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(54) INTEGRATED ELECTRONIC SHOPPING CART SYSTEM AND METHOD

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(57) **ABSTRACT**

Integrated shopping cart functionality is provided on a first website so that products/services from different affiliated websites can be integrated into the shopping cart at the first website and the e-commerce functionality of the first website can be utilized to purchase the selected products/services. A framework for integrating this functionality enables the first website to integrate with affiliated websites so that an increased number of users may access the first website since the proprietor of the first website may offer various products/services from a multitude of different affiliated websites, for example by providing URL links to the affiliated websites that a user may access in order to select items from the affiliated websites. These items can be integrated into the shopping cart at the first website and purchased with a single transaction. Increased user traffic is expected at the first website since a user's shopping interests can be fulfilled at a single website. Additionally, affiliated websites are benefited by this integrated shopping cart functionality since the e-commerce functionality of the integrated shopping cart is performed by a server that is associated with the first website. Therefore, affiliated websites need not include their own e-commerce functionality. Instead, they may take advantage of the e-commerce functionality of the first website and still receive the benefits of the sale of their offered products/services to the user. Maintenance costs and overhead costs with respect to including an e-commerce software engine are therefore reduced and often eliminated as a result.

10

BuyWiz Shopping List

MENU	NAME	PRICE	SITE
	50 wa comic books all new	$50.00	www.ebay.com
	Mushrooms: 6 Wonderful Stamps and...	$5.50	www.ebay.com
Tester Tester	Mushrooms: 6 Marvelous Stamps and...	$5.50	www.ebay.com
My Shopping List	**VHR Watchwere and la Piccionlion**	**$39.99**	**www.barnesandnoble.c**
From Friends	Encarta World English Dictionary	$35.00	www.barnesandnoble.c
Purchased Items	Hearts in Atlantis	$16.80	www.barnesandnoble.c
Deleted Items	Flu	$12.59	www.barnesandnoble.c
	The DK Children's Illustrated Encyclo...	$27.95	www.barnesandnoble.c
	Tin House Magazine, Premiere Issue	$9.95	www.barnesandnoble.c
	Miss Spider Backpack	$34.95	www.barnesandnoble.c

Illustration 1. The BuyWiz Universal Shopping Cart contains items to be purchased from multiple merchants

10

BuyWiz Shopping List

MENU

Tester Tester
- **My Shopping List**
- From Friends
- Purchased Items
- Deleted Items

NAME	PRICE	SITE
50 wa comic books all new	$50.00	www.ebay.com
Mushrooms: 6 Wonderful Stamps and...	$5.50	www.ebay.com
Mushrooms: 6 Marvelous Stamps and...	$5.50	www.ebay.com
VHR Watchwere and la Piccionlion	**$39.99**	**www.barnesandnoble.c**
Encarta World English Dictionary	$35.00	www.barnesandnoble.c
Hearts in Atlantis	$16.80	www.barnesandnoble.c
Flu	$12.59	www.barnesandnoble.c
The DK Children's Illustrated Encyclo...	$27.95	www.barnesandnoble.c
Tin House Magazine, Premiere Issue	$9.95	www.barnesandnoble.c
Miss Spider Backpack	$34.95	www.barnesandnoble.c

Illustration 1. The BuyWiz Universal Shopping Cart contains items to be purchased from multiple merchants

FIG. 1

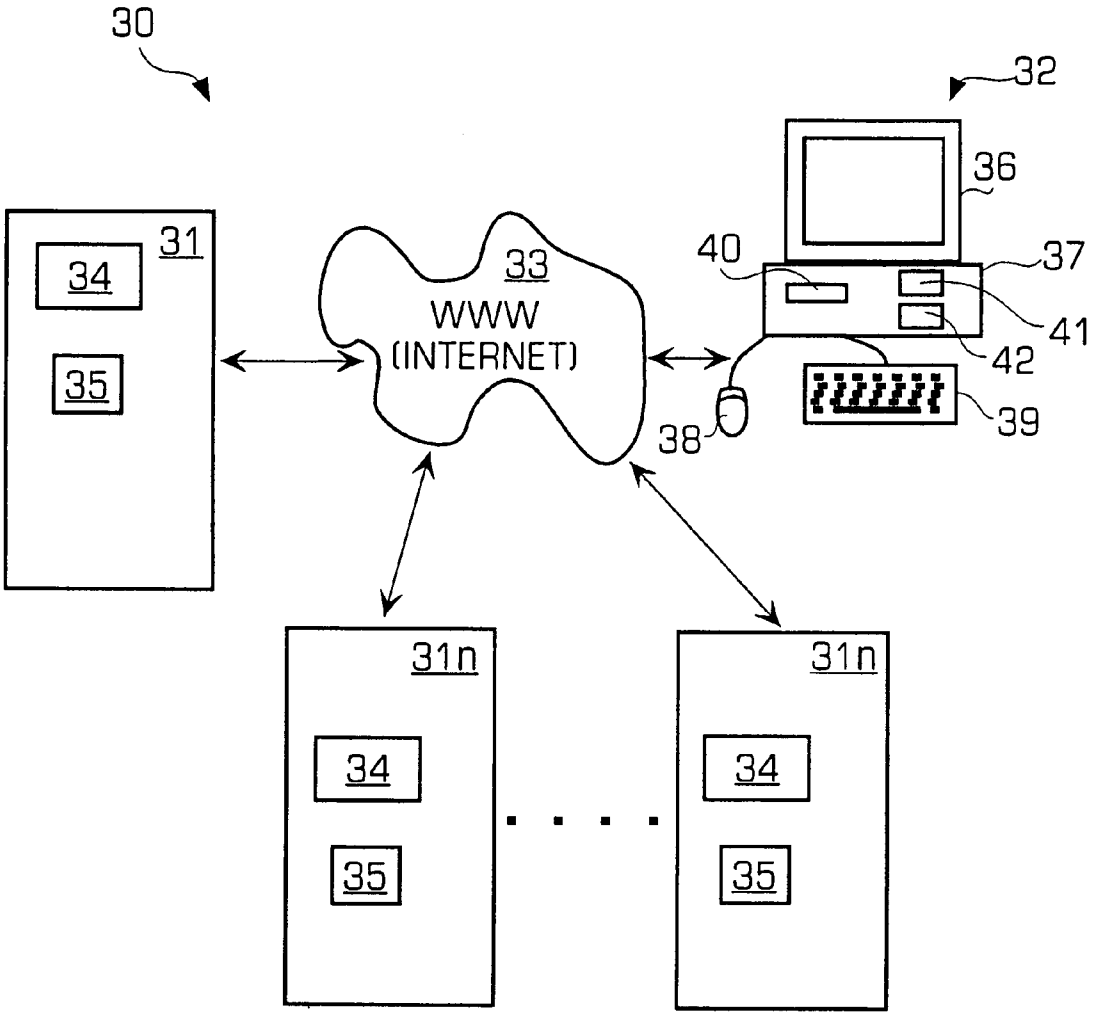
30
32
36
31
34
35
33
WWW
(INTERNET)
40
37
41
42
39
38
31n
34
35
31n
34
35

FIG. 2

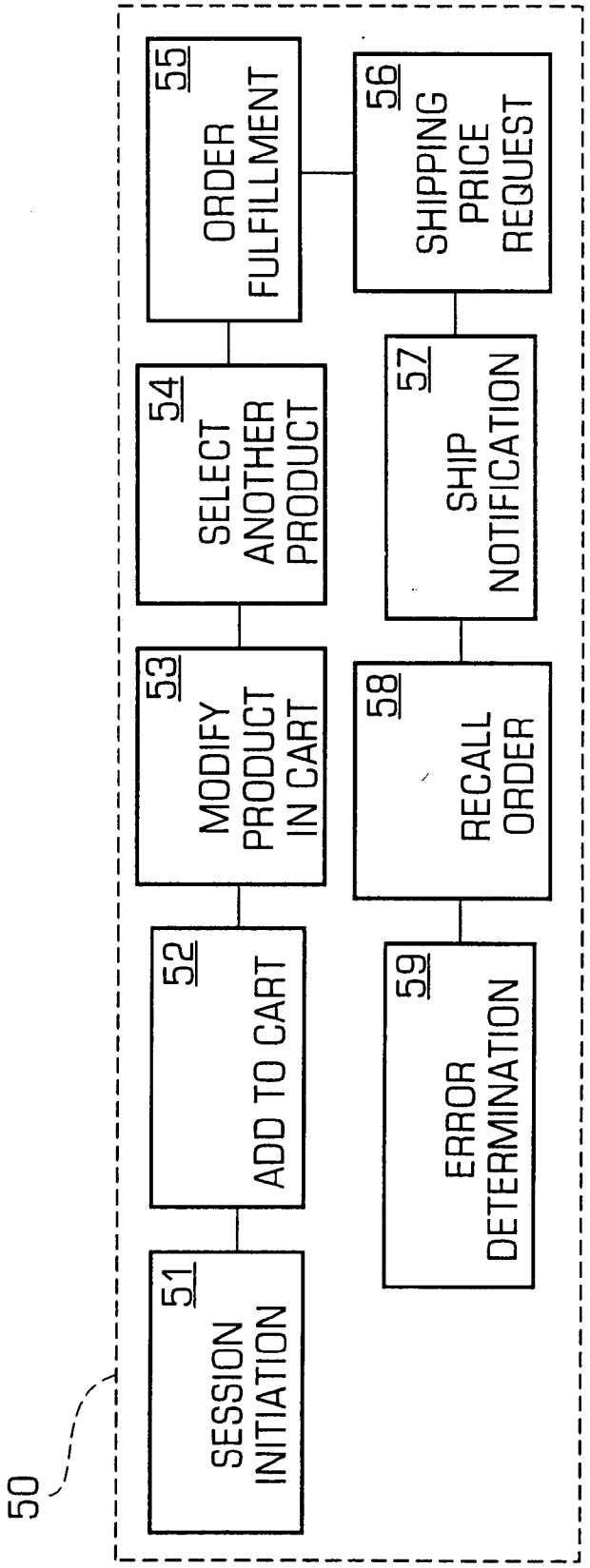
50
51
SESSION INITIATION
52
ADD TO CART
53
MODIFY PRODUCT IN CART
54
SELECT ANOTHER PRODUCT
55
ORDER FULFILLMENT
56
SHIPPING PRICE REQUEST
57
SHIP NOTIFICATION
58
RECALL ORDER
59
ERROR DETERMINATION

FIG. 3

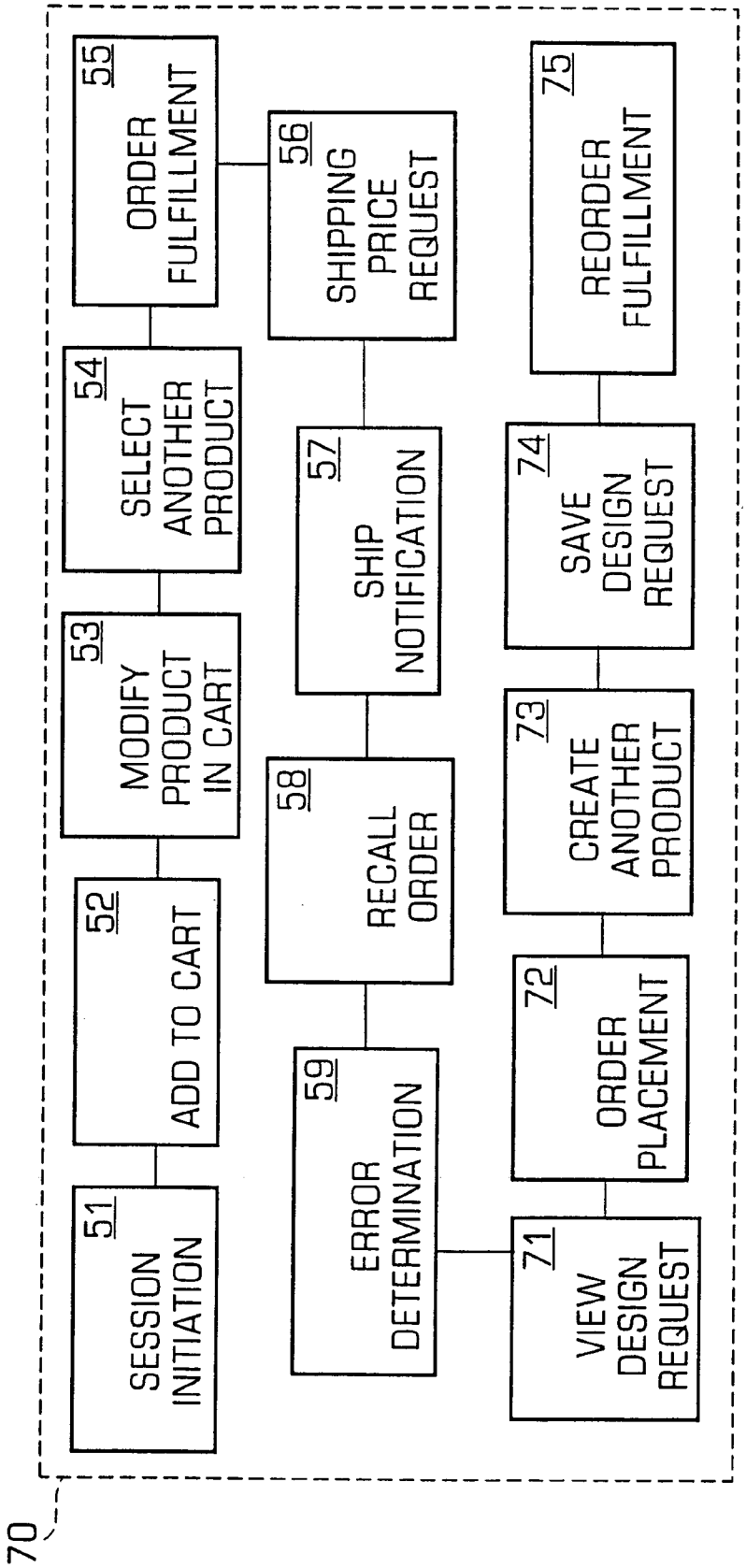
70
51
SESSION INITIATION
52
ADD TO CART
53
MODIFY PRODUCT IN CART
54
SELECT ANOTHER PRODUCT
55
ORDER FULFILLMENT
56
SHIPPING PRICE REQUEST
57
SHIP NOTIFICATION
58
RECALL ORDER
59
ERROR DETERMINATION
71
VIEW DESIGN REQUEST
72
ORDER PLACEMENT
73
CREATE ANOTHER PRODUCT
74
SAVE DESIGN REQUEST
75
REORDER FULFILLMENT

FIG. 4

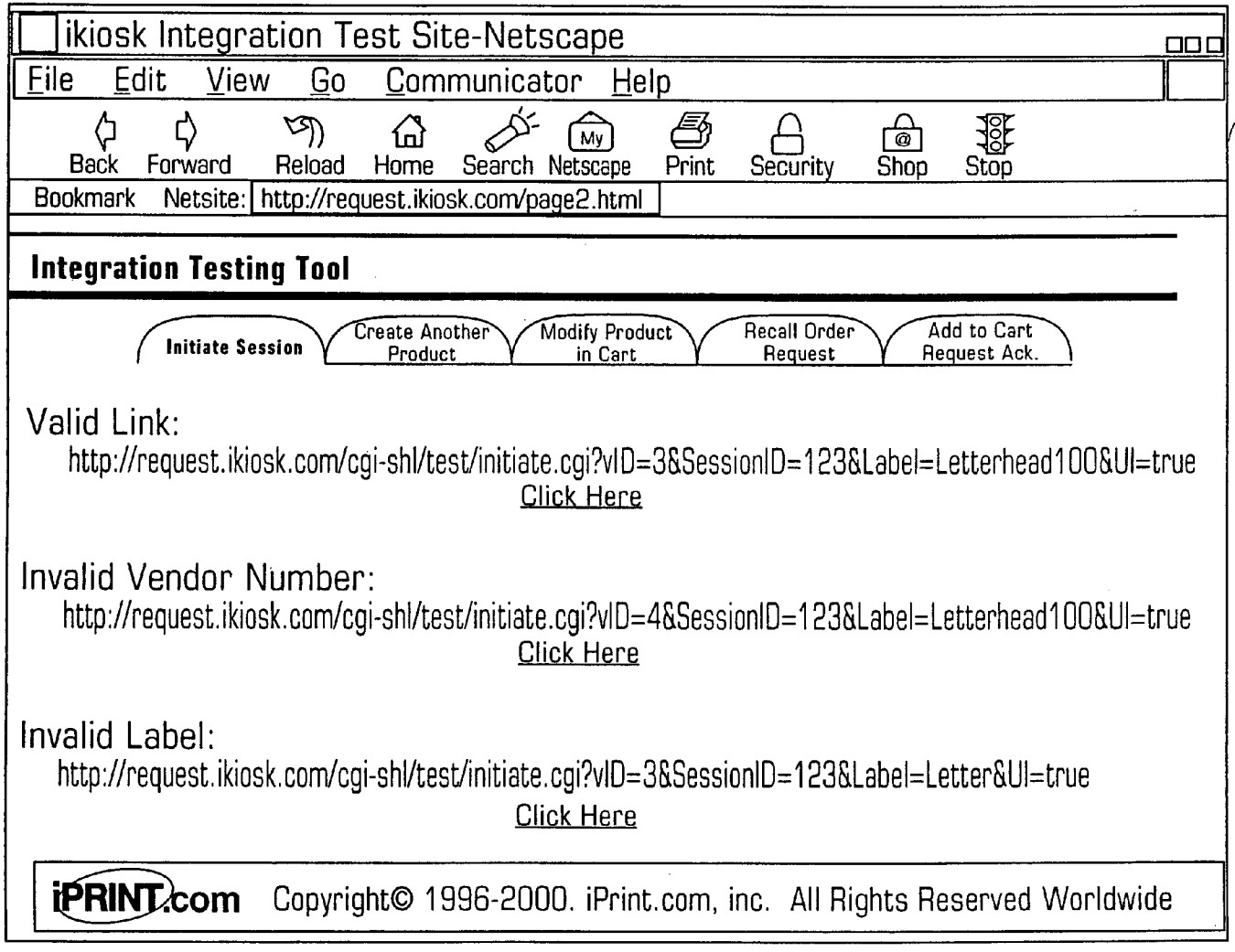
ikiosk Integration Test Site-Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Netscape Print Security Shop Stop
Bookmark Netsite: http://request.ikiosk.com/page2.html
Integration Testing Tool
Initiate Session
Create Another Product
Modify Product in Cart
Recall Order Request
Add to Cart Request Ack.
Valid Link:
http://request.ikiosk.com/cgi-shl/test/initiate.cgi?vID=3&SessionID=123&Label=Letterhead100&UI=true
Click Here
Invalid Vendor Number:
http://request.ikiosk.com/cgi-shl/test/initiate.cgi?vID=4&SessionID=123&Label=Letterhead100&UI=true
Click Here
Invalid Label:
http://request.ikiosk.com/cgi-shl/test/initiate.cgi?vID=3&SessionID=123&Label=Letter&UI=true
Click Here
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FIG. 5

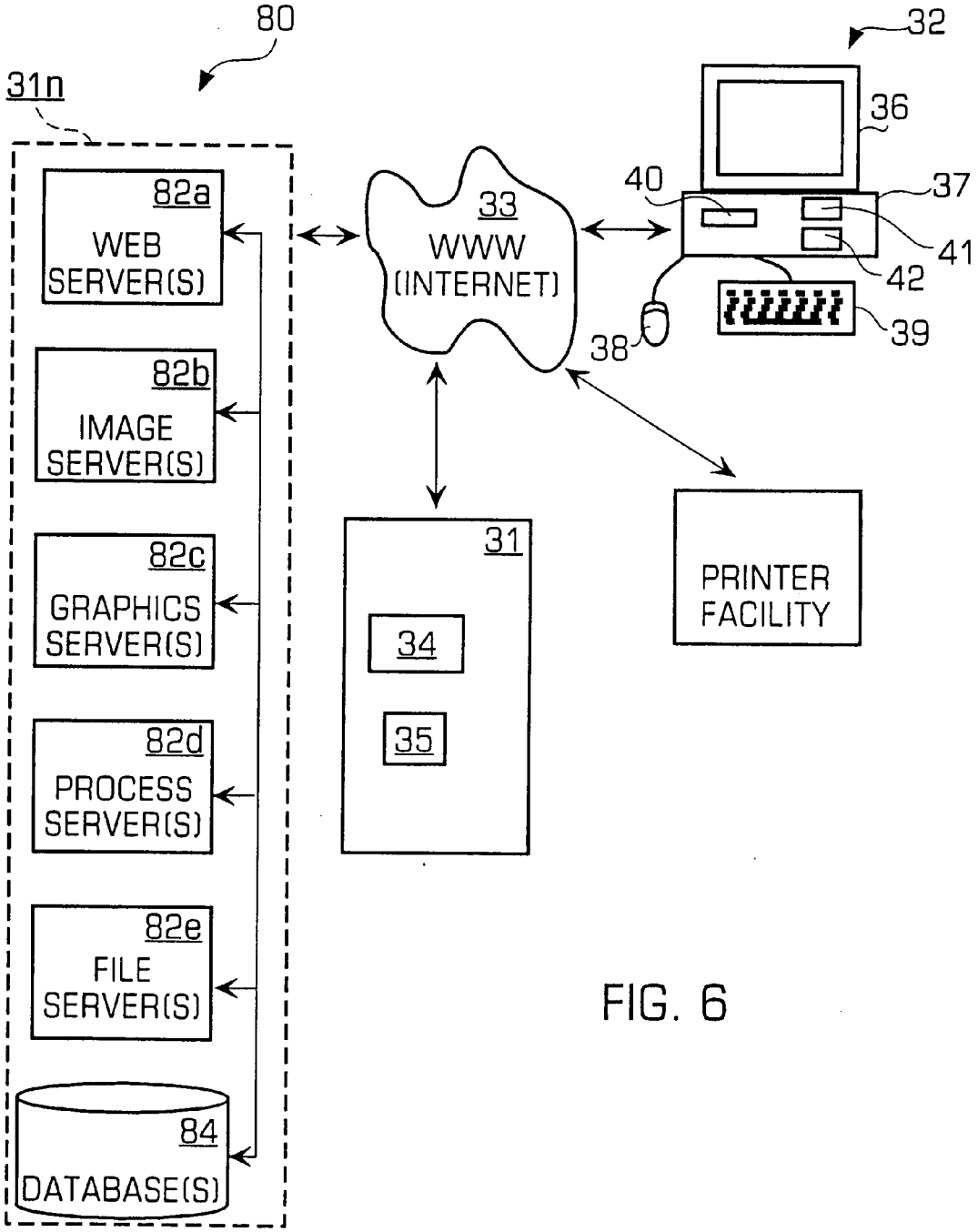
80
31n
82a
WEB SERVER(S)
82b
IMAGE SERVER(S)
82c
GRAPHICS SERVER(S)
82d
PROCESS SERVER(S)
82e
FILE SERVER(S)
84
DATABASE(S)
33
WWW (INTERNET)
31
34
35
32
36
37
40
41
42
38
39
PRINTER FACILITY

FIG. 6

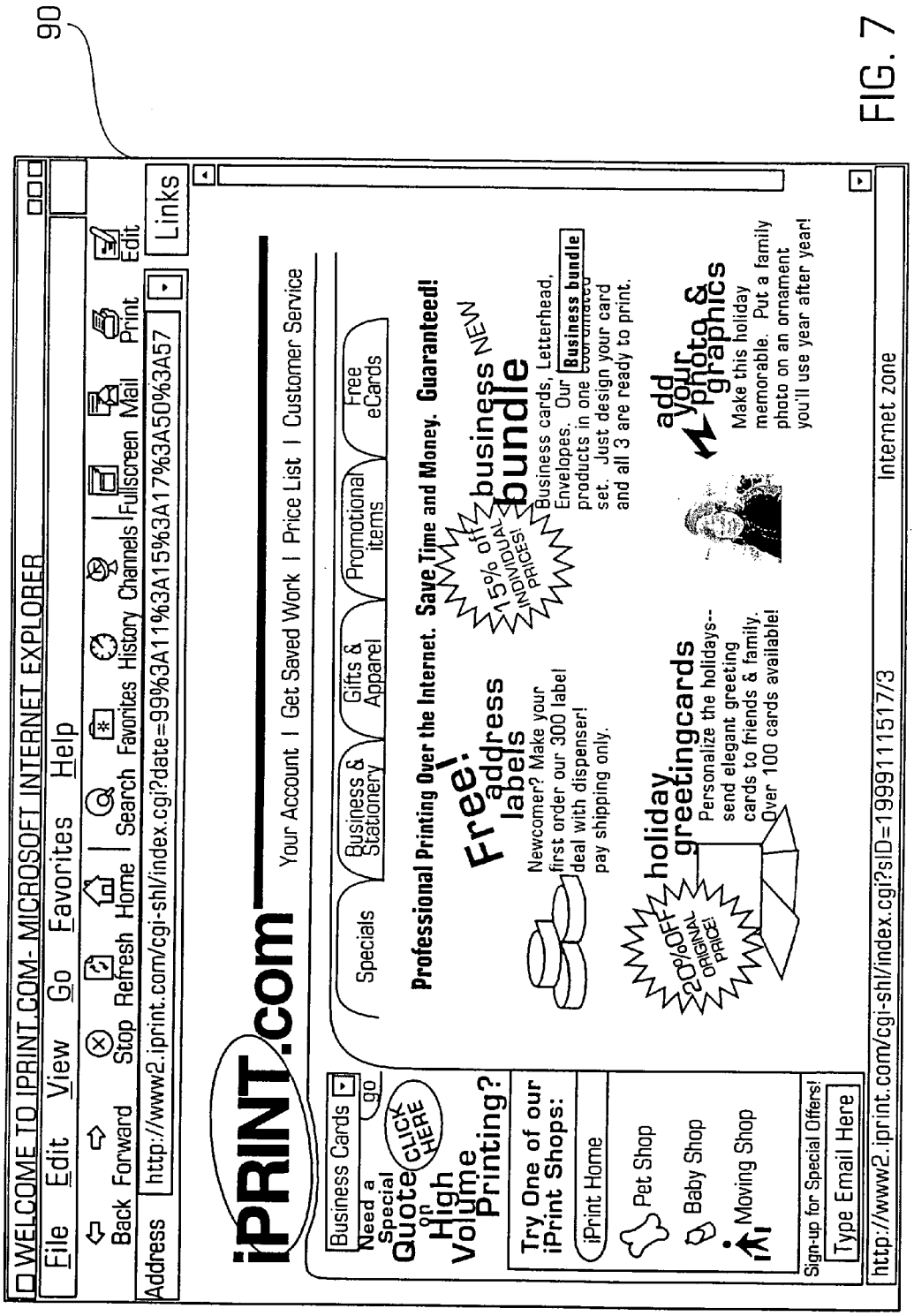
90
WELCOME TO IPRINT.COM- MICROSOFT INTERNET EXPLORER
File Edit View Go Favorites Help
Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit
Address http://www2.iprint.com/cgi-shl/index.cgi?date=99%3A11%3A15%3A17%3A50%3A57
Links
iPRINT.com
Your Account | Get Saved Work | Price List | Customer Service
Business Cards go
Need a Special Quote on High Volume Printing?
CLICK HERE
Try One of our iPrint Shops:
iPrint Home
Pet Shop
Baby Shop
Moving Shop
Sign-up for Special Offers!
Type Email Here
Specials
Business & Stationery
Gifts & Apparel
Promotional items
Free eCards
Professional Printing Over the Internet. Save Time and Money. Guaranteed!
Free! address labels
Newcomer? Make your first order our 300 label deal with dispenser! pay shipping only.
15% off INDIVIDUAL PRICES!
business bundle NEW
Business cards, Letterhead, Envelopes. Our Business bundle products in one set. Just design your card and all 3 are ready to print.
20% OFF ORIGINAL PRICE!
holiday greetingcards
Personalize the holidays-- send elegant greeting cards to friends & family. Over 100 cards available!
add your photo & graphics
Make this holiday memorable. Put a family photo on an ornament you'll use year after year!
http://www2.iprint.com/cgi-shl/index.cgi?sID=199911517/3
Internet zone

FIG. 7

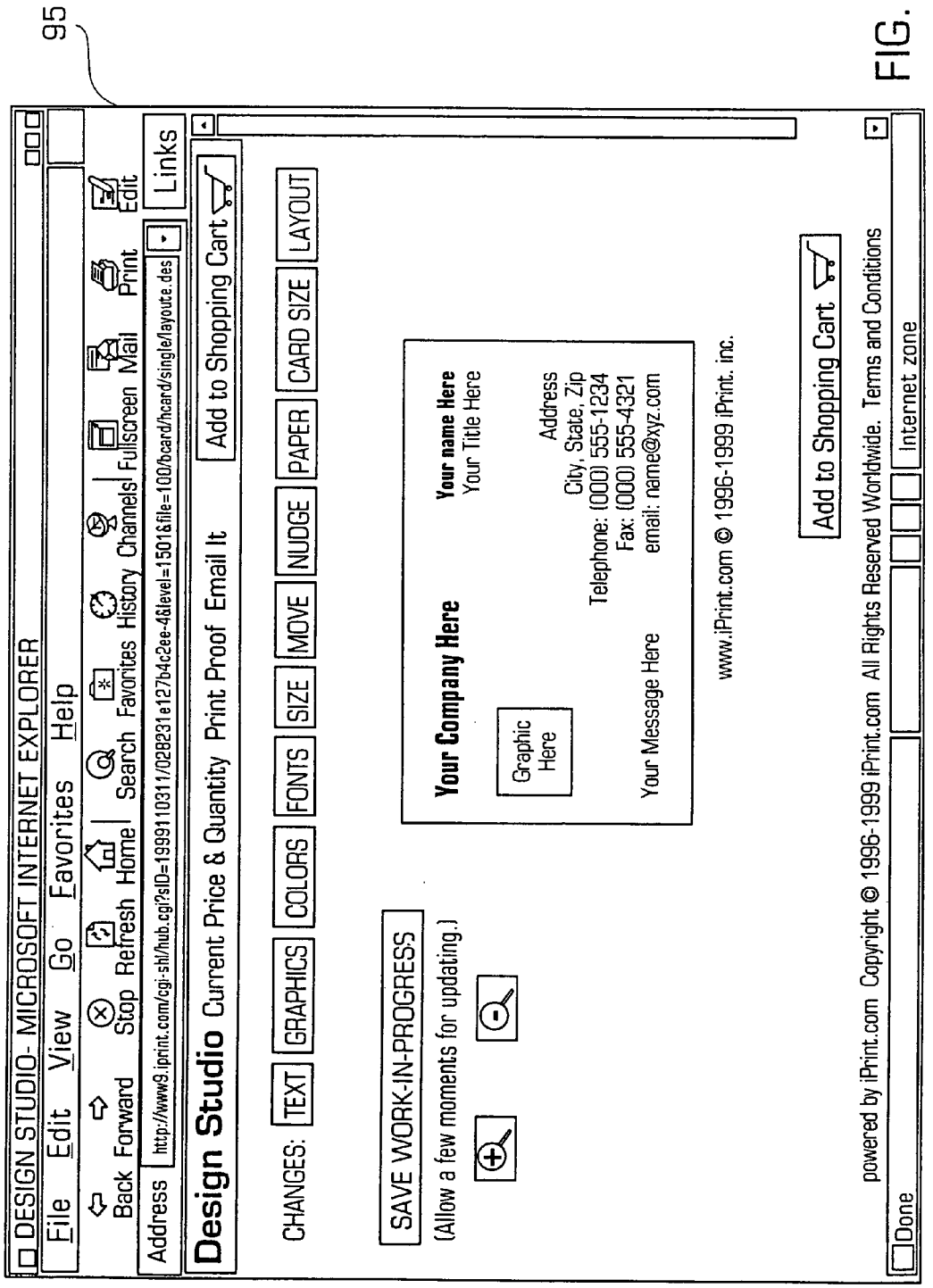
95
DESIGN STUDIO- MICROSOFT INTERNET EXPLORER
File Edit View Go Favorites Help
Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit
Address http://www9.iprint.com/cgi-shl/hub.cgi?sID=1999110311/028231e127b4c2ee-4&level=1501&file=100/hcard/hcard/single/layoute.des
Links
Design Studio Current Price & Quantity Print Proof Email It
Add to Shopping Cart
CHANGES: TEXT GRAPHICS COLORS FONTS SIZE MOVE NUDGE PAPER CARD SIZE LAYOUT
SAVE WORK-IN-PROGRESS
(Allow a few moments for updating.)
Your Company Here
Graphic Here
Your name Here
Your Title Here
Address
City, State, Zip
Telephone: (000) 555-1234
Fax: (000) 555-4321
email: name@xyz.com
Your Message Here
www.iPrint.com © 1996-1999 iPrint. inc.
Add to Shopping Cart
powered by iPrint.com Copyright © 1996-1999 iPrint.com All Rights Reserved Worldwide. Terms and Conditions
Done
Internet zone

FIG. 8A

100

Layouta.des - Notepad

File Edit Search Help

```
PRODUCT=bcard/hcard/single
PRODUCT_SIZE=0,0,3.5,2
LAYOUT_NAME=LAYOUTA.DES
BACKGROUND=
ZOOM=1
GRAPHIC_START
  FILE=hidden\default.wmf
  NAME=Graphic
  BOX=2.7125,0.745,3.3125,1.255
  COLOR=BLACK
  ALIGNMENT=RIGHT
  SPACING=MIDDLE
  MOVE_BOX=0.4,0.1875,3.3125,1.8125
  SBOX=2.710417,0.7447916,3.314584,1.255208
GRAPHIC_END
LINE_START
  NAME=Line
  BOX=0.3,0.1875,0.3,1.8125
  COLOR=BLACK
  MOVE_BOX=0.4,0.1875,3.3125,1.8125
  WIDTH=1
  STYLE=0
LINE_END
TEXT_START
  NAME=Name
  TEXT=Your Name Here
  FONT=Arial
  FONTATTR=BOLD
  FONTSIZE=8
  BOX=0.4,0.1875,3.3125,1.8125
  COLOR=BLACK
```

FIG. 8B

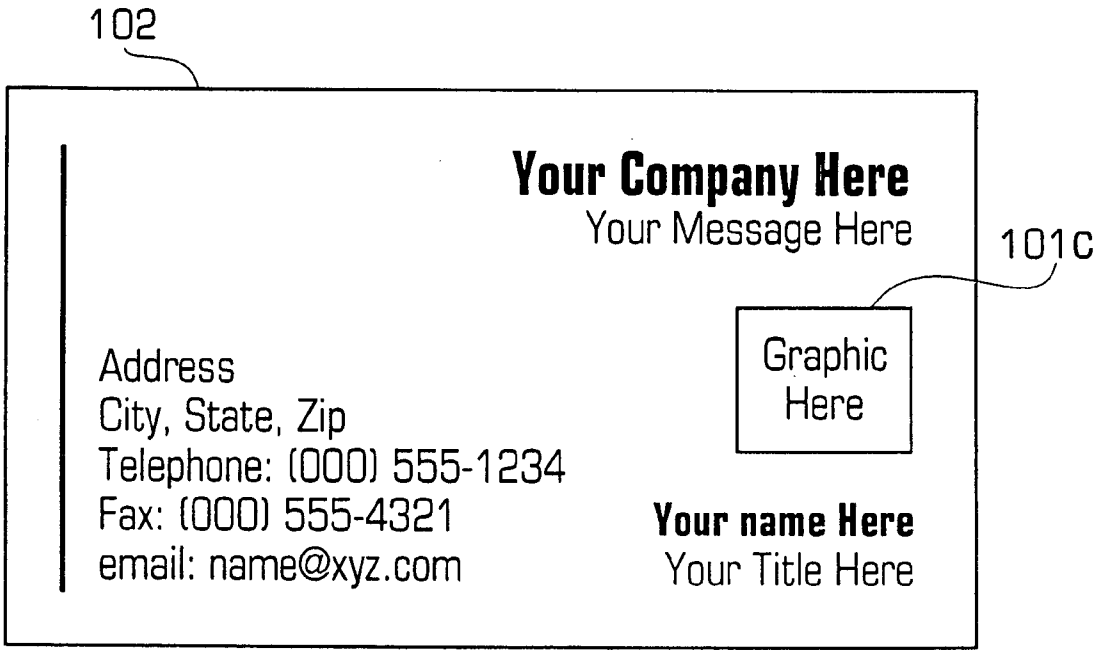
102
Your Company Here
Your Message Here
101C
Graphic Here
Address
City, State, Zip
Telephone: (000) 555-1234
Fax: (000) 555-4321
email: name@xyz.com
Your name Here
Your Title Here

FIG. 8C

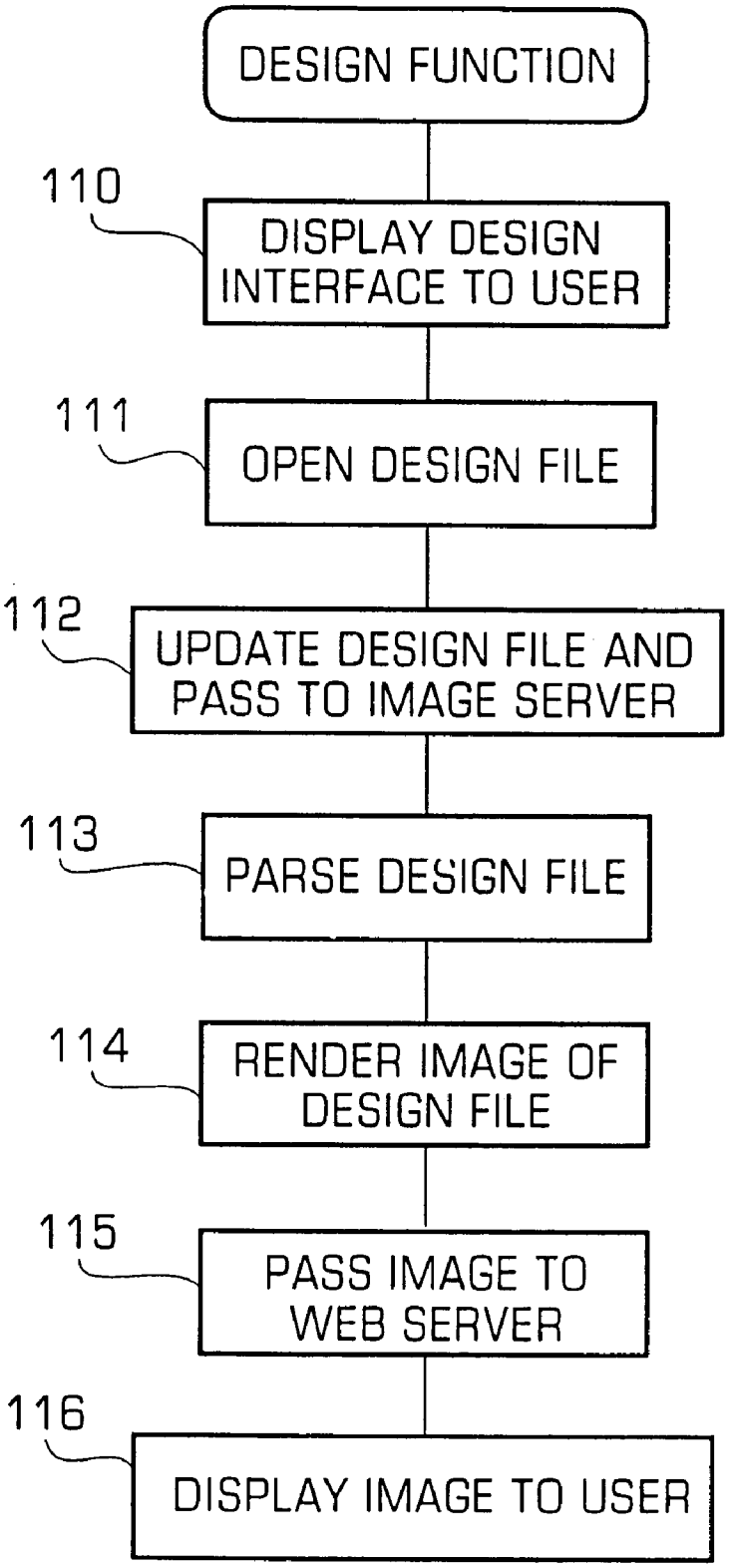
DESIGN FUNCTION
110
DISPLAY DESIGN INTERFACE TO USER
111
OPEN DESIGN FILE
112
UPDATE DESIGN FILE AND PASS TO IMAGE SERVER
113
PARSE DESIGN FILE
114
RENDER IMAGE OF DESIGN FILE
115
PASS IMAGE TO WEB SERVER
116
DISPLAY IMAGE TO USER

FIG. 9

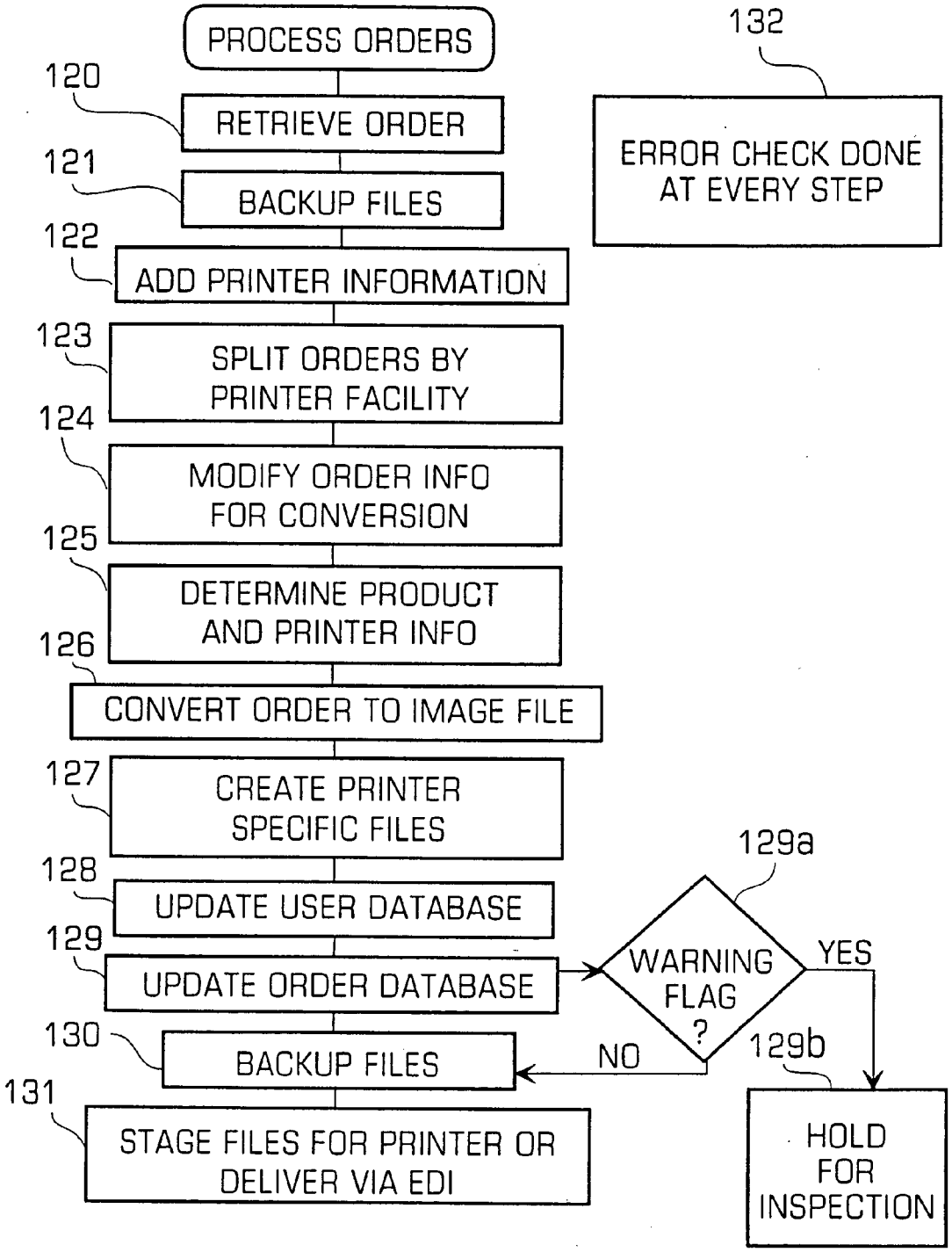
PROCESS ORDERS
120
RETRIEVE ORDER
121
BACKUP FILES
122
ADD PRINTER INFORMATION
123
SPLIT ORDERS BY PRINTER FACILITY
124
MODIFY ORDER INFO FOR CONVERSION
125
DETERMINE PRODUCT AND PRINTER INFO
126
CONVERT ORDER TO IMAGE FILE
127
CREATE PRINTER SPECIFIC FILES
128
UPDATE USER DATABASE
129
UPDATE ORDER DATABASE
130
BACKUP FILES
131
STAGE FILES FOR PRINTER OR DELIVER VIA EDI
132
ERROR CHECK DONE AT EVERY STEP
129a
WARNING FLAG ?
YES
NO
129b
HOLD FOR INSPECTION

FIG. 10

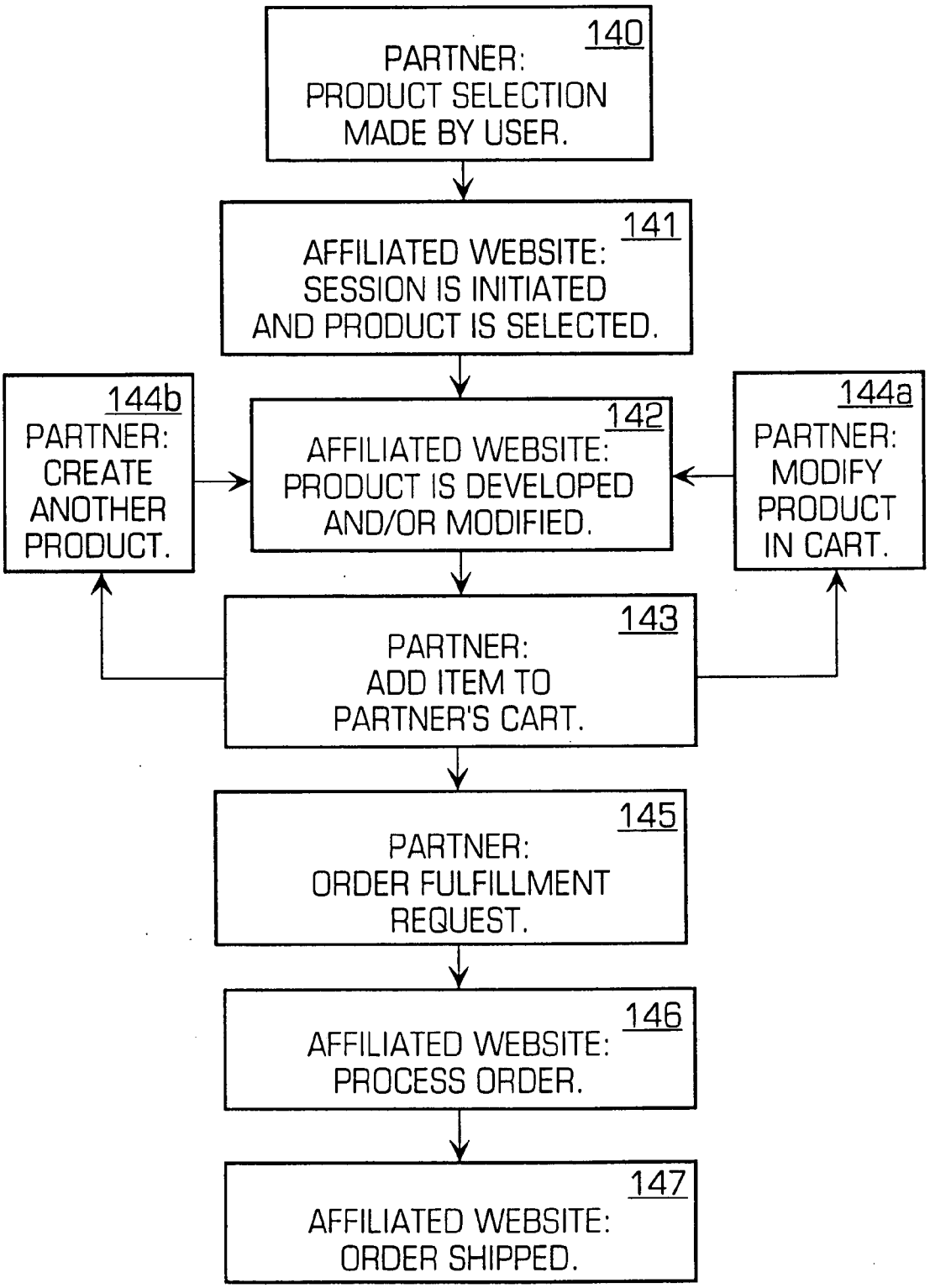
140
PARTNER: PRODUCT SELECTION MADE BY USER.
141
AFFILIATED WEBSITE: SESSION IS INITIATED AND PRODUCT IS SELECTED.
144b
PARTNER: CREATE ANOTHER PRODUCT.
142
AFFILIATED WEBSITE: PRODUCT IS DEVELOPED AND/OR MODIFIED.
144a
PARTNER: MODIFY PRODUCT IN CART.
143
PARTNER: ADD ITEM TO PARTNER'S CART.
145
PARTNER: ORDER FULFILLMENT REQUEST.
146
AFFILIATED WEBSITE: PROCESS ORDER.
147
AFFILIATED WEBSITE: ORDER SHIPPED.

FIG. 11

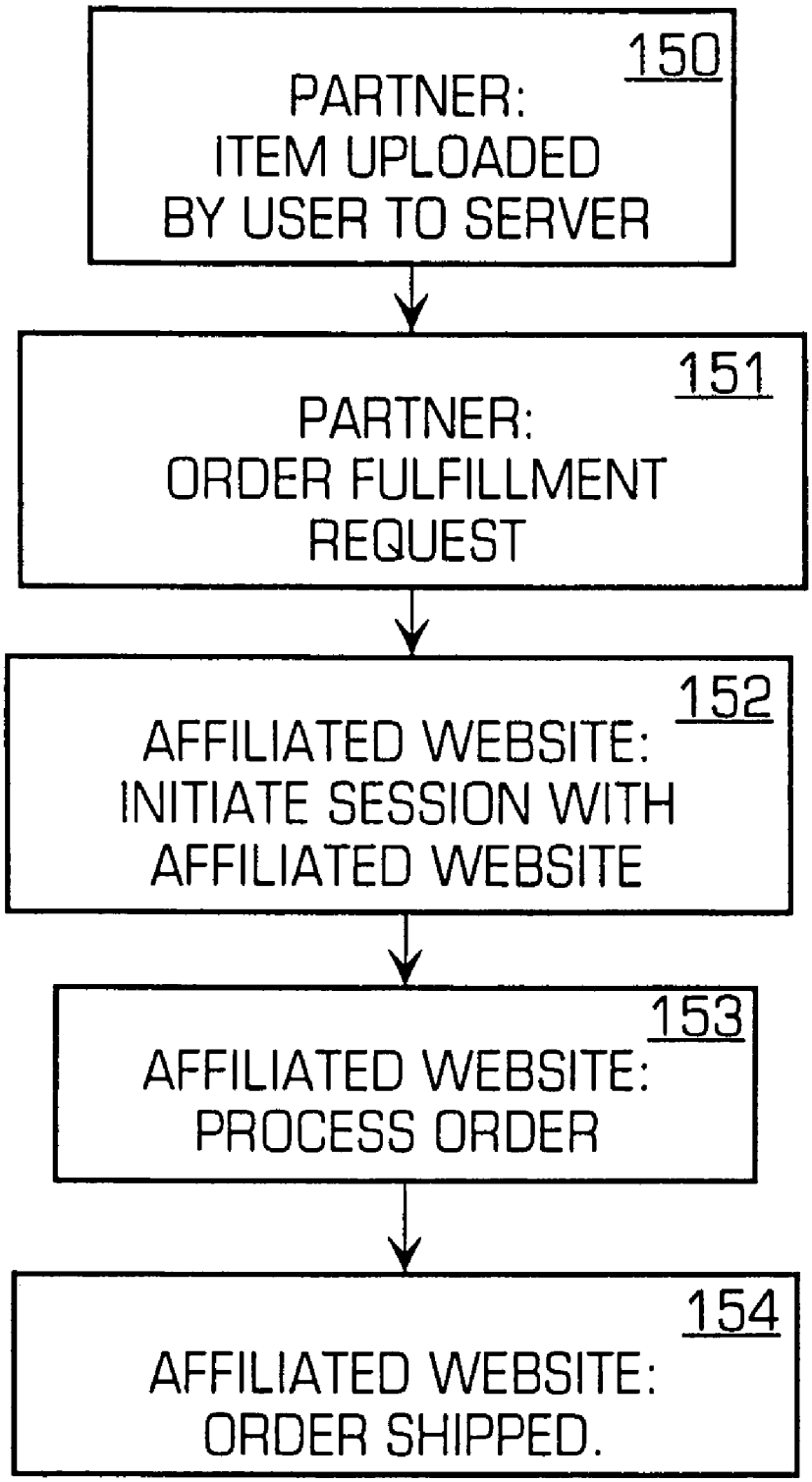
150
PARTNER:
ITEM UPLOADED
BY USER TO SERVER
151
PARTNER:
ORDER FULFILLMENT
REQUEST
152
AFFILIATED WEBSITE:
INITIATE SESSION WITH
AFFILIATED WEBSITE
153
AFFILIATED WEBSITE:
PROCESS ORDER
154
AFFILIATED WEBSITE:
ORDER SHIPPED.

FIG. 12

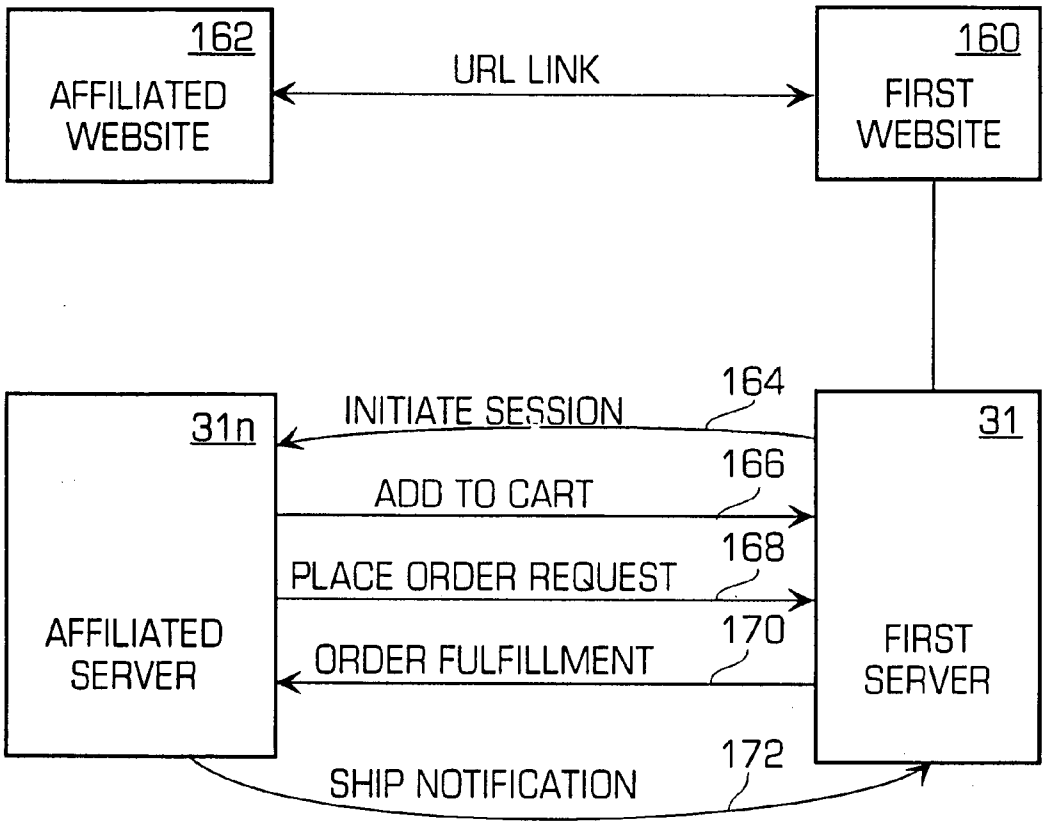
162
AFFILIATED WEBSITE
URL LINK
160
FIRST WEBSITE
31n
AFFILIATED SERVER
INITIATE SESSION
164
ADD TO CART
166
PLACE ORDER REQUEST
168
ORDER FULFILLMENT
170
SHIP NOTIFICATION
172
31
FIRST SERVER

FIG. 13

INTEGRATED ELECTRONIC SHOPPING CART SYSTEM AND METHOD

[0001] The present invention relates to an online shopping system for a user to order and purchase items and more particularly to a system and method for providing an electronic shopping system having an integrated shopping cart functionality.

BACKGROUND OF THE INVENTION

[0002] As the Internet is becoming more commercially oriented, product and service providers are exploring new ways to promote and sell a wide range of their products and services. Such efforts to date have generally taken the form of a vendor (or vendor company) establishing a website on a machine (computer or server) connected to the Internet.

[0003] The websites generally have a product display and purchase functionality integrated therein. A website is, in general terms, a server application running on a computer which accepts connections from client programs. Client programs, such as browsers, allow a remote user to access the information stored on the website. The information can include a broad range of multimedia data including textual, graphical, audio, and animation information. A common client application is in the form of a web browser, which, via mouse, keyboard or command line input, allows a user to access and "navigate" around the website.

[0004] Internet-based retail has become extremely popular over the last several years. Both business-to-business and business-to-consumer retail channels have benefited from the advances made in e-commerce technology, enhanced transaction security and improved data bandwidth.

[0005] Online retailing can be traced through three generations of commerce-enabling software. Initially, simple HTML forms were utilized by retail websites to facilitate online transactions between users and the proprietor of a website. Users were free to indicate their orders on these HTML forms. However, the forms were generally only suitable for indicating a few items of interest. When more than a few items were indicated, the HTML forms became difficult to manage and inefficient, since the order form was separate (on a different HTML form page) from the item description.

[0006] The next generation in online retailing involved "shopping cart" software. An electronic shopping cart is simply a computer software program that operates as an online retail website's catalog and ordering process. Typically, the shopping cart functions as the interface between the website and the user, allowing users to select merchandise, review the merchandise that has been selected, make any modifications or additions to the selected merchandise and purchase the selected merchandise. Shopping cart software is similar to a physical shopping cart, such as that commonly found in a grocery store, in the sense that selected items for purchase may be commonly grouped together in the shopping cart and purchased with a single transaction. In an online environment, a user can select an item of interest for purchase as the user browses through a website and can choose to "place" the selected item in the shopping cart. The software remembers the selected items during the user's browsing and even maintains a running total of the purchase price.

[0007] However, while electronic shopping carts are useful and have resulted in increasing the simplicity of online retailing, conventional shopping cart software is limited as an electronic commerce tool. This limitation resulted in the development of the third generation of online retailing software, "storefront" or "store building" software. Websites constructed with this software include conventional shopping cart functionality and also allow the website proprietor to add, delete, or temporarily hide products on the website, change product prices, set up sales and promotions, provide secure transaction features, manipulate graphics, and integrate the online operations with existing physical accounting and inventory systems.

[0008] Regardless of the generation of e-commerce software implemented on a website, information about the products and services offered at a particular website is generally maintained in an online database usually resident in the server that maintains the website. The database may contain fields such as product name, SKU (stockkeeping unit, an identification of a particular product that allows it to be tracked for inventory purposes), descriptive text, price, weight (to calculate shipping), and the electronic file name of an item photograph or other identification information of an item.

[0009] Since a website is often navigated by more than a single user at any given time, a different shopping cart is associated with each user. For example, a cookie file (small computer file) that contains a user's shopping cart identification information, such as shopping cart number, may be transmitted to the user's own Web browser software resident on the user's computer system and may remain stored on the user's hard drive during the entire visit at the website (and may even remain stored on the user's hard drive after the user leaves the website or terminates an Internet session). Cookies are therefore an efficient tool for maintaining the association between the user and the shopping cart and are implemented by most e-commerce software.

[0010] Alternatively, e-commerce software programs may utilize a temporary Internet Protocol (IP) number, that is automatically assigned to a user by the user's ISP (Internet Service Provider) when the user logs onto the Internet, as an identifier to associate a particular shopping cart with a user. Also, a randomly generated shopping cart number may be appended to the URL (Universal Resource Locator) appearing in the "Location" or "Address" field of the user's browser software. In such case, whenever the user navigates to a different product page of the website, the cart number, being appended to the URL, effectively "follows" the consumer through the site.

[0011] Regardless of the particular software program utilized, integrated shopping carts are highly desirable electronic commerce software applications. Using an integrated shopping cart allows a user to select items from a number of different websites, collect the items in a single integrated shopping cart and purchase the items with a single transaction. While highly desirable, integrated shopping carts have been difficult to implement.

[0012] Therefore, universal shopping carts have typically become popularized. One such universal shopping cart is available from BuyWiz Software. Using BuyWiz's universal shopping cart, users can collect items from various online stores and save the selected items in a single shopping cart

that resides on the user's personal computer instead of being integrated with a particular website. The cart's contents can be viewed, either on-line or off-line, and the user can receive sales or price change notifications, and purchase some or all of the items via a single click using a single central registration form.

[0013] The BuyWiz shopping cart works in conjunction with a shopping server/service offered by BuyWiz Software. When a user browses a BuyWiz-supported merchant website and arrives at a purchase page of the website, such as a webpage that contains an action for adding an item to the shopping cart, the BuyWiz "shopping bag" automatically appears on the user's display. FIG. **1** is a sample screenshot of the BuyWiz shopping bag **10**. Using an input device of the computer, such as initiating a single click of the mouse, the user can select an item to be "placed" in the shopping bag **10** where it appears with all of the other items in the shopping bag **10**.

[0014] If the selected item is from a merchant that is supported by BuyWiz Software, the user can choose to purchase the item and the BuyWiz server fills in the requisite registration forms with the user's fixed information, such as name and address and credit card information. Once an item is "placed" in the shopping bag, the BuyWiz server continually monitors that item's pricing on the merchant website, posting any price changes directly to the shopping bag display interface. Since BuyWiz's shopping bag is an independent software program that remains resident on a user's computer and the participating websites can support its functionality, the shopping bag is not integrated into the e-commerce functionality of those websites. As such, BuyWiz's shopping bag software incorporates its own e-commerce functionality in order to process product and service orders thereby adding complexity and overhead to the software. In effect, any commercial transactions are handled by the website from which the product or service was selected. Thus, the universal shopping cart does not eliminate the need for e-commerce functionality to be a part of the websites.

[0015] Other solutions to providing a universal e-commerce shopping experience have been proposed. One such solution is proposed in U.S. Pat. No. 5,895,454, that issued Apr. 20, 1999, to Harrington (herein the "'454 Patent"). The '454 Patent discloses a method of effecting commerce in a networked computer environment. A database of vendor product data and an associated database interface that allows remote access by one or more users is established. A local user interacts with the database by querying the database to specify a local user's product/service specification (a search request to locate a particular product or service of interest). In response to the query, the database provides the local user with a selection of remote vendor network websites. After the local user interactively connects with one or more of the remote vendor network sites, the user selects products/services from the information provided on the remote vendor network website. The selection of a particular product/service triggers a transaction notification which records the user's selection and associated financial transaction data which is transmitted to the database and associated database interface. During, or at the conclusion of, a local user's shopping session, the user confirms the selection(s) whereby the database and associated database interface transmits purchase/order data to the remote vendor sites corresponding to the user's selection.

[0016] The '454 Patent proposes to establish a "virtual shopping mall" of affiliated member vendor websites so that a user can peruse the various products and services offered from the vendors at a single location. For example, affiliated member vendor websites may establish an electronic list (including images and textual description, etc.) of products/services offered for purchase and provide the electronic list to a database administrator so that a product/service database can be maintained including the products/services indicated in the electronic list from the vendor websites. A user can search the database to locate desired items and select desired items from a website for purchase. Accordingly, each product/service selected from a particular vendor website can only be purchased through that first website using the e-commerce functionality of that first website. Other products and services from other vendor websites cannot be purchased through the first website. In order to purchase a different product or service from another vendor website, the user must access that second vendor website and purchase the item through the second website, using the e-commerce functionality of the second website.

[0017] Thus, while the '454 Patent provides an efficient "window shopping" aspect to e-commerce, it does not address the inefficiencies resulting from causing a user to conduct multiple purchases at different websites instead of allowing the user to select from multiple vendor items and aggregate the selected items into a single integrated shopping cart so that the selected items can be purchased in a single transaction.

[0018] Unfortunately, electronic shopping carts have been predominantly localized to distinct websites. They have not been implemented to function across different websites. As such, electronic commerce is stifled, because the user cannot commonly gather all of the desired products and services across any website in an integrated shopping cart and purchase all of the selected items with a single transaction. Instead users are generally forced to conduct separate transactions at each website, each having their own electronic shopping cart in which users can "place" and purchase selected items from that website. It is desirable, then, to provide an integrated shopping cart that can be implemented across any website. It is to this end that the present invention is directed.

SUMMARY OF THE INVENTION

[0019] In accordance with the invention, integrated shopping cart functionality is provided on a first website so that products/services from different affiliated websites can be integrated into the shopping cart at the first website and the e-commerce functionality of the first website can be utilized to purchase the selected products/services.

[0020] Advantageously, the first website is benefited by this integrated shopping cart functionality in that an increased number of users may access the first website since the proprietor of the first website may offer various products/services from a multitude of different affiliated websites, for example by providing URL links to the affiliated websites that a user may access in order to select items from the affiliated websites. These items can be integrated into the

shopping cart at the first website and purchased with a single transaction. Increased user traffic is expected at the first website since a user's shopping interests can be fulfilled at a single website.

[0021] Additionally, affiliated websites are benefited by this integrated shopping cart functionality since the e-commerce functionality of the integrated shopping cart is performed by a server that is associated with the first website. Therefore, affiliated websites need not include their own e-commerce functionality. Instead, they may take advantage of the e-commerce functionality of the first website and still receive the benefits of the sale of their offered products/services to the user. Maintenance costs and overhead costs with respect to including an e-commerce software engine are therefore reduced and often eliminated as a result.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022] FIG. **1** is a sample screenshot of an electronic shopping bag display interface offered by BuyWiz;

[0023] FIG. **2** shows a schematic diagram of an integrated shopping cart system in accordance with the invention;

[0024] FIG. **3** is a block diagram representation of an integrated shopping cart software module in accordance with the invention;

[0025] FIG. **4** illustrates an alternative block diagram embodiment of an integrated shopping cart software module in accordance with the invention;

[0026] FIG. **5** is an example of a screenshot of a user interface for a toolkit testing software module in accordance with the invention;

[0027] FIG. **6** illustrates an embodiment of an electronic printing system that may be implemented as a part of the integrated shopping cart system of FIG. **2**;

[0028] FIG. **7** shows an example of a screen shot of a user interface that may be displayed to a user upon the user accessing the electronic printing system of FIG. **5**;

[0029] FIG. **8**A is a graphical representation of a default design template that a user may customize and modify to create a desired design;

[0030] FIG. **8**B illustrates an example of a design file that may be created by the electronic printing system in accordance with the changes that the user may make to the default design template shown in FIG. **8**A;

[0031] FIG. **8**C shows an associated graphical representation of the design file of FIG. **8**B that may be displayed to a user in real-time to reflect modifications to a default design file;

[0032] FIG. **9** is a flowchart illustrating the operation flow of the electronic printing system shown in FIG. **6** when a user initiates a local design function;

[0033] FIG. **10** illustrates the operational flow of the process server of the electronic printing system shown in FIG. **6**;

[0034] FIG. **11** is a flow chart illustrating the process flow of the integrated shopping cart system in accordance with the invention;

[0035] FIG. **12** is a flowchart illustrating the operation flow of the order fulfillment of an uploaded data file in accordance with the invention; and

[0036] FIG. **13** is a schematic diagram illustrating the operation of the integrated shopping cart system in accordance with the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0037] FIG. **2** shows a schematic diagram of an integrated shopping cart system **30** in accordance with the invention. The system **30** may include a first server **31** (website) connected with one or more clients **32** across a wide area network (WAN) **33**, such as the Internet, or more particularly, the World Wide Web. The first server **31** may contain one or more pieces of software code **34** that may be stored on the first server **31** and may be executed by a microprocessor **35** in the first server **31** in order to operate as the integrated shopping cart system **30** of the invention. The Internet **33** permits the first server **31**, when accessed by an individual client **32**, to display a web page on the client computer system **32** which permits the client **32** to interact with the first server **31**.

[0038] The client computer system **32** may include a display device **36**, a chassis **37**, and one or more user input devices, such as a mouse **38** and a keyboard **39**. The chassis **37** may house a permanent storage system **40**, such as a hard disk drive, optical disk drive, tape drive, or the like, which may store one or more software applications such as a web browser application. The client computer system may have a memory **41** resident therein and the software application from the disk **40** may be transferred to the memory **41** to be executed by a CPU **42** in the computer system. The browser application may be configured to connect the client **32** to the first server **31** over the WAN **33** and receive graphical information (web pages) that may be displayed on the display device **36** to the user. The browser application may also permit the client **32** to interact with the first server **31** such as by selecting a particular product or service from the first server **31** for purchase or by allowing a user to access additional affiliated websites and their associated servers **31***n*, such as by the user selecting an associated URL link on the first website.

[0039] In accordance with the invention, the first server **31** may be associated with a first vendor website and may be in communication with a multitude of additional affiliated servers **31***n*, the additional servers **31***n* being associated with particular vendor websites. Alternatively, a multitude of vendor websites may be provided on a single server **31**. A user may, while accessing a particular website, select products and/or services for purchase from that website, as will be described in more detail herein, and also may "navigate" among the additional servers **31***n* to access an affiliated website in order to select products and/or services for purchase from one of the affiliated websites. In accordance with the invention, the integrated shopping cart system **30** allows the products and/or services selected by a user from the affiliated website(s) to be incorporated into an electronic shopping cart at the first website so that the e-commerce functionality of the first website can be utilized by the affiliated websites.

[0040] In order to function as the integrated shopping cart system **30** of the invention, the first website server **31** and

any affiliated website servers **31***n* include an integrated shopping cart software module **50**. The integrated shopping cart software module **50** will now be described with reference to particular software sub-modules which are shown in FIG. **3**.

[**0041**] With reference to FIG. **3**, the integrated shopping cart software module **50** may include a session initiation software sub-module **51** for initiating a communication session between an affiliated website server **31***n* and the first website server **31**. The session initiation sub-module **51** allows the first website server **31** to transmit request information to an affiliated website server **31***n*, such as passing website identifier information to the affiliated website server **31***n*. The request information may be transmitted according to known communication protocols, such as an HTTPS POST (encrypted) command, an HTTP POST command, an HTTP GET command, an HTTPS GET (encrypted) command, or any other similar command protocol.

[**0042**] In order for the affiliated website server **31***n* to identify the first website server **31**, a vendor identifier assigned to the first website server **31** is transmitted by the sub-module **51** to the affiliated website server **31***n*. In accordance with the invention, a vendor identifier can be assigned to each website to which the integrated shopping cart system **30** functionality is provided. The vendor identifier may include a sequence of numbers, letters and special characters such that a vendor can be properly identified by the system. Additionally, a product identifier is transmitted by the software sub-module **51** to the affiliated website server **31***n* so that an associated product or service can be selected for purchase from the affiliated website. Optionally, one or more session identifiers may be transmitted by the software sub-module **51** so that communication sessions between the servers **31**, **31***n* can be tracked and maintained, as well as a user identifier for a particular vendor. The user identifier enables the system to determine whether a user is logged onto a particular vendor's account management system and redirect the user to the appropriate website if necessary. This may also be accomplished via cookie functionality.

[**0043**] The integrated shopping cart software module **50** may also include an add-to-cart software sub-module **52** for informing the first website of an addition to the user's shopping cart. In accordance with the invention, the add-to-cart software sub-module **52** may transmit selected product/service information to the first website server **31** so that the selected product/service may be properly added to the user's shopping cart at the first website.

[**0044**] A number of parameters may be transmitted by the sub-module **52** to the first website server **31** so that the selected product/service can be properly added to the shopping cart at the first website. For example, parameters include, but are not limited to, a reference parameter that indicates a user's order, line item number that indicates a particular location in the shopping cart at which to add the item, quantity, weight, inventory number, line item description, total line item price, session identifier information, and user identifier information.

[**0045**] The reference parameter identifies a selected product or service from an affiliated website to be added to the shopping cart at the first website. The line item parameter identifies a particular location in the shopping cart from which to add the selected product/service information. Quantity and weight parameters are self explanatory and identify the quantity of the selected product/service and the weight of the selected item. The inventory number parameter is also self explanatory and allows a vendor's inventory information to be updated and maintained. The line item description parameter associates an indicated textual string, graphic, or other identification information with the selected product/service so that the product/service in the shopping cart can be identified by the user. The total line item price parameter indicates the total cost of the selected product or service (generally a function of quantity and weight and base price information) so that a proper shopping cart total can be calculated by the system **30**. The information may be transmitted, for example, via HTTPS as an XML message from the affiliated website server **31***n* to the first website server **31**. Other transmission protocols, such as FTP, e-mail, HTTP, and HTTPS (among others) could be used without departing from the invention.

[**0046**] The communication flow between the first website server **31** and the affiliated website server **31***n* is as follows. Upon a user selecting a product/service from an affiliated website to be added to the shopping cart at the first website, the affiliated website server **31***n* contacts the first website server **31**, such as via the HTTPS secure communication protocol. Upon connecting with the first website server **31**, the affiliated website server **31***n* sends a message, such as an XML message that may include the parameter information indicated above, to the first website server **31**. Upon receiving the message, the first website server **31** may acknowledge receipt of the message and the user may be redirected to a predetermined or dynamic URL on the first website server **31** so that the user can return to the first website in order to either perform additional selecting of items from the first or other affiliated websites or so that the user can conclude an order.

[**0047**] As described, the first website server **31** may acknowledge receipt of the message transmitted from the affiliated website **31***n*. The acknowledge message may be transmitted as an XML message, or any other communication format, from the first website server **31** to the affiliated website server **31***n* and may include the reference parameter information as well as status information, such as whether the selected item was successfully added to the shopping cart at the first website.

[**0048**] The integrated shopping cart software module **50** may also include a modify-product-in-cart software sub-module **53** for informing an affiliated website server **31***n* of a request by the user at the first website to modify an item in the shopping cart at the first website. The request information may be transmitted by the first server **31** to the affiliated website server **31***n* according to known communication protocols, such as an HTTPS POST command. A number of parameters may be transmitted by the first server **31** to the affiliated website server **31***n* so that the affiliated website server **31***n* can identify the product/service in the shopping cart requested by the user to be modified. For example, as described above, parameters may include a vendor identifier, reference parameter, line item number and action information (such as a modify an item request). Optionally, session identifier information may be transmitted by the first server **31**, as well as a user identifier for a particular vendor. The modify software sub-module **53** may

also be used to recall and modify a previously identified order request or a previously saved work. For example, a user accessing the affiliated website may initiate an order by choosing a particular item to be added to the shopping cart, yet may leave the website prior to fulfilling the order. In such a case, the previously chosen items may be recalled and the order or saved work may be modified accordingly.

[0049] The integrated shopping cart software module **50** may also include a create-another-item software sub-module **54** for informing the affiliated website server **31***n* of a request by the user at the first website to create another item for purchase. The request information may be transmitted by the first server **31** to an affiliated website server **31***n* according to known communication protocols, such as an HTTPS POST command. A number of parameters may be transmitted by the first server **31** to the affiliated website server **31***n* so that another item can be created by the user from the affiliated website. For example, as described above, parameters may include the vendor identifier, reference parameter, product identifier, and action information (such as a select another item request). Optionally, session identifier information, line item number information, and a user identifier may be transmitted by the first server **31**.

[0050] The integrated shopping cart software module **50** may also include an order fulfillment software sub-module **55** for informing the affiliated website server **31***n* of a request by a user at the first website to fulfill the user's shopping cart order. The request information may be transmitted by the first server **31** to the affiliated website server **31***n* according to known communication protocols, such as HTTPS via an XML message transmitted by the first server **31** to the affiliated website server **31***n*.

[0051] In order for the affiliated website server **31***n* to fulfill a user's order, shipping information is transmitted by the first server **31** to the affiliated website server **31***n*. Shipping information may include address and other contact information of the user, shipping company information, and shipping method information. Additionally, other parameter information, such as vendor identifier, reference parameter and line item information may be transmitted to the affiliate website server **31***n* so that the proper product/service can be identified by the affiliate website server **31***n* and shipped to the user, as well as vendor reference information. The information may be transmitted, for example via HTTPS as an XML message from the first website server **31** to the affiliated website server **31***n*. Other transmission protocols, such as FTP, e-mail, HTTP and HTTPS could be used without departing from the invention.

[0052] The communication flow between the first website server **31** and the affiliated website server **31***n*, as shown in FIG. **2**, is as follows. Upon a user selecting to fulfill a shopping cart order, the first website server **31** contacts the affiliated website server **31***n*, such as via the HTTPS communication protocol. Upon connecting with the affiliated website server **31***n*, the first website server **31** sends a message, such as an XML message that may include the parameter information indicated above, to the affiliated website server **31***n*. Upon receiving the message, the affiliated website server **31***n* may acknowledge receipt of the message and the user's order may be fulfilled by the affiliated website server **31***n*.

[0053] As described, the affiliate website server **31***n* may acknowledge receipt of the message transmitted from the first website server **31**. The acknowledge message may be transmitted as an XML message, or any other communication format, from the affiliate website server **31***n* to the first website server **31** and may include reference parameter information, line item parameter information and status information, such as whether the order was fulfilled and the expected ship date of the order.

[0054] The integrated shopping cart software module **50** may also include a shipping price request software sub-module **56** for informing the affiliated website server **31***n* of a request by the first server **31** for a shipping price of a selected item so that a user may be charged a correct price by the proprietor of the first website to fulfill a user's shopping cart order. The request information may be transmitted by the first server **31** to the affiliated website server **31***n* according to known communication protocols, such as HTTPS via an XML message transmitted to the affiliated website server **31***n*. In order for the affiliated website server **31***n* to determine the shipping cost for a selected item, item information and shipping information are transmitted to the affiliated website server **31***n*. Shipping information may include address and other contact information of the user, shipping company information, and shipping method information. Additionally, other parameter information, such as vendor identifier, reference parameter and line item information may be transmitted to the affiliate website server **31***n* so that a proper shipping price can be determined by the affiliated website server **31***n*. The information may be transmitted as an XML message from the first website server **31** to the affiliated website server **31***n*. Other transmission protocols, such as FTP, e-mail, HTTP and HTTPS could be used without departing from the invention.

[0055] The communication flow between the first website server **31** and the affiliated website server **31***n*, as shown in FIG. **2**, is as follows. Upon a user selecting to fulfill a shopping cart order, the first website server **31** contacts the affiliated website server **31***n*, such as via the HTTPS communication protocol. Upon connecting with the affiliated website server **31***n*, the first website server **31** sends a message, such as an XML message that may include the parameter information indicated above, to the affiliated website server **31***n*. Upon receiving the message, the affiliated website server **31***n* may acknowledge receipt of the message and an accurate shipping cost determination may be returned to the first website server **31** so that a user's order can be fulfilled.

[0056] As described, the affiliated website server **31***n* may acknowledge receipt of the message transmitted from the first website **31**. The acknowledge message may be transmitted as an XML message, or any other communication format, from the affiliated website server **31***n* to the first website server **31** and may include reference parameter information, line item parameter information, status information, and shipping price information so that a user's order can be accurately processed and fulfilled.

[0057] The integrated shopping cart software module **50** may also include a ship notification software sub-module **57** for informing the first website server **31** of the fulfillment of an order by the affiliated website server **31***n*, thereby allowing the first website server **31** to process electronic payment of a user's order. The notification information may be transmitted to the first website server **31** according to known

communication protocols, such as HTTPS via an XML message transmitted to the first website server **31**.

[**0058**] To notify the first website server **31** of shipping an order, the affiliated website server **31***n* may transmit parameter information to the first website server **31**, such as line item information and reference parameter information. Optionally, tracking information may be transmitted to the first website server **31** so that a user's order may be tracked during shipping, and a vendor reference number may be transmitted to identify a vendor's order number for the item. The information may be transmitted as an XML message from the affiliate website server **31***n* to the first website server **31**. Other transmission protocols, such as FTP, e-mail, HTTP and HTTPS, could be used without departing from the invention.

[**0059**] The communication flow between the first website server **31** and the affiliated website server **31***n*, as shown in FIG. **2**, is as follows. Upon the shipping of a selected item, the affiliated website server **31***n* contacts the first website server **31**, such as via the HTTPS communication protocol. Upon connecting with the first website server **31**, the affiliated website server **31***n* sends a message, such as an XML message that may include the parameter information indicated above, to the first website server **31**. Upon receiving the message, the first website server **31** may acknowledge receipt of the message.

[**0060**] As described, the first website server **31** may acknowledge receipt of the message transmitted from the affiliated website server **31***n*. The acknowledge message may be transmitted as an XML message, or any other communication format, from the first website server **31** to the affiliated website server **31***n* and may include reference parameter information and line item parameter information.

[**0061**] The integrated shopping cart software module **50** may also include a reorder software sub-module **58** for informing the affiliated website server **31***n* of a request to add a previously ordered product from the affiliated website to the user's current shopping cart order at the first website. The notification information may be transmitted to the affiliated website server **31***n* according to known communication protocols, such as an HTTPS request transmitted to the affiliated website server **31***n*.

[**0062**] In order to request the recall of a previously ordered item from the affiliated website server **31***n*, the first website server **31** may transmit parameter information to the affiliated website server **31***n*, such as vendor identifier, reference parameter, line item number, and action information to be performed, such as the recalling of a previously ordered item by the user. Optionally, session identifier information may be transmitted to the affiliated website server **31***n*, as well as vendor reference information.

[**0063**] The integrated shopping cart software module **50** may include an error determination software sub-module **59** for managing error information. The error information may be transmitted to the first website server **31** according to known communication protocols, such as an HTTPS request transmitted to the first website server **31**.

[**0064**] In accordance with the invention, the first website server **31** may maintain a list of error code information to notify a user of the occurrence of an error during the selection, purchase or fulfillment of a user's shopping cart order. Upon encountering an error, the affiliated website server **31***n* transmits the error code information for an error type to the first server **31**. The first server **31** may then compare the received error code against the error list and inform the user accordingly. Alternatively, the affiliated website server **31***n* may maintain its own list of error code information to notify a user of the occurrence of an error during the selection, purchase or fulfillment of a user's shopping cart order.

[**0065**] Additional software sub-modules may be incorporated into the integrated shopping cart software module **50** to customize the functionality of the integrated shopping cart system **30** for a particular affiliated website. Furthermore, additional embodiments of the invention may be provided that include various combinations of the sub-modules described above. Therefore, the integrated shopping cart functionality can be customized for every website in which it may be integrated.

[**0066**] FIG. **4** illustrates an alternative embodiment of the integrated shopping cart software module **50** shown in FIG. **3**, in which like elements are represented by like reference numbers and need not be explained. The integrated shopping cart software module **70** shown in FIG. **4** may include additional software sub-modules, or a combination of the software sub-modules described herein, in order to customize the functionality of the integrated shopping cart system **30** for a particular affiliated website, such as an affiliated website that allows a user to create custom design items that may be printed on a wide array of media.

[**0067**] As shown in FIG. **4**, the integrated shopping cart software module **70** may include a view design request software sub-module **71** for informing the affiliated website server **31***n* of a request by a user at the first website to view an image of a design item that may be or was previously created by the user at the affiliated website. The request information may be transmitted by the first server **31** to the affiliated website server **31***n* according to known communication protocols, such as an HTTPS command.

[**0068**] In order for the affiliated website server **31***n* to identify a requested design item, parameter information is transmitted by the first server **31** to the affiliated website server **31***n*. The parameter information may include vendor identifier, reference parameter, line item number and zoom factor information. The zoom factor parameter indicates a zoom factor used to display the requested design item image to the user. Preferably, the zoom factor may be on the order of 0.1× to 1× magnification, however, any zoom factor may be specified.

[**0069**] The communication flow between the first website server **31** and the affiliated website server **31***n*, shown in FIG. **2**, is as follows. Upon a user requesting to view an image of a design item from the first website, the first website server **31** contacts the affiliated website server **31***n*, such as via the HTTPS communication protocol. Upon connecting with the affiliated website server **31***n*, the first website server **31** transmits a message, that may include the parameter information indicated above, and may include the URL of the first website, to the affiliated website server **31***n*. Upon receiving the message, the affiliated website server **31***n* may transmit an image of the requested line item to the first website server **31** that may be displayed to the user.

[**0070**] The integrated shopping cart software module **70** may also include a create another product software sub-

module **73** for informing the affiliated website server **31***n* of a request by a user at the first website to create another custom designed item based on a present item located in the shopping cart. The request information may be transmitted by the first server **31** to the affiliated website server **31***n* according to known communication protocols, such as an HTTPS command.

[**0071**] In order for the affiliated website server **3** in to identify a requested design item, parameter information is transmitted by the first server **31** to the affiliated website server **31***n*. The parameter information may include vendor identifier, reference parameter, product identifier, line item number and session identifier information. The product identifier information allows the affiliated server **31***n* to identify a particular product design item.

[**0072**] The communication flow between the first website server **31** and the affiliated website server **31***n*, shown in FIG. **2**, is as follows. Upon a user requesting to create another design item from the first website, the first website server **31** contacts the affiliated website server **31***n*, such as via the HTTPS communication protocol. Upon connecting with the affiliated website server **31***n*, the first website server **31** transmits a message, that may include the parameter information indicated above, to the affiliated website server **31***n*. Upon receiving the message, the affiliated website server **31***n* may implement a design tool interface thereby allowing the user to create a custom design item and select the newly created item to be placed in the shopping cart at the first website. Depending on whether the line item number information is transmitted to the affiliated server **31***n*, the design tool interface may initiate a design item template based on the design format indicated by the line item number information. Alternatively, the design tool interface may initiate a design item template based, for example, on a previously selected design item by the user.

[**0073**] The integrated shopping cart software module **70** may also include a save design request software sub-module **74** for informing the first website server **31** that a user has chosen to save a custom design item on the affiliated website server **31***n*. The request information may be transmitted by the first server **31** to the affiliated website server **31***n* according to known communication protocols, such as HTTPS via an XML message.

[**0074**] In order for the affiliated website server **31***n* to notify the first server **31** of a saved design item, the affiliated server **31***n* transmits parameter information to the first server **31**. The parameter information may include reference parameter, line item number, line item description information, user identifier information and session identifier information. The first server **31** may acknowledge receipt of the notification by transmitting an acknowledgement message to the affiliated server **31***n*.

[**0075**] The communication flow between the affiliated website server **31***n* and the first website server **31**, shown in FIG. **2**, is as follows. Upon a user requesting to save a custom design item on the affiliated server **31***n*, the affiliated website server **31***n* contacts the first website server **31**, such as HTTPS as an XML message. Upon connecting with the first website server **31***n*, the affiliated website server **31***n* transmits a message, that may include the parameter information indicated above, to the first website server **31**. Upon receiving the message, the first website server **31** may transmit an acknowledgement message back to the affiliated website server **31***n*. The acknowledgement message may include parameter information such as reference number information, and status information.

[**0076**] The integrated shopping cart software module **70** may include an order placement request software sub-module **72** for informing the affiliated website server **31***n* of a request by a user at the first website to fulfill an order for an item that was not selected at the affiliated website. For example, an order item may have been transmitted to the first server **31** by the user, such as from the user's own personal computer via a modem or other transmission means, or possibly selected from another affiliated server **31***n* by the user. The request information may be transmitted by the first server **31** to the affiliated website server **31***n* according to known communication protocols, such as HTTPS via an XML message.

[**0077**] In order for the affiliated website server **31***n* to identify a requested design item, parameter information is transmitted by the first server **31** to the affiliated website server **31***n*. The parameter information may include vendor identifier, reference parameter, line item number and shipping information. The information may be transmitted as an XML message from the first website server **31** to the affiliated website server **31***n*. Other transmission protocols, such as FTP, e-mail, HTTP and HTTPS, could be used without departing from the invention.

[**0078**] The communication flow between the first website server **31** and the affiliated website server **31***n*, shown in FIG. **2**, is as follows. Upon a user requesting to fulfill an order at the first website, the first website server **31** contacts the affiliated website server **31***n*, such as via the HTTPS communication protocol. Upon connecting with the affiliated website server **31***n*, the first website server **31** transmits a message, that may include the parameter information indicated above, to the affiliated website server **31***n*. Upon receiving the message, the affiliated website server **31***n* may fulfill the order for the requested line item and may acknowledge the order fulfillment to the first website server **31** so that a user can be notified of the fulfillment of an order.

[**0079**] The integrated shopping cart software module **70** may also include a reorder fulfillment request software sub-module **75** for informing the affiliated website server **31***n* of a request by a user at the first website to fulfill a new order for a previously ordered item in the user's shopping cart order. The request information may be transmitted by the first server **31** to the affiliated website server **31***n* according to known communication protocols, such as HTTPS via an XML message transmitted by the first server **31** to the affiliated website server **31***n*.

[**0080**] In order for the affiliated website server **31***n* to fulfill a user's order, shipping information is transmitted by the first server **31** to the affiliated website server **31***n*. Shipping information may include address and other contact information of the user, shipping company information, and shipping method information. Additionally, other parameter information, such as vendor identifier, reference parameter, line item information and vendor reference information may be transmitted to the affiliate website server **31***n* so that the proper product/service can be identified by the affiliate website server **31***n* and shipped to the user. The information may be transmitted as an XML message from the first

website server **31** to the affiliated website server **31***n*. Other transmission protocols, such as FTP, e-mail, HTTP and HTTPS could be used without departing from the invention.

[**0081**] The communication flow between the first website server **31** and the affiliated website server **31***n*, as shown in FIG. **2**, is as follows. Upon a user selecting to fulfill a shopping cart order, the first website server **31** contacts the affiliated website server **31***n*, such as via the HTTPS communication protocol. Upon connecting with the affiliated website server **31***n*, the first website server **31** sends a message, such as an XML message that may include the parameter information indicated above, to the affiliated website server **31***n*. Upon receiving the message, the affiliated website server **31***n* may acknowledge receipt of the message and the user's order may be fulfilled by the affiliated website server **31***n*.

[**0082**] As described, the affiliate website server **31***n* may acknowledge receipt of the message transmitted from the first website server **31**. The acknowledge message may be transmitted as an XML message, or any other communication format, from the affiliate website server **31***n* to the first website server **31** and may include reference parameter information, line item parameter information, vendor reference information, expected ship date, and status information, such as whether the order was fulfilled.

[**0083**] Additionally, the user may elect to drop any order(s) in progress and start over with the ordering/selecting process anew. Accordingly, a start over message may be transmitted from the first website server **31**, for example as a GET command via the HTTPS communication protocol optionally passing a session identifier(s) for the affiliated website. This message effectively sends the user back to a partner website when starting the ordering/selecting process anew. Upon the occurrence of an error during the ordering process using the invention, a user may also be redirected back to the affiliated website server **31***n*. Generally, the redirection message passes a numeric code indicating the error type which caused the user to be redirected back to the affiliated website server **31***n*.

[**0084**] To ensure that each transaction between the first website server **31** and an affiliated website server **3** in is authentic, the integrated shopping cart system **30** may utilize a two-tiered authentication scheme, however, alternative authentication methods may be used without departing from the invention.

[**0085**] In accordance with the invention, the two-tiered authentication includes vendor identifier authentication and IP-based filtering authentication. For example, as described above, each vendor website server **31** may be provided with a unique alpha-numeric code (vendor identifier). The vendor identifier allows an affiliated website server **31***n* to properly identify a requesting server **31**. In addition, to ensure that all requests transmitted to an affiliated website server **31***n* originated from an authentic server **31**, each request message may be validated by comparing the IP (Internet Protocol) address and/or a list of legal referrer addresses of the requesting server **31** against a predetermined list of authentic IP-addresses and/or legal referrer addresses. Accordingly, server requests originating from a non-authentic IP-address and/or referrers can be rejected by the system **30**.

[**0086**] In order to implement the integrated shopping cart system **30**, the first website server **31** is provided with a test software toolkit that allows the first website server **31** to create and test integration software in a pre-production environment. When the first website server **31** has successfully tested the integration software, the integrated shopping cart system **30** may be implemented. Each of the software sub-modules described above may have an associated test software toolkit module that allows the first website server **31** to test the integration software to ensure the operability of the integrated shopping cart system **30**. Preferably, the software toolkit module may reside on the affiliated website server **31***n* and the first server **31** may access the software toolkit module on the affiliated website server **31***n* to test the functionality of the integrated shopping cart system **30**.

[**0087**] In accordance with the invention, the test software toolkit may have an interface mode and a non-interface mode. The interface mode allows the first website server **31** to access the software toolkit module on the affiliated website server **31***n* via the Internet. The non-interface mode allows the first website server **31** to test its own integration computer code.

[**0088**] To ensure security of the system **30**, the test environment may be protected with a user ID/password combination to ensure that only authorized users have access to the test environment. When testing via the interface mode, preferably, the user ID/password need be supplied by the first server **31** only once. When testing via the non-interface mode, the user ID/password may need be supplied by the first server **31** multiple times. The software toolkit will now be described.

[**0089**] FIG. **5** is an example screenshot **79** of the software toolkit module interface. Each of the software sub-modules may be tested via this interface. For example, an initiate session software sub-module of the integration testing software toolkit module allows the first website server **31** to test whether parameter information, such as vendor identifier and product information (label information) are successfully transmitted to the affiliated website server **31***n*. The test information may be transmitted by the first website server **31** according to known communication protocols, such as an HTTPS POST command.

[**0090**] Depending on whether the test information has been successfully transmitted by the first website server **31**, various status messages are returned to the first website server **31** to inform the first website server **31** of any errors in transmission. In the case of encountering an error in transmission, the first website server **31** may correct any indicated errors and retest the sub-module.

[**0091**] An add-to-cart sub-module of the testing toolkit allows the first website server **31** to test whether parameter information, such as URL information, reference parameter, line item number, quantity, weight, inventory number, line item description, total line item price and session ID information are successfully transmitted to the affiliated website server **31***n*. The test information may be transmitted by the first website server **31** according to known communication protocols, such as HTTPS via an XML message.

[**0092**] A modify-product-in-cart sub-module of the testing toolkit allows the first website server **31** to test whether parameter information, such as vendor identifier, reference parameter and line item number information are successfully transmitted to the affiliated website server **31***n*. The test

information may be transmitted by the first website server **31** according to known communication protocols, such as an HTTPS POST command. Depending on whether the test information has been successfully transmitted by the first website server **31**, various status messages are returned to the first website server **31** to inform the first website server **31** of any errors in transmission. In the case of encountering an error in transmission, the first website server **31** may correct any indicated errors and retest the sub-module.

[**0093**] A create-another-product sub-module of the testing toolkit allows the first website server **31** to test whether parameter information, such as vendor identifier, reference parameter and line item number information are successfully transmitted to the affiliated website server **31***n*. The test information may be transmitted by the first website server **31** according to known communication protocols, such as an HTTPS POST command. Depending on whether the test information has been successfully transmitted by the first website server **31**, various status messages are returned to the first website server **31** to inform the first website server **31** of any errors in transmission. In the case of encountering an error in transmission, the first website server **31** may correct any indicated errors and retest the sub-module.

[**0094**] A reorder request sub-module of the testing toolkit allows the first website server **31** to test whether parameter information, such as vendor identifier, reference parameter and line item number information are successfully transmitted to the affiliated website server **31***n*. The test information may be transmitted by the first website server **31** according to known communication protocols, such as an HTTPS POST command.

[**0095**] A ship price request sub-module of the testing toolkit allows the first website server **31** to test whether parameter information, such as reference parameter and line item number information are successfully transmitted to the affiliated website server **31***n*. The test information may be transmitted by the first website server **31** according to known communication protocols, such as an HTTPS POST command.

[**0096**] Depending on whether the test information has been successfully transmitted by the first website server **31**, various status messages are returned to the first website server **31** to inform the first website server **31** of any errors in transmission. In the case of encountering an error in transmission, the first website server **31** may correct any indicated errors and retest the sub-module.

[**0097**] Other software sub-modules may also be tested with the integration testing software toolkit module in accordance with the invention. For example, an order fulfillment request software sub-module of the testing toolkit allows the first website server **31** to test whether parameter information, such as vendor identifier, reference parameter, line item number, vendor reference information, and shipping information are successfully transmitted to the affiliated website server **31***n*. The test information may be transmitted by the first website server **31** according to known communication protocols, such as HTTPS via an XML message.

[**0098**] An order placement request software sub-module of the testing toolkit allows the first website server **31** to test whether parameter information, such as vendor information, line item information, inventory information, quantity information, description information, and shipping information are successfully transmitted by the first website server **31** according to known communication protocols, such as HTTPS via an XML message.

[**0099**] A ship notification software sub-module of the testing toolkit allows the first website server **31** to test whether parameter information, such as URL information, reference parameter, vendor reference information, line item number and tracking number information are successfully transmitted by the first website server **31** according to known communication protocols, such as HTTPS via an XML message. Depending on whether the test information has been successfully transmitted by the first website server **31**, various status messages are returned to the first website server **31** to inform the first website server **31** of any errors in transmission. In the case of encountering an error in transmission, the first website server **31** may correct any indicated errors and retest the sub-module.

[**0100**] A view design software sub-module of the testing toolkit allows the first website server **31** to test whether parameter information, such as vendor identifier information, reference parameter information, line item number and zoom factor information are successfully transmitted by the first website server **31** according to known communication protocols, such as HTTPS via an XML message. Depending on whether the test information has been successfully transmitted by the first website server **31**, various status messages are returned to the first website server **31** to inform the first website server **31** of any errors in transmission. In the case of encountering an error in transmission, the first website server **31** may correct any indicated errors and retest the sub-module.

[**0101**] A save design software sub-module of the testing toolkit allows the first website server **31** to test whether parameter information, such as reference parameter information, line item number information, and description information are successfully transmitted by the first website server **31** according to known communication protocols, such as HTTPS via an XML message. Depending on whether the test information has been successfully transmitted by the first website server **31**, various status messages are returned to the first website server **31** to inform the first website server **31** of any errors in transmission. In the case of encountering an error in transmission, the first website server **31** may correct any indicated errors and retest the sub-module.

[**0102**] In order to illustrate the operation of the above described integrated shopping cart system **30**, the system **30** will be described in the context of a user accessing a first website, such as a business supply store vendor's website, via the Internet **33**. The first website may provide URL links to a number of affiliated websites, one such affiliated website being a website that allows a user to create and modify custom designs that may be printed on a variety of print media.

[**0103**] The affiliated websites and the first website together comprise an integrated shopping cart network. Within this network, the affiliated websites include the integrated shopping cart functionality described above so that a user may access the affiliated websites in order to select items for purchase. Upon selecting an item for purchase from an affiliated website, the item may be "placed"

into the user's shopping cart at the first website and the user may continue to access other affiliated websites in order to select additional items for purchase. Upon concluding selection, the user may purchase each of the items in the shopping cart at the first website using the e-commerce functionality of the first website.

[0104] In describing the operation of the integrated shopping cart system **30** of the invention, the affiliated website server **31***n* will be described in the context of a plurality of servers, together comprising an electronic printing system, such as that described in co-pending U.S. patent application Ser. No. 09/568,644, entitled "Electronic Printing System and Method, filed May 10, 2000, which is incorporated herein by reference. It should be noted however that the following description is intended merely for illustrative purposes and is not considered to be limiting. The integrated shopping cart system **30** can be implemented across any website and its associated server architecture.

[0105] FIG. **6** illustrates an embodiment of an electronic printing system **80**, such as that described in the above-identified U.S. Patent Application. The electronic printing system **80** may include an affiliated server **31***n* (that may be embodied as a server hub including a plurality of servers as will be described herein) that may contain one or more pieces of software code **81** that may be stored on various servers **82***a*-e, may be accessible to each server **82***a-e* via the server hub **31***n*, and may be executed by microprocessors **83** in the servers **82***a-e* in order to operate as the electronic printing system **80**. The individual servers **82***a-e* may include one or more web servers **82***a*, one or more image servers **82***b*, one or more graphics servers **82***c*, one or more process servers **82***d*, and one or more file servers **82***e*. For simplicity, these servers **82***a-e* collectively represent an affiliated website server **3** in of the integrated shopping cart system **30** in accordance with the invention.

[0106] The function and interrelationship of these servers **82***a-e* will be described in detail herein. While the system **80** is described herein as a plurality of servers **82***a-e*, it should be noted that the system **80** is also capable of being embodied as a single server **31***n*, having systems capable of performing as the electronic printing system **80** of the invention.

[0107] A database(s) **84** may include a large number of records, which may be accessed by the various servers **82***a-e*. For example, the database(s) **84** may include records pertaining to user personal information, such as shipping information. The database(s) **84** may also include records pertaining to user billing information, order histories, order status, pricing information, sales tax information, printer information and printer attributes, such as which printer plant may be best utilized for a printing product based, in part, on user location. Additionally, the database(s) **84** may include store attributes, product attributes, shipping carriers, options, and costs, and printer-specific information, such as ink colors and media type. It should be understood that the database(s) **84** may include additional record information that has not been described here, and is not limited to the records set forth herein.

[0108] A user may access the electronic printing system **80**, such as with the user's browser software program and may create or edit electronic printing templates in a database(s) **84** that may reside on the remote servers **82***a-e*. For example, in accessing the first website the user may be provided with a URL link that will navigate the user to an affiliated website, such as one associated with the electronic printing system **80**, when selected by the user.

[0109] When selecting the URL link at the first website that is associated with the electronic printing system **80**, the user may be electronically transferred to a user interface screen of the electronic printing system **80**. FIG. **7** shows an example of a screen shot of the user interface **90** screen that may be displayed to the user upon the user accessing the electronic printing system **80**.

[0110] The user may interact with the electronic printing system **80** via the user interface **90**. For example, the user may design a custom print order via the user interface **90** by initiating a design request for a custom print design and submit the custom design for processing and printing. Additionally, a user may modify the design, in which case the design change is automatically represented in the design files and conveyed graphically to the user, as will be described.

[0111] A custom print design may include custom print information, such as graphical information, audio-visual information, image information, textual information, etc. Such information can be stored as binary data or ASCII characters (the ASCII characters or binary data define text information and may also define generic file information).

[0112] Upon the user creating a custom print design, the electronic printing system **80** may store the design information until an order is placed. Every order may have an order file and one or more associated design files. The design files may describe the initial layout of a print design and may reflect updates to the initial layout based upon the custom design created by a user. The design files may also describe non-print items associated with the custom print information, such as second sheets, etc.

[0113] An imaging engine (resident on an image server **82***b*) may convert the information in the design files into a graphic file for on-screen representation and a process server **82***d* may convert the design files into a "ready-to-print" output file that may be retrieved electronically by a remote printer facility. The output file may be formatted as an image file format, such as a raster file format or a vector file format. The image file format can be, for example, an .EPS file format, a .JPG file format, a .GIF file format, a .PDF file format, textual, or any other such format.

[0114] The order file may contain user information and product data, such as a user's shipping address, pricing information, and the media type desired. When an order is submitted, such as by the user at the first website choosing to purchase a design item in the user's shopping cart that the user created or modified using the electronic printing system **80**, both the order file and the design files may be staged for conversion. These files may be converted to printer specific files and may be sent to or retrieved by a local or remote printing facility and the user's order may be carried out by the printing facility and may be sent to the user when completed. Upon carrying out the user's order, in accordance with the invention, the user may be notified that the user's order has shipped.

[0115] Upon the user selecting a desired product to design, a list of pre-designed templates may be displayed to the user,

from which the user may select a default design template to begin customizing a print design order. A graphical representation of a default design template **95** may be displayed to the user (FIG. **8**A) that the user may then customize and modify to create a desired design. It should be noted that a user is not bound to the selected product template. Product layouts may be changed at any time.

[**0116**] FIG. **8**B illustrates an example of a design file **100** that may be created by the electronic printing system **80** in accordance with the changes that the user may make to the default design template such as shown in FIG. **8**A. The design file **100** may be updated in real time to reflect the changes. Generally, every print item, such as a business card, a T-shirt, a mug, etc., has associated design files, per side, that describes the design layout. The design files may be structured textual document files that may describe the initial layout of the design item, the placement of objects in the design item, and attributes of those objects. As a user modifies a default design file for a print order, for example by entering text, moving or coloring an object, new design files may be created by the system **80** to reflect the modifications to the default design layout which may then be sent to the image server **82***b* to create a new image that may be displayed to the user reflecting the modifications.

[**0117**] FIG. **8**C shows an associated graphical representation **102** of the design file **100** of FIG. **8**B that may be displayed to a user in real-time to reflect modifications to a default design file. In particular, the image server **82***b* may parse the textual information included in the design files and may return a graphical image **101** c (stored on the graphics server **82***c*) representative of the design described by the design files to be displayed to the user in real-time. The image server **82***b* may convert the textual information into a GIF graphic, or any other graphic file, that may be a screen representation of the layout of the custom design. Therefore, a user may be able to immediately visualize the changes and modifications that are made to a custom design before accepting the design.

[**0118**] Thus, in operation, upon a user accessing the electronic printing system **80**, such as from the first website, the user may access a user interface (shown in FIG. **7**) provided by a web server **82***a*. The user interface may provide an interactive design tool to the user so that the user may create a custom print design. The web server **82***a* may be configured to retrieve the custom design information input by the user and may create and update design files accordingly.

[**0119**] When a user initiates a design function from the interface design tool, graphics information may be obtained from the graphics storage location (the graphics may be stored on the image server **82***b*, the file server **82***e*, or any server capable of storing image data) and may be conveyed to an image server **82***b* so that the graphics information may be parsed into image files that may be displayed to a user, such as via the user's browser software program, to reflect user modifications to an initial design.

[**0120**] FIG. **9** is a flowchart illustrating the operation flow of the electronic printing system **80** (see FIG. **6**) when a user initiates a local design function. A design tool interface **90** (see FIG. **7**) may be displayed to the user through the browser interface (Step **110**). A web server **82***a* (see FIG. **6**) may open a default design file for a selected design product and may initiate the creation of a new item in an order (Step **111**). The design options that are presented to a user may be dependent on the design rules located in the database(s) **84**. The web server **82***a* may update the design files to reflect a change made by the user to the default design and may pass this information to the image server **82***b* (Step **112**), where the information may be parsed (Step **113**) and rendered as an image file (Step **114**) and returned to the web server **82***a* (Step **115**) and downloaded by the user for display to the user through the user interface (Step **116**).

[**0121**] The image server **82***b* may include a graphics conversion program that may parse textual information (from design files) into graphical images so that the web server **82***a* may convey these graphical images to the user through the browser interface **90** in real time. Thus, every time a user modifies a design by modifying design files, the web server **82***a* may update the design information and pass that information to the image server **82***b*. The image server **82***b* may parse the textual information, render a graphical image reflecting the design update, and return the graphical image to the web server **82***a* so that it may be displayed to the user through the browser interface. When the user is content with the custom design, the user may accept the design, in which case the design item may be "placed" in the user's shopping cart at the first website, as described above. Upon the user completing a shopping order, the user may choose to purchase the design item, in which case the design order may be submitted to the electronic printing system **80** for processing.

[**0122**] Upon the user completing a shopping cart order at the first website and choosing to purchase the selected design item, printer specific files for the design item may be generated by the electronic printing system **80**. These printer specific files may contain information such as what printer to send the file to and inventory codes that may be printer specific such as product, ink color, quantity, etc. The electronic printing system **80** may then stage the order (as printer specific files, such as .BEP and image files) so that the order may be retrieved electronically by a remote printing facility.

[**0123**] In order to convert the design files into an image file that may be utilized by any remote printing facility (such as an encapsulated postscript file, EPS file), the design files are processed by the electronic printing system **80**. The process server **82***d* (see FIG. **6**) may be configured to process orders received from the first website server **31** and output files that may be retrieved by a remote printing facility.

[**0124**] FIG. **10** illustrates the operational flow of the process server **82***d*. Initially, the process server **82***d* may retrieve an order that may have been submitted by the first server **31** and staged by the electronic printing system **80** in a staging directory resident on a file server **82***e* or resident in a database(s) **84**. In retrieving the order, the process server **82***d* may access the staging directory or database(s) **84** and locate a staged order and all associated files that may have been stored by the electronic printing system **80** (Step **120**). After the staged order has been retrieved by the process server **82***d*, the files are backed up (Step **121**) and printer facility information may be added to the staged order (Step **122**). This information may be determined at the time the user is designing the custom print order. After adding the printer facility information to the order, the process server **82***d* may split orders, for example, by printer facility (Step **123**).

[0125] Once a print order has been completed by the process server **82***d*, the process server **82***d* may modify the order in preparation for conversion of the design files to an image file (Step **124**). For example, all non-printable information may be removed from the design files. The process server **82***d* may then determine product and printer facility information from the order file (Step **125**), and parse the design files into an image file, such as an EPS file (Step **126**), that may be utilized by a printer facility. The image file could be of any image-type format.

[0126] Both spot printing plates and CMYK printing plates may be defined in the image file, among other printing plate designations, such as composite spot printing plates, etc. Spot printing plates utilize a black background printing plate to which different color ink may be added in order to create a print. For example, in the case of a print order in which a business card having a green ink color portion thereon may be defined in a design files, the image file may specify a black background plate and a green ink preference or may be defined on a secondary information file. CMYK printing plates may use four separate plates, cyan, magenta, yellow and black, or a composite plate for full color printing. Process color printing information, such as CMYK information, RGB (red, green, blue) information, or other color information where each color is represented as a separate printing plate. Process color printing information may be represented in separate printing plates or as a composite plate. This information may be specified in the image file.

[0127] Depending upon the product ordered by a user and/or the designated printer facility, the process server **82***d* may retrieve an order number associated with the order request and may create a printer specific file associated with the information that may not be included in the converted image file, such as product, paper color, media type, etc (Step **127**). Printer specific files may include printer facility specific information, such as attributes and the like.

[0128] The process server **82***d* may then add the user information to a user database(s) **84** (Step **128**) and may update an order database(s) **84** with the user order information (Step **129**). The process server **82***d* may then backup all the printer specific files (Step **130**) and compress them, such as by zipping the printer files, and copy the compressed files to an appropriate location so that the compressed files may be downloaded by a remote or local printer facility (Step **131**) or stage to an EDI server on an order by order basis. The printer specific files may include printer identification information, or printer specific inventory codes, such as product information codes, ink color codes, quantity information codes, etc. The process server **82***d* may also include a backend module for tracking order ship status and for notifying customers of shipped orders. Operation of the integrated shopping cart system will now be described in the context of being integrated with an electronic printing system.

[0129] FIG. **11** is a flowchart illustrating the operation flow of the integrated shopping cart system **30** of the invention. Indicated in each block of the flowchart is an action performed by the system in response to a request by a user, together with the server responsible for performing the requested action.

[0130] As shown in FIG. **11**, a user at the first website may choose to select a product from an affiliated website (Step **140**). Thus, the user may, for example, select a URL link on the first website to navigate to an affiliated website in order to select a product, such as to create a custom design item from the affiliated website.

[0131] An integrated shopping cart session may be initiated between the first server **31** and the affiliated website server **31***n*, for example by activating the session initiation software sub-module **51** of the integrated shopping cart system software module **50**. After a session has been initiated, a user may choose to select a custom design item from the affiliated website (Step **141**). The custom design item may include print information as well as non-print information. For example, the custom design item may include non-printable items where no custom design work is involved in creating the item (i.e., using a default template).

[0132] After selecting a product for custom design, the user may then design a custom print design, as described above and may modify the custom print design until acceptable by the user (Step **142**). The user may then choose to add the designed item to the user's shopping cart at the first website (Step **143**).

[0133] After adding the designed item to the shopping cart, the user may choose to modify a product already in the shopping cart (Step **144***a*) or may choose to create another product (Step **144***b*). In either case, the user may create and/or modify a custom print design until acceptable by the user (Step **142**). The user may then choose to add the designed item to the user's shopping cart at the first website (Step **143**).

[0134] When the user has completed a shopping cart selection and is ready to complete an order, the user, at the first website, may choose to fulfill an order request (Step **145**). Upon a user choosing to fulfill an order request, the affiliated website server **31***n* from which an item has been selected by a user may be notified of the user's request to fulfill an order (Step **146**). Upon the affiliated website fulfilling an order, the affiliated website may notify the first website and/or the user, of the fulfillment of an order, such as the shipping of the order (Step **147**).

[0135] FIG. **12** is a flowchart illustrating the operation flow of an alternative embodiment of the integrated shopping cart system **30** of the invention in which order fulfillment of an uploaded item, or an item selection item that may be resident on the first website itself, may be performed by the system **30**. Indicated in each block of the flowchart is an action performed by the system in response to a request by a user, together with the server responsible for performing the requested action.

[0136] As shown in FIG. **12**, a user at the first website may choose to upload an item, for example, a data file representing an object to be added to the shopping cart, or select from an item existing at the first website to be added to the shopping cart at the first website (Step **150**). When the user is ready to complete a shopping cart order, the user, at the first website, may choose to fulfill an order request (Step **151**). An integrated shopping cart session may then be initiated between the first server **31** and the affiliated website server **31***n*, for example by activating the session initiation software sub-module **51** of the integrated shopping cart system software module **50** (Step **152**). Upon a user choosing to fulfill an order request, an affiliated website server **31***n*

which may be configured to perform a specified function, such as printing or otherwise processing the uploaded data file or the selected item, may be notified of the user's request to fulfill an order (Step **153**). Upon the affiliated website fulfilling an order, the affiliated website may notify the first website and/or the user, of the fulfillment of an order, such as the shipping of the order (Step **154**).

[**0137**] FIG. **13** is a schematic diagram illustrating the operation of the integrated shopping cart system in accordance with the invention. A user accessing a first website **160** (hosted, for example, by a first server) may be presented with a dynamic link, such as a URL link, to an affiliated website **162** (hosted, for example, by an affiliated server in communication with the first server). The first website **160** may include an electronic shopping cart software application for facilitating commercial transactions between the user and any of the first website **160** or affiliated websites **162** so that the user can purchase products and/or services provided by any of the proprietors of the websites.

[**0138**] As described above, in accordance with the invention, a user may access an affiliated website and may select products and/or services for purchase from the affiliated website **162**. As shown in FIG. **13**, upon a user accessing an affiliated website **162** the first server **31** may transmit an initiate message **164** to the affiliated server **31***n* to initiate a communication session with the first server **31**. When a session has been initiated between the first server **31** and the affiliated server **31***n*, a user accessing an affiliated website **162** (hosted by the affiliated server **31***n*, for example) may select products and/or services for purchase from the affiliated website **162**.

[**0139**] Upon a user selecting a particular product and/or service from the affiliated website **162** for purchase, the affiliated server **31***n* may transmit an add-to-cart message **166** to the first server **31** indicating to the first server **31** to reflect the user's selection in a shopping cart order maintained by the first server **31**. Therefore, a user accessing an affiliated website **162** can select products and/or services for purchase from the affiliated website **162** and the selected items can be maintained in a shopping cart order by the first server **31** and displayed to the user accessing the first website **160**.

[**0140**] A user, after selecting items for purchase from an affiliated website **162**, may choose to place an order for any or all of the items indicated in the user's shopping cart order maintained by the first server **31**. Upon placing a request for an order **168**, the first server **31** may implement its own commercial functionality to properly process the order. In processing the order by the first server **31**, order processing and order fulfillment of products and/or services selected for purchase from an affiliated website **162** may be performed by the affiliated website server **31***n*. For example, the first server **31** may transmit an order fulfillment request message **170** to the affiliated server **31***n* requesting the affiliated server **31***n* to perform its own order fulfillment processing, such as producing and shipping **172** a selected item. After shipping the selected item, the affiliated server **31***n* may transmit a ship notification message **174** to the first server **31** alerting the first server **31** that the affiliated server **31***n* has properly processed and shipped the order. The first server **31** may then properly notify **176** the user that the order has been successfully processed and shipped.

[**0141**] Thus, in-accordance with the invention, integrated shopping cart functionality is provided on a first website so that products/services from different affiliated websites (or even uploaded data files from a user) can be integrated into the shopping cart at the first website and the e-commerce functionality of the first website can be utilized to purchase the selected products/services (or otherwise process the uploaded data files).

[**0142**] Advantageously, the first website is benefited by this integrated shopping cart functionality in that an increased number of users may access the first website since the proprietor of the first website may offer various products/services from a multitude of different affiliated websites, for example by providing URL links to the affiliated websites that a user may access in order to select items from the affiliated websites. These items can be integrated into the shopping cart at the first website and purchased with a single transaction. Increased user traffic is expected since a user's shopping interests can be fulfilled at a single website.

[**0143**] Additionally, affiliated websites are benefited by this integrated shopping cart functionality since the e-commerce functionality of the integrated shopping cart is performed by a server that is associated with the first website. Therefore, affiliated websites need not include their own e-commerce functionality. Instead, they may take advantage of the e-commerce functionality of the first website and still receive the benefits of the sale of their offered products/services to the user. Maintenance costs and overhead costs with respect to including an e-commerce software engine are therefore reduced and often eliminated as a result.

[**0144**] While the foregoing has been described with reference to particular embodiments of the invention, such as an integrated shopping cart system, it will be appreciated by those skilled in the art that changes in these embodiments may be made without departing from the principles and spirit of the invention.

1. An electronic shopping cart system integrated with a computer network connecting a plurality of servers together, the computer network being accessible by a user, comprising:

a first server associated with a first website, the first server including a shopping cart application configured to maintain a shopping cart order of items selected by a user from a plurality of affiliated websites, and a catalog application adapted to receive item information relating to the items that can be selected by the user from the plurality of affiliated websites, the first server being configured to process the shopping cart order and to provide order fulfillment information to the affiliated websites from which the items were selected by the user; and

a plurality of affiliated servers associated with the plurality of affiliated websites, each of the affiliated servers including a respective catalog of item information relating to the items that can be selected from the respective affiliated websites, the plurality of affiliated servers being adapted to provide the respective catalogs of item information to the first server and to receive and process the order fulfillment information from the first server.

2. The integrated shopping cart system of claim 1, wherein the computer network is the World Wide Web.

3. The integrated shopping cart system of claim 1, wherein the items include products and services.

4. The integrated shopping cart system of claim 1, wherein the item information includes any of item identification information, cost information, and description information.

5. The integrated shopping cart system of claim 1, wherein the order fulfillment information includes any of item identification information and shipping information.

6. An electronic shopping cart system integrated with a computer network connecting a plurality of servers together, the computer network being accessible by a user, comprising:

a server associated with a first website, the server including a shopping cart application configured to maintain a shopping cart order of items selected by a user from a plurality of affiliated websites, and a catalog application adapted to receive item information relating to the items that can be selected by the user from the plurality of affiliated websites, the server being configured to process the shopping cart order and to provide order fulfillment information to the affiliated websites from which the items were selected by the user.

7. The integrated shopping cart system of claim 6, wherein the computer network is the World Wide Web.

8. The integrated electronic shopping cart system of claim 6, wherein the items include products and services.

9. The integrated electronic shopping cart system of claim 6, wherein the item information includes any of item identification information, cost information, and description information.

10. The integrated shopping cart system of claim 6, wherein the order fulfillment information includes any of item identification information and shipping information.

11. An electronic shopping cart system integrated with a computer network connecting a plurality of servers together, the computer network being accessible by a user, comprising:

a plurality of affiliated servers associated with a like plurality of affiliated websites, each of the affiliated servers including a respective catalog of item information relating to items that can be selected from the respective affiliated websites, the plurality of affiliated servers being adapted to provide the respective catalogs of item information to a first website, each of the affiliated servers being configured to receive order fulfillment information from the first website and to process the order fulfillment information.

12. The integrated shopping cart system of claim 11, wherein the computer network is the World Wide Web.

13. The integrated electronic shopping cart system of claim 11, wherein the items include products and services.

14. The integrated electronic shopping cart system of claim 11, wherein the item information includes any of item identification information, cost information, and description information.

15. The integrated electronic shopping cart system of claim 11, wherein the order fulfillment information includes any of item identification information and shipping information.

16. An integrated shopping cart software application, comprising:

a session initiation software module for establishing a communication session between a first server associated with a first website and an affiliated server associated with an affiliated website within a computer network so that a catalog of item information relating to items that can be selected from the affiliated website that is maintained by the affiliated server is accessible by the first server permitting the selecting of an item from the affiliated website;

an add item software module for informing the first server of the selecting of an item from the affiliated website so that a shopping cart order maintained by the first server is updated to include the selected item from the affiliated website;

an order fulfillment software module for transmitting order fulfillment information to the affiliated server and requesting the affiliated server to process the transmitted order fulfillment information to fulfill a portion of the shopping cart order; and

an error determination software module for managing error information occurring in the communication session between the first server and the affiliated server.

17. The integrated shopping cart software application of claim 16, wherein the session initiation software module permits the first server to transmit request information to the additional server system.

18. The integrated shopping cart software application of claim 17, wherein the request information is transmitted by a communication protocol.

19. The integrated shopping cart software application of claim 18, wherein the communication protocol includes any of FTP, e-mail, HTTP and HTTPS communication protocols.

20. The integrated shopping cart software application of claim 17, wherein the request information includes any of vendor identifier information for identifying the first server, product identifier information for identifying an item from the catalog of item information and session identifier information for maintaining communication session information between the first server and the affiliated server.

21. The integrated shopping cart software application of claim 16, wherein the add item software module permits the additional server system to transmit item information relating to a particular item selected from the catalog of item information to the first server so that the selected item is added to the shopping cart order maintained by the first server.

22. The integrated shopping cart software application of claim 21, wherein the item information is transmitted as an XML message.

23. The integrated shopping cart software application of claim 21, wherein the item information includes any of reference parameter information for identifying the selected item, line item number information for indicating a location in the shopping cart order at which the selected item is located, the quantity of the item selected, the weight of the selected item, inventory number information relating to the selected item, line item description information for associating a description of the selected item, price information of the selected item, session identifier information, and user identifier information.

24. The integrated shopping cart software application of claim 21, wherein an acknowledgement message is transmitted from the first server to the affiliated server upon the first server receiving the item information from the affiliated server.

25. The integrated shopping cart software application of claim 16, wherein the order fulfillment software module permits the first server to transmit request information to the affiliated server so that the affiliated server can fulfill a portion of the shopping cart order.

26. The integrated shopping cart software application of claim 25, wherein the request information is transmitted as an XML message.

27. The integrated shopping cart software application of claim 25, wherein the request information includes any of shipping information, vendor identifier information, reference parameter information, line item information and session identifier information.

28. The integrated shopping cart software application of claim 27, wherein the request information further includes any of tax information, distribution information, payment information, and cost center information.

29. The integrated shopping cart software application of claim 27, wherein the shipping information includes any of shipping address information, contact information, shipping company information and shipping method information.

30. The integrated shopping cart software application of claim 25, wherein an acknowledgement message is transmitted from the affiliated server to the first server upon the affiliated server receiving the request information from the first server.

31. The integrated shopping cart software application of claim 16, further comprising a shipping price software module for informing the first server of the shipping price of the item selected from the affiliated website.

32. The integrated shopping cart software application of claim 31, wherein the shipping price software module permits the first server to transmit shipping price request information to the affiliated server.

33. The integrated shopping cart software application of claim 32, wherein the request information is transmitted as an XML message.

34. The integrated shopping cart software application of claim 32, wherein the shipping price request information includes any of item information and shipping information.

35. The integrated shopping cart software application of claim 32, wherein an acknowledgement message is transmitted from the affiliated server to the first server upon the affiliated server receiving the request information from the first server.

36. The integrated shopping cart software application of claim 16, wherein order fulfillment notification information is transmitted as an XML message.

37. The integrated shopping cart software application of claim 36, wherein order fulfillment notification information includes any of line item information, reference parameter information, tracking information relating to a shipped item and session identifier information.

38. The integrated shopping cart software application of claim 36, wherein an acknowledgement message is transmitted from the first server to the affiliated server upon the first server receiving the notification information from the affiliated server.

39. The integrated shopping cart software application of claim 16, wherein the error determination software module permits the transmission of an error message to the first server.

40. The integrated shopping cart software application of claim 16, further comprising a ship notification software module for informing the first server of the fulfillment of a portion of the shopping cart order.

41. The integrated shopping cart software application of claim 16, further comprising a select-another-item software module for informing the first server of selecting another item from the affiliated website so that the selected item from the affiliated website can be added to the shopping cart order maintained by the first server.

42. The integrated shopping cart software application of claim 41, wherein the select-another-item software module permits the first server system to transmit request information to the additional server system.

43. The integrated shopping cart software application of claim 42, wherein the request information is by a communication protocol.

44. The integrated shopping cart software application of claim 43, wherein the communication protocol includes any of HTTP, HTTPS, FTP and e-mail.

45. The integrated shopping cart software application of claim 41, wherein the request information includes any of vendor identifier information, reference parameter information, action information, session identifier information and line item number information.

46. The integrated shopping cart software application of claim 16, further comprising a modify item software module for informing the affiliated server system of a request to modify a selected item indicated in the shopping cart order maintained by the first server.

47. The integrated shopping cart software application of claim 45, wherein the request information is transmitted by a communication protocol.

48. The integrated shopping cart software application of claim 47, wherein the communication protocol includes any of HTTP, HTTPS, FTP and e-mail.

49. The integrated shopping cart software application of claim 45, wherein the request information includes any of vendor identifier information, line item number information and session identifier information.

50. The integrated shopping cart software application of claim 16, further comprising a reorder software module for informing the first server of selecting a previously selected item from the affiliated website so that the previously selected item can be added to the shopping cart order maintained by the first server.

51. The integrated shopping cart software application of claim 50, wherein the reorder software module permits the first server to transmit request information to the affiliated server.

52. The integrated shopping cart software application of claim 51, wherein the request information is transmitted by a communication protocol.

53. The integrated shopping cart software application of claim 52, wherein the communication protocol includes any of HTTP, HTTPS, FTP and e-mail.

54. The integrated shopping cart software application of claim 51, wherein the request information includes any of

vendor identifier information, reference parameter information, line item number information and session identifier information.

55. The integrated shopping cart software application of claim 16, further comprising a view design software module for viewing an image of a design item created at the affiliated website.

56. The integrated shopping cart software application of claim 55, wherein the view design software module permits the first server to transmit request information to the affiliated server.

57. The integrated shopping cart software application of claim 55, wherein the request information is transmitted by a communication protocol.

58. The integrated shopping cart software application of claim 57, wherein the communication protocol includes any of HTTP, HTTPS, FTP and e-mail.

59. The integrated shopping cart software application of claim 56, wherein the request information includes any of vendor identifier information, reference parameter information, line item number information, zoom factor information and session identifier information.

60. The integrated shopping cart software application of claim 16, further comprising a create another product software module for informing the affiliated server of creating a custom design item.

61. The integrated shopping cart software application of claim 60, wherein the create another product software module permits the first server to transmit request information to the affiliated server.

62. The integrated shopping cart software application of claim 61, wherein the request information is transmitted by a communication protocol.

63. The integrated shopping cart software application of claim 62, wherein the communication protocol includes any of HTTP, HTTPS, FTP and e-mail.

64. The integrated shopping cart software application of claim 61, wherein the request information includes any of vendor identifier information, reference parameter information, line item number information, product identifier information for indicating a particular design item template to provide to facilitate the creating of another product, and session identifier information.

65. The integrated shopping cart software application of claim 16, further comprising a save design software module for informing the first server of a saved design item on the affiliated server.

66. The integrated shopping cart software application of claim 65, wherein the saved design item includes any of custom design items, non-custom design items, and non-printable items.

67. The integrated shopping cart software application of claim 65, wherein the save design software module permits the affiliated server to transmit request information to the first server.

68. The integrated shopping cart software application of claim 67, wherein the request information is transmitted as an XML message.

69. The integrated shopping cart software application of claim 67, wherein the request information includes any of reference parameter information, line item information and item description information.

70. The integrated shopping cart software application of claim 67, wherein an acknowledgement message is transmitted from the first server to the affiliated server upon the first server receiving the saved design notification information from the affiliated server.

71. The integrated shopping cart software application of claim 16, further comprising an order placement software module for informing the affiliated server to fulfill an order for an item selected from a different affiliated website.

72. The integrated shopping cart software application of claim 71, wherein the order placement software module permits the first server to transmit request information to the affiliated server.

73. The integrated shopping cart software application of claim 72, wherein the request information is transmitted as an XML message.

74. The integrated shopping cart software application of claim 72, wherein the request information includes any of vendor identifier information, reference parameter information, line item information and shipping information.

75. The integrated shopping cart software application of claim 16, further comprising a reorder fulfillment software module for informing the affiliated server of the fulfilling of an item in the shopping cart order that was previously fulfilled by the affiliated server.

76. The integrated shopping cart software application of claim 75, wherein the reorder fulfillment software module permits the first server to transmit request information to the affiliated server.

77. The integrated shopping cart software application of claim 76, wherein the request information is transmitted as an XML message.

78. The integrated shopping cart software application of claim 76, wherein the request information includes any of shipping information, vendor identifier information, reference parameter information, and line item information.

79. A method for incorporating integrated shopping cart functionality in a computer network, comprising the steps of:

installing an integrated shopping cart testing software toolkit, having a plurality of test modules incorporated therein, on an affiliated server associated with an affiliated website;

accessing the affiliated server by a first server and activating the integrated shopping cart testing software toolkit to test the functionality of the plurality of test modules incorporated therein;

testing the functionality of the plurality of test modules by transmitting parameter information from the first server to the affiliated server;

indicating the status of transmitting the parameter information to reflect the result of a communication between the first server and the affiliated server; and

in the event of a failed communication between the first server and the affiliated server, re-configuring the affiliated server and re-testing the functionality of the plurality of test modules until each of the test modules are successfully tested.

80. The method of claim 79, wherein the plurality of test modules includes a respective test module associated with a respective module of an integrated shopping cart software application.

81. The method of claim 79, wherein the parameter information is transmitted by any of the HTTPS, HTTP, FTP and e-mail communication protocols.

82. An integrated electronic shopping cart system, comprising:

a first server system connected with a computer network including at least one client computer system, the first server system being associated with a first website and including a shopping cart application configured to maintain a shopping cart order of items selected by a user from an affiliated website, and a catalog application adapted to receive item information relating to the items that can be selected by the user from the affiliated website, the first server system being configured to process the shopping cart order and to provide order fulfillment information to the affiliated website;

an affiliated server system associated with the affiliated website and including a respective catalog of item information relating to the items that can be selected from the affiliated website, the affiliated server system being adapted to provide the catalog of item information to the first server system and to receive and process the order fulfillment information from the first server system, the affiliated server system further including

at least one server system configured to communicate with at least one client system;

at least one image server system configured to receive custom print information, including custom print design item information, from the client system and to provide the custom print design item information to the at least one server system so that the custom print design item information can be dynamically displayed to the at least one client system to indicate any modification to the custom print design item information;

at least one file server system configured to store the custom print information; and

at least one process server system configured to format the custom print information and to generate a print order;

each of the at least one server system, at least one image server system, at least one file server system and at least one process server system being in communication with each other so that custom print information can be provided between them; and

at least one printing facility in communication with the affiliated server, the at least one printing facility configured to receive the formatted custom print information from the affiliated server and to process the print order in accordance with the custom print information.

83. The integrated electronic shopping cart system of claim 82, wherein the custom print information includes any of graphical information, audio-visual information, image information and textual information.

84. The integrated electronic shopping cart system of claim 82, wherein the custom print information is provided from a client system in communication with the affiliated server system.

85. The integrated electronic shopping cart system of claim 82, wherein the custom print information is included in at least one design file that describes the layout of a custom print design item associated with the custom print information.

86. The integrated electronic shopping cart system of claim 85, wherein the at least one design file further describes non-print items associated with the custom print information.

87. The integrated electronic shopping cart system of claim 85, wherein the layout of the custom print design item described in the design file is updated to indicate any modification to the custom print design item information.

88. The integrated electronic shopping cart system of Claim 87, wherein the modified custom print design item information is displayed in real-time.

89. The integrated electronic shopping cart system of claim 82, wherein the custom print design item information is modified in accordance with a predetermined ruleset for a selected print medium.

90. The electronic shopping cart system of claim 82, wherein the custom print information is formatted into a format that is recognizable by the at least one printing facility.

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