting the second individual to join the database.

The second individual is thus invited to respond by providing information about a third individual, and perhaps by providing selected information regarding the second individual. The information about the third individual includes, a description of a relationship between the second individual and the third individual, for example, the name and an e-mail address, and perhaps other information. In the case of a second individual, the second individual is also invited to confirm the relationship between the first individual and the second individual. The second individual may confirm or deny the relationship with the first individual. In addition perhaps, the second individual may modify the relationship type as proposed by the first individual.

In the case that the second individual confirms the relationship with the first individual, this confirmation creates a defined relationship between the first and second individuals. This information is stored in the database, in records respectively associated with the first and second individuals. Similarly, if the third individual confirms or denies a relationship with the second individual, this information also is stored in the relationship database. In the event that each individual has at least one defined relationship, that individual becomes a pre-registered member of the database. A pre-registered member who completes all of the other membership requirements (see FIGS. 4A–4C) is known as an “active” member. Importantly, in this embodiment, the messaging is entirely electronic, that is, by e-mail. It is, thus, automatic and a database can be quickly constructed.

In the foregoing manner, numerous individuals can become members of the database, each member having a defined relationship to at least one other member in the database which is a confirmed relationship of one sort or another.

In addition to the e-mail communication system for joining the database, individuals also may be able to join the database by accessing a Web-site of the database service provider on the Internet. This is done in a conventional manner by accessing the Web-site through an Internet service provider. Once the user has logged into the Web-site, he can input certain information and sponsor other individuals to become members, thereby beginning the registration process. Each individual who is a pre-registered member will have the opportunity to provide additional information regarding personal characteristics. This information also becomes part of the database associated with the individual. This information is preferably input, and thus can be edited, via the Web site of the database service provider.

The first individual sponsoring a second individual, via the Web-site, causes an e-mail message to be automatically generated and delivered to the second individual. This e-mail message prompts the second individual to respond by e-mail in the manner as previously described. The second individual may respond by e-mail as previously described, or alternatively, may access the Web-site to find out more information regarding the database service provider, and proceed with the registration process through the Web-site instead of the e-mail communications technique.

In this way, the database can become constructed automatically, based on information which is entered electronically. Moreover, the growth of the database can become exponential as more and more members sign up additional members who in turn sign up an additional number of members. Thus, it is not inconceivable that the database can

contain hundreds of thousands, if not millions, of individuals, each having a record in a database, in which the individual provides selected personal information. The files are password protected for security and privacy reasons.

The database, thus constructed, contains defined relationships between different pairs (or groups) of individuals. As noted, these pairs of individuals can be linked or interconnected by chains of defined relationships so that one individual can access the database and, through one or more defined relationships, locate another individual who is also a member of the database by some characteristic, that is information that was input into the database. Although the searching individual may not personally know the individual who is the object of the search, the searching individual has a defined relationship with someone, who has a defined relationship with someone, etc., and finally the object individual can be connected through this networking to the searching individual.

As appreciated by the inventors, the basic concept of the networking database, having defined relationships between individuals, is a unique application of the theory that everyone is linked to everyone else on the planet through a maximum of six defined relationships.

Although the principal invention concerns the use of e-mail and the Internet based on ease of communications and automatic processing, it should be understood that alternate messaging forms could be used, for example, telephone numbers whereby information could be input by touchtone keypads.

The networking database of the present invention has applications for searching in terms of finding other individuals in the database, finding a connection to other users in the database, and finding other individuals in the database having particular professional or personal characteristics or features that are of interest to another member.

BRIEF DESCRIPTION OF THE DRAWINGS

Further features of the invention, its nature, and various advantages will be more apparent from the accompanying drawings, and the following detailed description in which like reference numerals refer to like elements and in which:

FIG. 1 is a block diagram of a networking database system (NDS) in accordance with a preferred embodiment of the present invention;

FIG. 2 is a flow chart illustrating routine, Become A Member, in accordance with the NDS of FIG. 1;

FIG. 3 is a flow chart showing routine, USER1_Names_USER2 using the NDS of FIG. 1;

FIGS. 4A, 4B and 4C are flow charts illustrating routine LOGIN in accordance with the NDS of FIG. 1;

FIGS. 5A, 5B and 5C are flow charts showing the USER2_Responds routine of the NDS of FIG. 1;

FIG. 6 is a functional flow diagram showing the process, USER2_Responds_to_Relationship_Type_Confirm_Request, using the NDS of FIG. 1;

FIG. 7 is a flow chart illustrating routine, USER1_Responds_to_a_Request_to_Verify_a_New_E-mail_Address, in accordance with the NDS of FIG. 1;

FIG. 8 is a functional flow diagram showing the Web-site Services routine of the NDS in FIG. 1;

FIGS. 9A–9E are flow charts illustrating the process, Add New Relationship to a personal profile of the present invention;

FIGS. 10A–10F are flow charts showing the process for editing the personal profile of FIG. 9;

FIG. 11 is an illustration of the personal profile edit screen of the present invention;

FIG. 12 is a functional flow diagram showing a method for editing the white pages using the screen of FIG. 11;

FIG. 13 is a flow chart illustrating a method for canceling a membership using the screen of FIGS. 9A–B;

FIGS. 14A and 14B are flow charts showing a first application using the NDS of FIG. 1;

FIG. 15 is a functional flow diagram showing a second application using the NDS of FIG. 1;

FIGS. 16A–16B are flow charts illustrating a third application using the NDS of FIG. 1; and

FIG. 17 is a flow chart showing a fourth application using the NDS of FIG. 1; and

FIG. 18 is an example of a home page on a Web site according to the present invention.

DETAILED DESCRIPTION OF THE DRAWINGS

Referring to FIG. 1, there is generally shown a networking database system (NDS) 10 in accordance with the present invention. The NDS 10 includes a plurality of computers 14, each of which is coupled to a network 11, and, in turn, to a database service provider (DSP) 12. Each computer 14, of which one is shown in some detail and two others are represented in block form, is typically a personal computer, such as a Windows-based workstation, having a memory 24 containing communications software 27 and a modem 20 (or some other form of Internet connectivity, such as a T-1, ISDN line, etc.). Communications software 27 may be any software suitable for telecommunications, and is preferably browser or e-mail software. Modem 20 is used with communications software 27 for communication over network 11 with a DSP 12, more particularly a web server 35 of DSP 12.

Web server 35 is typically a programmed computer, more specifically one which supports a HyperText Transfer Protocol (http), that handles requests for records, documents and other services, and transmits such information over network 11. Network 11 is, for example, the Internet. Many suitable software programs for Web server 35 exist, including Netscape, Apache, Microsoft IIS, and O'Reilly.

Each computer 14 also has an input device 21 such as a keyboard and/or mouse and a display 23 (monitor) for communication with a user. It should be understood that computer 14 also may be those commercial devices known as "Web-TV" boxes, as are currently available from Phillips Electronics, Magnavox and Sony Corporation, or Network Computers as may be provided by Oracle and Microsoft. It also should be understood that hundreds of thousands, if not millions, of computers 14 may be coupled to network 11, and thus to DSP 12, as will become more apparent in the following discussion.

DSP 12, in addition to web server 35, includes a database connectivity engine 60, preferably COLD FUSION™ available from Allaire Corporation, connected to web server 35 for pre-processing an output from Web server 35. The database connectivity engine 60 is hereinafter also referred to as COLD FUSION 60. COLD FUSION 60 is a specific server side scripting language product which allows otherwise static information to be created dynamically by providing an interface between web server 35 and a database server 45 using the Open Database Connectivity (ODBC) protocol. ODBC is well-known in the art and therefore will

not be further discussed. Other similar server side scripting products could be used, such as Web Objects and Microsoft's IDC technology.

Database server 45 is generally configured as an SQL database, using software programming such as that available from Oracle, Informix, Microsoft, or Sybase, and is operable to transmit and receive information between COLD FUSION 60 and a database 70. Database 70 is a typical storage medium as is well-known, more specifically database 70 is a conventional relational database.

A queue-watcher 40 ("Q-watcher 40") polls database server 45, which retrieves the requested information from database 70 and returns it to Q-watcher 40. Q-watcher 40 uses the information to generate text messages that are passed to a mail server 55 for transmittal to users.

Mail server 55 is a conventional device that reads text messages inbound on network 11, such as electronic mail (e-mail), that is communicated to web server 35 and sends the text message outbound on network 11. Any method for sending and receiving e-mail may be used. For example, for sending e-mail the well-known Simple Mail Transfer Protocol (SMTP), and a standard for reading e-mail, such as the well known Post Office Protocol (POP), are programmed into mail server 55, in what is now a conventional manner and, therefore, will not be described in further detail.

A parser 50 is connected to an output of mail server 55. Parser 50 is responsible for processing e-mail messages which arrive at mail server 55. Specifically, parser 50 determines which routine or routines should be called in database server 45 to process the received message, as will be discussed later. It is possible, however, that the parser is unable to determine this information from the e-mail message, for example, because of faulty transmission between computer 14 and mail server 55. Therefore, parser 50 is provided with an error subroutine which is activated in the event an error is determined. At this point, the e-mail is returned to the sender, delivered to customer service, or queued to database server 45 for transmission of an error message to the user.

Details of an embodiment of parser 50, COLD FUSION 60, Q-watcher 40, and database server 45 will be described below with reference to a preferred embodiment of a process of constructing a networking database in accordance with the present invention.

Become a Member

A preferred method of constructing a networking database includes adding records for individuals to the database 70 and establishing one or more defined relationships between the records for selected individuals, and will now be described.

For convenience, references in the following discussion to individuals, users and persons should be construed synonymously, and references to an individual in the context of database 70 should be understood to mean a record (or group of records) associated with the individual. It also should be recognized that the use of underscoring to connect together words also serves as a cross reference to the flow charts and an exemplary software routine in the microfiche appendix, and the use of periods to connect together letter-number combinations is associated with e-mail text messages and user displays.

There are two preferred methods of becoming a member. The first is by communication with web server 35, more conventionally understood as an interactive communication with the "Web-site" 90 of the DSP 12 over Internet network

11. The second is by e-mail communication with DSP 12 in response to an e-mail message originated from mail server 55. These are discussed in turn.

Referring to FIG. 2, routine Become_A_Member (BAM) is illustrated. BAM is executed to allow a user to become a "member" of DSP 12. The user, through computer 14, accesses Web-site 90, and is required to "click" on box 600, which initiates routine BAM.

In step 601, a display screen of information is shown to the user, who in this context and others that follow is referred to as USER1, on display 23. It is to be understood that USER1 may be any user of DSP 12. Using input device 21, USER1 is required to enter specified personal information, preferably at least a last name and a valid e-mail address. It should also be understood that currently multiple users cannot use the same e-mail address and still have different records in database 70. This could be changed by a suitable variation in programming that will allow it. A particular user can have multiple e-mail addresses and map to the same record in the database. It should also be understood that USER1 also may add a first name as well as other information as is discussed herein. However, this other information is not required in this routine as a design choice.

At step 602, the routine determines whether a valid Internet e-mail address and last name have been entered, by applying validation rules 602A. Typically, a valid Internet e-mail address contains a string of text characters followed by an "@" symbol, followed by a second string of text characters, followed by a ".", and then a third string of text characters. For example, a@b.c would be identified as a valid address. Other e-mail address formats may be used. If step 602 determines that no valid address or last name (either one) was input by USER1 at step 601, then step 603 is executed. If, on the other hand, the validation requirements are met, the routine advances to step 604 where a routine Person_Become_A_Member is initiated by COLD FUSION 60, and executed in database server 45. Then, USER1 may proceed to become a member.

The Person_Become_A_Member routine 604 determines whether the entered e-mail address is in the database 70. In step 605, database server 45 determines whether the e-mail address belongs to one of an "active", "pre-registered", "revoked" or "canceled" member, all of which types of members will be discussed below. A canceled member is an individual whose information had been entered into the database 70 and was an actual member, but was removed from being a member in the database 70 voluntarily. A "revoked" user is defined as a user who has fulfilled all the sponsorship and registration requirements (see FIGS. 4A-4C), but had his privileges involuntarily removed from the database 70 for misuse.

If the e-mail address is new or for a canceled member, then steps 611 and 612 are executed, thereby sending an e-mail message, containing a password to USER1 at the user-given e-mail address input at step 601, and also thanking USER1 for entering at web server 35. A unique password is assigned to each user that becomes known to the database 70 to restrict unwanted users and allow known users, that is users who have registered with DSP 12 to confirm their identity. Each password stored in database 70 corresponds to a known user. A password may be a string of numbers or letters or a combination of both. It should be noted that sending a password to the e-mail address entered in step 601 insures that the password is sent only to the user, thus minimizing the likelihood of misuse or fraud.

If, on the other hand, at step 605, it is determined that the e-mail address is not new or for a canceled member then step

606 is invoked. At step 606, the database 70 is queried to determine whether the e-mail address is associated with a user that is a "non-responder" (such a user is also referred to as pre-registered). If it is, step 607 is executed. At step 607, a display, H.BAM.FORM.SS.E2, is delivered to USER1 informing the user that the e-mail address is associated with a non-responder. If instead the e-mail address input by USER1 is not for a non-responder, then step 608 is executed in which the database 70 is queried to determine whether the e-mail address is for a user that was revoked. If the user was revoked, then step 609 is initiated. Step 609 displays a screen H.BAM.FORM.SS.E3. Otherwise, step 610 is initiated. Step 610 invokes a screen at display 21, H.BAM.FORM.SS.E4 that indicates to USER1 that the e-mail address entered is for an active member. An active member is one who has a current registration record in database 70 and has met the requirements for membership, i.e., the user has listed his demographic information with DSP 12 and has listed a relationship with at least one other person with DSP 12 and, if necessary, has responded to his sponsorship (i.e., having been identified to the database by a "USER1").

Typically, the routine depicted in FIG. 2 is used by a user who unilaterally desires to become a member of database 70.

USER1 Names USER2

In a second technique to become a member, generally, USER1, also identified as "A" in the drawings and the routines of the Microfiche Appendix, for convenience, sends an e-mail message from its computer 14 to DSP 12 which is received by mail server 55. See FIG. 3. It is assumed that the e-mail message identifies a USER2 (also referred to as "B" in the drawings and the routines of the Microfiche Appendix, for convenience) and, thus, contains a formcode recognizable by parser 50 as will be explained. The inbound e-mail is processed by parser 50, which searches for any formcodes in the e-mail. If a formcode is found, then parser 50 queries the database server 45 to discover precisely who is the message sender. Parser 50 then processes the e-mail in view of the formcode and what information may be listed in database 70, and if appropriate creates a suitable record in database 70 for USER2. For example, if a record for USER2 already exists, a second such record will not be created. Referring now to FIG. 3, this is shown outlining both techniques. However, here the discussion will be directed to sponsoring a member.

The DSP 12 determines whether USER2 is a valid candidate for a relationship with USER1, at step 400. In other words, it is determined whether: (i) USER1 is USER2 (see step 805; FIG. 9A as discussed elsewhere); (ii) USER2 has an invalid e-mail address (see step 602; FIG. 2 as discussed elsewhere); (iii) USER2 is a denied member (see step 820; FIG. 9B as discussed below); (iv) USER2 is a canceled member (see step 821; FIG. 9B as discussed below); or (v) USER2 is a revoked member (see step 822; FIG. 9C as discussed below).

If so, USER1 cannot list USER2. If not, the process proceeds to step 402.

At step 402, it is determined by database server 45 whether a relationship already exists between USER1 and USER2. The relationship may be pending (see steps 806-809; FIG. 9A); confirmed but pending confirmation of new type (see steps 810-813; FIG. 9A), confirmed (see steps 814-815; FIG. 9B), or denied by USER1 or USER2 (see steps 818-819; FIG. 9B).

It should be evident that generally the routine outlined in Personal Profile Add New Relationship (see FIGS. 9A-9B)

is similar to that used in the present routine; thus many of the steps are repeated and not discussed further.

Login/complete Registration/alerts

Once USER1 has been identified to DSP 12, a routine Session_Validation, in database 45, is executed to authenticate all transactions that are performed between the user and DSP 12. The user, at LOGIN, for example, is required to identify himself to DSP 12, by entering a PASSWORD and an e-mail address, each time he uses DSP 12. At the time of identification, routine Session_Validation assigns "session" information which indicates the identity of the user. For each transaction between the user and DSP 12, the routine insures that the user is, indeed, the person previously identified. It should be appreciated that, by authenticating each communication proffered by a registered user in DSP 12, the privacy of each member, who enters personal and professional information into database 70, is maximized. Then USER1 must undergo a LOGIN procedure to register and advance to the next stage of membership (see Session Validation below).

Referring to FIGS. 4A-4C, a flow chart is shown indicating the LOGIN program. Each user must undergo a LOGIN procedure to register and advance to the next stage of membership after he has been recognized by database 70. LOGIN allows a user to continue the registration process previously described in connection with FIGS. 2 and 3, update or change the user's personal profile (See FIGS. 10A-10F), or use the Web site 90 services available to registered members of DSP 12 (See FIG. 8).

In a preferred embodiment, the execution of Session Validation occurs at the Web site 90 (see FIG. 8) and is required each time a member uses the "personal profile manager", "network me" or "connect me" services, all of which will be discussed herein in connection with NDS 10.

In step 704, LOGIN is invoked. In this context, the user may be a USER1 or a USER2. The user who is "logged-in" is required to enter a "username", an e-mail address of the user which was previously stored in database 70. It is possible, however, the username includes the last name, first name, or another name (alias) chosen by the user. In addition to a username, the logged-in user must also provide the PASSWORD which was previously generated by database server 45 (see FIGS. 2 and 3).

The database server 45 then executes step 705 to determine whether the username is in a proper format, as in step 602. If not, then step 706 is invoked, which indicates to the user that the input is invalid. However, if the e-mail address is found to be valid, then steps 707 and 708 are initiated to verify that the e-mail address is found in the database 70 and has not been revoked. If the e-mail is not "found and not revoked", then step 709 is executed to determine whether the e-mail address is that of a revoked member. This determines whether the e-mail address assigned to the logged-in user has been "revoked" by DSP 12 due to improper or unauthorized use of DSP 12 by the logged-in user, as described herein. If the e-mail address is that of a revoked member, step 710 is executed and a suitable message indicating the same is displayed to the logged-in user. Otherwise, it is determined that the username is not found and step 714 is executed. Again, a suitable message to the logged-in user is displayed and the user is prompted to reenter the information.

If, at step 708, the output is yes, then PASSWORD is checked against what is listed in database 70 at step 711. If a match is found, that is the PASSWORD is valid, then step

712 (FIG. 4B) is executed. If not, however, step 713 is called, indicating to the logged-in user that the input is an invalid password and the user is prompted to reenter the information.

In step 712, database server 45 determines whether the logged-in user must complete his registration with DSP 12 by providing certain requested information. If so, the logged-in user is asked to provide selected information, more specifically, personal or professional information including, among other things, one or more of the following: geographic location, occupation, and gender. At this stage, steps 716-720A are executed to complete the registration process.

At step 716, COLD FUSION 60 invokes the database to perform a series of routines that are necessary for COLD FUSION 60 to present screen 718. For example, a routine Person_Get_Pre_Registration_Info is called to get information already entered for the user, a routine Region_Get_All is called to get a list of allowable geographic information about the user, and a routine Occupation_Get_All is called to get a list of allowable occupational information. At step 718, the registration screen is presented enabling the logged-in user to complete registration.

When complete, the input data is examined for valid input at step 719. If invalid information is found, an appropriate message (at step 720A) is displayed to the logged-in user who is prompted to re-enter valid information. Valid entries are accepted and processed at step 720 by COLD FUSION 60 to be stored in suitable fields of the logged-in user's record in database 70. The input data is sorted into the record for the user in database 70 by routine Person_Update_Pre_Registration_Info which updates the registration record in database 70.

At step 717, the database server 45 determines information about the user's relationships. More specifically, routine Person_Get_Relationship's_Sponsor_Count is executed to determine whether the relationship requirement is met.

The routine proceeds to step 721 where COUNT, the number of total relationships initiated or declared by the member, whether confirmed, denied or non-response, is evaluated.

If the COUNT at step 721 is zero, then steps 722-725 are invoked which prompt the logged-in user to add new relationships. In other words, the user is prompted to register a different person with DSP 12, for example, a friend, relative, or co-worker. If the new relationship information is not valid as determined at step 723, that is an invalid name or an invalid e-mail address for the person is input, as in step 602, then at step 725 the logged-in user is notified and prompted to reenter the information. If the information is valid, then at step 724 the routine Person_Add_New_Relationship is executed, which adds the new relationship to the record for the logged-in user, updates the record in database 70 with the information and adds a new person to database 70 if the person listed is not already in the system. This is also the starting point of the routine USER1_Names_USER2 as described above in connection with FIG. 3.

If the COUNT at step 721 is not zero, step 726 (FIG. 4C) is executed to refresh the session information from step 707. As a result, at step 727, COLD FUSION 60 evaluates whether this is a user's second login and, if so, in steps 727A and 727B, prompts him to add more information about himself for storage in database 70. The additional information may appear on a questionnaire screen at step 727A prompting the user to input a plurality of demographic information, such as age. Afterwards, or if the user does not

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elect to enter such information, the routine passes to step 730, wherein COLD FUSION 60 coupled with database server 45, using routine Person_Get_Relationship_Status, determines the state of the relationships between the logged-in user and others. In this regard, at step 731, it is determined whether any pending relationships or whether no relationships exist with the logged-in user. If the answer is no to both, then the logged-in user continues to use other areas of DSP 12. If the answer is yes, however, then COLD FUSION 60 determines at step 732 whether no relationships exist or whether any of the relationships need to be confirmed or denied at steps 733-734. If there are no relationships, step 734 is executed indicating that no relationships exist. If, on the other hand, pending relationships do exist, COLD FUSION 60 determines whether there is any new information to process at step 735. If there is not, then the logged-in user may move to another area of DSP 12. However, if there is, the database server 45 processes all incoming information and updates the pending relationships at step 736 before returning the user to continue use of DSP 12.

USER2 Responds

Referring now to FIGS. 5A-5C, a flow chart is shown illustrating the routine of parser 50 when an e-mail response arrives at mail server 55 from a USER2, wherein USER2 was identified to DSP 12 by a given USER1. At this stage, parser 50 processes an e-mail from USER2 in response to a formcode which was previously generated by Q-watcher 40 when USER2 originally was sent a message. The formcode contains information which allows parser 50 to determine what type of message arrived at mail server 55. Any inbound message to mail server 55 determined to have an unidentifiable, unknown or duplicate formcode is forwarded to a customer service person for manual processing.

In steps 100 and 101, mail server 55 receives an e-mail response from USER2 in response to an initial e-mail sent by Q-watcher 40, in the routine USER1_names_USER2 previously discussed. Parser 50 parses the e-mail, sees the formcode, and reacts to a designated formcode from the e-mail message as discussed above. Procedure Process_Relationship_Response is initiated at step 105 to determine and update, as appropriate, the status of the relationship between USER1 and USER2.

At step 140, if a DENY response to a proposed relationship is sensed, then database server 45 updates database 70 in step 145, indicating that USER2 has denied a relationship with the given USER1. In this case, database server 45 verifies whether the given USER1 has any other confirmed relationships at step 150. If so, then step 150A is executed and an e-mail message E.DB.BRESP.2 is initiated by parser 50 to the given USER1, indicating that USER2 has denied the relationship. The routine, thereafter, passes to step 180 (FIG. 5B).

If the answer to step 150 is no, however, in step 155, the database server 45 searches for other unconfirmed relationships between USER1 and another user without a CONFIRM or a DENY. If the answer is yes, that is, if there are other unconfirmed relationships without a CONFIRM or DENY, then step 165 is executed. At step 165, an e-mail message E.DB.BRESP.3 is sent to the USER1 indicating that USER2 has denied the relationship, but that other unconfirmed relationships are pending. If at step 155 it is determined that USER1 has no other unconfirmed relationships without a CONFIRM or DENY, then at step 170 an e-mail message E.DB.BRESP.4 is sent to USER1 indicating this fact, and prompting USER1 to provide new relationship information.

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Referring again to step 140, if the relationship is not denied, step 125 is executed to determine whether the relationship was confirmed. If, at step 125 a CONFIRM response is sensed, then at step 130, the relationship of USER1 to USER2 is confirmed, and the database records for USER1 and USER2 are accordingly updated. If the relationship is not confirmed, the routine passes to step 180.

In step 180 (FIG. 5B), database server 45 executes a routine Process_New_Relationship. In this routine, at step 185, database server 45 determines the existence of any new relationships being proposed by USER2 in the e-mail message. If none exist, the procedure continues to step 185A. At step 185A, database server 45 determines whether the relationship between USER1 and USER2 was neither confirmed nor denied. If yes, the e-mail is forwarded to customer service. If not, the procedure continues to step 260 (FIG. 5C). If, on the other hand, the answer is yes, then parser 50 creates a list of all new relationships listed by USER2. In this context, the USER2 is redefined as a given USER1 and the users identified in USER2's e-mail are redefined as USER2 (s), by executing steps 190-197B. This is similar to USER1_names_USER2 (see FIG. 3). When all of the relationships have been processed, at step 195A, database server 45 determines whether the relationship between USER1 and USER2 was neither confirmed nor denied. If yes, the relationship is updated as CONFIRM (as in step 130). If not, the procedure continues to step 196. When the output of step 196 is no, indicating that no errors have occurred in the steps 190 and 195, step 260 is executed. If the answer at step 196 is yes, then step 197 is invoked to determine whether USER2 has met the relationship requirements. If so, step 197A is executed and parser 50 sends USER2 E.DB.ANB.7 indicating only that the errors are encountered. If not, however, step 197B is executed, noting that USER2 has not fulfilled all the requirements for membership. After steps 197A-B, step 260 is invoked.

Step 260 updates the status of USER2 in database 70. In step 261, it is determined whether USER2 is a non-responder or deny-responder. If not, then no update is performed and the routine is terminated. However, in the event that USER2 is a non-responder or deny-responder, step 262 is executed. In step 262, if USER2 has confirmed his relationship with USER1 or listed additional relationships, step 263 is invoked to update USER2 to a "pre-registered" status. Otherwise, USER2's status is updated to "deny-responder" in step 264. After steps 263 and 264, the routine stops.

As it will be understood, by the foregoing processes, a very large number of users can become established in the database 70 with defined relationships to selected other users, and in which other users confirm the validity of the defined relationship and perhaps of the type of relationship. In this way, a networking database is established, verified and confirmed. As will be discussed, a registered user can thus access the database and determine a chain of overlapping confirmed relationships in DSP 12 with any other confirmed registered user that is part of the chain.

USER2 Responds to Relationship Type Confirm Request

Referring to FIG. 6, in step 200, parser 50 starts, upon detection of a suitable response from USER2 (also referred to as "B") received via mail server 55, to update the type of relationship state between USER2 and USER1 (also referred to as "A"), which was identified as one of CONFIRM or DENY. A CONFIRM indicates that USER2 has accepted the type of relationship proposed by USER1. On the other hand, DENY, indicates that USER2 did not confirm a relationship type listed by USER1. If in step 205, the presence of a

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CONFIRM in an e-mail message is determined by parser 50, then at step 210, database server 45 updates the status of the proposed type of relationship to CONFIRM in database 70. Otherwise, parser 50 searches for DENY at step 215. If a DENY is not found, then parser 50 executes step 220 and a message, E.CUST.1w/M.CUST.3, is sent to customer service, indicating that the e-mail message is not a suitable response. If a DENY is found, then parser 50 executes step 225 in which the database 70 modifies the relationship type to unspecified. Subsequently, an e-mail message, E.DB.EDITREL.2, is sent by parser 50 to USER1. At step 230, the operation is ended. This routine is typically used in response to USER1 proposing a particular type of relationship with USER2, and USER2 (having previously confirmed the relationship), may separately confirm or deny the type of relationship proposed by USER1.

USER1 Responds to a Request to Verify a New E-mail Address

When an active user desires to change or add an e-mail address, the personal profile is accessed and an e-mail verification routine is applied. For example, the routine prohibits the user from entering the e-mail address of another user already in the database. Referring to FIG. 7, in step 300, parser 50 processes an inbound e-mail to determine whether a new e-mail address that has been listed by the user has been verified and should be listed in database 70. At step 305, the same query as in step 205 is performed. Here, if the answer CONFIRM is found, the e-mail address in the database 70 is listed as CONFIRM in step 310. The e-mail address is also listed as CONFIRM at the "personal profile screen" and in the "white pages", each of which will be discussed below. In step 312, the procedure is terminated.

If no CONFIRM is found in step 305, then step 315 is executed. Step 315 determines the presence of DENY. If no DENY is found, then an e-mail, at step 320, is sent to customer service for manual processing, E.CUST.W/M.CUST.4. On the other hand, if a DENY is found, at step 325 a message is sent to a confirmed e-mail address for the user who had listed the new email address. Simultaneously, step 330 is executed wherein information is added to database 70 indicating that the e-mail address was denied. The routine ends at step 340.

Services Web-site

Referring to FIG. 8, a user enters the web-site 90 (FIG. 18) through Web server 35 at step 275. The user is first shown a pre-LOGIN screen. At this stage, the user has access to all public services provided by DSP 12. It is contemplated that public services include the white pages described herein and an "about" section. To access any one of the public services provided by DSP 12, the user simply clicks a desired box in the displayed screen in a conventional manner. In a preferred embodiment, all public services are highlighted. However, it is possible that the member services boxes be shaded gray, indicating that they are inaccessible to the user.

The user also may click on the LOGIN box at step 276, as previously discussed. Once the user has completed the LOGIN procedure, COLD FUSION 60 executes routine Person_Get_Services_Info at step 277. In step 277, the user is validated as a member, and COLD FUSION 60 executes step 278. At step 278, the user is permitted access to valid member services, such as "marketplace", "connect me" and "network me", each of which is described below. In this case, boxes indicating the member services are highlighted as the above public services. It should be noted that a member may still access the public services of DSP 12

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even after a LOGIN. Moreover, member services are executed in the same manner as previously described for the case of public services.

Personal Profile

The "Personal Profile" screen 102 (FIG. 9A) allows the user several options to update and/or add relationships within database 70. The options will be discussed below in turn.

1. Add New Relationships

One function for which Personal Profile screen 102 is used is add new relationships. In the embodiment, referring to FIGS. 9A-9B, at the Web-site 90 personal profile screen 102, a user may add a new relationship by clicking on "Add New Relationships". The user is then required to submit selected information. In the preferred embodiment, the information is input into four separate fields displayed on profile page 102: first name, last name, e-mail address, and relationship type (father, mother, employee, etc.) To initiate the process, the user is required to at least enter a last name, an e-mail address and a relationship type. Other information could be required.

At step 801, the entry by the user, in this context, USER1 is validated. If invalid, the user is returned to personal profile screen 102 at step 801A. If valid, however, COLD FUSION 60 passes the information into stored procedure Person_Add_Relationship in step 802.

At step 803, it is determined whether the input person, in this context a USER2, is unknown. If so, a suitable message is displayed at step 803A, and an e-mail is sent to USER2 inviting USER2 to join DSP 12 and confirm the relationship with USER1 and a new record for USER2 is established in database 70.

In step 804, if USER2 is known, (i.e., an active, non-responder, pre-registered or denied member) and has no relationship history with USER1, then step 804A is executed, wherein an email is sent to USER2 inviting him to confirm the relationship to USER1 and USER1 is notified that this will occur. At step 805, COLD FUSION 60 determines if USER1 has entered his own e-mail address. If so, then step 805A is executed notifying the user of the error. At step 806 it is determined whether a relationship between USER1 and USER2 has already been proposed by USER2, and is pending confirmation from USER1. If yes, the database 70 confirms the relationship and a message is presented to USER1 at step 806A indicating that the relationship was confirmed. It should be noted that, in step 806, USER1 listed the same relationship type as USER2 had already listed in the database 70.

At step 807, it is determined whether USER2 has a relationship with USER 1 pending USER1's confirmation and the relationship that USER1 proposed with USER2 is a different type. If yes, the relationship is confirmed and the relationship type is listed as unspecified in database 70. Subsequently, step 807A is executed and an e-mail message is sent to USER2 informing him of the request for reclassification of the relationship type.

At step 808, if a relationship between USER1 and USER2 was already listed by USER1 in database 70 and is pending confirmation by USER2 of the same type, at step 808A a message reminding USER2 of his pending confirmation is sent by database server 45, and USER1 is notified of the pending relationship.

In step 809 it is determined whether USER1 entered a different type of a pending relationship already listed by

USER1, even though the relationship is pending USER2's confirmation. If so, step 809A is executed and USER1 is notified that the relationship type cannot be reclassified.

Steps 810, 810A, 811, 811A, 812, 812A, 813, and 813A operate in the same manner as steps 806, 806A, 807, 807A, 808, 808A, 809, and 809A. However, the relationship between USER1 and USER2 has already been confirmed in database 70, but a new type is pending confirmation by either USER1 or USER2. In step 810, if USER1 has attempted to reclassify the relationship to the same relationship type that is pending USER1's confirmation, then in step 810A USER1 is notified that the relationship type has been confirmed and database 70 is updated accordingly. In step 811, if USER1 has attempted to reclassify the relationship to a different relationship type that is pending USER1's confirmation, then in step 811A USER1 is informed that USER1 may only confirm or deny the reclassification. In step 812, if USER1 has attempted to reclassify the relationship to the same relationship type that is pending USER2's confirmation, then in step 812A USER1 is informed that such an action cannot be taken while the reclassification is pending USER2's confirmation. In step 813, if USER1 has attempted to reclassify the relationship to a different relationship type that is pending USER1's confirmation, then in step 813A USER1 is informed that such an action cannot be taken while the reclassification is pending USER2's confirmation.

If at step 814, USER1 enters the same type and the relationship between USER1 and USER2 is already confirmed in database 70, step 814A is executed informing the user that he has committed an error. At step 815, if the user enters a different type and the relationship is found as confirmed in database 70, step 815A is executed indicating that the relationship has already been confirmed, then step 815A is executed.

If a confirmed relationship in the database 70 is listed as having previously been cancelled by USER1 (step 816) or, cancelled by USER2 (step 817), or a pending relationship had been denied by USER1 (step 818), step 803A is executed as described above and an e-mail is sent to USER2 requesting that USER2 confirm the relationship and database 70 is updated accordingly.

If the relationship was previously denied by USER2, at step 819, step 819A is executed and USER1 is notified that the relationship was denied by USER2 and cannot be related by USER1.

At step 820, if USER2 is a denied member, USER1 is notified that USER2 does not wish to be contacted at step 820A. In step 821, if USER2 is a cancelled member, step 820A is executed.

In step 822, if USER2 is a revoked member, USER1 is notified at step 822A that USER2 is, indeed, a revoked member and that a relationship cannot be established with a revoked member.

2. Relationships Pending Confirmation

Referring now to FIG. 10A, the logged-in user, in this case a USER1, may interactively confirm or deny a pending relationship. This is another function performed in the Personal Profile screen 102. This is initiated by the user clicking the appropriate confirm or deny check box, and then clicking on the "submit" button associated with the pending relationship. The submit box is simply a predetermined area which causes the information entered by the user to be input into DSP 12. More specifically, this causes, at step 1815, COLD FUSION 60 to determine whether any check box was selected. If an invalid click occurs, i.e., no check boxes were

selected, step 1815A represents an error message screen to the user. Once a confirmation or denial is found at step 1815, a routine Person_Update_Pending_Relationships is executed at step 1816 which updates database 70 to any confirm or deny operations. At step 1817, COLD FUSION 60 determines whether any relationships to USER1 have a DENY. If not, step 1815A is executed and a message CONTACTS.SS.THANKS is displayed. If so, however, step 1818 is called wherein it is determined if any other relationships with a USER2 (whose relationship USER1 just denied) have a CONFIRM. If other relationships have a CONFIRM, a deny notification e-mail message E.DB.B-RESP.2 is sent to the USER2 at step 1818A, which explains that USER2 has other confirmed relationships. Otherwise, step 1819 is executed.

In step 819, database server 45 determines whether USER2 has any other relationships that have neither a CONFIRM nor DENY. If there are such other relationships, then step 1819A is executed and a deny notification e-mail message E.DB.BRESP.3 indicating other unconfirmed relationships exist, is transmitted to USER2. Otherwise, step 1819B is executed and a deny notification e-mail message E.DB.DRESP.4, indicating no other relationships (pending or confirmed) exist, is transmitted to the USER2.

3. Reclassify

Referring to FIG. 10B, the logged-in user, in this case a USER1, also may reclassify a pending relationship by clicking on it in the Personal Profile screen 102. This causes COLD FUSION 60 to operate database server 45 to execute, at step 1820, the routine Get_All_Relationship_Types and a notification of the relationship at step 1820A. At step 1821 COLD FUSION 60 determines whether the proposed reclassification is the same as what was previously registered in database 70. If so, routine Person_Update_Pending_Relationships is executed at step 1822 confirming the relationship type. At step 1622A, a suitable message is displayed to the user indicating that the relationship type was confirmed. If not, however, routine Person_Reclassify_Relationship is executed at step 1823. Step 1823 signifies that USER1 has reclassified the relationship with USER2. At 1823A, a suitable message is displayed to the logged-in user. Also, at step 1824 the database server 45 queries whether the relationship was previously classified. If it was not, an e-mail message E.SI.EDITREL.2 is sent to USER2 at step 1824B indicating that a previously undefined relationship was classified. If it was classified, an e-mail message is sent to USER2 indicating that USER1 seeks to reclassify the relationship, at step 1824A.

4. Relationships Pending USER2'S Confirmation

One option a user has is to remove a proposed relationship that has not yet been confirmed or denied. When a user enters the "click to cancel" box on Personal Profile screen 102, shown in FIG. 10A, web server 35 displays a message requiring verification to remove a particular listing at step 830 (See FIG. 10C). If the user clicks on the "remove" box in the displayed message, the routine Person_Cancel_Pending_Relationships is called by database server 45 at step 831. This routine allows the user to remove unwanted relationships from his profile in DSP 12. It should be noted that the user has the option to return to screen 102 by clicking "nevermind" at step 830.

Step 831A is executed and the user receives back a message, CONTACTS.SS.THANKS4, confirming the removal. Subsequently, database server 45 executes steps 832-33. Steps 832 and 833 are similar to 1818 and 1819 above and will not be here discussed. It should be noted that

the e-mail messages from steps 832A, 833A, and 833B are sent to the USER2 that was removed from the logged-in user's personal profile from parser 50.

5. Relationship Types Pending Confirmation

As shown in FIG. 10D, the user can confirm relationship type information by clicking on the appropriate box and then clicking on the "Submit" box. (Here, the relationships already have a confirmed state, but the relationship type has been reclassified by USER2). This causes COLD FUSION 60 to process the input data. At step 840, a validation is performed to determine whether any confirm boxes were "checked" by the user. If boxes were checked, then the routine Person_Update_Pending is called at step 841 by database server 45. If not, a display is shown of step 840A. In step 842, a screen is displayed thanking the user for updating his relationships.

6. Relationships Pending USER'S Confirmation

Referring to FIG. 10F, a user may click on the "click to reclassify or delete relationship types" button in screen 102 to reclassify or delete a relationship that is pending a confirmation of a relationship type. In response to a click, COLD FUSION 60 displays a message CONTACTS.PENDING.RECLAS.YOU to the user at step 850, asking the user either to click on delete, or to reclassify the relationship and click on submit to input the new type. If the user clicks on delete at step 850, a further screen prompt at step 850A is displayed to verify that the user is certain of the deletion. If the deletion is verified, at step 851, database server 45 calls routine Person_Delete_Relationship which displays a message CONTACTS.SS.THANKS7 confirming the deletion at step 851A. Steps 852, 852A, 853, 853A, and 853B are similar to steps 832, 832A, 833, 833A, and 833B respectively, as described above, and will not be further discussed here.

If, on the other hand, the user clicks on a "reclassify" box at step 850, database server 45 executes step 860. In step 860, Routine Person_Update_Rel processes the request. At step 861, the database server 45 determines whether a reclassification was in fact performed. If not, step 862B is executed and a display is sent to the user indicating the relationship type was confirmed. On the other hand, if the type has been reclassified at step 861, an appropriate message is displayed (step 862A).

Following step 862A, step 863 is executed. Database server 45 determines whether the relationship was last defined by the USER2. If so, database server 45 executes step 863A to send an e-mail message E.SI.EDITREL.1 to USER2 to indicate the relationship has been reclassified. If not, then database server 45 executes step 863B to send an e-mail message E.SI.EDITREL.2 to USER2 to indicate the relationship has been reclassified from unspecified.

7. Confirmed Relationships

The user also may use screen 102 to delete or reclassify confirmed relationships in a similar manner.

Referring now to FIG. 10E, in step 870, the user is prompted to delete or reclassify any confirmed relationships. If delete is selected, steps 850A, 851, 851A, 852, 852A, 853, 853A and 853B are executed in a similar manner as described above (see FIG. 10F).

If reclassify is chosen at step 870, step 870A is executed in which database server 45 calls routine Person_Reclass_Rel as above. Then, steps 861-863B are executed as described above. (see FIG. 10F).

It should be understood that after each deletion or reclassification, the database 70 is suitably updated.

Editing Personal Profile

When a user registers with DSP 12 and becomes a member, the user may list various personal and professional information including e-mail address(es), last name, first name, aliases, occupation, geography, hobbies, skills or expertise, and the like. Certain user provided information, such as name, address, phone numbers, etc., may be consolidated in a "white pages" record of database 70. This information is all stored in one or more records in database 70 can be viewed through the personal profile functions when the user logs onto the web-site 90. One option a user has in using the personal profile is to edit any of the personal information previously provided by the logged-in user, as well as to provide new or supplemental information. This is done in a relatively straightforward manner and is generally described herein with reference to FIG. 11 and examples in FIGS. 12-13.

1. Editing Whit Pages

Referring now to FIG. 12, a flow chart is shown illustrating a process which allows a member to edit, add, or remove his personal profile listing from the white pages record in database 70.

In step 1200, the user clicks on "personal profile" box 78, on web-site 90, which executes step 1201. At step 1201, COLD FUSION 60 displays an edit screen 95 which allows the user to edit his personal profile. By selecting the "edit" box 1202A corresponding to the "White Pages Listing" at step 1202, the user begins the editing process. At step 1203, routines Person_Get_WP_Info, Person_Get_WP_Names, and Person_Get_WP_E-mails are executed by COLD FUSION 60 and database server 45 to determine whether the member is currently listed in the white pages and to retrieve the user's relevant white page information at step 1204. If listed, step 1204A is executed and the current listing found in white pages is displayed at display device 23. At this stage, the user is prompted to input any new changes to his current listing or delete himself from the white pages. If the user is not listed, 1204B is executed which allows the user to input his personal and professional data.

After the user completes either steps 1204A or 1204B, routine Person_Update_WP_Info is called in step 1205. At step 1206, database server 45 determines whether the user has removed himself from the white pages. If the answer is yes, step 1206A is initiated and the data base server 45 removes the listing from the white pages. This generates a screen to the user confirming the change. If not, however, a query is performed at step 1207 to determine whether the information corresponds to a new listing. If yes, database server 45 updates database 70, and subsequently notifies the user at step 1207A. If not, step 1207B is executed and database server 45 updates changes to the current listing. Subsequently, the user is informed of the changes.

2. Cancel Membership

This routine allows the user to cancel or modify his membership status with DSP 12.

Referring to FIG. 13, at step 1200 COLD FUSION 60 displays edit screen 95. By selecting the "edit" box 1301 corresponding to "Cancel Membership", the user executes step 1302. At step 1302, the user is queried as to whether she would like to proceed with the cancellation, change her status to "do not solicit", or both. This is followed by a sequence of steps that establishes, with confirmations as appropriate, the revised status of the user. The database is accordingly updated. In view of the detailed illustrations and

the Microfiche Appendix, it is submitted that a person of ordinary skill in the art will be able to design appropriate sequences of instructions to edit the information of the personal profile of a user. The specific information and sequence is deemed to be a matter of design choice.

APPLICATIONS

One of the features of DSP 12 is that members can access various services to use the networking database for various purposes. One such purpose, which is an application of the networking database, is to search the database to find a member having a particular characteristic in his personal profile. Unlike conventional database searching, in accordance with the present invention, the networking database search also can provide a set of defined relationships between selected ones of hundreds or millions of thousands of members who respond to the search request. This permits the searching user to find a linkage of defined relationships between it and the member responsive to the search. It is estimated, based on the theories advanced by Marconi, that no more than six defined relationships will be needed to complete a chain between the searching user and the object of the search, assuming an adequately large number of members. The advantage of searching the networking database having defined relationships will become more clear in the view of the following examples.

EXAMPLE I

White Pages Search

Referring to FIGS. 14A–B, an application of an embodiment of the present invention is shown in a flow chart which permits a member or a non-member user to search through the white pages listing.

At step 1050, the user is shown a display screen corresponding to the white pages search. At this point, the user does not have to have performed the LOGIN routine. However, it should be noted that, by design choice, only valid members are listed in the white pages directory of database 70 in the described embodiments. Other embodiments could permit non-members to be in the white pages. Still other embodiments could include having DSP 12 access available e-mail directories not part of the DSP 12.

The user may conduct a search using an e-mail address or last name. It is possible that other searches could be performed, e.g., occupation, geography, hobby, skills, etc., which could be listed in the white pages. With respect to a last name search in the preferred embodiment, the user only needs the first letter of the last name to retrieve results.

If at step 1050, box 54, “e-mail search”, is selected by the user, step 1051 is executed to determine a valid e-mail entry as in step 602. If the entry is invalid, step 1051A is executed and the user is notified of the error and requested to try again. Otherwise, the database server 45 routine E-mail_Get_Whitepage_Info is called in step 1052 by COLD FUSION 60.

At step 1052, the database server 45 searches the database 70 in order to find the entered e-mail address. If found at step 1053, step 1053B is initiated and the result is displayed. The displayed result may list the first name, last name, street, city, state, zip code, country, home phone, work phone, or facsimile of the person searched. The white page listing parameters to be displayed may be chosen by the listed member at the time of registration or later. Further, it is possible that a member may permit certain of the white page information to be displayed to non-members, which is less

than what is displayed to valid members. Also, what is displayed can be changed, as the member desires.

Referring again to step 1053, if no matches are found, step 1053A is executed, notifying the user that no match was obtained.

It should be noted that in each of step 1053A and 1053B, the user is able to begin a new search.

Referring back to step 1050, if the user chooses box 56, “last name search”, step 1055 is executed to determine whether the entered last name is valid.

If invalid, step 1055A is called to notify the user of this result. If valid, however, routine Name_Get_Whitepage_List is called in step 1056. At step 1057, the number of search results is determined. If none, step 1057A is performed by COLD FUSION 60, indicating that no results were found, and also allowing a new search to be conducted, for example, by broadening the search categories.

If matches are found in step 1057, the number of matches is counted in step 1058. Next, routine Name_Get_WP_List is called. In step 1058B, the total number of matches and all or a part of the search results are shown. The number of results shown may be any number, but is preferably ten. The user may display the profile of any person on the list of results by clicking on the displayed name which brings up screen 1053C. This is done in a manner that is well known. Similar to steps 1053A–B, a new or modified search may be selected at steps 1057A, 1058B and 1058C.

Again at step 1050, if the user selects box 58, “modify/add listing”, step 1070 is executed. Here, the user, after completing LOGIN (if not already logged in), may modify or add his listing to the white pages.

At step 1070, COLD FUSION 60 transfers the user to the personal profile to edit the information in the white page listing. (See FIG. 12).

EXAMPLE II

Network Me

Referring to FIG. 15, another preferred embodiment using DSP 12 of the present invention is illustrated which allows a member to search for other members that he is connected to directly or indirectly by defined relationships confirmed to be valid, based on one or more of the criteria entered in the member’s personal profile (see FIG. 11). For example, selected criteria may include, among other variations, one of (i) geography; (ii) occupation and geography; (iii) hobby and geography, and (iv) skill and geography. It should be noted that the criteria may be general or more specific. For example, for geographical information, the user may specify the state or, more specifically, the city of the person to be searched. It is also possible the criteria could include organizations such as alumni clubs or place of employment.

Referring now to FIG. 15, the user may click on box 42, “network me”, in what is now a conventional manner. The user may access box 42 by first completing LOGIN or alternatively checking box 42 and then completing LOGIN. It should be apparent that, by design choice, only members are authorized to utilize the “connect me” process. A similar procedure can be used at the start of each application, e.g., network me. It also should be noted that the user could already be logged in when seeking to access this application. Thus, there is no need to login again. COLD FUSION 60 prompts the user at step 1020 to enter the criteria to be searched. The parameters to be entered are dependent on the type of search being performed, as described above. If the

user fails to select the proper criteria for the search at step 1021, the routine will typically prompt the user to re-enter the correct search criteria. If, for example, the user intends to perform an occupation and geography search and only enters data representative of geographical preference, then, step 1021A is executed notifying the user of the deficiency. If all of the proper search criteria are entered at step 1021, step 1022 is called. It should be noted that, by design choice, if a user chooses at step 1020 a search using any of hobby, occupation or skill, and only enters geographic information, a geographic search will be performed. Additional information on the search may be obtained in addition to the geographic information.

In step 1022, one of routines Person_Network_Geography (geographic), Person_Network_Hobby (hobby), Person_Network_Occupation (occupation), and Person_Network_Skills (skills), is called corresponding to the desired search to be performed. Each of the search routines is in SQL and is well known in the art. Therefore, they will not be further discussed. In step 1023, COLD FUSION 60 and database server 45 determine if any search results corresponding to the inputted criteria are found in database 70. If not, step 1023A is called to notify the user. Otherwise, step 1024 is executed to determine whether the search was by geography only or by geography and other criteria. If by geography only, the display at step 1024B is shown. Otherwise, the display at step 1024A is shown.

Alternatively, instead of listing members by e-mail address, last name etc., it should be recognized that a "marketplace" could be designed which allows users to list products and services for sale, hire, rent etc., and to be searched by product type, services, etc. The marketplace could be limited to direct or indirect relationships.

EXAMPLE III

Connect Me

Referring to FIGS. 16A–16B, another illustrative embodiment using the DSP 12 of the present invention is shown.

In step 1001, the user clicks on box 39 corresponding to "connect me." The user may access box 39 by first completing LOGIN or alternatively checking box 39 and then completing LOGIN. It should be apparent that, by design choice, only members are authorized to utilize the "connect me" process. A similar procedure can be used at the start of each application, e.g., network me. It also should be noted that the user could already be logged in when seeking to access this application. Thus, there is no need to login again.

At step 1002, a search screen is displayed, on display 23, which interrogates the user for the last name or e-mail address of the person the user wishes to search. However, the user may also provide geographical or occupational data, or the first name of the person. Other embodiments are also possible such as searches by hobbies, skills, etc. It is to be understood that, in the preferred embodiment, only an e-mail address or a last name is required at step 1002.

If at step 1002, an e-mail address is entered, step 1003 is executed to determine a valid e-mail address such as in step 602. If a valid address is not found, step 1003A is executed and a suitable display, SRCH.SS.E1, is sent to the user.

If, however, the e-mail address is valid, routine Person_Connect_E-mail is called by COLD FUSION 60 at step 1004. At step 1005, a determination is made as to whether the entered e-mail address is listed in database 70. If the e-mail address is not found in database 70, step 1005A is executed notifying the user that the e-mail address is

unknown. If the output of 1005 is yes, then step 1006 is called to determine whether a connection has been found between the user and the search criteria, e.g., geography, occupation, etc. If not, then step 1006A is executed informing the user. If, however, a connection is found, then step 1007 is called to determine whether the connection in step 1006 is only a "first degree" relationship. A first degree relationship is one wherein a user has a confirmed relationship with another user in the database 70 (or by the other user listing him in the database 70). A "second degree" relationship is when the connection includes a first degree relationship, as between USER1 and USER2, and a separate defined relationship as between USER2 and USER3, and the connection is made between USER1 and USER3 by the chain of two linked defined relationships. Thus, an N degree relationship is a chain of N linked first degree relationships. It is to be understood that DSP 12 could monitor the number of relationships by degree number (first degree, second degree etc.) and notify the user, for example, via e-mail how his relationships have compiled over a period of time.

If yes in step 1007, step 1007A is called to show the user the detail of the connection, for example, the first name, last name and how the user is connected to the person found in the search. If not, then 1007B is executed notifying the user.

Referring again to step 1002, if the input is a last name, step 1010 is executed.

In step 1010, the last name is determined to be valid and listed in database 70. If not, step 1010A is called and SRCH.SS.E2 is displayed to the user. If, on the other hand, the name is valid, routine Get_Candidate is called in step 1011 by COLD FUSION 60.

At step 1012, the number of search results is determined. If none are found, step 1012A is executed so informing the user. Otherwise, step 1013 is called to display a list of matching entries to the user.

In step 1014, Person_Connect is initiated to determine whether any connections were found to the name on the result list that is selected. If yes, step 1007 is executed. If not, however, step 1015A is executed, indicating to the user that no connection was found.

Requesting a New Password

The function of subroutine Person_Resend_Password is to allow a member of DSP 12 to request a new password in the event his original password is lost, misplaced, or forgotten. A password may only be sent to the user's primary e-mail address and is a randomly generated password—not selected by the user—different from the original password. The first time the user attempts to use one of the original or current password, the password not used is invalidated.

Referring now to FIG. 17, a flow chart illustrating Person_Resend_Password is shown. At step 475, COLD FUSION 60 delivers a screen to display 23 prompting the user to enter his e-mail address. If the address is determined to be valid at step 476, i.e., it is in a proper format (see step 602), routine Person_Resend_Password is executed at step 477. Otherwise, the user is notified that the e-mail address entered is invalid at step 478A.

In steps 477 and 478, routine Person_Resend_Password determines whether an e-mail address is successful, that is, the e-mail address is in system. If the output of step 478 is found to be successful, the user is sent notification of the success at step 479B. In step 479B, database server 45 generates a new password, updates database 70, and passes the new password to mail server 55 to send to the user at his primary e-mail address. The user is notified at step 479A. It

should be understood that a user can only receive a new password by accessing his private e-mail. Therefore, only the user has access to the new password, thereby maintaining the confidentiality of the password for the user In step 478, if the output is unsuccessful, step 478A is again executed. However, in this case, the e-mail address in steps 477-78 could be determined as follows:

- (i) e-mail address is not listed in database 70;
- (ii) e-mail address is assigned to a canceled member;
- (iii) e-mail address is assigned to a revoked member;
- (iv) e-mail address is assigned to a denied member; and
- (v) the maximum number of requests by the user to access routine Person_Resend Password has been exceeded. If this is the case, the user is informed accordingly. If the maximum number of requests is exceeded, the user may not request that the password be resent for a certain period of time.

Session Validation

The communications protocol, http, used to carry information between the user and DSP 12, as discussed above, is "connectionless". In other words, the identity of the user does not persist as the user navigates from one screen to the next. As such, authentication cannot be implemented as it is with conventional client/server applications, wherein the user logs-in to the server once during a session and remains validated in the system until he logs-off. Accordingly, the present invention, in a preferred embodiment, uses a sub-system which uses routine, Session_Validation whereby, upon verification of username and password (see LOGIN), a unique Session Identification (SID) is established for the user which is stored in a data table of DSP 12. (See steps 701-703; FIG. 4A). This SID is passed by DSP 12 to the user after each transaction with DSP 12, such that the user maintains his SID for each subsequent communication with DSP 12.

In addition to the SID, the user also transmits his network address and browser type (See FIG. 1), which the DSP 12 compares with the SID. In cases wherein: (i) the SID is not found, (ii) the network address has changed, (iii) the browser type is altered, or (iv) the session has been inactive for an excessive amount of time, the request for LOGIN is considered invalid, and the user is required to LOGIN again. (See step 702; FIG. 4A).

It is to be understood that the routines herein discussed, in accordance with the process of the present invention, are explained in further detail in the attached Microfiche Appendix. As herein described, the routines are referred to on a system level using a standard format as is conventional in the art: such as Person_Resend_Password (See FIGS. 16A-16B) or Person_Get_Rel (see FIGS. 4A-4C). It also should be understood that persons of ordinary skill in the art could, in view of the disclosure herein, produce suitable software that is fundamentally different in form from what is disclosed in the Microfiche Appendix, yet perform the indicated and desired functions as set forth herein. Further, although the invention has been described with reference to a particular embodiment, it is to be understood that this embodiment is merely illustrative of the application of the principles of the invention and should not be construed in a limiting manner. Numerous other modifications may be made and other arrangements may be devised without departing from the spirit and scope of the present invention.

We claim:

1. A networking database system comprising:
 - a communication port;
 - a web server connected to the communication port;
 - a database containing a plurality of records;
 - a database server connected to the database for operating on said database;
 - a database connectivity engine connected to the web server for preprocessing the output of the web server and connected to the database server;
 - a queue watcher coupled to said database server for queuing outgoing e-mails;
 - a mail server operatively connected to the communication port to receive incoming e-mails, and connected to said queue watcher to transmit outgoing e-mail; and
 - a parser connected to the mail server to process incoming e-mails and connected to the database server;
 wherein the database server is responsive to the parser processing to manipulate a record in the database, and selected ones of said plurality of records are linked to selected other ones of said plurality of records by a confirmed defined relationship or a denied defined relationship.
2. The system of claim 1 wherein a first incoming e-mail contains a formcode and the parser is operable to identify the formcode, wherein the database server responds to the identified formcode to update or generate records in said database.
3. The system of claim 1 further comprising a network coupled to said web server at said communication port operable to connect a first user to said web server.
4. The system of claim 3 wherein the network supports communications of said incoming and outgoing e-mails.
5. The system of claim 3 wherein said first incoming e-mail is associated with a first user and a first outgoing e-mail is associated with a second user and wherein the first incoming e-mail and first outgoing e-mail further comprise information regarding a first relationship between said first user and said second user.
6. The system of claim 5 wherein said plurality of records further comprises a first record and a second record corresponding to said first and second users, respectively, and wherein said database server operates on said first and second records to update said first relationship between said first record and said second record to one of a confirmed defined relationship and a denied defined relationship.
7. The system of claim 6 further comprising a third user on said network, wherein said database server updates said second record in response to an incoming e-mail and a formcode in an e-mail from said third user.
8. The system of claim 6 further comprising a third user on said network, wherein said database server updates said second record in response to an input from said third user at said communication port.
9. The system of claim 6 wherein each of said plurality of records further includes a security code.
10. The system of claim 9 further comprising an input corresponding to said second user, the input being a function of said security code, and wherein said input contains data corresponding to said second user.
11. The system of claim 10 further comprising a third user on said network, wherein said input further comprises a second relationship between said second user and said third user and the database server is operable to transmit a second outgoing e-mail to said third user.
12. The system of claim 11 wherein said plurality of records further comprises a third record corresponding to

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said third user, and wherein said second relationship is one of a confirmed defined relationship or a denied defined relationship and wherein said database stores said second relationship in said second and third records.

13. The system of claim 1 wherein said plurality of records further comprise at least one of the group consisting of demographic data and relationship data.

14. The system of claim 1 wherein said plurality of records further comprise a personal profile component wherein said personal profile component is modifiable by a user.

15. A method for creating a networking database system having a communication port and a database for storing data in a plurality of records comprising:

- (a) receiving a first input at said communication port containing a first set of data corresponding to a first user, said first set of data including a relationship between said first user and a second user;
- (b) storing the first set of data in a first record of said database;
- (c) determining a first relationship between a first user and a second user from said first set of data;
- (d) transmitting a first e-mail to said second user, the first e-mail containing information that is a function of at least said first relationship;
- (e) creating a second record in said database corresponding to said second user; and
- (f) receiving a second input at said communication port from said second user in response to said first e-mail, wherein said second input contains status information corresponding to said first relationship.

16. The method of claim 15 wherein step (b) further comprises updating the first record in response to said second input and step (f) further comprises storing said status in said first and second records.

17. The method of claim 15 wherein step (f) further comprises receiving said status information as one of a confirmed relationship, a denied relationship and non-responsive input.

18. The method of claim 15 wherein step (f) further comprises receiving an e-mail from said second user.

19. The method of claim 18 further comprising receiving a third input at said communication port containing a second set of data corresponding to said second user, said second set of data including a second relationship between said second user and a third user, and storing said second set of data in said second record of the database.

20. The method of claim 19 further comprising determining a second relationship between said second user and a third user from said second set of data.

21. The method of claim 20 further comprising transmitting a second e-mail to said third user, the third e-mail containing information that is a function of said second relationship.

22. The method of claim 21 further comprising establishing a third record in said database corresponding to the third user, said third record including said second relationship.

23. The method of claim 15 wherein step (d) further comprises generating a security code corresponding to said second user, and transmitting said security code in said first e-mail.

24. The method of claim 23 wherein said second input is a function of said security code and said method further comprises receiving a third input at said communication port.

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25. A networking database apparatus comprising:
means for communicating on a network having a communications port for receiving an input of data and transmitting an outgoing e-mail;

means for storing a first record and a second record in a database in response to a first data input from a first user, said first data input including information about a relationship between said first user and a second user, wherein said first and second records correspond to the first user and the second user, respectively;

means for transmitting a first e-mail to said second user in response to said determined relationship, the first e-mail being a function of said first relationship; and

means for receiving a second data input from said second user in response to said first e-mail, wherein said second data input comprises status information about said first relationship.

26. The apparatus of claim 25 further comprising means for updating said status information in said first and second records in response to said second data input from the second user wherein said status information is one of a confirmed relationship and a denied relationship.

27. The apparatus of claim 26 wherein the second data input further comprises an e-mail from said second user.

28. The apparatus of claim 26 further comprising a web site and wherein said second data input comprises data entered at the web site by the second user.

29. The apparatus of claim 25 further comprising means for generating a security code associated with said second user, wherein said first e-mail further includes the security code.

30. The apparatus of claim 29 further comprising means for updating said second record in response to said second data input from said second user, said second data input being a function of said security code.

31. The apparatus of claim 30 wherein said second data input further comprises information about a second relationship between said second user and a third user, and further comprising means for transmitting a second e-mail to said third user in response to said second data input.

32. A method for creating a networking database system comprising the steps of:

receiving from a first individual a first set of data relating to said first individual, said first set of data including at least one name and address of a second individual and a relationship between said first individual and the second individual,

storing the first set of data in a first record of said database;

transmitting a first message to said second individual at said address, said first message inviting the second individual to join the database by providing a second set of data relating to said second individual, said second set of data including at least one name and address of a third individual and including a relationship between said second individual and the third individual;

receiving from the second individual the second set of data; and

storing the second set of data in a second record of said database, whereby, by repeated iterations of the steps of receiving data from one individual that provides information

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about that individual and provides the name, address and a relationship with another individual, transmitting a message to said another individual and inviting said another individual to submit information about himself or herself and the name, address and a relationship with still another individual, a database is established specifying information about the individuals and their relationships.

33. The method of claim 32 further comprising the step of inviting the second individual to confirm the relationship between the first individual and the second individual that is described by the first individual.

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34. The method of claim 33 further comprising the step of confirming the relationship between the first individual and the second individual.

35. The method of claim 32 wherein the address of the second individual is an e-mail address and the first message is an e-mail.

36. The method of claim 32 wherein each individual is identified by a name and an e-mail address and messages to the individuals are e-mail messages.

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