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[Continued on next page]

(54) Title: E-COMMERCE CATALOG CONSTRUCTION BY INCORPORATION

800
S

EBEP

PURCHASING TRANSACTIONS
RESTRICTED AREA OF BUYER,

ADMINISTRATION OF THE PURCHASE CATALOG
REGISTER OF DEMAND FOR PRODUCT OR SERVICE
DEMANDED PRODUCTS LIST
DEMANDED SERVICES LIST
QUERIES & OFFERS FROM VISITORS

ADMINISTRATION OF VENDORS
CREATE GROUPS OF VENDORS
VENDORS LIST
LIST OF VENDORS GROUPS

PURCHASES
COMPOSE MATERIAL LIST FOR QUOTATION
QUOTATIONS SENT FROM OUR VENDORS
CONTRACTS & ORDERS

NEGOTIATION FORUM
BY VENDOR
BY TOPIC
BY DATE

ORDERS LOG
BY VENDOR
BY DATE

HOME BACK TUTORIAL SEARCH

(57) Abstract: A method for constructing an electronic catalog by incorporation of existing data sets corresponding to products to be listed in the electronic catalog. Existing databases are downloaded to an extranet-based e-commerce platform user's enterprise site. The existing databases may be catalogs from other extranet-based e-commerce platform users, a general catalog provided by the extranet-based e-commerce platform provider, or third party XML files. Data sets corresponding to products to be added to the catalog are imported to the electronic catalog, adding that product to the electronic catalog. Optionally, the data sets may be imported to a client-side electronic catalog; and the changes to the client-side electronic catalog can be exported to a server-side electronic catalog accessible through the extranet-based e-commerce platform.

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Title*E-Commerce Catalog Construction by Incorporation*

This application claims priority under 35 U.S.C.
5 §119(e) for U.S. Provisional Patent Application Number
60/169,329, filed on December 6, 1999. This application is
also related to co-pending U.S. Patent Application No.
09/652,568 filed on August 31, 2000. Both of the
aforementioned applications are herein incorporated by
10 reference, but are not admitted to be prior art.

Technical Field

This invention relates generally to e-commerce and more
specifically to a method for constructing an e-commerce
15 catalog by incorporation of existing data.

Background Art

In order to participate in e-commerce, an electronic
catalog of products for sale is typically provided for
20 purchasing entities to identify and order demanded products.
In one e-commerce solution, each enterprise creates two
electronic catalogs: one for products for sale and one for
demanded products. Construction of an electronic catalog,
however, can be an onerous task for small and mid-sized
25 business enterprises. Typically, enterprises initiating an
e-commerce presence must manually construct an electronic
catalog in its entirety. This requires considerable labor
expenditure to manually enter each product into the catalog,
particularly when each product requires multiple fields of
30 data.

Extensive effort has been directed to optimizing catalog searches, catalog structures and catalog interoperability with customer purchasing systems. For example, one approach to catalog interoperability is to
5 create a multi-vendor catalog either inside the purchasing entity's firewall or on a host server on the Internet. This approach is disclosed in "Product Information Management, Publishing and Exchange Enable Preferred Relationships with Customers and Channel Partners" SAQQARA SYSTEMS, INC. White
10 Paper (MAY, 1999). Catalog searches can be optimized by avoiding redundant entries. U.S. Patent No. 5,231,566, issued to *Blutinger et al.*, teaches a method for constructing an electronic catalog in which each manual entry is checked against the existing catalog for a match
15 with a previous entry to prevent duplicate entries. Catalog structure can be optimized by using object-oriented code to create the catalog structure. U.S. Patent No. 6,052,670, issued to *Johnson*, teaches the use of an object-oriented framework to construct an electronic catalog. The resulting
20 catalog is extensible and the content can be controlled by the enterprise. However, these solutions require individual catalog entries to be manually entered into the catalog. Manually entry of data requires substantial labor expenditure, which may be cost prohibitive for small and
25 mid-size enterprises. Many existing solutions also require a large capital investment in custom software or loss of control over the content of a catalog on an Internet host.

A need still exists for a method for constructing an electronic catalog, which is not cost prohibitive for small
30 and mid-size businesses and allows a user to control content.

It is an object of the present invention to provide a method for constructing an electronic catalog by incorporation of existing data.

Disclosure of the Invention

To achieve these and other objectives, and in view of its purposes, the present invention provides a method for constructing an e-commerce catalog by incorporation of existing data. Incorporation provides significant labor savings, avoiding the time required to manually enter product data into an electronic catalog. In addition, incorporation allows an enterprise to maintain control over the content of the catalog.

In one embodiment of the present invention, a method is provided for constructing an electronic catalog by incorporation of existing data sets corresponding to products to be listed in the electronic catalog. Existing databases are downloaded to an extranet-based e-commerce platform user's enterprise site. The existing databases may be catalogs from other extranet-based e-commerce platform users, a general catalog provided by the extranet-based e-commerce platform provider, or third party XML files. Data sets corresponding to products to be added to the catalog are imported to the electronic catalog, adding that product to the electronic catalog. Optionally, the data sets may be imported to a client-side electronic catalog, and the changes to the client-side electronic catalog can be exported to a server-side electronic catalog accessible through the extranet-based e-commerce platform.

It should be understood that both the foregoing general description and the following detailed description are exemplary, but are not restrictive, of the invention.

Brief Description of Drawings

The features and advantages of a method for constructing an electronic catalog by incorporation will be more clearly understood from the following description when read in connection with the accompanying drawing. Included
5 in the drawing are the following figures:

Fig. 1 is a block diagram of an extranet-based e-commerce platform, which can be used to construct an electronic catalog by incorporation according to one embodiment of the present invention;

10 Fig. 2 illustrates the architecture for an extranet-based e-commerce platform used to construct an electronic catalog by incorporation according to one embodiment of the present invention;

Fig. 3 illustrates a graphical user interface for a
15 purchasing transaction area of an enterprise site of an extranet-based e-commerce platform used to construct and maintain a demand catalog according to the present invention;

Fig. 4 illustrates a graphical user interface for a
20 sales transaction area of an enterprise site of an extranet-based e-commerce platform used to construct and maintain a sales catalog according to the present invention; and

Fig. 5 is a flow diagram of a method for constructing an electronic catalog by incorporation according to one
25 embodiment of the present invention.

Best Mode for Carrying Out the Invention

The present invention will be described in detail with reference to the accompanying drawing in which like
30 reference numerals designate similar or corresponding elements, regions, and portions. The present invention

provides a method for constructing an electronic catalog by incorporation.

Referring now to Fig. 1; a first extranet-based e-commerce platform (EBEP) user has an enterprise site (601) as disclosed in U.S. Patent Application No. (Attorney Docket WEB 2000-4), which is incorporated herein. The EBEP user constructs a client side user catalog (USER CATALOG/C) (1840) using its enterprise site (601). USER CATALOG/C (1840) is a database, comprises data sets (1802, 1808, 1810), which describe products for sale or demanded by the first EBEP user, depending upon whether USER CATALOG/C (1840) is a sales transaction catalog (sales catalog) or a purchasing transaction catalog (demand catalog).

The data sets (1802, 1808, 1810) in USER CATALOG/C (1840) can be input using any combination of three methods. First, data sets can be uploaded from a legacy database (1850) using a translation program (1860). The translation program (1860) can translate a legacy database (1850) into an extensible markup language (XML) file, then the XML file is uploaded into USER CATALOG/C (1840) by incorporation. Second, data sets (1802, 1808, 1810) can be manually entered using an input application (1870). Third, data sets (1802, 1808, 1810) can be entered into USER CATALOG/C (1840) by incorporation.

When data sets (1802, 1808, 1810) are entered into USER CATALOG/C (1840) by incorporation, the data sets (102, 1808, 1810) are transmitted through the extranet-based e-commerce platform (EBEP) (300) and the EBEP user's enterprise site (601). The data sets (1802, 1808, 1810) can be retrieved by the EBEP (300) from various locations on the Internet (100). These locations include, but are not limited to, a general catalog (1800) constructed by the EBEP provider for the purpose of catalog construction by incorporation and enterprise sites of other EBEP users (1831).

Fig. 2 shows an implementation of the present invention using a client/server architecture. On the client side, the EBEP user's software comprises a client-side operating system (470A), a first database (480A), extranet-based e-commerce platform software (450), client-side distributed data management software (460) and the USER CATALOG/C database (1840). In the embodiment shown in Fig. 2, the first EBEP user's software communicates through a communication layer (not shown) to a host server on the Internet (100).

On the server side of the connection, an enterprise java beans architecture (EJB) is used. EJB is a product of Sun Microsystems of Palo Alto, CA. A websphere application (500) from International Business Machine, Inc. (IBM) of Armonk, NY is installed on the server to monitor and manage transactions between enterprises on the EBEP. The websphere application establishes an EJB session/entity (510) associated with the entity (i.e., enterprise) who established it. EJB uses piece of application code to assemble a working application to perform EBEP functionalities.

The server side Enterprise Application Integration software (EAI/S) (410) is incorporated using DOMINO (520) by Lotus Development of Cambridge MA. DOMINO allows the EJB application to read data in a variety of languages, including hyper text markup language (HMTL) (530), extensible markup language (XML) (540), NOTES by IBM, and Lotus Development, and SERVLET (560) by Sun Microsystems.

After USER CATALOG/C has been created or updated, it is exported to the EBEP software by an authorized individual using the distributed data management software (460, 410). The EBEP session (510) creates a server side user catalog (USER CATALOG/S) (1900), which is a duplicate of USER CATALOG/C (1840), but is available to other EBEP users

through their respective EBEP extranets. USER CATALOG/S (1900) is created using the distributed data management software (410), preferably as a notes database. Optionally, for catalog updates, only the changes to USER CATALOG/C are exported to USER CATALOG/S.

It should be understood that although the foregoing description is based on a client-server architecture over the public Internet, other architectures are possible within the scope of the present invention, as well as, other types of networks.

Fig. 3 shows a graphical user interface (GUI) for the purchasing transaction area (800) of a first EBEP user's enterprise site according to one embodiment of the present invention. As shown in Fig. 3, a comprehensive menu of functions related to purchasing transactions can be accessed from within the purchasing transaction area (800). One such EBEP function in the purchasing transactions area is "REGISTER OF DEMAND FOR PRODUCT OR SERVICE." By selecting this function, an authorized individual can create a demand catalog or add products to an existing demand catalog.

Fig. 4 shows a graphical user interface (GUI) for the sales transaction area (900) of a first EBEP user's enterprise site according to one embodiment of the present invention. As shown in Fig. 4, a comprehensive menu of functions related to sales transactions can be accessed from within the sales transaction area (900). One such EBEP function in the sales transactions area is "INSERT PRODUCT IN CATALOG." By selecting this function, an authorized individual can create a sales catalog or add products to an existing sales catalog.

Referring to Fig. 5, after selecting "REGISTER OF DEMAND FOR PRODUCT OR SERVICE" from any area of the first EBEP user's enterprise site, the authorized individual can

select "RESEARCH BY COMPANY" (step 1710) from a menu of functions. The EBEP software will provide the authorized user with a screen with one or more blank fields with which to define the company to be searched. After entering the
5 necessary data to define the desired search criteria (step 1720), the authorized individual selects search (step 1725) to initiate the EBEP search function. The EBEP software then provides a listing of EBEP users matching the search criteria provided by the authorized user. The authorized
10 individual selects a company name from the search results (step 1730) causing the EBEP software to open the selected company's EBEP enterprise site (step 1740).

Alternatively, the authorized individual can select "RESEARCH BY DEMANDED GOODS" (not shown) or RESEARCH BY
15 SALES GOODS" (not shown) in place of "RESEARCH BY COMPANY" (step 1710). The EBEP software will provide the authorized user with a screen with one or more blank fields with which to define the goods to be searched. Goods can be searched by any combination of: product name, brand name, sector,
20 characteristics, city and state. The process proceeds like the search by company, but, with a list of matching products being provided.

Still referring to Fig. 5, while viewing the selected company's EBEP enterprise site, the authorized individual
25 selects the catalog (i.e., the selected company's sales catalog or demand catalog) from which to incorporate products into his/her own sales or demand catalog (step 1745). The EBEP software downloads the selected catalog to the first EBEP user's enterprise site. The authorized
30 individual then selects "INCORPORATE PRODUCTS CATALOG" (step 1750) from a menu of available EBEP functions. The authorized individual selects products to be incorporated (step 1770). Products can be selected, for example, by highlighting them while viewing the downloaded catalog. The

Not furnished at the time of publication

Claims

What is claimed is:

1. A method for creating or expanding an electronic
5 catalog by incorporation, comprising the steps of:
 downloading a database having data sets corresponding
to products to be incorporated into an electronic catalog;
 selecting specific data sets corresponding to products
to be incorporated; and
10 incorporating the selected data sets into the
electronic catalog by importing the selected data sets into
the electronic catalog.
2. The method of claim 1, further comprising
15 exporting the newly created or expanded electronic catalog
to a host server on the Internet.
3. The method of claim 1, wherein the electronic
catalog is a sales catalog or a demand catalog on an
20 extranet-based e-commerce platform user's enterprise site
and the database is another extranet-based e-commerce
platform user's sales catalog or demand catalog.
4. The method of claim 1, wherein the electronic
25 catalog is a sales catalog or a demand catalog on an
extranet-based e-commerce platform user's enterprise site
and the database is a general catalog provided by the
extranet-based e-commerce platform provider.
- 30 5. The method of claim 1, wherein the electronic
catalog is a sales catalog or a demand catalog on an

extranet-based e-commerce platform user's enterprise site and the database is an XML file created by translating a legacy database.

5 6. A method for incorporating data sets corresponding to products demanded or products for sale into an electronic catalog accessible through an extranet-based e-commerce platform, wherein one or more authorized individuals:

 creates a custom enterprise site having a purchasing
10 area and a sales area;

 downloads existing databases comprising data sets that correspond to products that are demanded or for sale to the custom enterprise site using an extranet-based e-commerce platform;

15 imports data sets from the downloaded database that correspond to products that are demanded or for sale into a client-side electronic catalog; and

 exports changes to the client-side electronic catalog to a server-side electronic catalog.

20

 7. The method of claim 6, wherein the electronic catalog is a sales catalog or a demand catalog on an extranet-based e-commerce platform user's enterprise site and the database is another extranet-based e-commerce
25 platform user's sales catalog or demand catalog.

 8. The method of claim 6, wherein the electronic catalog is a sales catalog or a demand catalog on an extranet-based e-commerce platform user's enterprise site
30 and the database is a general catalog provided by the extranet-based e-commerce platform provider.

9. The method of claim 6, wherein the electronic catalog is a sales catalog or a demand catalog on an extranet-based e-commerce platform user's enterprise site
5 and the database is an XML file created by translating a legacy database.

10. A machine-readable medium having coded thereon program code, wherein the program code is executed by one or
10 more machines over a machine network, the machines implementing a method for creating or expanding an electronic catalog by incorporation; the method comprising the steps of:

downloading a database having data sets corresponding
15 to products to be incorporated into an electronic catalog;

selecting specific data sets corresponding to products to be incorporated; and

incorporating the selected data sets into the electronic catalog by importing the selected data sets into
20 the electronic catalog.

11. The invention of claim 10, wherein the electronic catalog is a sales catalog or a demand catalog on an extranet-based e-commerce platform user's enterprise site
25 and the database is another extranet-based e-commerce platform user's sales catalog or demand catalog.

12. The invention of claim 10, wherein the electronic catalog is a sales catalog or a demand catalog on an
30 extranet-based e-commerce platform user's enterprise site

and the database is a general catalog provided by the extranet-based e-commerce platform provider.

13. The invention of claim 10, wherein the electronic
5 catalog is a sales catalog or a demand catalog on an extranet-based e-commerce platform user's enterprise site and the database is an XML file created by translating a legacy database.

10 14. A method of constructing an electronic catalog, using any combination of:

uploading data set corresponding to products demanded or for sale from a legacy database using a translation program;

15 manually entering data set corresponding to products demanded or for sale;

incorporating data sets corresponding to products demanded or for sale from existing databases.

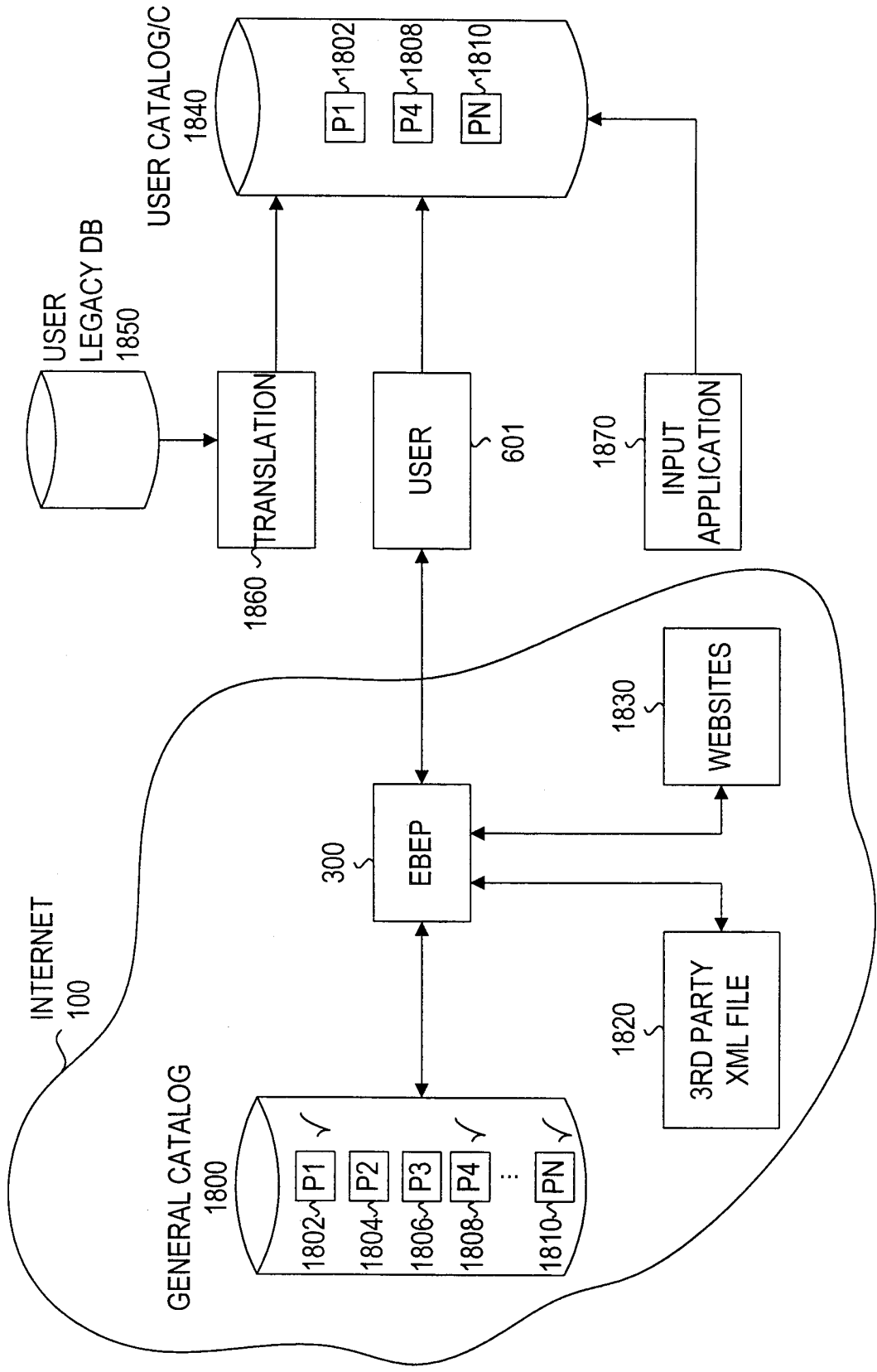


FIG. 1

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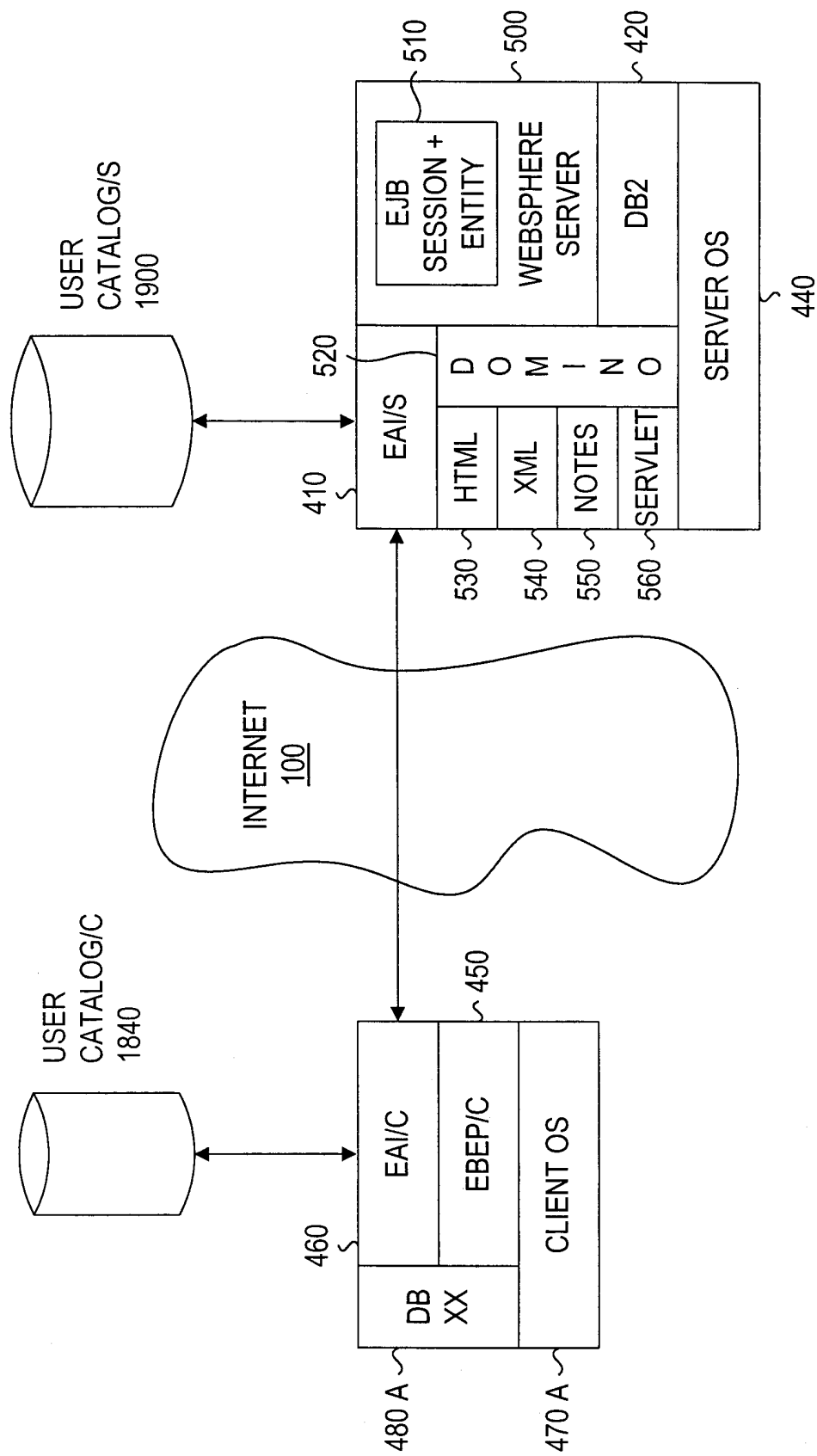


FIG. 2

3/5

800

S

EBEP
<u>PURCHASING TRANSACTIONS</u> <i>RESTRICTED AREA OF BUYER,</i>
ADMINISTRATION OF THE PURCHASE CATALOG
<u>REGISTER OF DEMAND FOR PRODUCT OR SERVICE</u>
<u>DEMANDED PRODUCTS LIST</u>
<u>DEMANDED SERVICES LIST</u>
<u>QUERIES & OFFERS FROM VISITORS</u>
ADMINISTRATION OF VENDORS
<u>CREATE GROUPS OF VENDORS</u>
<u>VENDORS LIST</u>
<u>LIST OF VENDORS GROUPS</u>
PURCHASES
<u>COMPOSE MATERIAL LIST FOR QUOTATION</u>
<u>QUOTATIONS SENT FROM OUR VENDORS</u>
<u>CONTRACTS & ORDERS</u>
NEGOTIATION FORUM
<u>BY VENDOR</u>
<u>BY TOPIC</u>
<u>BY DATE</u>
ORDERS LOG
<u>BY VENDOR</u>
<u>BY DATE</u>
HOME
BACK
TUTORIAL
SEARCH

FIG. 3

4/5

900

S

EBEP

SALES TRANSACTIONS
RESTRICTED AREA OF VENDOR,

ADMINISTRATION OF THE SALES CATALOGINSERT PRODUCT IN CATALOGPRODUCT LISTPROPOSALS & QUERIES FROM VISITORS**ADMINISTRATION OF BUYERS**CREATE GROUPS OF BUYERSBUYERS LISTLIST OF BUYERS GROUPS**TRANSACTIONS**QUOTATIONS SENT BY OUR BUYERSSALES - CONTRACTS & ORDERS**NEGOTIATION FORUM**BY BUYERBY TOPICBY DATE**ORDERS LOG**BY BUYERBY DATE

HOME

BACK

TUTORIAL

SEARCH

FIG. 4

5/5

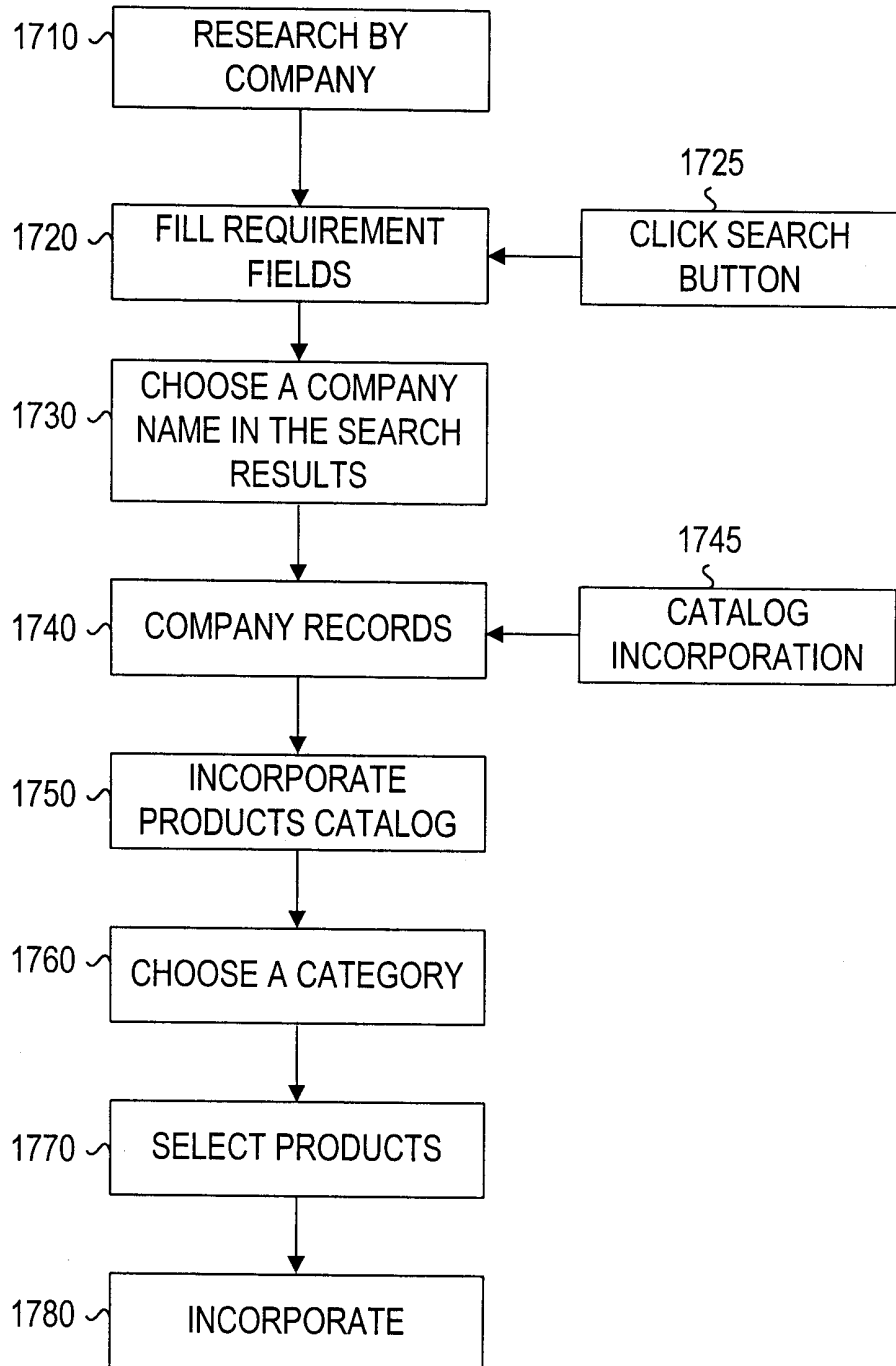


FIG. 5