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(71) Applicant: **EQUIFAX, INC.** [US/US]; 1550 Peachtree Street, N.W., Atlanta, GA 30309 (US).

(72) Inventors: **MULHERN, Robert, Kelly**; 4890 Settles Point Road, Suwanee, GA 30024 (US). **REDMAN, James, Crawford**; 845 Start Road, Jackson, GA 30233-9743 (US). **KARAS, David, J.**; 7165 Amberleigh Way, Duluth, GA 30097 (US). **SATTERFIELD, Markus, R.**; 1210 Elk Ridge Cove, Alpharetta, GA 30005 (US).

(74) Agent: **PRATT, John, S.**; Kilpatrick Stockton LLP, Suite 2800, 1100 Peachtree Street, Atlanta, GA 30309-4530 (US).

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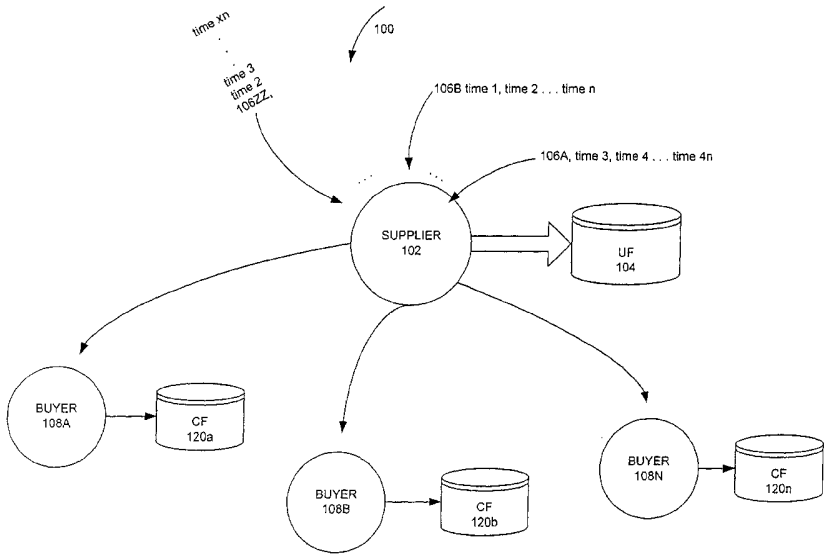
(54) Title: SYSTEM AND METHOD FOR MANAGING AND UPDATING INFORMATION RELATING TO ECONOMIC ENTITIES



(57) Abstract: Methods and systems for managing and updating information relating to economic entities using sets of unique identifiers. A universe database contains record entries. Each of the record entries is associated with a unique universe identifier. A customer database contains customer record entries. Each customer record entry is associated with a unique customer identifier. A conversion table provides a mapping between the unique universe identifiers and the unique customer identifiers. The information contained in the customer database is updated using the unique universe identifiers, unique customer identifiers and the conversion table. The unique universe identifiers and the unique customer identifiers are stable over a period of time.

WO 03/044717 A1

SYSTEM AND METHOD FOR MANAGING AND UPDATING INFORMATION RELATING TO ECONOMIC ENTITIES

CROSS-REFERENCE TO RELATED APPLICATION

This application claims priority to U.S. Serial No. 09/992,809 filed on November 19, 2001, entitled "System and Method for Managing and Updating Information Relating to Economic Entities," the entire contents of which are incorporated herein by reference.

TECHNICAL FIELD

This invention relates to managing and updating a massive amount of information relating to economic entities and providing information requested by an information buyer to the information buyer, and, in particular, to efficiently providing the requested information using two sets of unique identifiers.

BACKGROUND OF THE INVENTION

The present invention relates to managing and processing massive amounts of information regarding virtually each and every participant in today's economy. A significant part of today's economy relies on information provided by information suppliers, those who gather and process raw data and provide processed information regarding an economic entity to information buyers. As an example, an information supplier gathers data regarding a consumer and sells processed information to an information buyer. An information buyer uses the processed information to identify potential customers of its products and to shape and target its marketing strategies. Examples of information buyers include credit companies, retailers, manufacturers and service providers.

An information supplier provides information according to criteria specified by an information buyer. One information buyer may only need addresses and names of its potential customers. Another information buyer may wish to know the type of food and clothing a potential customer prefers, in addition to the customer's name and address. A third information buyer may wish to know the potential customer's marital status, income and assumed debts.

Traditional methods of supplying processed information are labor intensive and require tremendous processing capability and time. In general, traditional methods involve a step of comparing the content of an information buyer's customer file to the content

in the information supplier's file. Comparing data contents requires a batch processing and presents a substantially difficult task. Information about a particular person is often captured in various forms, requiring various steps to standardize an information buyer's customer file. For example, even a person's name may have been entered in the customer's files in three or four different ways. In addition, the amount of information available regarding an individual exploded with advancements made in computer and information technologies, presenting a daunting amount of information to be handled and managed.

Traditional methods also often fragmented databases of an information buyer according to the buyer's business units and geographical locations of the buyer's sub-units. In other words, an information buyer's customer file was often stored in a fragmented way, thereby preventing the information buyer from having an integrated view of its customers. A corporation cannot provide the most efficient services to its customers when it only has fragmented views of its customers and cannot access all information it has regarding a particular customer. For example, a regular customer of a corporation does not regard the corporation based on its different business units and is likely to be frustrated when a unit of the corporation cannot access the customer's file when the customer has been dealing for a number of years with another unit of the corporation.

In addition, new digital infrastructures such as the Internet and wireless communications brought about capability to distribute information in an amazing speed to almost every location on the globe. Accordingly, customers of information buyers expect high quality services in near real-time. In turn, information buyers expect information suppliers to deliver high quality information in near real-time. At the same time, the digital revolution brought about vast capability to gather astounding amounts of information regarding every economically active person, either natural or legal. Information buyers expect information suppliers to be able to gather, process and deliver enormous amounts of information in near real-time.

An information supplier such as Acxiom Corporation ("Acxiom") attempts to meet the challenges in the digital age buy using a plurality of persistent keys that link the record entries of information buyers with the record entries in its central database. United States patent number 6,073,140 assigned to Acxiom, which patent is incorporated herein by this reference, discloses an open system in which an information buyer's databases are updated using a plurality of persistent keys and version numbers. A version number associated with a persistent key is updated each time the content in Acxiom's central database associated with the persistent key is updated. An information buyer's database becomes

updated when the buyer's version number differs from the version number in Acxiom's central database with respect to the same persistent key.

SUMMARY OF INVENTION

The present invention provides systems and methods for managing and updating massive amounts of information relating to economic entities. An information supplier's universe database includes record entries, which are subject to change. Each record entry is associated with a unique universe identifier ("UUID"). A record entry can contain all information regarding a particular economic entity, including, among others, the address, the telephone number, marital status and credit history. A UUID is stable over time, thus can be used to link raw data generated by an economic entity and which raw data are subject to change.

When an information buyer transfers its customer database to the information supplier to update its database, the supplier assigns a set of unique customer identifiers ("UCID's") to each record entry in the customer's database. A UCID is assigned to each and every record entry contained in the customer's database regardless of whether a record entry corresponds to an existing economic entity. The UCID is stable over a period of time, and each of the customer record entries is organized per person. Accordingly, each of the UCID's can be used to link separate data generated over time regarding a particular customer of an information buyer.

The supplier also creates a conversion table or other desired functionality for associating, mapping, linking, or correlating (hereinafter "associating") the UCID's and UUID's. The supplier then uses the UUID's, UCID's and the associating functionality to efficiently transfer information desired by an information buyer and referenced by a UCID. The supplier assigns a set of UCID's per information buyer. Each buyer has its unique set of UCID's. Accordingly, integrity of data per customer database belonging to an information buyer is facilitated.

An information supplier keeps track of enormous amounts of information relating to virtually every economic entity generating raw data within a defined universe. A UUID, which is preferably stable over time, facilitates management of information by providing a way to link separate and modular data inputs regarding a particular economic entity. Similarly, a UCID, which is preferably stable over time, allows a way to link different sets of information regarding a particular customer of an information buyer. A set of UCID's enables an information buyer to have an integrated view of each and every of its customers.

Furthermore, the UCID's allow the information buyer to transmit only its UCID's or a subset thereof to the information supplier when the buyer wishes to update its customer record entries. Accordingly, the present invention reduces the amount of data that needs to be handled or transmitted from an information buyer to an information supplier.

For certain time-critical information, the present invention provides a way to update such information in near real-time. An information buyer can transmit via the Internet or a wireless communication link, the UCID associated with the time-critical information. The information supplier can find the corresponding UUID using the UCID and the associating functionality. The supplier can update the content requested by the buyer via the Internet or another real-time communication link.

The use of two sets of unique identifiers provides a way to decouple the information buyer's customer file and the information supplier's universe file. This decoupling provides several advantages. Among them are that it prevents inadvertent contamination of information between the customer database and the universe database. The universe database includes highly sensitive information, such as credit information and other regulated information. The decoupling provides a ways to prudently control highly sensitive information. In addition, the decoupling provides a way to protect against information theft. The decoupling also reduces the chance that one buyer will accidentally obtain access to another buyer's information.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an overview of a preferred system embodiment of the present invention.

FIG. 2 is an exemplary embodiment of the initial transfer of information from an information supplier to an information buyer according to the principles of the present invention.

FIG. 3 is an exemplary embodiment of a non-initial transfer of information from an information supplier to an information buyer according to the principles of the present invention.

FIG. 4 is an exemplary embodiment of a transfer of information relating to a consumer referenced by a UCID and the corresponding UUID.

DETAILED DESCRIPTION

Referring to FIG. 1, an overview of an exemplary process 100 involved in gathering, updating and processing information regarding an economic entity is described. An information supplier 102 keeps a universe file ("UF") 104 that can contain a record entry for each entity that generates raw data in a universe X. For example, a universe X may comprise the United States. The supplier gathers raw data relating to each economic entity, 106A through 106ZZ. The supplier then processes the raw data and stores the processed information relating to each economic entity in universe X.

Each record entry for an economic entity can be associated with a unique universe identifier ("UUID"). The UUID is preferably stable over time. In other words, all and every information concerning an entity can be referenced and accessed by using a UUID associated with the entity regardless of time and geographical location. For example, if an entity 106A installs a telephone line at time X and the entity assumes a mortgage at a later time Y, the supplier can receive information relating to these events and both these events can be referenced using the same UUID. As another example, if the entity 106A buys a house in location Y and buy a car in location Z, the supplier can gather information relating to these events and both of these events can be referenced using the same UUID. A record entry can contain all information relating to an economic entity, including, among others, the name, address, telephone number, utility bill payment history and credit history. A record entry can include a plurality of data files. The UUID can be assigned as appropriate, per economic entity, per record entry, or per any other desirable data trait. A preferred embodiment assigns the UUID per entity.

The use of UUID's, which is preferably stable over a period of time and assigned preferably per entity, facilitates management and integration of information regarding an economic entity. Raw data relating to an economic entity is subject to change. For example, a person's address, name, telephone names, e-mail address, and marital status may change over time. Furthermore, a person's certain traits may manifest for a short time period then disappear. For example, a person may become fanatical over chocolate ice cream and buy gallons of ice cream every week, then develop a distaste for chocolate ice cream. The person may then develop another interest. The UUID's provide a way to link all information relating to an entity regardless of time and space. They also provide a way to avoid fragmentation of information relating to an entity. Similarly, the UUID's provide safeguards against loss of information regarding an economic entity. All information

regarding an entity can be integrated, analyzed and modeled to provide a holistic market benchmark for the particular person.

The supplier 102 provides information to a plurality of information buyers, commonly designated as 108. For example, an information buyer 108a may be a manufacturer of bicycles and may buy a list of customers who are potential buyers of bicycles. The supplier delivers a customer file ("CF") 120a to the information buyer 108a. Similarly, an information buyer 108b may be a credit company and buy a list of customers who are potential consumers of its services. The supplier 102 delivers a CF 120b to the information buyer 108b.

In general, a CF includes a subset of the information included in the UF. There are several reasons for this. An information buyer 108a may be geographically limited and therefore not wish to obtain information on someone who is not residing in a specified locality. Another buyer may be interested in obtaining information regarding entities who are natural persons and are under the age of thirty-five ("35"). Yet another buyer may also be interested in only those entities whose behavior indicates that they would be good credit card customers. Still another buyer may need only parts of the information kept in the UF on each entity. In any event, the supplier identifies the content to be delivered in a CF file according to the information buyer's specifications.

Each record entry in a CF can be assigned with a unique customer identifier ("UCID"). A UCID can be assigned to every customer record entry regardless of whether the record entry identifies an economic entity. For example, the CF 120a may include old or corrupted data and thus include a record entry that may not correspond to an economic entity constituting a potential customer for the information buyer 108a. Regardless, a UCID can be assigned for each and every customer record entry in a CF. A UCID is preferably stable over time. Accordingly, a UCID provides a way to link separate data inputs generated at different times and at different locations and yet relating to the record entry corresponding to the same UCID.

The supplier 102 can assign a different set of UCID's per information buyer. A set of UCID's used for a CF belonging to the buyer 108A is, therefore, preferably different from a set of UCID's used for a CF belong to the buyer 108B. The use of different sets of UCID's per information buyer provides capability to protect proprietary information belonging to each information buyer. The use of different sets of UCID's also provides capability to avoid unintended dilution or expansion of information contained in a CF of a particular information buyer. Furthermore, using different sets of UCID's for different

customers avoid the security issues and other numerous problems associated with the previously discussed persistent key approach where different buyers are using the same key to access the same record entry. For example, the supplier can change periodically a set of UCID's belonging to an information buyer, thereby providing an increased security for information contained in the buyer's CF.

Referring to FIGs. 2 and 3, a preferred embodiment for transferring information from a supplier's universe file to a buyer's customer file is provided. The process depends on whether each record entry in the customer file was previously assigned with a UCID. In FIGs. 2 and 3, the universe file is illustrated as contained in a single database. Similarly, the customer file is illustrated as contained in a single database. Those skilled in the art will understand that the universe and customer files can be stored in several different databases and memory devices located across different geographical areas. The requirement is that a record entry corresponding to a UUID be accessible regardless of the location and manner by which the record entry is stored. Similarly, a record entry corresponding to a UCID needs to be accessible regardless of the location and manner by which the record entry is stored. A record entry can include a plurality of data files.

Referring to FIG. 2, a process of transferring information when an information buyer provides a customer file which does not have previously assigned UCID's is described. An information buyer 202 provides its CF 204 to a supplier 206 to update record entries contained in the CF 204. In general, the buyer provides the CF 204 to the supplier 206 using storage devices, such as magnetic tapes, CD's or DVD's. However, the CF 204 can be transferred to the supplier 206 via any communicational means, including wired and wireless communications, such as satellite transmissions and the Internet.

In a preferred embodiment, information in the CF 204 is organized per person. Accordingly, upon the receipt of the CF 204, the supplier 206 checks to ascertain the information in CF 204 is organized per person. If the content of the 204 is not organized per person, the supplier reworks the content of the CF 204 such that the content becomes organized per person. The element 208 represents a working customer file ("WCF") whose record entry organization may or may not be the same as that in the CF 204.

The supplier then matches or correlates the content of the WCF 208 with the information contained in the UF 210. The process of matching information contained in two different databases is well known in the art. For example, public domain identity data can be used to match the content of the WCF 208 with the content contained in the UF 210. The

result of the matching process, in general, will include a matched customer file ("MCF") 212 and a non-matched customer file ("NMCF") 214. The supplier then updates the content of the MCF 212 according to the specifications of the information buyer 202.

The supplier assigns a UCID to each record entry in MCF, as well as each record entry in NMCF 214. Those skilled in the art will understand that the assignment of the UCID's to the record entries in the CF or files derived therefrom may occur at any time after the CF 204 is delivered to the supplier and preferably before the supplier delivers an updated customer file ("UCF") to the buyer 202. Those skilled in the art will also understand that the MCF 212 and NMCF 214 need not be combined before being delivered to the buyer 202 since the CF 204 may be stored in various formats as long as a UCID can be used for all related data identified as a single record entry.

After assigning a set of UCID's, the supplier creates a conversion table or other desired mapping, linking, associating, or correlating (hereinafter, "associating") functionality to associate the UUID's and UCID's (hereinafter, "CT" or "conversion table") 218. The CT 218 can be used in subsequent transfers of information from the supplier 206 to the buyer 202. The supplier 206 delivers an updated customer file ("UCF") 216 to the buyer 202 via any viable communicational links.

Referring to FIG. 3, a non-initial transfer of information from the supplier 306 to buyer 302 is described. The buyer 302 delivers a CF 304 to the supplier 306. Each record entry should have a corresponding UCID. Using the conversion table created during the initial transfer of information, the supplier 306 can easily identify and update those record entries in the UF corresponding previously matched record entries. The record entries that have not been previously matched with information contained in the UF or record entries that do not have assigned UCID's are matched using the traditional data matching process described in connection with FIG. 2. Iterative transfers of information between an information supplier and an information buyer will result in integration of information contained in the buyer's customer files, and the need to perform expensive traditional data matching process will eventually disappear.

Accordingly, each UCID has a corresponding UUID, that is all record entries in CF 304 will eventually have a corresponding entries in the UF, and the CT 318 is used to translate the UCID's assigned to the CF 304 to the UUID's in the UF. Once the mapping between the content of the CF 304 and the content of the UF 310 is accomplished, the updating of the content of the CF becomes a trivial process. For example, certain information contained in a record entry referenced by a UUID can be simply written over into the record

entry referenced by the corresponding UCID. In addition, the information buyer 302 may transmit to the supplier 306 only the UCID's corresponding to record entries the buyer wishes to update. The supplier can supply only a portion of the record entry referenced by the corresponding UUID's. The use of the UUID's, UCID's and CT can eliminate the need to transfer a massive amount of data from an information buyer to an information supplier.

The use of two sets of unique identifiers, *i.e.*, the UUID's for the record entries in the UF and the UCID's for the record entries in a CF provides several advantages. First, it provides a decoupling function that helps to protect security and integrity of different sets of databases. It provides safeguards against inadvertent dilution and contamination of data between the UF and a CF. In addition, the UF contains highly sensitive data, such as credit information and information subject to various federal or local laws. The use of different sets of identifiers for the UF and CF provides a way to control and prudently manage sensitive and/or regulated information. The UCID's cannot be used to ascertain credit or regulated information. Furthermore, an information thief cannot use a set of the UCID's to back trace the source of information. In this sense, the CT acts as a filter or a gateway to isolate the outside world from the UF, unlike the persistent key approach mentioned above.

The UF contains time-sensitive information. The supplier has ability to obtain economic transaction of a person in near real-time basis. Each time a consumer generates an economic event, such as buying a box of chocolates using a credit card, or assuming a mortgage, the supplier has ability to update record entries in its UF. Certain aspects of information regarding a person may be time critical to certain information buyers. The use of the UUID's, UCID's and CT allows capability to provide critical information to an information buyer in near real-time.

Referring to FIG. 4, a transfer of information relating to a consumer referenced by a UCID and the corresponding UUID is described. A UUID 404 references a record entry 420 containing information relating to an entity 402. In general the record entry 420 includes a plurality of data files, commonly designated as 406. When the entity 402 generates events, such as changing her residency and disconnecting her telephone number and utilities, an information supplier receives new raw data regarding the entity 402. The supplier has ability to process the raw data and recognize, for example, the data file 406a containing the address for the person 402 needs to be updated. When the buyer 410a transfers the UCID 412, the supplier finds the corresponding UUID 404 using the conversion table 440. The supplier can also initiate transfer of information regarding the entity 402 when certain information regarded by the buyer 410a to be time-critical becomes updated.

The data file 406a is associated with a set of attributes, commonly designated as 408. For example, an attribute 408a specifies whether the data file 406a is regulated or non-regulated. Another attribute 408x specifies the time critical level of the data file 406a for different information buyers. Depending on the attributes associated with the data file 406a, the supplier can transfer in near real-time the updated content of the data file 406a to an information buyer. For example, the content of data file 406a is non-regulated and time critical to buyer 410a. The supplier can use the UUID 404 and the conversion table 440 to find the corresponding UCID 412. The supplier then can deliver the content of the data file 406a to update the corresponding data file 414a contained in the record entry 430 referenced by the UCID 412. The supplier can provide new time-critical information to the buyer 410a via any real-time methods of communications, including the Internet and wireless communications. Those skilled in the art will understand that a supplier's computer can also overwrite the content of the data file 406a into the data file 414a associated in a buyer's computer using a standard protocol such as Extensible Markup Language ("XML").

The foregoing is provided for purposes of explanation and disclosure of preferred embodiments of the present invention. Further modifications and adaptations to the described embodiments will be apparent to those skilled in the art and may be made without departing from the spirit and scope of the invention and the following claims.

CLAIMS

What is claimed is:

1. A method for updating a customer file having a plurality of record entries, comprising:

receiving raw data corresponding to at least one event generating entity;

processing the raw data and generating at least one processed record entry;

storing a plurality of processed record entries in a universe database, each record entry being associated with a unique universe identifier ("UUID");

comparing the content of the customer file with the content of the universe database;

generating a matched customer file and a non-matched customer file;

assigning a unique customer number ("UCID") for each record entry contained in the customer file;

associating each UCID with a corresponding UUID; and

updating a portion of at least one record entry in the matched customer file with information contained in the processed record entry associated with the UUID corresponding to the UCID associated with the at least one record entry.

2. The method of Claim 1, wherein each UUID is stable over a period of time; and each UCID is stable over another period of time, and the raw data is subject to change.

3. The method of Claim 1, wherein a UCID is assigned to every record entry contained in the customer file regardless of whether a record entry corresponds to an existing economic entity.

4. The method of Claim 1, wherein the action of comparing the content of the customer file with the content of the universe database comprises organizing the record entries in the customer file per person.

5. The method of Claim 1, wherein the action of comparing the content of the customer file with the content of the universe database comprises using public domain identity data common to the customer file and the universe database.

6. The method of Claim 1, wherein the action of associating each UCID with a corresponding UUID comprises:

generating a conversion table providing a mapping between the UCID's with a set of the UUID's contained in the universe database.

7. The method of Claim 1, wherein the action of updating a portion of at least one record entry is accomplished using a batch mode.

8. The method of Claim 1, wherein the action of updating at least a portion of at least one record entry is accomplished in near real-time via the Internet.

9. A method for updating a customer file having a plurality of customer record entries, each customer record entry being associated with a unique customer identifier (UCID), comprising:

transferring a UCID contained in the customer file;

associating the transferred UCID with a corresponding unique universe identifier (UUID) referencing one record entry contained in an information supplier's database; and

updating a portion of the customer record entry associated with the transferred UCID with information contained in the record entry referenced by the corresponding UUID.

10. The method of Claim 9, wherein the record entry contains information relating to events generated by an economic entity;

each UCID is stable over a period of time; and

each UUID is stable over another period of time.

11. The method of Claim 9, wherein the action of associating the transferred UCID with the corresponding UUID comprises referencing a conversion table providing a mapping between a plurality of UCID's and a plurality of UUID's.

12. The method of Claim 9, wherein the action of updating a portion of the customer record entry associated with the transferred UCID comprises a batch processing mode.

13. The method of Claim 9, wherein the action of transferring a UCID comprises a transfer of data via the Internet.

14. The method of Claim 9, wherein the action of transferring a UCID comprises a transfer of data via a wireless communication link.

15. The method of Claim 9, wherein the action of updating a portion of the customer record entry associated with the transferred UCID comprises a transfer of data via the Internet.

16. The method of Claim 9, wherein the action of updating a portion of the customer record entry associated with the transferred UCID comprises a transfer of data via a wireless communication link.

17. The method of Claim 9, comprising:

updating the transferred UCID with a new UCID;

associating the new UCID with a UUID; and

generating a conversion table providing a mapping between the new UCID and the UUID associated with the new UCID.

18. A method for updating a customer file having a plurality of customer record entries, each customer record entry being associated with a unique customer identifier (UCID), comprising:

transferring a UCID to an information supplier, the supplier having a universe database containing record entries, each of said record entry being associated with a unique universe identifier ("UUID");

associating the transferred UCID with a corresponding UUID; and

updating a portion of the customer record entry associated with the transferred UCID with information contained in the record entry being associated with the corresponding UUID.

19. The method of Claim 18, wherein each of the record entries comprises processed information from raw data corresponding to events generated by an economic entity.

20. The method of Claim 18, wherein the action of transferring a UCID is accomplished via the Internet.

21. The method of Claim 18, wherein the action of transferring a UCID is accomplished via a wireless communication link.

22. The method of Claim 18, wherein the action of transferring a UCID is accomplished via a wired communication link.

23. The method of Claim 18, wherein the action of updating a portion of the customer entry associated with the transferred UCID comprises a batch processing.

24. The method of Claim 18, wherein the action of updating a portion of the customer entry associated with the transferred UCID comprises a transfer of data via a wired communication link.

25. The method of Claim 18, wherein the action of updating a portion of the customer entry associated with the transferred UCID comprises a transfer of data via a wireless communication link.

26. The method of Claim 18, wherein each UCID is stable over a period time and each UUID is stable over another period of time.

27. The method of Claim 18, comprising:

changing the transferred UCID to a new UCID,

associating the new UCID with a UUID; and

generating a conversion table providing a mapping between the new UCID and the UUID associated with the new UCID.

28. A system for updating a plurality of customer files, each of said customer files belonging to an information buyer, comprising:

a universe database containing record entries, each record entry being associated with a unique universe identifier ("UUID");

a means for assigning a set of unique customer identifiers ("UCID") for each of the customer files;

a conversion table providing a mapping between a set of the UUID's and each set of the UCID's assigned to each of the plurality of customer files; and

updating a portion of at least one customer file using at least one UCID in the set of the UCID's corresponding to the least one customer file and a portion of the conversion table.

29. The system of Claim 28, wherein each set of the UCID's is different from another set of the UCID's.

30. The system of Claim 28, wherein the conversion table comprises a plurality of customer conversion tables, each customer conversion table corresponding to one of the plurality of customer files and providing a mapping between a set of UUID's and the set of UCID's assigned for the corresponding customer file.

31. The system of Claim 28, wherein the record entries contained in the universe database correspond to economic entities;

each UUID is stable over a period of time; and

each UCID is stable over another period of time.

32. The system of Claim 28, wherein at least one set of UCID's is changed to a new set of UCID's, each UCID in the new set being associated with a UUID; and a conversion table provides a mapping between the new set of UCID's and a set of the UUID's.

33. A system for updating a customer database containing a plurality of customer record entries, each customer record entry being associated with a unique customer identifier ("UCID"), comprising:

a universe database containing record entries, each record entry being associated with a unique universe identifier ("UUID");

a conversion table providing a mapping between the UUID's and UCID's; and

updating a portion of the customer database with information contained in the universe database using the UUID's, the conversion table and the UCID's.

34. The system of Claim 33, wherein the UUID's are stable over a period of time and the UCID's are stable over another period of time.

35. The system of Claim 33, wherein the UCID's are updated with a new UCID's and a new conversion table provides a mapping between the UUID's and UCID's.

36. A method for managing information relating to event generating entities, comprising:

receiving raw data generated by the entities;

processing the raw data and generating processed record entries, each record entry being associated with a unique universe identifier ("UUID"),

receiving a customer database containing a plurality of customer record entries; and

assigning a unique customer identifier ("UCID") for each of the customer record entries; and

creating a conversion table providing a mapping for each UCID to one and only corresponding UUID.

37. The method of Claim 36, wherein

each UUID is stable over a period of time;

each UCID is stable over another period of time.

38. The method of Claim 36, wherein a portion of the customer database is updated using the UUID's, UCID's and the conversion table.

39. A method for managing information relating to event generating entities, comprising:

receiving raw data generated by the entities;

processing the raw data and generating processed record entries, each record entry being associated with a unique universe identifier ("UUID");

receiving at least one unique customer identifier ("UCID"); and

updating a portion of the customer database using a conversion table providing a mapping of the at least one UCID to a corresponding UUID.

40. The method of Claim 39, wherein

each UUID is stable over a period of time;

each UCID is stable over another period of time.

41. The method of Claim 39, wherein the received UCID is changed with a new UCID and the conversion table provides a mapping between the new UCID and a UUID.

42. A method for managing information relating to an event generating entity, comprising:

receiving raw data generated by the entity;

processing the raw data and generating at least one data file being accessible by a unique universe identifier ("UUID");

finding a corresponding unique universe customer identifier ("UCID") using a conversion table;

transferring the at least one data file to update a record entry being associated with the UCID.

43. The method of Claim 42, wherein the action of transferring the at least one data file occurs after determining the state of an attribute associated with the at least one data file.

44. The method of Claim 42, wherein the UUID is stable over a period of time and the UCID is stable over another period of time.

45. A system for managing information relating to an event generating entity, comprising:

a record entry comprising a plurality of data inputs, the record entry being associated with a unique universe identifier ("UUID");

a customer record entry comprising a plurality of customer data inputs, the customer record entry being associated with a unique customer identifier ("UCID");

a conversion table providing a mapping between the UUID and UCID; and

updating a portion of the customer record entry using the UUID, UCID and conversion table.

46. The system of Claim 45, wherein the UUID is stable over a period of time and the UCID is stable over another period of time.

47. The system of Claim 45, wherein each of the plurality of customer data inputs is associated with an attribute and the action of updating a portion of the customer record entry occurs in response to determining the state of the attribute associated with at least one of the plurality of customer data inputs.

48. A method for updating a plurality of customer files, each customer file having a plurality of record entries, comprising:

receiving raw data corresponding to at least one event generating entity;

processing the raw data and generating at least one processed record entry;

storing a plurality of processed record entries in a universe database; each record entry being associated with a unique universe identifier ("UUID");

comparing the content of each of the plurality of customer files with the content of the universe database;

generating a matched customer file and a non-matched customer file for each of the plurality of customer files;

assigning a set of unique customer identifiers ("UCID's") for each customer file, each UCID within the set being associated with each record entry contained in the customer file corresponding to the set of UCID's;

associating each UCID with a corresponding UUID; and

updating a portion of at least one record entry in at least one matched customer file with information contained in the processed record entry associated with the UUID corresponding to the UCID associated with the at least one record entry.

49. The method of Claim 48, wherein each UUID is stable over a period of time; and each UCID is stable over another period of time.

50. The method of Claim 48, wherein a UCID is assigned to every record entry contained in each of the plurality of customer files regardless of whether a record entry corresponds to an existing economic entity.

51. The method of Claim 48, wherein the action of associating each UCID with a corresponding UUID comprises:

generating a conversion table for each of the plurality of customer files, each conversion file providing a mapping between the set of UCID's assigned to the corresponding customer files with a set of the UUID's contained in the universe database.

52. The method of Claim 48, wherein the action of updating a portion of at least one record entry is accomplished using a batch mode.

53. The method of Claim 48, wherein the action of updating at least a portion of at least one record entry is accomplished in near real-time via the Internet.

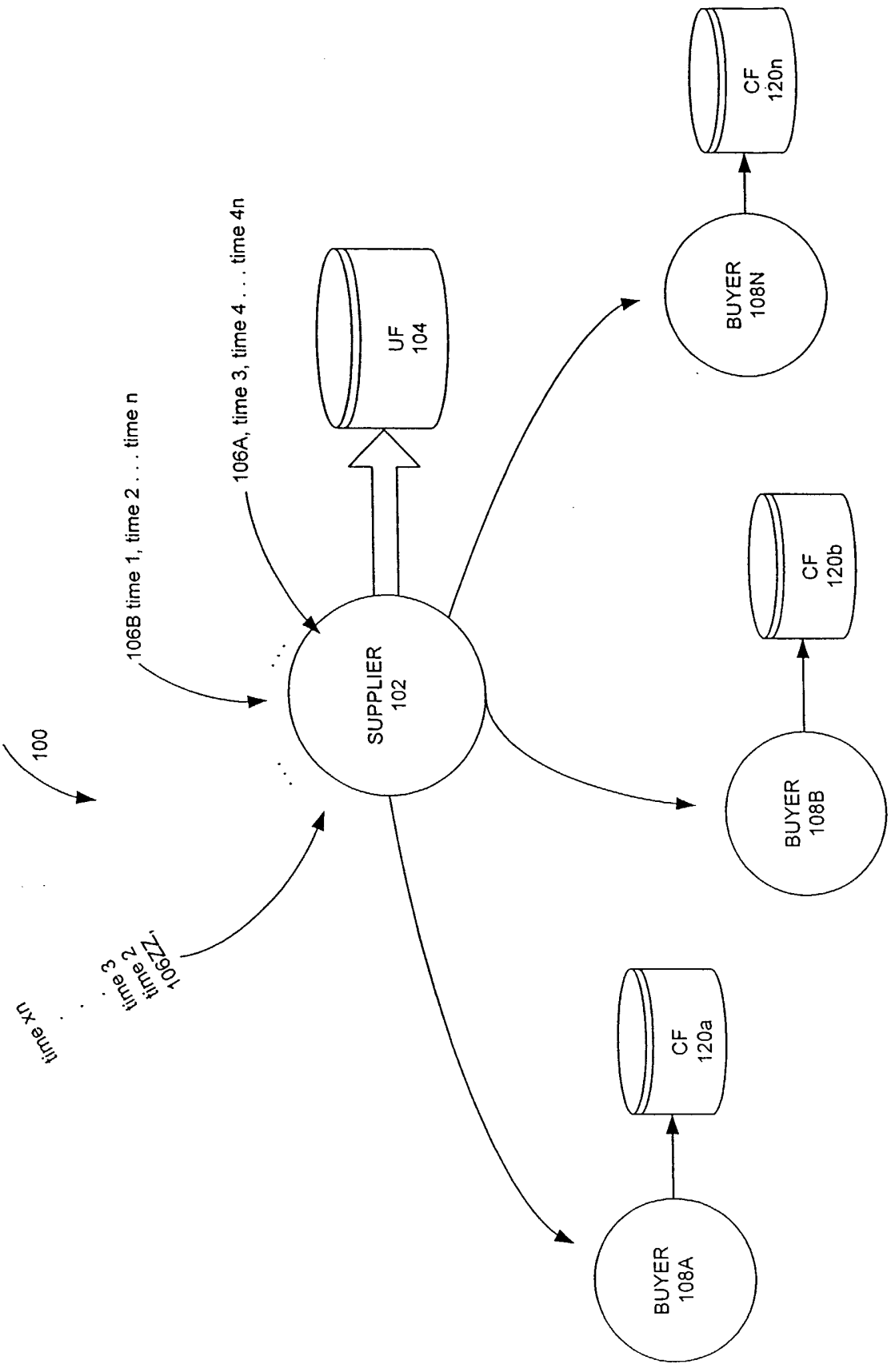

100
106B time 1, time 2 . . . time n
106A, time 3, time 4 . . . time 4n
106Z, time 2, time 3 . . . time xn
SUPPLIER 102
UF 104
BUYER 108N
BUYER 108B
BUYER 108A
CF 120n
CF 120b
CF 120a

Figure 1

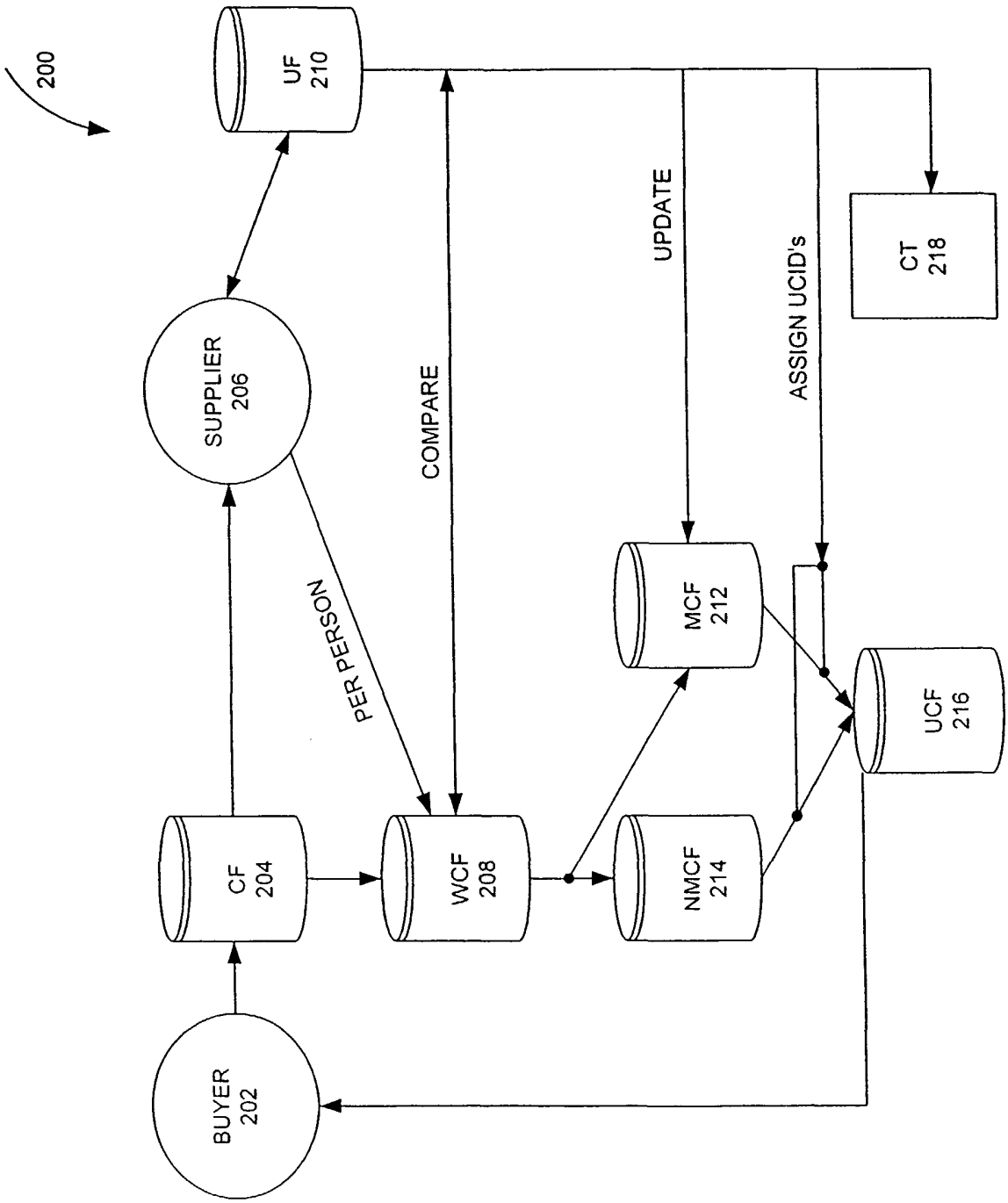

200
UF 210
SUPPLIER 206
COMPARE
UPDATE
ASSIGN UCID's
CT 218
PER PERSON
MCF 212
UCF 216
CF 204
WCF 208
NMCF 214
BUYER 202

Figure 2

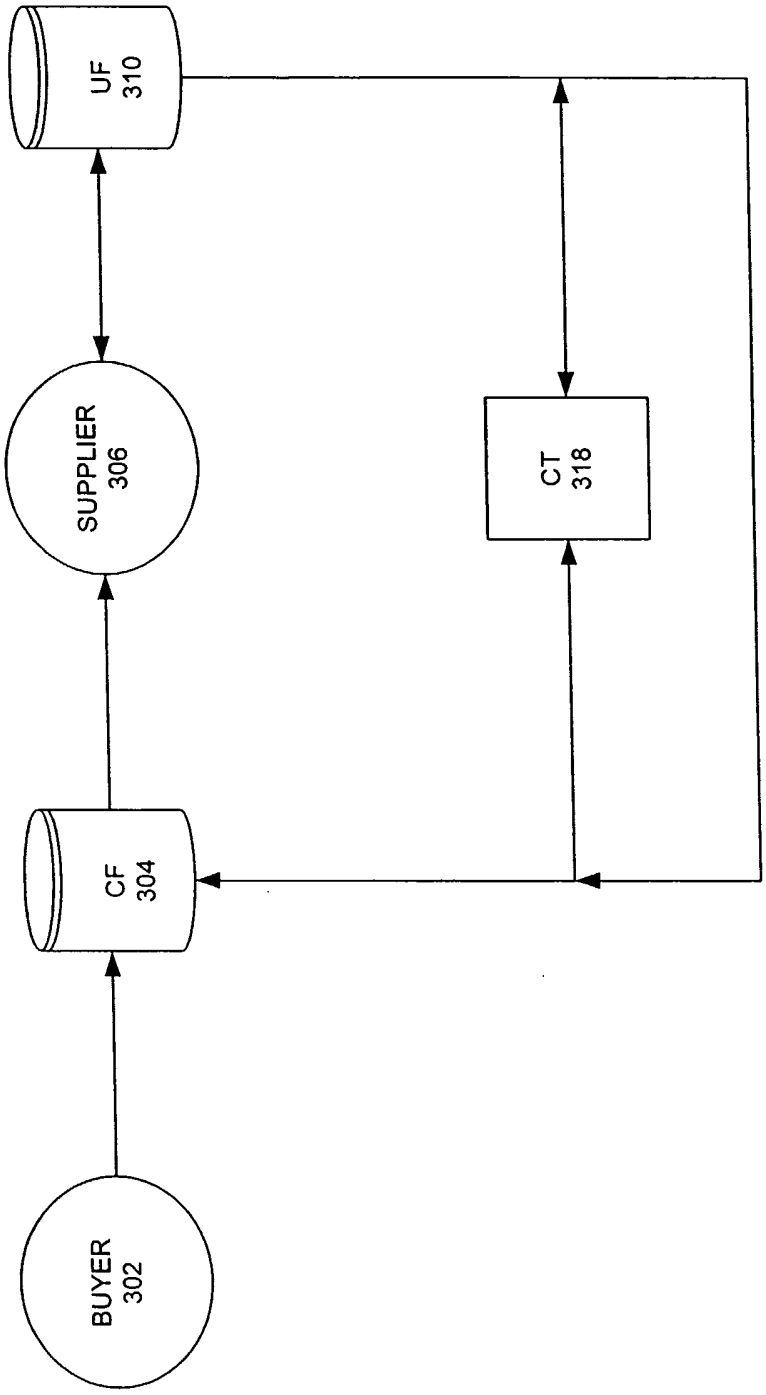


Figure 3

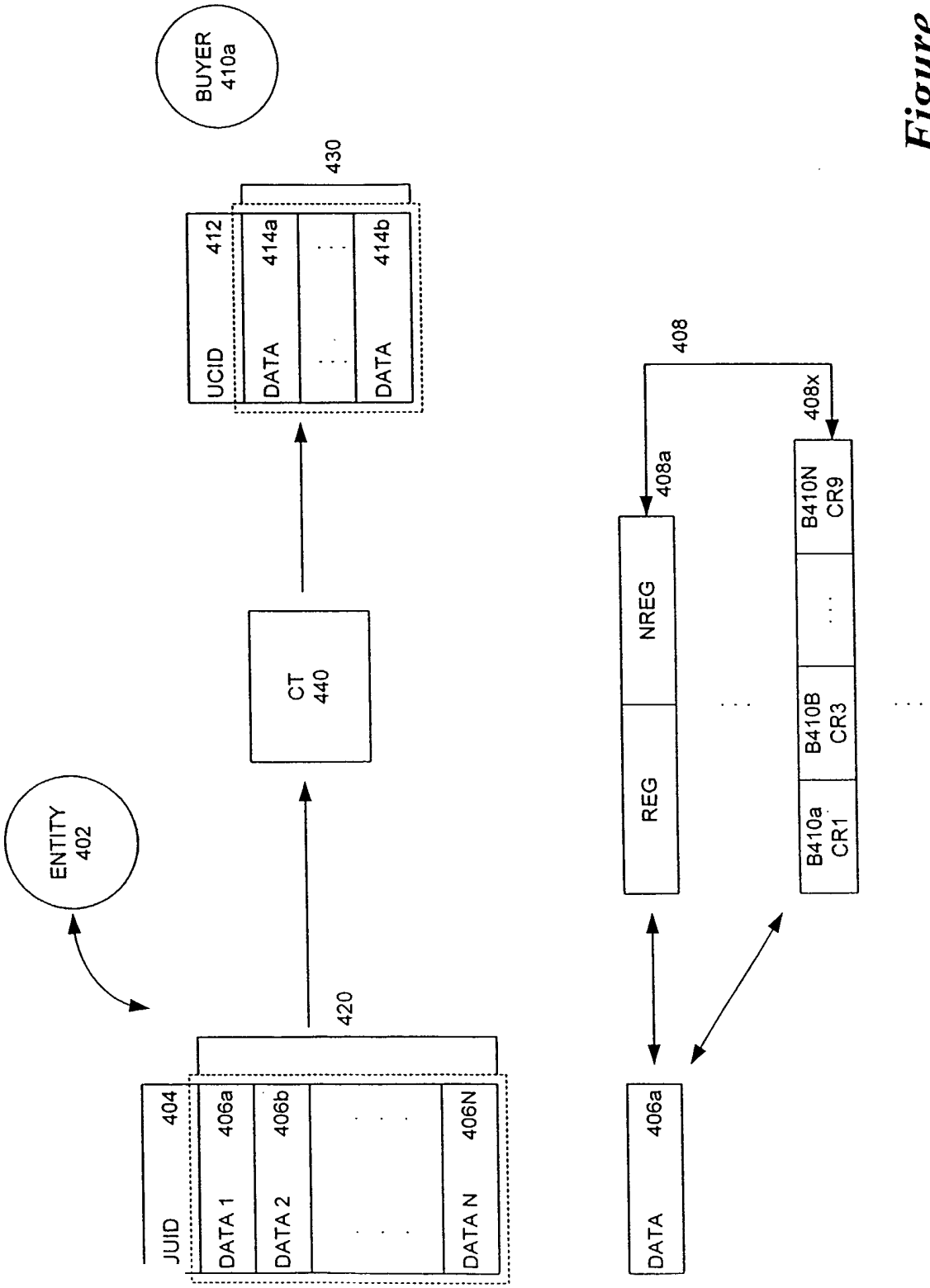

BUYER
410a
430
UCID
412
DATA
414a
DATA
414b
CT
440
ENTITY
402
420
JUID
404
DATA 1
406a
DATA 2
406b
DATA N
406N
408
408a
NREG
REG
408x
B410N
CR9
B410B
CR3
B410a
CR1
DATA
406a

Figure 4

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 02/37094

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06F17/60

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, PAJ, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 305 196 A (DEATON DAVID W ET AL) 19 April 1994 (1994-04-19) abstract claims 1-9 column 3, line 56 -column 6, line 47	1-53
Y	US 6 073 140 A (BAKER JOY L ET AL) 6 June 2000 (2000-06-06) cited in the application abstract claims 1-21	1-53
A	US 5 675 662 A (DEATON DAVID W ET AL) 7 October 1997 (1997-10-07) abstract claims 1-5	1,9,18, 28,33, 36,39, 42,45,48

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
27 February 2003	06/03/2003

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Daman, M

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Form PCT/ISA/210 (second sheet) (July 1992)

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
A	US 2001/037333 A1 (NISHIMURA SHUICHI) 1 November 2001 (2001-11-01) abstract page 1, left-hand column, paragraph 9 -page 2, left-hand column, paragraph 19 ---	1,9,18, 28,33, 36,39, 42,45,48
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 12, 3 January 2001 (2001-01-03) & JP 2000 250795 A (HITACHI LTD), 14 September 2000 (2000-09-14) abstract -----	1,9,18, 28,33, 36,39, 42,45,48

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Information on patent family members

International Application No
PCT/US 02/37094

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