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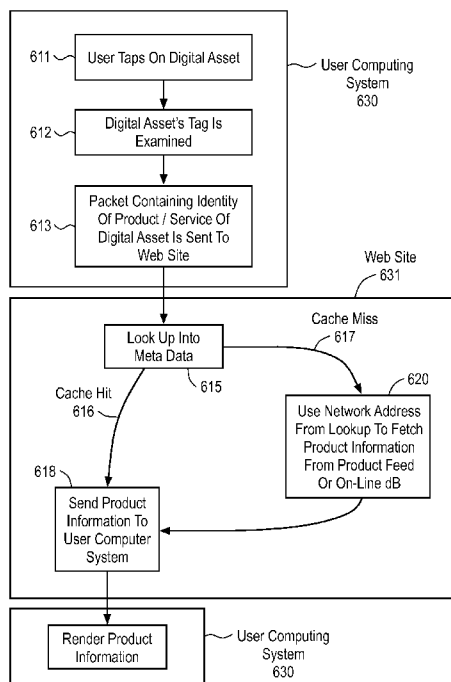
(54) Title: ON LINE ADVERTISING AND ELECTRONIC CATALOG PROCESSES AND APPARATUS

FIG. 6B

(57) **Abstract:** Various methods and systems concerning advertisements and electronic calendars with digital assets are described. The methods include receiving from a network a packet having an identifier that identifies a product associated with a digital asset. The digital asset is rendered on a catalog that is rendered on a remote computing system. The identifier is determined from information that was deployed with the digital asset on the remote computing system. The method includes performing a lookup into a database with the identifier. The method includes receiving product information for the product from the lookup and sending the product information to the remote computing system. The method includes receiving from the network a second packet having a second identifier that identifies a second product associated with a second digital asset. The second digital asset is rendered on a second catalog that is rendered on a second remote computing system. The second identifier is determined from second information that was deployed with the second digital asset on the second remote computing system. The method includes performing a lookup into the database with the second identifier. The method includes receiving an identifier or an on-line product feed or on-line product database from the lookup and requesting second product information for the second product from the on-line product feed or on-line product database. The method also includes receiving the second product information for the second product and sending the second product information to the second remote computing system. Other methods and systems are discussed.

ON LINE ADVERTISING AND ELECTRONIC CATALOG PROCESSES AND APPARATUS

Claim to Priority

[0001] The present application claims priority to U.S. Patent Application 13/194,98, entitled, “On Line Advertising and Electronic Catalog Processes and Apparatus” filed on July 31, 2011 which is a continuation-in-part of U.S. Patent Application 13/108,963, entitled “Electronic Catalog Construction and Applications” filed on May 16, 2011 which is a continuation-in-part of 13/107,959, entitled “Electronic Catalog Construction” filed on May 15, 2011.

Field of Invention

[0002] The field of invention pertains generally to information processing in a networked environment, and, more specifically, to electronic catalog construction and applications.

Background

[0003] Fig. 1A shows the face of a tablet computer 101. Notably, the face of a table computer includes a touch sensitive screen 102 that a user interfaces with in order to cause the tablet computer to perform useful routines. One interesting feature of a tablet computer is that documents or other displayable imagery 103 that are effectively larger than the size of the screen 102 can easily be made to slide in various directions (typically, as is well known, any direction) so that the larger document is easy to peruse – even though it is larger than the tablet screen.

[0004] Fig. 1B shows a representation of the information system (IS) infrastructure of a supplier/retailer that supports the purchase of its goods/services over a network such as the Internet. According to the IS infrastructure of Fig. 1B, the retailer/supplier maintains an on-line product database 110 and an order management system 111. Generally, the on-line product database 110 includes and provides the information used to identify and purchase a good or service offered by the retailer/supplier (e.g., price, product/SKU number, quantity available, applicable size(s), applicable color(s), etc.). For example, the information within the on-line product database 110 may be used as a source of information for an on-line product feed.

Thus, information included within the product database 110 is typically provided to prospective buyers before a purchase is actually made.

[0005] By contrast, the order management system 111 (which may also run off a database) is used for order fulfillment to handle an order once an on-line buyer has taken affirmative steps to purchase a good/service on line. For example, the order management system 111 typically implements one or more of: purchaser identification processes, credit card information handling processes, credit card approval and/or security (e.g., user authentication) processes, and product/service delivery processes. An input to an order management system may include information provided by the on-line product database 110 (to identify the product/service being purchased on-line) coupled with information associated with the purchaser of the product/service (e.g., the purchaser's name, address and credit card information).

[0006] Information associated with the on-line product database 110 may be consolidated with information associated with the order management system 111 (e.g., in a same database).

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] The present invention is illustrated by way of example and not limitation in the figures of the accompanying drawings, in which like references indicate similar elements and in which

[0008] Fig. 1A shows a tablet computer;

[0009] Fig. 1B shows the Information System (IS) infrastructure of a supplier/retailer;

[0010] Fig. 2 shows a network environment including a catalog constructor;

[0011] Fig. 3 shows exemplary meta data that may be utilized by a catalog constructor;

[0012] Fig. 4 shows a process that may be executed by a catalog constructor;

[0013] Fig. 5 shows an architecture of a catalog constructor;

[0014] Fig. 6A shows a depiction of an electronic catalog;

[0015] Fig. 6B shows a process by which product information for a digital asset may be delivered to a user's computing system;

[0016] Fig. 7 shows a depiction of meta data having relationships;

[0017] Fig. 8A shows a process for integrating digital media content into an electronic catalog;

[0018] Fig. 8B shows a bookshelf of a user's catalogs;

[0019] Fig. 8C shows a process by which an electronic catalog is returned in response to a user tapping on a digital asset that corresponds to an advertisement;

[0020] Fig. 9A shows the pushing of information to an electronic catalog;

[0021] Fig. 9B shows a process by which a digital asset of an advertisement of an electronic magazine can be changed after publication of the electronic magazine;

[0022] Fig. 10 shows the integration of a personal digital asset with an electronic catalog digital asset on a computer display;

[0023] Fig. 11A shows digital assets from different suppliers/retailers being presented in a single displayed image;

[0024] Fig. 11B shows a layout of an electronic catalog page;

[0025] Fig. 11C through FIG. 11I shows various GUI possibilities;

[0026] Fig. 12 shows an embodiment of a computer system.

Detailed Description

1.0 Electronic Catalogs

[0027] Fig. 2 shows an example of a system that is capable of extracting digital assets from various web sites, including social web sites for instance, and/or receiving digital assets from retailers, suppliers, product feeds, etc. and synthesizing them into an electronic catalog. An electronic catalog is a catalog that can be viewed on a computing system (e.g., personal computer (PC), laptop, netbook, tablet computer, smartphone, etc.). According to the system of Fig. 2, different digital asset sources 200 populate different websites with their respective digital assets and/or otherwise provide digital assets so that an electronic catalog constructor can receive them. As observed in Fig. 2, as a few examples, the digital asset sources may include any one or more of a retailer, a supplier and an individual. Although only one respective instance of each such digital asset source is observed in Fig. 2 it should be understood that many different retailers, suppliers and individuals can contribute digital assets as described herein.

[0028] A retailer can be viewed as a seller of goods and/or services. For example, a store (and/or franchise) that sells goods that are made and/or marketed by others is a retailer. A

supplier is the initial source for a good or service such as a company that provides products of its own design and markets the products for sale. An individual can be a person or an organization of some kind such as a government organization or corporation. Note that, depending on the circumstances, a retailer can be an individual, a supplier can be an individual, a retailer can be a supplier, etc.

[0029] Respective information systems 200_1, 200_2 and 200_3 associated with each of the retailer, supplier and individual are observed in Fig. 2. Here, for instance, the information systems 200_1 of the retailer may correspond to the backend software and computing systems (e.g., servers) that supply digital assets to a store's /franchise's web page(s) on the Internet and/or source any on-line product feed (e.g., as provided through a backload application program interfaces(API)). Likewise, the information systems 200_2 of the supplier may correspond to the backend software and computing systems (e.g., servers) that supply digital assets to a supplier's web page(s) on the Internet, execute the supplier's B2B automated on line business processes and/or source an on-line product feed of the supplier. Notably, each of the information systems 200_1, 200_2 of the retailer and supplier may be implemented with a respective on-line product database and order management system as discussed above with respect to Fig. 1B. The information systems 200_3 of the individual may correspond, for example, in the case of an individual person, to the software and computing system used by the person to access and use information resources through a network such as the Internet.

[0030] As observed in Fig. 2, the respective information systems of the retailer 200_1, supplier 200_2 and individual 200_3 feed various digital assets 204_1 through 204_6 into various web sites 202_1 through 202_3, any one or more of which may be a social web site. The digital assets are rendered on the various web pages 203_1 through 203_3 of the various websites. Alternatively or in combination (not shown in Fig. 2), the sources 200 of the digital assets may provide product feeds or other flows of information that include digital assets that are sampled or otherwise obtained by a catalog constructor 207. A product feed, as is known in the art, is a continued stream of information, typically in the form of a text file or document (such as XML or RSS) that is sent into a network and "listened to" by recipients/user/subscribers of the feed. The text document is usually formatted in some fashion to contain product information. Product feeds may be provided by a supplier/retailer or by a third party (such as GoogleProduct, theFeed, and Bing).

[0031] A digital asset is typically some form of digital photograph or video clip. Exemplary file types include JPEG, .png, .mov, MPEG and JSON. As just a few possible examples, Fig. 2 shows: i) a retailer and supplier posting 201_1, 202_2 respective digital assets 204_1, 204_2 to a first website 202_1; ii) a supplier and individual posting 201_3, 201_4 respective digital assets 204_3, 204_4 to a second website 202_2; and, iii) a retailer and individual posting 201_5, 201_6 respective digital assets to a third website 202_3. Here, web sites 202_1, 202_2 and 202_3 may be any web site including a supplier's/retailer's respective own web site or even a social web site.

[0032] A social web site is understood to be a website that is fundamentally designed to let individuals express and/or describe themselves and/or otherwise interact with others socially in an open, networked fashion (e.g., over the Internet). Examples include Facebook (which is designed to let individuals "friend" one another as well as provide for the posting of bios or other descriptions of the individual and photos or images of the individual), Twitter (which is designed to let individuals acts as a source of information to the Internet), Flickr (which is designed to let individuals post their own respective photos and/or videos), blogs, etc. For convenience the following discussion will refer to web sites 202 as being social web sites even though any of web sites 202 need not be a social web site.

[0033] Fig. 2 shows the digital assets rendered by a same web site 202 as being rendered from a same web page. Although this particular approach is possible it should also be understood that the various digital assets may be posted across different web pages of a same web site. Moreover, the combinations of postings as between the digital asset sources and the web sites may vary from the specific combinations observed in Fig. 2.

[0034] A catalog creator 207 then collects some/all of the digital assets 204_1 - 204_6 and constructs an electronic catalog 210 from them. In an embodiment, the catalog 210 includes the visual images of the digital assets with added embedded code that causes useful functions to be performed such as: i) the triggering of an on-line purchasing sequence 212 for an item depicted in the digital asset; and, ii) synchronization 213 between comments added to the digital asset on the electronic catalog 210 and comments added to the digital asset on a web site page (such as a social web site page) from where the digital asset was collected by the catalog constructor 207.

[0035] The catalog constructor 207 can be any of a retailer, supplier or individual and may be implemented with any combination of automated (e.g., software based) and manual processes.

A catalog constructor 207 constructs a catalog 210, for example, according to input information describing parameters of the catalog's desired content. According to one example (among a multitude of other possibilities), the catalog constructor 207 is a web site that provides electronic catalogs as an on line service to users of the web site, such as user 211. Here, user 211 provides input information 214 that the catalog constructor 207 web site uses to determine the content of the catalog 210 (e.g., type of purchasable items to be included in the catalog such as clothes and other further defining features such as type of clothes (e.g., shirts), color, retailer, supplier, age, gender, etc.). The web site creates the electronic catalog 210 and sends it to the user 211 over a network. The user 211 may then use the catalog on his/her computer such as a tablet computer. Notably, the user 211 may be any of a retailer, supplier or individual. In another usage case, the user 211 of the catalog 210 is also the creator 207 of the catalog. For example, a person on his/her tablet computer may use catalog construction software 208, 209 installed on the tablet computer to construct a catalog 210 according to desired parameters 214 specified by the person on the table computer.

[0036] In response to a request to create a catalog, the catalog constructor 207 produces a catalog 210 from collected digital assets that fit desired criteria/parameters associated with the input information 214. In an embodiment, the catalog 210 includes embedded on-line purchasing and comment synch code for the respective digital assets. The user 211 may be given an opportunity to view digital assets that were automatically chosen for inclusion in the catalog by the catalog constructor 207 and formally reject any such automatically chosen digital asset. Likewise, the user 211 may also be given the opportunity to review digital assets that were not automatically chosen for inclusion in the catalog and formally include any such automatically rejected digital asset.

[0037] The same user 211 may then use the newly created electronic catalog 210 to purchase and/or comment on items displayed in the catalog. Alternatively or in combination, the catalog creator 207 or user 211 may share the newly created catalog through a network to other individuals so that the other individuals have an opportunity to purchase and/or comment on the items displayed in the catalog. For instance, if user 211 is a person, the person may upload the electronic catalog 210 to a social web site and permit it to be shared/viewed, by the individual's friends, friends-of-friends, etc. Here, notably, providing people with the ability to publish their own personally created catalogs according to their own tastes and then share them with their on-line friends is apt to be an effective marketing/sales device as friends are

not only apt to have similar tastes and interests but are also apt to be interested in each others' catalog(s). Through the aforementioned embedded synchronization code, the friends can comment on a certain asset in the catalog and these same comments may then be posted on the asset's original post in the social web site from where it was collected. The person's friends may also publish and share their own catalogs that the person likewise can receive and view. Here, friends are sharing catalogs amongst themselves that they have individually created. This allows friends to compare each other's tastes and likes in a multi-directional fashion.

[0038] Although the above example was written with a view toward the individual as an individual person, various organizational individuals may also make use of customized and automated catalog construction technology. For instance, a private school may not require uniforms but may have a strict dress code. A customized and automated catalog construction tool can be utilized by directors of the school to construct a catalog of clothing that is appropriate as to the school's dress code, for example, across a spectrum of retailers and suppliers, and publish the catalog to the school's students and/or parents of the school's students on a social web site or on the school's own web site. The students/parents can then fetch the catalog from the web site to view apparel deemed appropriate for the school's dress code.

[0039] Likewise, retailers and suppliers may also make use of automated catalog construction technology to create their own electronic catalogs. Electronic catalogs (like any of those described above in the preceding examples) may also include digital assets posted by people who, for example, posted photos of themselves in certain garments on a social web site (postings 201_4 and 201_6 may be examples of this). As such, for instance, the on line catalogs of suppliers and retailers may include imagery of people other than traditional, professional models. The postings by such individuals may be made on a web page of a supplier or retailer that the supplier/retailer posted on the social web site, and, these same postings may later appear in an electronic catalog of the supplier/retailer.

[0040] As discussed above, the catalog constructor 207 can be implemented, for instance, as a web site that constructs electronic catalogs as an on line service. In this case, for instance, an individual (including a retailer and supplier) who seeks to construct a catalog would create a session with the web site, enter the criteria for selecting digital assets for inclusion in the catalog, and receive as a result the constructed electronic catalog 210. Note that in the case where a retailer or supplier seeks to create a catalog, the catalog requester 217 is not so much

as a user of the catalog but a provider of the catalog. As such, the input criteria 215 used to determine the content of the catalog is a retailer or supplier. Alternatively from a publicly available web site, the catalog constructor 207 may be implemented as an instance of software within an individual's information system. For instance, in the case of a corporation, the catalog constructor 207 may be a software tool that runs on the corporation's internal computing systems. In the case of an individual person, the catalog constructor 207 may be a software tool that is installed on the person's personal computing system. Architecturally, the catalog constructor 207 may be split so as to have a client part and a server part. If so, the server part may be instantiated on a private server (e.g., within a corporation's IS infrastructure) or a public server that is reachable, for instance, over the Internet.

[0041] Given that the catalog constructor 207 creates an electronic catalog 210 based on specified input parameters (e.g., 214 or 215) specified by an individual that desires the creation of a catalog, the catalog constructor 207 is essentially responsible for intelligently selecting certain digital assets for inclusion in the catalog while intelligently rejecting others.

2.0 Meta Data and Electronic Catalog Construction

[0042] In an embodiment, a body of meta-data is associated with each digital asset and kept/managed by the catalog constructor 207. The meta-data essentially describes the one or more purchasable items rendered in the visual imagery of a digital asset that may be incorporated into an electronic catalog. Fig. 3 shows exemplary meta-data structures for different purchasable items that may appear across different digital assets for instance. Notably, the meta data profiles may include a specific retailer/supplier and associated part number, SKU character or other specific product identifier. Additionally, some of the meta-data may pertain to the web site or product feed that a digital asset was collected from. Examples include, in the case of web sites, the name of the web site where the digital asset was posted, an identifier of the page and/or subject matter associated with the page of the website from which the digital asset was collected, and, an identifier of an individual that sourced the digital asset to the web site. In the case of product feeds the meta data may identify the feed, information on how the feed is accessed and/or any information on how the received feed (e.g., text file or document such XML or RSS documents/files) is formatted so that it can be appropriately parsed. Even further, as described in more detail further below, such meta-data may include code or information useful for constructing code that triggers an on-line purchasing sequence for the item to which the meta-data pertains and/or permits comments

made about the asset on the catalog to be synchronized with comments made on its original web site web page.

[0043] Thus, in order to select certain items for inclusion into a requested electronic catalog, the catalog constructor searches through the meta data for items that effectively match input criteria specified by the individual who desires the creation of the catalog. Meta data profiles may, therefore, be stored in a searchable database. With the understanding that meta-data exists for the digital assets, there are various ways in which the meta-data may be correlated to its respective digital asset so as to be useable to the catalog constructor 207.

[0044] On one end of the spectrum, referred to as a front end approach, the meta-data associated with a digital asset is included with the digital asset by its original source 200 before it is posted on websites 202. For example, retailers/suppliers/individuals may post digital asset images on various web sites where the posted digital assets have embedded meta data used by the catalog constructor 207 (e.g., pricing information, supplier/retailer of depicted good/service, description of depicted good/service, targeted gender, target age, targeted ethnicity, etc.). In this case, the correlation between a digital asset and its meta-data is straightforward as it is essentially given to the catalog constructor 207 along with the digital asset. In another effectively front end approach, comprehensive meta data profiles for digital assets are sent to a catalog constructor 207 directly by the digital assets' respective original source(s) 200. Each meta data profile has an "identifier" that identifies a particular digital asset and/or imagery therein. Digital assets are then posted on web sites (e.g., social web sites or other types of web sites) with respective embedded identifiers. The catalog constructor 207, e.g., as a constant background process, scans these web sites for digital assets, stores them in a database and flags their respective embedded identifiers. By matching an asset's embedded identifier with an identifier of the pre-supplied meta-data, the catalog constructor can correlate a digital asset to its meta data. With front end approaches, changes to meta-data (such as a price change for a product) are easily effected. For example, if the price of an item changes, the supplier/retailer simply sends the catalog constructor an updated price for the identifier associated with the item. The catalog constructor 207 updates its meta-data accordingly.

[0045] In the case of a "front-end" approach, as discussed above, the meta-data for a digital asset may include or be appended to the digital asset from its original sources. For example, a retailer 200_1 and individual 200_3 may append suitable meta-data to respective digital assets that they post to respective web sites 202. Here, the websites may have some feature of their

respective APIs or other data interface/specifications that permit the inclusion of such meta-data along with the digital assets that they post (e.g., a “miscellaneous” field of suitable information size and/or a field for a link to miscellaneous data). In more direct approaches the web sites may even adopt their systems to knowledgeably accept and store/manage/organize the meta-data associated with the posted digital assets. This meta-data may then be provided to the catalog constructor. In an even further embodiment, line 220 of Fig. 2 corresponds to an industry-wide standard that articulates the structure of the meta-data so that the manner of specifying meta-data for digital assets by their individual sources is standardized and transparent to whichever web site the sources decide to post their respective digital assets on.

[0046] In another front end approach, one or more automated product feeds (such as Google Product, Commission Junction, theFind or a product feed provided by a supplier/retailer) are enhanced to include or otherwise refer to digital assets that include respective images of the products/services that the product feeds provide information about. Here, the catalog constructor 207 can obtain a correlation of obtainable digital assets/images to pertinent meta data simply by receiving the product feed. Here, automated product feeds (from the supplier/retailer or from a third party) may also be received by the catalog constructor to update its meta data in response to product/service changes such as pricing changes, discontinuations, etc.

[0047] On the other end of the spectrum, referred to as a “back end” approach, the catalog constructor 207 determines the correlation between a digital asset and its respective meta data. Here, the product lines of various retailers and/or suppliers are made available to the catalog constructor 207 separately and/or with little if any relationship to the reception of the digital assets by the catalog constructor 207. For example, the catalog constructor may receive one or more automated product feeds that do not include digital imagery of the products/services to which the product feed(s) pertain. The catalog constructor may also separately receive digital assets of the products/service that are not correlated in any way to the information in the product feed. In one embodiment, suppliers/retailers of the products/services generate the product feed and provide the digital assets received by the catalog constructor – but they do not correlate them. Instead the catalog constructor has to perform the correlation (e.g., manually).

[0048] In one embodiment, alternatively or in combination, the meta data profiles are adapted to also include a digital image of an individual item or a description of an image of the

individual item. Correlation between the meta data and received digital assets are then effected by comparing the visual image of the meta data with the visual image of a received digital asset. For example, the catalog constructor 207 might automatically and repeatedly, as a constant background process, scan websites for digital assets that are suitable for inclusion in a catalog. As new digital assets are collected from the web sites, the catalog constructor 207 flags the specific supplier/retailer a particular digital asset is associated with. The catalog constructor then queries a product feed of the supplier/retailer and queries its own internal database which presents images of products/services for that supplier/retailer that are stored in the database and that are identified in the product feed. The stored digital assets may have been received separately from the supplier/retailer, collected earlier from a scan of websites or combination of both. The catalog constructor (e.g., manually or automatically) compares the image of the newly received digital asset against the image(s) for the supplier/retailer kept in the catalog constructor's database. Matches result in a correlation/linkage between a specific digital asset collected from a website and its corresponding meta-data.

[0049] According to one approach, the visual search process may be outsourced to a web service, such as IQEngines, that specializes in visual searches. In other embodiments, visual searches may be done manually (e.g., again with an outsourced web service such as SamaSource). In a further embodiment, if an electronic visual search engine approach fails a back-up manual search process is attempted. Once a match is found for a digital asset, the digital asset may then be stored in the catalog constructor's database with an association to its respective meta data.

[0050] Subsequent changes to meta data such as pricing changes or discontinuation of products/services may be effected with a back end approach (catalog constructor discovers the changes) or a front end approach (catalog constructor is notified of the changes (e.g., from an automated product feed)).

[0051] Regardless if the catalog constructor's meta data is realized with a front end approach, a back end approach, or some combination thereof, the catalog construction process continues by: 1) searching the database's meta-data for "hits" in view of the requester's input criteria information 214/215; and, 2) extracting the digital assets for those items of meta-data that registered a search hit. In an embodiment, rather than store digital assets in their entirety into the catalog constructor's database, the meta data is configured with links that identify where the digital assets can be found. In this case, for example, catalogs are created by using the

associated links to fetch the digital assets from the network (e.g., from their web sites) for those items of meta-data that registered a search hit. An approach that stores digital assets in the catalog constructor's database and that uses links may also be taken.

[0052] Tablet computers are particularly useful for viewing a produced electronic catalog because an electronic catalog can be instantiated on a "large" document with digital assets embedded thereon where the document/catalog is effectively significantly larger than the displayable screen area of the tablet computer. As discussed in the background, such a large document is easily viewable on a tablet computer because of the ease at which the large document is "moved" relative to the displayable screen area (e.g., by touching the screen and swiping to the right the large electronic catalog can appear to move to the right).

[0053] Here, a single large document/catalog can be intelligently arranged by the catalog constructor. For instance, if a catalog constructor receives a request for a catalog for specific types of shirts, pants, jackets and shoes (e.g., with specific colors for each of the shirts, pants, jackets and shoes), the catalog constructor can organize the shirts in a first quadrant, the pants in a second quadrant, the jackets in a third quadrant and the shoes in a fourth quadrant. Alternatively or in combination the catalog constructor can mix the various items (jackets, shirts, pants and shoes) based on pre-configured matching color combinations. For example, brown/tans/yellows are placed in one half of the catalog and blues/grey/blacks are placed in another half of the catalog.

[0054] Promotional nuances can also be built into the construction of a catalog. For example, digital assets resulting from search hits can be displayed in an electronic catalog in an order and/or size determined by a score where the score is based on one or more of a price paid by retailer/supplier for the advantage of having a higher score, a sale price, or popularity of the item. Moreover, the pages may be automatically laid out based on the score. For example, the lower the score the smaller the size of the digital asset as depicted on the electronic catalog. Contra-wise, the higher the score the larger the size of the digital asset as depicted on the electronic catalog.

[0055] In a sense, an electronic catalog is a new kind of search result. Whereas, traditional search results look like text lists, electronic catalogs correspond to search results displayed in beautiful form. An electronic catalog can also be "live" in the sense that, for example, if a new digital asset is added to the catalog constructor's database that matches an earlier constructed electronic catalog's original search terms – the new digital asset can be automatically pushed to

the electronic catalog long after its creation. Here, the catalog constructor may maintain a database that contains the search terms used to produce its previously constructed electronic catalogs. On a periodic basis and/or for each new digital asset added to the catalog constructor's database, the catalog constructor can re-apply its old search requests/terms to its constantly evolving/growing digital asset database. As newly added digital assets and corresponding meta data are added to the data base, new hits on old search terms will be produced. By associating a network address for its previously constructed electronic catalogs as well as their corresponding search terms, electronic catalogs can be continually updated with new digital assets that correspond to new hits on old search terms.

[0056] Figs. 4 and 5 pertain to a method and architecture for a catalog constructor. A catalog item synthesizer 508 may: 1) receive digital assets correlated to its corresponding meta data 401 (such as a product feed that is enhanced with digital assets of the products it feeds information about); and/or, 2) receive digital assets that uncorrelated to corresponding meta data 402 (e.g., from web page scans), receive (e.g., from a standard product feed) and/or construct (e.g., manually) the corresponding meta data for the digital assets 403 and correlate the digital assets to its corresponding meta data 404. The catalog item synthesizer 508 may process any received or constructed information and condition it for storage into a database. The catalog item synthesizer 508 also stores 405 the digital assets correlated to their respective meta data into a database 510.

[0057] A catalog synthesizer 509 receives 406 a request to construct an electronic catalog and input criteria from a catalog requester. The catalog synthesizer 509 in response searches 407 the meta data in the database 510 based on the input criteria. The catalog synthesizer 509 then incorporates 408 the digital assets that correspond to the meta data the produced a search hit in order to produce an electronic catalog.

3.0 Embedded Tags and Synchronization Code

[0058] As discussed above, the meta-data may also include program code that is to be embedded or otherwise associated with the digital assets selected for inclusion in the electronic catalog ("program code" can include computer readable textual content and/or instructions, scripts or other types of executable/"processable" software).

[0059] For example, according to one approach, the meta data includes information to insert a "tag" into the digital asset and/or its associated information that is incorporated into the catalog. In an embodiment, program code of the electronic catalog associated with a tag

performs the following routines: 1) detects that a user has tapped on (e.g., in the case of touch sensitive user interface and display) or selected (e.g., with a cursor and a mouse click) an image of the digital asset in the catalog that the tag is associated with; 2) in response to the detecting of the tapping/selection, triggers a pop-up window or the sudden appearance of another specialized displayed feature that provides information on the selected digital asset such as: 1) a supplier/retailer; 2) product identifier (e.g., SKU number); 3) price; and, 4) a “buy” button or other GUI feature that, when tapped/selected by the catalog user, causes an on-line purchasing sequence to initiate for the item that the digital asset renders an image of.

[0060] For instance, upon the user tapping the buy button, a connection is established to an automated product feed for the item (as provided by the retailer/supplier of the item to be purchased or by a third party) or an on-line product database (e.g., as provided by the retailer/supplier of the item to be purchased), and/or, a connection is established to the catalog constructor’s web site which periodically samples product feeds (e.g., on a daily basis) and updates its meta-data accordingly (i.e., when the user taps on the buy button, an inquiry into the catalog constructor’s meta data is made). The digital asset’s meta data as kept by the catalog constructor may include the desired product information (e.g., part number/SKU number, price, available size(s), available colors/styles, etc.) for the digital asset that was tapped on, or, information needed to establish a connection to the appropriate product feed or an on-line product database from which the desired product information may be obtained.

[0061] For example, according to one approach, when the user taps on the digital asset rendered on the user’s computing system, a request packet is sent from the user’s computing system to the catalog constructor’s web site. In response, the catalog constructor’s web site references a meta data entry for the digital asset containing connection information (e.g., a link, a reference to a software interface that can be instantiated by the catalog constructor, a network address, etc.) that the catalog constructor uses to access an on line product feed and/or product database to obtain the product information for the product/service of the digital asset that the user tapped on. The product information is then returned to the user’s machine (e.g., by way of a response packet to the original request packet). In another embodiment, rather than use the connection information in the meta data to fetch the product information, the catalog constructor’s web site instead forwards the connection information to the user’s machine (e.g. by way of a response packet) and the user’s machine directly fetches the product information from the on line product feed or on-line product database. In another

approach, the connection information is embedded into the electronic catalog (e.g., within the digital asset's tag) for use by the user's machine when the user taps on the digital asset on the catalog.

[0062] From the above, the afore-mentioned tag that is embedded with the digital asset that the user tapped on can include a link or other kind of information used to reach or send a message to the catalog constructor web site. The tag can also include information identifying the product/service associated with the digital asset that the user tapped on. This information may in many cases simply be an identifier of the digital asset itself. The information identifying the product/service may be included, for example, in an initial request packet sent from the user's computing system to the catalog constructor's web site, where, the packet's destination address is based on the link information found in the same tag. The information identifying the product/service is then used by the catalog constructor web site to identify a specific entry within the catalog constructor's meta data that pertains to the product/service (digital asset) tapped on by the user.

[0063] As discussed just above, according to one embodiment, when a user taps on a digital asset, the digital asset's associated tag includes a link or a reference to a software interface that the user's computer system uses to send a message to the catalog constructor web site. The tag also includes information identifying the tapped on product/service (and/or digital asset). This information is also included in the message sent to the catalog constructor web site. The catalog constructor, in response, uses this information to fetch connection information (e.g., a link, a reference to software interface, a network address, etc.) from meta data it maintains for the digital asset. The connection information may identify a network address for an on line product feed or on line database. Here, for example, the catalog constructor prepares a packet that includes information identifying the product/service that was tapped on (this may be the same information found in the tag that was sent from the user's machine to the catalog constructor web site). The packet also includes a destination address determined from the connection information obtained from the look-up into the catalog constructor's meta data (e.g., the network address of the appropriate product feed or on-line database, or a software interface used to reach these destinations). The packet may effectively be a request to the product feed/on-line product database for the product information for the product/service identified in the message. In alternate embodiments where the user's system attempts to

reach the product feed/on-line database directly, the user's system may use the connection information as described just above.

[0064] Notably, the catalog constructor's meta data may act like a cache for the desired product information. That is, as discussed above, when the catalog constructor receives a request including information identifying a product/service that was tapped on, the catalog constructor uses this information to read a meta data entry. The meta data entry itself may contain the desired product information. If the entry contains the product information for the product/service that was tapped on (cache hit), the catalog constructor provides the product information to the user's computer system. If the entry or meta data does not contain the product information (cache miss), the entry or meta data at least contains the connection information (e.g., a link, software interface, network address, etc.) that can be used to access an on line product feed and/or on line product database to obtain the purchasing information for the product/service. Anytime a cache miss occurs, the product information that was fetched from the on-line product feed can be stored into the catalog constructor's meta data so that a next request for the same product/service will not result in a cache miss. Tags are discussed again in more detail further below.

[0065] Notably, the above described acts performed by the catalog construction web site need not be performed by a catalog construction web site exclusively. For instance, these same functions may also be performed by an on-line sales web site or other web site or computer system.

[0066] With respect to the presentation of the product information to the user in response to the user tapping on or otherwise identifying the digital asset, rather than have the information suddenly appear in response to the user affirmatively selecting an item in some way, the visually displayable content of the digital asset may be modified to visually integrate the information (e.g., supplier/retailer; product identifier; price; buy button) into the digital asset so that it appears along with a purchasable item as the standard imagery that is rendered by the electronic catalog.

[0067] Notably, some digital assets may include multiple tags for different purchasable items with different corresponding suppliers/retailers. For example, an individual may post an image of himself/herself with a shirt from a first retailer/supplier, pants from a second different retailer/supplier, shoes from a third different retailer/supplier and an accessory (e.g., a pocketbook or tennis racket) from a fourth different retailer/supplier. The visual search

process or supplied meta-data (e.g., in the front end approach) would identify all four purchasable items and, correspondingly, four separate tags would be embedded in the digital asset at the appropriate position in the digital asset where each tag's corresponding item appears. As such, when the user taps on or otherwise selects a specific one of the items, the sudden appearance of corresponding information and buy button/feature for the specific item is displayed.

[0068] In an embodiment, the format of the tag is standardized or otherwise made available to suppliers/retailers for example so the tag can be included with the digital asset when it is originally posted or otherwise made available from its source.

[0069] Regardless of how the product information is delivered to the computer system upon which the tapped on digital asset is rendered, according to various embodiments, once the user of the computer system has access to the product information and affirmatively decides to purchase the corresponding item/service, the system is connected in some way to the retailer's/supplier's order management system. This connection can be assisted by a catalog constructor web site. For instance, the electronic catalog on the user's computer system may contain code that, when processed by the user's system, recognizes that the user desires to complete on an on-line purchase sequence and sends a packet to the catalog constructor web site. In response, the catalog constructor's web site engages the applicable retailer's/supplier's order management system (e.g., with an exchange of request/response packets).

[0070] Here, again, the catalog constructor may perform a lookup into its meta data for the product/service (and/or corresponding digital asset) for which a purchase is being executed to retrieve information that identifies the network address of the appropriate on line order management system. The catalog constructor can act like a bridge/router to support communications between the user's system and the order management system (forwarding of packets exchanged between the user's system and the order management system) to complete the purchase. Alternatively or in combination, the catalog constructor web site can interface with the order management system and complete the purchase with minimal/no involvement of the user's machine once the user's machine has notified the catalog constructor that it intends to make a purchase and has forwarded any needed information to the catalog constructor pertaining to the purchase (e.g., product/SKU number, color, quantity, size, credit card details, etc.).

[0071] In another approach, the catalog construction web site forwards the information used to reach the on line order management system to the user's system and the user's system interfaces with the on line order management system directly. In yet another approach the information used to reach the on line management system is embedded in the tag associated with the digital asset so that the user's system does not need to communicate with the catalog constructor in order to make an actual purchase (because the electronic catalog on the user's system has the information needed to communicate with the order management system). Notably, again, the above described acts performed by the catalog construction web site need not be performed by a catalog construction web site exclusively. For instance, these same functions may also be performed by an on-line sales web site or other web site or computer system.

[0072] According to a second feature, comment and comment synchronization code may be incorporated into the electronic catalog for its selected digital assets. Here for instance, if a digital asset is collected from a social web site page that permits comments from individuals pertaining to the digital asset to be posted on the web page (e.g., beneath the digital asset) or elsewhere, the catalog constructor 207 embeds code into the catalog for the digital asset that not only permits comments to be posted on the catalog for the digital asset, but also, causes any such comments that are posted on the catalog to also be posted on the social web site page where comments for the digital asset are found. For instance, an individual may post digital assets of himself/herself on a social web site where the social web site permits comments to be posted by others beneath the image of the digital asset. An electronic catalog is then created with the digital asset and users of the electronic catalog post comments on the electronic catalog that pertain to the digital asset (e.g., a comment that a displayed shirt looks good with a displayed pair of pants). The comment that is entered on the catalog is then, by way of the embedded synchronization code, automatically posted as commentary for the digital on the social web site page where it was originally posted (e.g., beneath where the digital asset is rendered).

[0073] In an embodiment, automatic synchronization is made an option that is enabled/disabled either during the catalog construction stage (e.g., so that if the catalog constructor 207 does not want synchronization for particular digital assets, the synchronization program code is simply not included in the catalog accordingly), or, during use of the catalog (e.g., so that if a user of a catalog enters a comment on a catalog, the user has the option to

permit or deny the reposting/synchronization of the comment on the digital asset's original social web site). The option to permit/deny synchronization may be rendered as a GUI feature (e.g., "permit synchronization ?", "comment private or public", etc.) with checkboxes or other selectable feature that permits the user of the catalog of the control the synchronization of his/her comments on the catalog.

[0074] Fig. 6A shows an electronic catalog 600 having various digital assets 601_1 through 601_N each having associated/embedded tag and synchronization code as discussed above. Note that in various embodiments not every digital asset of an electronic catalog has both tag and synch code. Some digital assets may have no such code or only code for one of these functions.

[0075] Fig. 6B shows a process by which product information for a digital asset may be delivered to a user's computing system. According to the process of Fig. 6B, a digital asset having an associated tag is tapped on by a user 611 on the user's computing system 630. The tag is examined and a link or other kind of network address that identifies a web site and information identifying the digital asset or a product/service associated with the digital asset is extracted 612. A packet is constructed having the web site as its destination and that contains the identity of the digital asset and/or the product/service. The packet is sent to the web site 613. At the web site 631, the information identifying the digital asset and/or the product service is used to perform a lookup into meta data 615. The lookup provides the product information for the product/service (cache hit) 616 or does not provide the product information for the product/service (cache miss) 617.

[0076] In the case of a cache hit, the product information is encapsulated in a response packet and sent to the user's computing system 618. In the case of a cache miss, the lookup into the meta data provides a network address for a product feed or on line product database. The network address is used to fetch the product information for the product/service from the on-line product feed or the on-line product database 620. The web site then sends a response packet that encapsulates the product information to the user's computer system 618. The user's computer system then renders at least some of the product information to enable an on-line purchase 621.

4.0 Meta Data Relationships

[0077] In a further embodiment, the instances of meta-data for the digital assets are designed to specify relationships where appropriate between their associated products/services. For example, if a certain product is deemed to have a strong relationship to another product in the

sense that a person who would be interested in buying one of the items is also apt to be interested in buying another of the items (e.g., a NY Yankees T shirt and a NY Yankees baseball cap), the relationship is recorded in the meta data. Fig. 7 shows a high level depiction of a collection of respective meta data items 701_1 – 701_N for digital assets having various relationships as signified by the depicted arrows.

[0078] In an embodiment, when the meta data is searched in response to a request to create an electronic catalog, and a “hit” results on one of the items, if a strong relationship is recorded for the hit upon item to another item, the other item is also automatically selected for inclusion in the electronic catalog even though by itself it did not result in a hit. Here, a number of relationship hops can be specified for automatic inclusion into an electronic catalog (e.g., as a default or as input criteria information specified by the electronic catalog construction requestor). For example, if the number of hops is “2”, a hit on any product/service meta data having a relationship to additional meta data will result in the automatic incorporation of the products/service of the additional meta data into the catalog. Any products/services having a relationship to the additional meta data is also automatically incorporated.

[0079] In a further embodiment the search criteria entered by the individual that requests an electronic catalog may also specify items that are not to be included in the catalog. If a strong relationship flows from a search hit item to another item that falls into the category of items that were specifically not to be included in the catalog, then, the other item is not automatically included in the electronic catalog.

[0080] Here, the relationships themselves can be determined from analytics processes that indicate certain correlations in the sense that people who have purchased a first item are apt to purchase a second item. The items need not be, on the surface, related in any way (e.g., NY Yankees T shirt and music by Bach). In an embodiment, a retailer/supplier forwards to the catalog constructor analytics data (and/or relationship data based on analytics) to the catalog constructor. In response, the catalog constructor incorporates corresponding relationship data into its corresponding meta data. A single item may have multiple relationships to a plurality of other items. Relationship data may also be used to incorporate “next best fit” replacement processes into the electronic catalog construction process. For instance, the catalog constructor’s meta data may be periodically updated to reflect changes in the associated products/services such as price changes and/or product/service discontinuations. In the case of a product/service discontinuation, the meta data for a discontinued product/service will be

updated to reflect that the product/service has been discontinued. If a search hits on the meta data of a discontinued item, the item will not be incorporated into the electronic catalog being constructed. However, if the meta data for the discontinued item has a relationship to another, similar product/service, that product/service will be incorporated into the electronic catalog as its replacement.

[0081] The catalog constructor 207 can also contribute to the production of analytics data and share it with one or more suppliers/retailers. Here, notably, it is envisioned that products/services from multiple suppliers and retailers may be incorporated into a single an electronic catalog based on the input criteria from various catalog users. In a further embodiment, the catalog constructor incorporates program code into an electronic catalog that is designed to “report” (e.g., back to the catalog constructor) the purchasing of any items from the electronic catalog. Here purchasing correlations between different suppliers/retailers may be flagged that otherwise would have gone unnoticed. For example, if a number of electronic catalogs are produced for different users that include all the materials for a place setting (silverware, placemats, dishes, etc.) a pattern may be reported from the electronic catalogs that a certain style of place mat and certain style of dish are frequently being purchased together. Here, the place mat supplier and dish supplier may have no relationship and would never have known of the correlation but for the behavioral pattern reported out from the electronic catalogs. This analytic data may be, for instance, reported to the catalog constructed who reports it to both the place mat supplier/retailer and the dish supplier/retailer. Because of the “open ended” search criteria that may be given to the catalog constructor, catalogs having widely varied and unrelated items may be incorporated into a single catalog. In this case, relationships may be detected between seemingly unrelated products/services.

5.0 Embedded Tags in Electronic Media and Associated Applications

[0082] In another approach, digital media – such as electronic magazines, web pages, blogging sites, video repository sites, digital content provider sites or services, etc. may have integrated advertising content (such as a specific add or an image in an editorial, etc.). The advertising content may include a digital image such as a picture of a product/service being advertised. Here, recalling that the format of the “tag” may be standardized or otherwise made available, the digital image of the advertisement may have the same associated “tag” information described above in the same format as constructed by a catalog constructor for inclusion into an electronic catalog. Thus, for instance, referring to Fig. 8A, a person may be reading an

electronic magazine (e.g., on his/her tablet computer) and see an advertisement for an item 801. The user may select the item (e.g., by tapping it) to trigger an on line purchasing sequence as described above in section 3.0.

[0083] Here, however, the digital asset is understood to be rendered as an advertisement integrated in digital media (such as an electronic magazine) rather than in a stand alone electronic catalog and the functions performed by the “catalog construction website” referred to above in Section 3.0 may instead be performed by an on-line sales web site, an on-line advertising web site, an on-line commerce web site or other computing system. Processes discussed above in section 3.0 as being performed by the user’s system may still be performed by the user’s system in the case of advertisements. However, indications that code performing such functions are included or otherwise associated with an electronic catalog are instead understood to be included or otherwise associated with the digital media and/or the platform used to integrate the advertisement into the digital media.

[0084] A digital image for an advertisement may be additionally formatted identically (or at least sufficiently) for inclusion into an electronic catalog. In this case, in response to the person tapping or selecting the advertisement/image, the digital image and its embedded “tag” information may be “copied over” to an electronic catalog of the person.

[0085] The electronic catalog may be already existing. For example, before reading the electronic magazine on the tablet computer, the user may have previously navigated on the tablet to a catalog constructor web site and had a catalog created (e.g., for the person or someone else the person knows). Upon subsequently reading the electronic magazine on the tablet, the person may tap twice on the digital advertisement to effect a “copy” of it (and its embedded tag information), close the magazine application, open the catalog and paste the digital image of the advertised item in the created catalog 802. With the compatible tag information, the person can later choose to purchase the item from the magazine “as if” the item had been included in the catalog originally by the catalog constructor. Additional items from other electronic media (e.g., other electronic magazines, one or more web pages, etc.) may also be included in the catalog.

[0086] Moreover, note that a single user may have more than one catalog, e.g., organized by subject matter. For example, a user may have a first catalog that corresponds to an accumulation of items that the user might wish to buy for his/her spouse at some point in the future (e.g., for the spouse’s birthday or for Christmas), a second catalog that corresponds to an

accumulation of items that the user might wish to buy for his/her child at some point in the future, a third catalog for possible Christmas presents, etc. As the user reads electronic media such as electronic magazines such and or other web pages, and incorporates various tagged items from such content into his/her respective catalogs, the catalogs will build up over time and, for instance, when the user finally decides to purchase an item, the appropriate catalog essentially corresponds to an electronic of the interesting items that have been viewed in the past as possible future purchase options. Here, the user may also copy and paste one portion of a first catalog into another portion of a second catalog. So, for instance, if a group of items on a catalog for a particular person could also service as interesting possible Christmas presents generally, the set of items may be copied from the catalog dedicated as possible purchasing options for the person and pasted into the catalog dedicated to possible general Christmas presents.

[0087] In an even further approach, the user may also keep electronic catalogs for various stores, suppliers and/or retailers. For example, the user may have a first electronic catalog for a first store (“Target”), a second electronic catalog for a second store (“Macys), a third electronic catalog for a first supplier (e.g., “Banana Republic”). Additionally, the user’s electronic catalogs may be further delineated based on supplier/ retailer and product/service subject matter. For example, a first electronic catalog of “Men’s Shirts at Macy’s”, a second electronic catalog of “Men’s Shirts at Target”, “Men’s Shirts by Levi”, etc. Such catalogs may be created and provided by the suppliers/retailers and/or created by the user (e.g., by submitting search terms to an electronic catalog constructor) in various combinations. Any/all of the various electronic catalogs described above that may belong to a user, including “personal” catalogs created by the user, may be organized in a “bookshelf” environment. For example, referring to Fig. 8B, the user may be provided an environment in which various bookshelves 830_1, 830_2, . . . 830_X can be labeled 831_1, 831_2, . . . 831_X (e.g., “Men’s Clothes” for a first bookshelf, “Women’s Clothes” for a second bookshelf, etc.) and representations of the various electronic catalogs 832_1, 832_2, . . . 832_X on each shelf kept by the user are depicted as the labeled spines of books that can be visually placed on a shelf. In this way, the user can easily organize the user’s various catalogs on his/her computing system.

[0088] Returning to the discussion presented at the onset of this section concerning the ability to effect on-line sales through digital assets rendered as advertisements in digital media, recall that it was mentioned that the digital asset rendered as an advertisement was understood to

be rendered as other than part of a stand alone electronic catalog, and that, any supporting on-line advertising/ sales/commerce web site may not have an electronic catalog construction function. It is pertinent to point out, however, that the advertising and sales processes referred to herein can be extended such that, rather than providing product information from a product feed or on line product database for the particular item displayed in the digital asset advertisement that a user tapped on, instead, a catalog is delivered to the user's system in response to the user tapping on the advertisement. For example, consider a process whereby a user taps on a digital asset that is rendered as an advertisement in an electronic magazine on the user's computing system, and where, the image of the digital asset is a man wearing a shirt from a particular apparel retailer/supplier. Instead of sending only the product information for the specific shirt to the user system where the advertisement is rendered, an entire catalog is instead provided that includes, e.g., besides the digital asset of the advertisement, digital assets for numerous other items offered by the same retailer/supplier (e.g., within the same product area as depicted in the digital asset (e.g., an electronic catalog displaying numerous men's shirts offered by the retailer/supplier, an electronic catalog displaying men's apparel offered by the retailer/supplier, etc.)).

[0089] Here, catalog construction is integrated with the advertisement/sales processes. In this case, referring to Fig. 8C, when a user taps on a digital asset rendered as an advertisement 841, in one embodiment, the tag associated with the digital asset causes the user computing system that is rendering the advertisement to send a packet to a web site (e.g., an on line sales/advertising/commerce web site) that maintains meta data for the tag and has access to a catalog constructor. The meta data for the tag contains catalog construction input terms that are generic to the digital asset (e.g., the identity of the supplier/retailer, the age group, sex, race, style, etc. of the product/service associated with the digital asset, etc.). Additional catalog construction input criteria may be associated with the context of the particular "user tap", e.g., the identity of the electronic media where the advertisement is rendered (e.g., a specific electronic magazine), the identity, age, sex of the user that tapped on the digital asset, etc. The program code running on the user computer system that processes the tag associated with the digital asset advertisement that was tapped on may be designed to coordinate the passing of this "user tap specific" information to the on line sales/advertising/commerce web site as a consequence of the digital asset being tapped on (e.g., in a packet having a destination address

determined from the digital asset's tag, information that identifies the product/service of the digital asset, and information that pertains to the particular "user tap").

[0090] With the generic meta data for the digital asset and the user tap specific information being presented to the catalog constructor, a catalog that is better targeted for the user that tapped on the advertisement is constructed 842. The catalog is then sent to the user's computer system. The catalog can be rendered 843 only within the pane of the of the original advertisement (e.g., as a single large page that can move in any direction but is presented only through the pane, a multiple paged document that can be observed one page at a time through the pane), or, can be presented "over" the media content that the advertisement was original presented on. If the user taps on any of the digital assets within the catalog an on-line purchasing sequence as described above with respect to electronic catalogs (e.g., in Section 3.0) can then commence. Once the catalog is sent to the user's computer system it may remain incorporated into the digital media in place of the original digital asset.

[0091] Digital media such as electronic magazines may also be originally published with incorporated electronic catalogs (rather than a single image within advertisement space as with traditional published media advertising). Each catalog may be viewable through a pane of advertising space within the digital media, or, be rendered "on top of" the digital media (e.g., in response to the user tapping on its associated advertising space/pane).

[0092] Here, one or more of the age, sex, race, income level, locale/residence, etc. details of the specific subscriber to (reader of) the digital asset may be used as input criteria to an electronic catalog constructor prior to publication of the digital media (or at least prior to the initial rendering of the catalog) to the specific subscriber. One or more pre-constructed electronic catalogs specific to a particular subscriber may then be incorporated into the digital media prior to its original publication/initial rendering to the reader/subscriber. Alternatively, one or more tags having links from where the electronic catalogs can be received may be incorporated into the digital media prior to its original publication to the subscriber. Thus, electronic catalogs specific to the reader of the digital media may be created and effectively incorporated into the digital media as part of the digital media's advertising experience presented to the reader/subscriber. A user tap on a digital asset within such an electronic catalog may cause the automatic construction and download of a new electronic catalog for incorporation into the digital media, or, initiate an on-line purchase sequence as discussed above.

6.0 Synchronization of Product/Service Changes to Catalogs and Advertisements

[0093] Recall that tags may be embedded or otherwise associated with digital assets embedded in electronic catalogs or in digital media as advertisements to trigger the beginning of an on-line purchasing sequence. As stated above, in an embodiment, program code associated with a tag performs the following routines: 1) detects that a user has tapped on (e.g., in the case of touch sensitive user interface and display) or selected (e.g., with a cursor and a mouse click) an image of the digital asset in the catalog that the tag is associated with; 2) in response to the detecting of the tapping/selection, triggers a pop-up window or the sudden appearance of another specialized displayed feature that provides information on the selected digital asset such as: 1) a supplier/retailer; 2) product identifier (e.g., SKU number); 3) price; and, 4) a “buy” button or other GUI feature that, when tapped/selected by the catalog user, causes an on-line purchasing sequence to initiate for the item that the digital asset renders an image of. For instance, upon the user tapping the buy button, a connection is established to an automated product feed for the item (as provided by the retailer/supplier of the item to be purchased or by a third party) or on-line product database. The digital asset’s meta data may include the information needed to establish the connection.

[0094] Here, various tag implementation architectures are possible. For instance, according to one approach, program code that detects that a user has tapped on or otherwise selected an image of an item and, in response, triggers the opening of a pop-up window is executed locally on the computer system on which the electronic catalog is rendered. With respect to the specific information within the pop-up window (supplier/retailer; product identifier, price) the information may also be kept locally on the computing system that renders the catalog or advertisement, or, as discussed above at length with respect to various embodiments in Section 3.0, the embedded tag may have a link or other network address to the catalog constructor’s meta data for the selected item such that the specific information within the pop-up window is downloaded to the user’s computer system over the network in response to the user tapping/selecting the item.

[0095] Recalling that updates to the catalog constructor’s meta data in view of changes such as pricing changes have already been discussed above, note that the later approach (downloading from the catalog constructor’s meta-data) automatically ensures that when the user taps on the item, the information for the item that appears in the pop-up window will be up-to-date. That is, since the information in the pop-up window is taken from the catalog constructor’s

meta data and the catalog constructor's meta data is up-to-date, the information that appears in the pop-up window will automatically be up-to-date.

[0096] In the former approach (information is kept locally on the computing system that presents the electronic catalog), the electronic catalog is automatically kept synchronized with the product/services by the catalog constructor. For example, each electronic catalog has a network address or other identifier that permits the catalog constructor to periodically send information to the electronic catalog after it has been created and provided to the user. The catalog constructor keeps a record of each catalog and its contents. When the catalog constructor becomes aware of a product change that effects one of the items on the catalog (because it received notice of the change from a supplier/retailer or one of their associated on line product feeds or on line product databases), the information is automatically sent to the electronic catalog and incorporated therein. For example, if the price on a certain item changes (and the electronic catalog on the user system is designed to keep pricing information locally on the user system), the catalog constructor sends the price change to the catalog which incorporates it into its local meta data for the affected item. If the user taps on the item, the latest price is correctly displayed.

[0097] In other situations the entire digital asset may be replaced and updated with a new, digital asset. As such, the user may look at the digital asset in one instant of time and see a specific digital asset within the catalog. Sometime later the user may again look at the same location in the catalog and see a different digital asset (because in between the two times, e.g., the supplier/retailer decided to replace the first digital asset with a "better" one).

[0098] A very similar process can be effected for advertisements. For example, a digital asset of advertising space in an electronic magazine purchased by a supplier/retailer may be changed by the supplier/retailer long after (e.g., weeks, months, years after) the electronic magazine initially published. As such, a reader of the electronic magazine may see a first digital asset in the advertisement space (e.g., when the electronic magazine first publishes). Then, subsequently, e.g., months after the electronic magazine first published, the reader may see a different digital asset in the same advertising space. In between the two times in which the reader viewed the same advertising space, for example, the supplier/retailer that purchased the advertising space decided to change the advertisement to "something else".

[0099] Here, each time the electronic magazine is brought up to be rendered for reading on the user's computer system, it may synchronize with an appropriate site (e.g., its publisher's site,

an advertising site, a sales site, a supplier controlled site, a retailer controlled site, etc.) to see if any changes to its advertisements have occurred since its last “opening” and update its advertisements accordingly. The update can be accomplished with processes very similar to those already described. For instance, the digital asset of an advertisement (or the advertisement space generally) may have an associated tag kept on the user’s system that identifies a link to the aforementioned appropriate site. When the magazine is next brought up to be rendered for reading on the user’s computing system, the tag is referred to so that the appropriate site can be pinged to see if a change has been made for that advertisement space. The appropriate site maintains meta data for its advertisements, and, if the meta data includes a change (such as a new digital asset) for that particular advertisement space (the identity of which may also be kept in the tag and forwarded to the appropriate site in the packet that corresponds to the ping), the change (e.g., the new digital asset) is sent to the user’s system for incorporation into the advertisement. Also, as discussed above, rather than a complete replacement to the digital asset, any information kept locally on the user system pertaining to the digital asset, such as price, available sizes, available colors can be changed by the supplier/retailer by way of similar processes. Other types of changes may also be effected such as text changes or font changes (e.g., if the advertisement has text fields that can be adjusted), background color changes, etc.

[00100] In another approach, as discussed above, an electronic catalog effectively resides in the advertisement space of the digital media. Recall from the discussion of Fig. 8C that digital media (such as an electronic magazine) may incorporate an entire electronic catalog as part of its construction. The catalog may be viewed, for instance, within a pane of advertising space within the rendered digital media, or, may be rendered “on top of” the digital media (e.g., in response to the user tapping on a pane of advertising space within the rendered digital media). The electronic catalog may be downloaded to the magazine in response to the user tapping on the advertisement space, or, the digital media may be initially published with the electronic catalog incorporated in its advertising scheme. In either case, changes to such an electronic catalog (e.g., replacement of digital assets and associated tags, removal of digital assets and associated tags, addition of new digital assets and associated tags, etc.) may be made according to the same/similar processes described just above.

[00101] In another approach, the standard design of the digital media is to create a new electronic catalog, e.g., consistent with the concepts already discussed above, each time the

reader newly taps on a specific pane of advertising space. Here, any changes effected to the catalog constructor's meta data between taps on the same advertising space (which may occur days, weeks, months, years, apart) will automatically cause the creation of a new up-to-date electronic catalog.

[00102] Returning back to a discussion of electronic catalogs, in a distributed approach, an electronic catalog has embedded or associated code that is sophisticated enough to, from the computing system on which the electronic catalog is displayed, tap into an automated product feed or on line product database to update a tag's associated item. That is the catalog's embedded code is designed to seek automated product feeds and/or on line product databases for its associated items to detect changes and incorporate those changes locally on the catalog. In this case, the catalog constructor need not automatically send synchronization messages to the electronic catalog. The catalog constructor may, however, e.g., similar to some of the processes discussed above in Section 3.0, assist a catalog's embedded/associated code establish a connection to, or act as an intermediary between, a product feed or on line product database. For instance the catalog's embedded/associated code may ping a catalog constructor's web site which, in response, returns information that informs the code where to get product feed /product database information, or, may connect to the product feed/on line product database itself on the code's behalf and forward any changes to the catalog.

[00103] In another approach, once an item is incorporated into a catalog, the presence of the item on the catalog is registered with the supplier/retailer of that item. Any future changes affecting the item are then automatically sent to the catalog by the retailer/supplier (rather than the electronic catalog constructor). Similarly, in order to keep the meta data cache of the catalog constructor up-to-date, a retailer/supplier may send updates/changes to its associated product feeds or product database (or notifications thereof) to the catalog constructor so the catalog constructor can update its meta data with the changes accordingly.

[00104] In the case of product discontinuations, by any of the mechanisms described above, a discontinued product may be automatically removed from an electronic catalog. In a further embodiment, if the discontinued product/service has a relationship to another, related item (e.g., a newer updated version of the discontinued item), new information to incorporate the related item into the catalog in place of the discontinued item is automatically sent to the catalog for automatic incorporation. Regardless if a product discontinuation exists or not, the introduction of a newer updated version of an item on a catalog may be automatically

incorporated into the electronic catalog as an automatic update to the catalog. A preference to automatically receive such updates or not automatically receive such updates may be specified by a user of the catalog. In a similar fashion, updates to relationship meta data of an item on a catalog may also be reflected as updates to the catalog. For instance, if a catalog constructor's or retailer/supplier's relationship data for an item on a previously constructed electronic catalog changes, such as the addition of new relationships, the items identified by the new relationships may be automatically incorporated on the electronic catalog. Again, in an embodiment, such automatic updates may be enabled or disabled by a user of the catalog.

[00105] By any of the mechanisms described above, a pricing change may also be accompanied by some kind of highlighted information such as "SALE!" or other promotional or advertisement-like communication. This information is rendered on the catalog in a manner that visually associates it with the item having a pricing change (such as putting "SALE!" across or beside the image of an item having its price reduced).

[00106] Moreover, in another embodiment, e.g., where the individual digital assets of an electronic catalog are registered with their respective suppliers/retailers, a specific supplier/retailer will know which ones of its products/services are instantiated on a single catalog. With a network address for the catalog (and/or the user and/or creator of the catalog) also being known, the supplier/retailer can push additional messages and/or content to the user and/or creator of the catalog for consideration for purchase, for inclusion in the catalog, etc. For example, if a user/creator of a catalog has instantiated five items from the same supplier on his/her catalog, the supplier might "tempt" the user/creator into purchasing the items by sending an on line offer (e.g., by email or that appears on the catalog) that offers to give the specific user a 20% discount if he/she purchase all five items on the catalog (or some subset of them). Alternatively, the supplier/retailer might send a digital asset of a sixth item (e.g., for inclusion on the catalog) an offer to give the sixth item to the user for free if he/she buys all five items (or some subset of them, etc.).

[00107] Notably, where not stated explicitly, the digital asset(s) discussed above in this section may also be understood to be rendered as an advertisement integrated in digital media (such as an electronic magazine) rather than in a stand alone electronic catalog, and, the functions performed by the "catalog construction website" and/or the like referred to above in this section may instead be performed by an on-line sales web site, an on-line advertising web site, an on-line commerce web site or other computing system. Any one of these sites/systems may

also have an integrated catalog construction function. Processes discussed above in this section as being performed by the user's system may still performed by the user's system in the case of advertisements. However, indications that code performing such functions are included or otherwise associated with an electronic catalog are instead understood to be included with or otherwise associated with the digital media and/or the platform used to integrate the advertisement into the digital media.

[00108] On a related note, the catalog creator may include a recommendation engine or otherwise execute recommender processes to make suggestions to a requestor of a catalog or hidden from the requester, e.g., as part of the catalog construction process, of certain goods/services and/or suppliers/retailers. Recommendation processes may also be executed after the construction of a catalog and be pushed to the user. The recommendations may be based on the aforementioned relationship data or may be executed as a separate process. Possible suggestions that may be made include, among other possibilities: 1) catalogs/stores to subscribe to (e.g., a user may like west elm and DWR so the recommendation process would recommend heath ceramic); 2) pages to be served (e.g., a user might tend to buy just sales item so pages with sales would be served first); 3) layout of a page (e.g., a product has high inventory so it would choose a page layout that would show a larger image for that product); 4) outfits (e.g., as is already performed in the prior art, if a user adds a shirt to the cart based on his/her history and what other people buy the recommender process can recommend the next page to show, or product to show). For catalogs that are already existing, the context of the suggestion may take the form of a pop up from the catalog or the incorporation of new information into the catalog.

[00109] In a further enhancement, any item on a first user's catalog can be "pushed" to the catalog of other users. For example, in the case where a number of friends are sharing each other catalogs, a particular user may receive an automatic update that one of the items on her catalog is now on sale at a reduced price. In an embodiment, the update will also be automatically be provided to each instance of her catalog on the computing systems of her friends with whom she has shared the catalog. Alternatively, the update may not be automatic. Instead the user may be give the option to manually push the update to only selected ones of her catalog based on which of her friend she wants to notify of the change.

[00110] Thus, as discussed above, and as observed in Fig. 9A, changes, updates, promotions, etc. may be pushed to an already existing electronic catalog 901 from a supplier/retailer 902

and/or catalog constructor 903. Fig. 9B shows a process by which digital media is published to a specific subscriber/reader 911, where, the digital media is designed to have an electronic catalog effectively incorporated into its advertising scheme. Prior to the initial rendering of the electronic catalog to the specific subscriber, the electronic catalog is created using input terms for the electronic catalog's construction that are specific to the particular subscriber/reader 912. The electronic catalog is subsequently rendered to the subscriber/reader 913. At a later time (days, weeks, months, years) the subscriber/reader re-accesses the electronic catalog (e.g., by tapping on the digital media's advertising space) and a new electronic catalog is rendered to the subscriber/reader 914 that corresponds to the initial electronic catalog with changes made thereto.

7.0 GUI Features

[00111] The user of an electronic catalog may use and/or otherwise view the catalog through a graphical user interface that has a number of useful features built in. An example includes:

[00112] "My closet" - The user can upload pictures of items he/she has already (such as his/her own personal digital photographs) and make them part of a custom catalog. For example, if a person has a digital photograph of himself/herself in a black shirt 1001 and he/she wants to know how it looks with a certain top/shoes, the personal digital image 1001 of the shirt can be presented simultaneously (on the catalog or another "scratch pad" of some kind) on a computer with the top/shoes from an electronic catalog 1002 so he/she can see how well the shirt matches the top/shoes. As another example, the person is looking for a sofa to match curtains the person already owns. The person takes a picture of the curtains, uploads it to his/her tablet and visually presents the image of the curtains with an image of the sofa taken from an electronic catalog to see how the two look together.

[00113] Another graphical user interface experience includes a "scratchpad" or other rendered environment onto which digital assets from multiple suppliers/retailers can be pasted for comparison and matching purposes. For example, a user of a tablet computer may be interested in upgrading his/her dining room including the purchasing of a new formal table setting. A "studio" application (or-sub application) is triggered (e.g., by tapping on an icon or pull down menu entry) that renders a "blank canvas" on the tablet screen. The user interface of the studio application also displays icons, pull down menus or other tools so that content can be added to the canvas. A first such tool may be to "paint" the canvas a particular color.

[00114] According to one embodiment, a palette of colors are rendered and the user is asked to select one. In another embodiment, the user can “import” a color from a paint supplier/retailer. Here, for instance, the user may have a pre-constructed electronic catalog stored on the table that includes various paint products offered by various paint suppliers/retailers. Each paint product digital asset on the electronic catalog includes embedded color code information that the computer uses to render the color of the paint on the canvas. Thus, for instance, by tapping on the paint digital asset on the electronic catalog, causing the canvas to be rendered (e.g., from an icon or pull-down menu) and then tapping on the canvas - the canvas is automatically painted in the color of the particular paint product selected by the user from the electronic catalog. In a further embodiment the user may draw a closed feature (rectangle, square, circle, etc.) with his/her finger on the canvas. The paint is then painted on the canvas within or outside the feature.

[00115] The user may then go to the same or a different catalog on the tablet and select a digital asset representing a dining room table offered for sale by a home furnishings supplier/retailer. Notably, the home furnishings supplier/retailer may be the same or different than the supplier/retailer that provides the paint color selected by the user (as made clear in the discussions above, a single electronic catalog can include digital assets from multiple suppliers/retailers). In like fashion as with the paint color, an image of the dining room table’s surface (and/or its color) may then be rendered on the canvas “on top of” the background paint.

[00116] Repeating this concept the user may then go back and forth between the same or different catalogs (in various combinations) to select digital assets of a place mat, dishware, glassware, silverware and napkins and paste images of them on the table on the canvas. Again, each of these products may be from the same or different suppliers/retailers in various combinations. The user is also free to hide the rendering of certain products from the canvas so that another “competing option” can be rendered in its place. For example, the user may choose to hide the currently rendered dishware, selected alternative dishware from an electronic catalog and past an image of it on the table in place of the hidden dishware. In this way various combinations of various products across a spectrum of different suppliers/retailers can be easily compared or otherwise tested as to how well they match one another.

[00117] Similar processes can also take place for clothes combinations, other home furnishing applications (e.g., various furniture products and wall coloring (including wall papering) options

are compared and contrasted), accessories and clothing (e.g., a pair of skis and a ski outfit), etc. In a way, the user can compare and contrast the look and feel of various items from sale from different suppliers/vendors through the use of electronic catalogs.

[00118] Fig. 11A shows a depiction where imagery of various digital assets 1101_1 to 1101_N from one or more different catalogs 1102_1 to 1102_N are collected in a canvas like application 1103 so various combinations of such products can be compared and contrasted. In an embodiment, the tag information is carried over to the canvas from the electronic catalog(s) so the user can initiate an on line purchasing sequence for any selected items from the canvas. In a further embodiment, the user may create multiple canvasses with, e.g., different combinations of products, to compare and contrast different combinations of products (such as different place settings in the dining room example). In an even further embodiment, like the shared catalog as discussed before, the user can share one or more canvasses on a social web site so the user's friends can comment as to their opinions on the user's selections.

[00119] Fig. 11B shows a layout of an electronic catalog page that may be used with a manual GUI based electronic catalog construction tool. Manual catalog construction may be integrated with automated electronic catalog construction processes described above. In the case of manual electronic catalog construction, rather than have the location of the digital assets chosen for inclusion within the catalog be determined automatically by a computer system, instead, the location and presentation of the digital assets within the electronic catalog are specified manually with a GUI. The digital assets selected for inclusion into the electronic catalog may be chosen manually, determined by an automated catalog constructor, or, some combination of both.

[00120] As observed in Fig. 11B, the layout of the electronic catalog page is first generically defined as a "floorplan" defined by regions 1111_1, 1111_2, . . . 1111_N. A single electronic catalog may have a single page or multiple pages that the user has to flip or otherwise page through in order to access. The size of a page may be used specified (e.g., larger than a table screen, the same size as a tablet screen, etc.). Each region within the floorplan of a page may be defined by its own specific size and shape. One or more digital assets are then assigned to each such region. In the case where only one digital asset is assigned to each region, the page of the electronic catalog is effectively rendered as a collection of digital assets each immediately visible in its own associated region.

[00121] Additionally, a group of digital assets may be assigned to a single region on a catalog page. In this case, some sort of user interface experience and additional layout information is defined in order to co-ordinate the rendering of multiple digital assets in a same region of a catalog page's floorplan. Here, for instance, each region may have an associated specific "type" or "style" in the overall scheme of the catalog that justifies the assignment of the multiple digital assets to a single region (e.g., shirts for a first region, pants for a second region, "black" for a first region, "red" for a second region, etc.). The size of the digital assets may be compressed to fit the image of multiple digital assets in a single region. Separately or in combination, various scrolling user interface experiences may be defined for the region so that the user can easily scroll through the multiple digital assets assigned to the region. Some possible options include: 1) swipe horizontal (in which case multiple digital assets are effectively laid out horizontally as if "behind" the catalog page and the user swipes left and right within the region "opening" to see the images "through the opening" of the region 1112); 2) swipe vertical; 3) swipe any direction (in which case the multiple digital assets are effectively laid out on a page that is larger than the "opening" of the assigned region 1113); 4) page through (in which case multiple digital assets are effectively laid out on separate pages where the user views a single such page "through the opening" of the region and pages through the pages in order to see the digital assets 1114). Alternate user experience definitions for a region can include, rather than viewing the digital assets of the region "through" the region as if the digital assets were behind the page, instead, selection of a region by a user (e.g., by tapping on it) can trigger digital assets associated with that region to "pop-up" over the catalog page such that the depicted imagery is as if the digital assets are above rather than behind the catalog page. Again, settings can be established to determine how the user sans through the digital assets (e.g., swipe horizontal, swipe vertical, swipe any direction, page through, etc.). Regions on a same page may be configured differently on a same page as to whether the digital assets of the region are rendered on top of the catalog page or from behind it.

[00122] Figs. 11C through Fig. 11I show additional possible GUI implementations and possibilities.

[00123] Although many of the examples discussed above in the application have emphasized that the electronic catalogs are rendered on a tablet computer it should be emphasized that electronic catalogs are of course not necessarily only render-able on such devices. Such catalogs can be viewed and managed on different computing systems and in different ways

(e.g., a web client (like a pdf viewer), a Facebook application, a mobile phone application, a personal computer application, etc.

8.0 Additional Comments

[00124] Fig. 12 shows an embodiment of a computing system (e.g., a computer which would be understood to include personal computer (PC), laptop, netbook, tablet computer, smartphone, etc.). The exemplary computing system of Fig. 11 includes: 1) one or more processing cores 801 that may be designed to include two and three register scalar integer and vector instruction execution; 2) a memory control hub (MCH) 802; 3) a system memory 803 (of which different types exist such as DDR RAM, EDO RAM, etc.); 4) a cache 804; 5) an I/O control hub (ICH) 805; 6) a graphics processor 806; 7) a display/screen 807 (of which different types exist such as Cathode Ray Tube (CRT), flat panel, Thin Film Transistor (TFT), Liquid Crystal Display (LCD), DPL, etc.) one or more I/O devices 808.

[00125] The one or more processing cores 801 execute instructions in order to perform whatever software routines the computing system implements. The instructions frequently involve some sort of operation performed upon data. Both data and instructions are stored in system memory 803 and cache 804. Cache 804 is typically designed to have shorter latency times than system memory 803. For example, cache 804 might be integrated onto the same silicon chip(s) as the processor(s) and/or constructed with faster SRAM cells whilst system memory 803 might be constructed with slower DRAM cells. By tending to store more frequently used instructions and data in the cache 804 as opposed to the system memory 803, the overall performance efficiency of the computing system improves.

[00126] System memory 803 is deliberately made available to other components within the computing system. For example, the data received from various interfaces to the computing system (e.g., keyboard and mouse, printer port, LAN port, modem port, etc.) or retrieved from an internal storage element of the computing system (e.g., hard disk drive) are often temporarily queued into system memory 803 prior to their being operated upon by the one or more processor(s) 801 in the implementation of a software program. Similarly, data that a software program determines should be sent from the computing system to an outside entity through one of the computing system interfaces, or stored into an internal storage element, is often temporarily queued in system memory 803 prior to its being transmitted or stored.

[00127] The ICH 805 is responsible for ensuring that such data is properly passed between the system memory 803 and its appropriate corresponding computing system interface (and

internal storage device if the computing system is so designed). The MCH 802 is responsible for managing the various contending requests for system memory 803 access amongst the processor(s) 801, interfaces and internal storage elements that may proximately arise in time with respect to one another.

[00128] One or more I/O devices 808 are also implemented in a typical computing system. I/O devices generally are responsible for transferring data to and/or from the computing system (e.g., a networking adapter); or, for large scale non-volatile storage within the computing system (e.g., hard disk drive). ICH 805 has bi-directional point-to-point links between itself and the observed I/O devices 808.

[00129] Processes taught by the discussion above may be performed with program code such as machine-executable instructions that cause a machine that executes these instructions to perform certain functions. In this context, a “machine” may be a machine that converts intermediate form (or “abstract”) instructions into processor specific instructions (e.g., an abstract execution environment such as a “virtual machine” (e.g., a Java Virtual Machine), an interpreter, a Common Language Runtime, a high-level language virtual machine, etc.)), and/or, electronic circuitry disposed on a semiconductor chip (e.g., “logic circuitry” implemented with transistors) designed to execute instructions such as a general-purpose processor and/or a special-purpose processor. Processes taught by the discussion above may also be performed by (in the alternative to a machine or in combination with a machine) electronic circuitry designed to perform the processes (or a portion thereof) without the execution of program code.

[00130] It is believed that processes taught by the discussion above may also be described in source level program code in various object-orientated or non-object-orientated computer programming languages (e.g., Java, C#, VB, Python, C, C++, J#, APL, Cobol, Fortran, Pascal, Perl, etc.) supported by various software development frameworks (e.g., Microsoft Corporation’s .NET, Mono, Java, Oracle Corporation’s Fusion, etc.). The source level program code may be converted into an intermediate form of program code (such as Java byte code, Microsoft Intermediate Language, etc.) that is understandable to an abstract execution environment (e.g., a Java Virtual Machine, a Common Language Runtime, a high-level language virtual machine, an interpreter, etc.) or may be compiled directly into object code.

[00131] According to various approaches the abstract execution environment may convert the intermediate form program code into processor specific code by, 1) compiling the intermediate form program code (e.g., at run-time (e.g., a JIT compiler)), 2) interpreting the intermediate

form program code, or 3) a combination of compiling the intermediate form program code at run-time and interpreting the intermediate form program code. Abstract execution environments may run on various operating systems (such as UNIX, LINUX, Microsoft operating systems including the Windows family, Apple Computers operating systems including MacOS X, Sun/Solaris, OS/2, Novell, etc.).

[00132] An article of manufacture may be used to store program code. An article of manufacture that stores program code may be embodied as, but is not limited to, one or more memories (e.g., one or more flash memories, random access memories (static, dynamic or other)), optical disks, CD-ROMs, DVD ROMs, EPROMs, EEPROMs, magnetic or optical cards or other type of machine-readable media suitable for storing electronic instructions. Program code may also be downloaded from a remote computer (e.g., a server) to a requesting computer (e.g., a client) by way of data signals embodied in a propagation medium (e.g., via a communication link (e.g., a network connection)).

[00133] In the foregoing specification, the invention has been described with reference to specific exemplary embodiments thereof. It will, however, be evident that various modifications and changes may be made thereto without departing from the broader spirit and scope of the invention as set forth in the appended claims. The specification and drawings are, accordingly, to be regarded in an illustrative rather than a restrictive sense.

Claims

1. A method, comprising:

receiving from a network a packet having an identifier that identifies a product associated with a digital asset, said digital asset rendered on a catalog rendered on a remote computing system, said identifier determined from information that was deployed with said digital asset on said remote computing system;

performing a lookup into a database with said identifier; and,

receiving product information for said product from said lookup and sending said product information to said remote computing system;

receiving from said network a second packet having a second identifier that identifies a second product associated with a second digital asset, said second digital asset rendered on a second catalog rendered on a second remote computing system, said second identifier determined from second information that was deployed with said second digital asset on said second remote computing system;

performing a lookup into said database with said second identifier; and,

receiving an identifier or an on-line product feed or on-line product database from said lookup and requesting second product information for said second product from said on-line product feed or on-line product database; and,

receiving said second product information for said second product and sending said second product information to said second remote computing system.

2. A method performed by a computing system, comprising:

detecting that a user of said computing has shown interest in a digital asset rendered on said computing system;

determining a destination address and an identifier of a product associated with said digital asset from information that was deployed on said computing system with said digital asset;

constructing a packet that encapsulates said identifier and sending said packet to said destination address;

receiving an electronic catalog in response; and,

rendering said electronic catalog on said computing system.

3. A method, comprising:

rendering on a computer system a bookshelf with a plurality of shelves, each shelf having respective representations of electronic catalogs of a user of said computer system, said representations depicted as spines of books sitting on said bookshelf, each shelf having a respective label indicative of content of its respective catalogs,

receiving at said computer system from a network automatic updates for respective ones of said catalogs and incorporating said updates into their respective catalogs.

4. A method, comprising:

identifying regions on a page of an electronic catalog;

assigning one or more digital assets to each of said regions, one of said regions having multiple digital assets assigned to it; and,

defining a layout scheme and user interface experience for said multiple digital assets; and,

incorporating respective tags of said digital assets into said electronic catalog, each of said tags identifying a web site and its respective digital asset's shoppable product/service.

5. A method, comprising:

receiving user selections of digital assets from different suppliers and/or retailers from one or more electronic catalogs, the digital assets representing different products from the different suppliers and/or retailers; and

rendering the selected digital assets of the different products together on a same displayed image.

6. A method, comprising:

receiving search terms for the construction of an electronic catalog, said search terms including different types of products;

performing a search with the search terms to produce search results corresponding to digital assets of the different types of products;

arranging the digital assets of the different products on the electronic catalog according to at least one of the following:

arranging the products on the electronic catalog surface in a manner that accounts for attractive color combinations of the different types of products;

adjusting the size of the digital assets based on one or more of:

a price paid by retailer/supplier of a digital asset;

a sale price;

popularity.

7. A method, comprising:

receiving search terms for an electronic catalog;

searching a database for meta data hits on said search terms;

constructing an electronic catalog from digital assets corresponding to said meta data hits;

keeping a network address for said electronic catalog and keeping said search terms;

updating said database with new meta data to construct an updated data base;

searching said updated database with said search terms to produce a new meta data hit;

sending a digital asset corresponding to said new meta data hit to said network address for incorporation into said electronic catalog.

8. A method, comprising:

constructing an electronic catalog, said constructing including embedding in said electronic catalog a digital asset with an associated tag for triggering an automatic on line purchasing sequence and associated code for synchronizing comments made about said digital asset on said electronic catalog onto a social web site.

9. A method comprising:

displaying digital media content on a computer display;

in response to a user's input, incorporating a digital asset of said digital media content onto an electronic catalog.

10. A method, comprising:

receiving at a computer system changes, updates and/or promotions concerning items on an electronic catalog; and,

notifying a user of said computer system of any of said changes, updates and/or promotions.

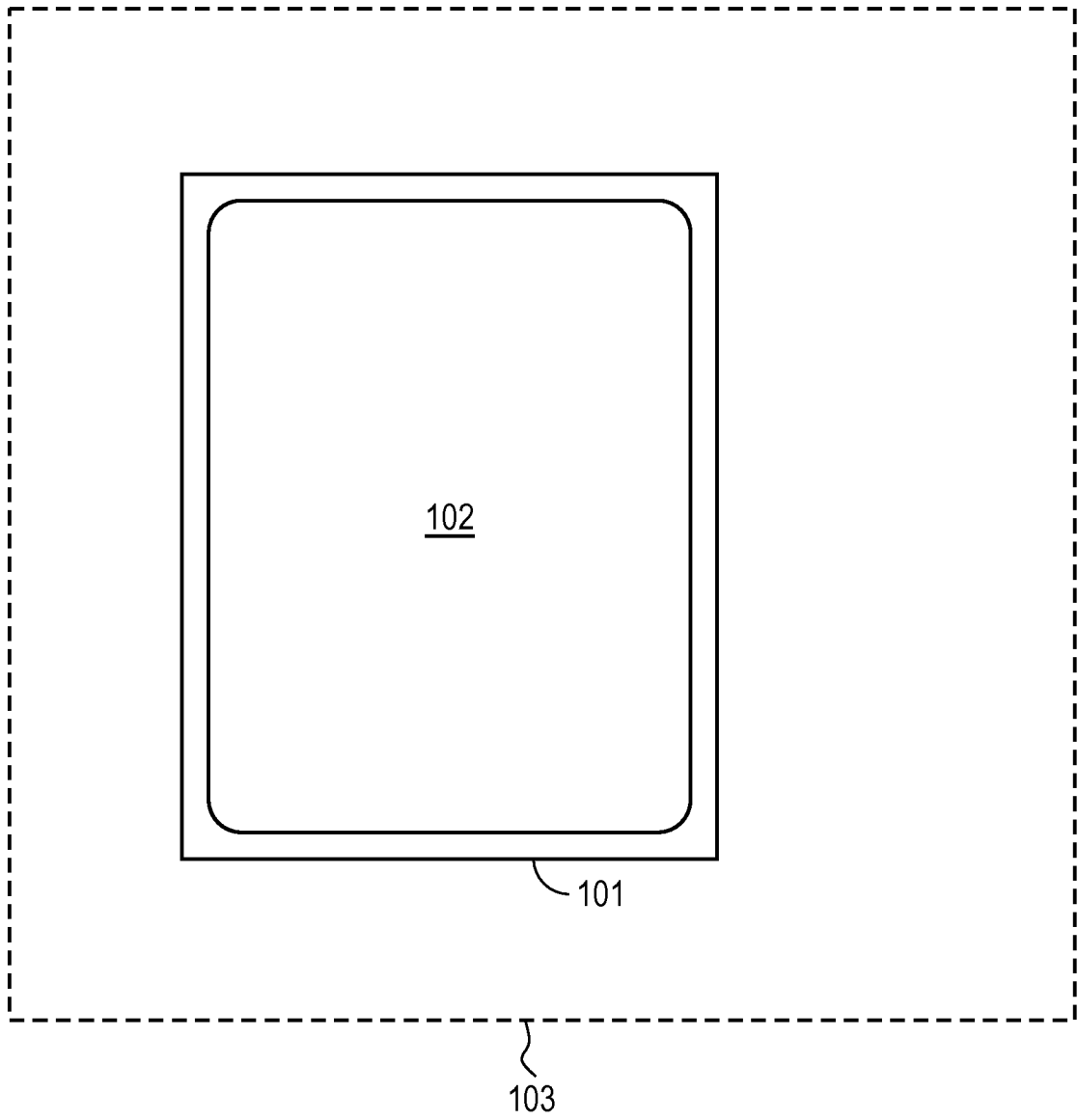


FIG. 1A

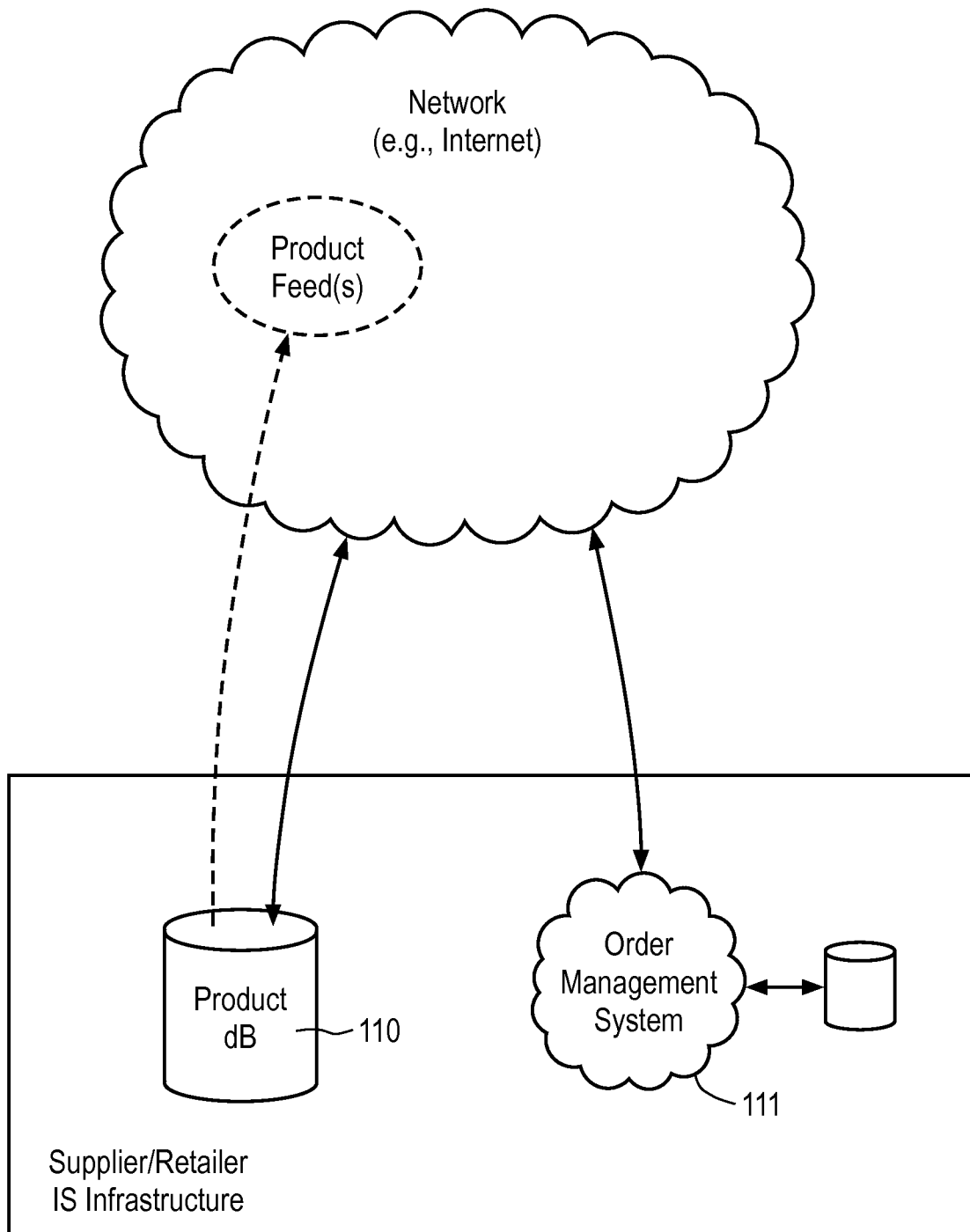


FIG. 1B
(PRIOR ART)

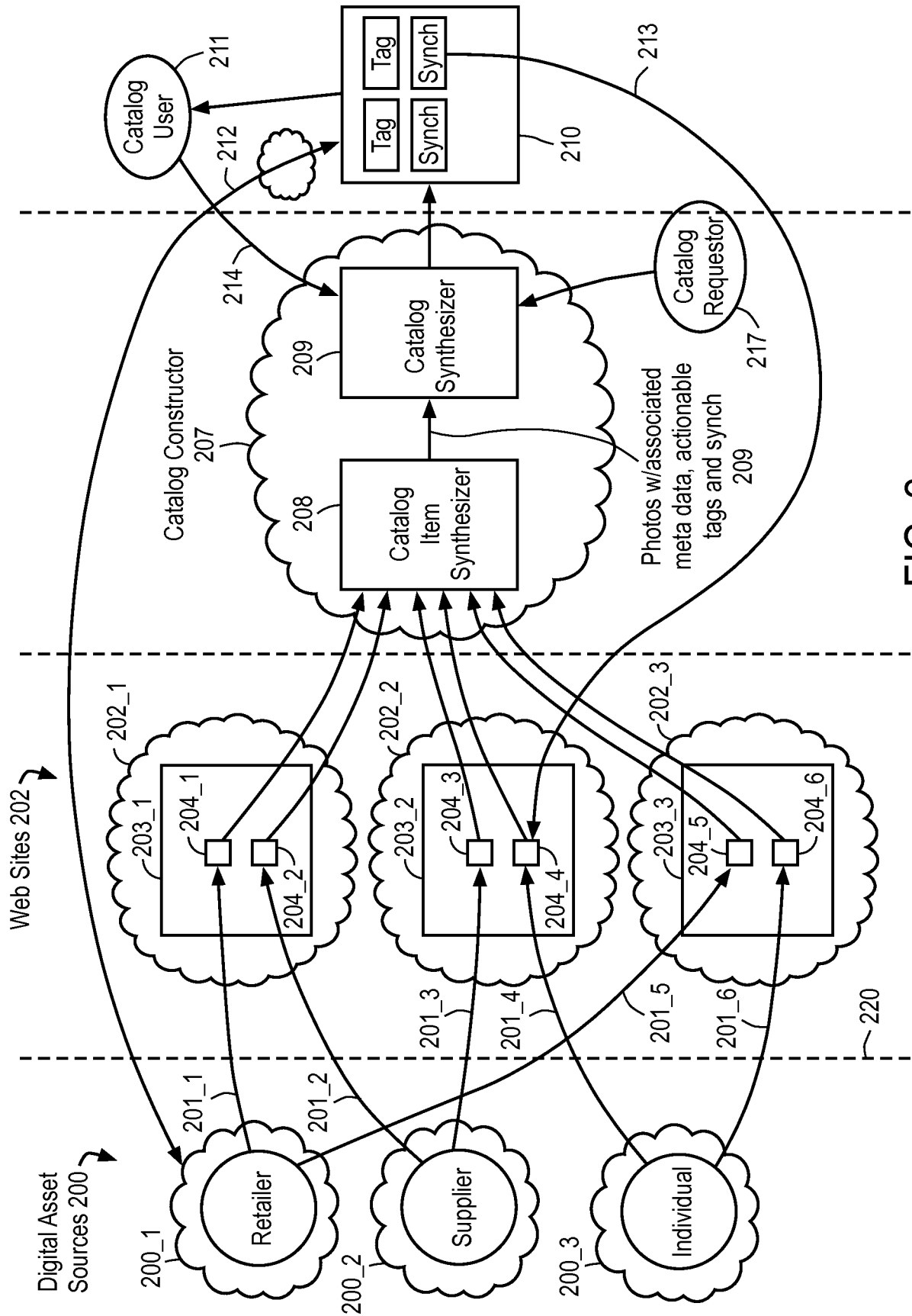


FIG. 2

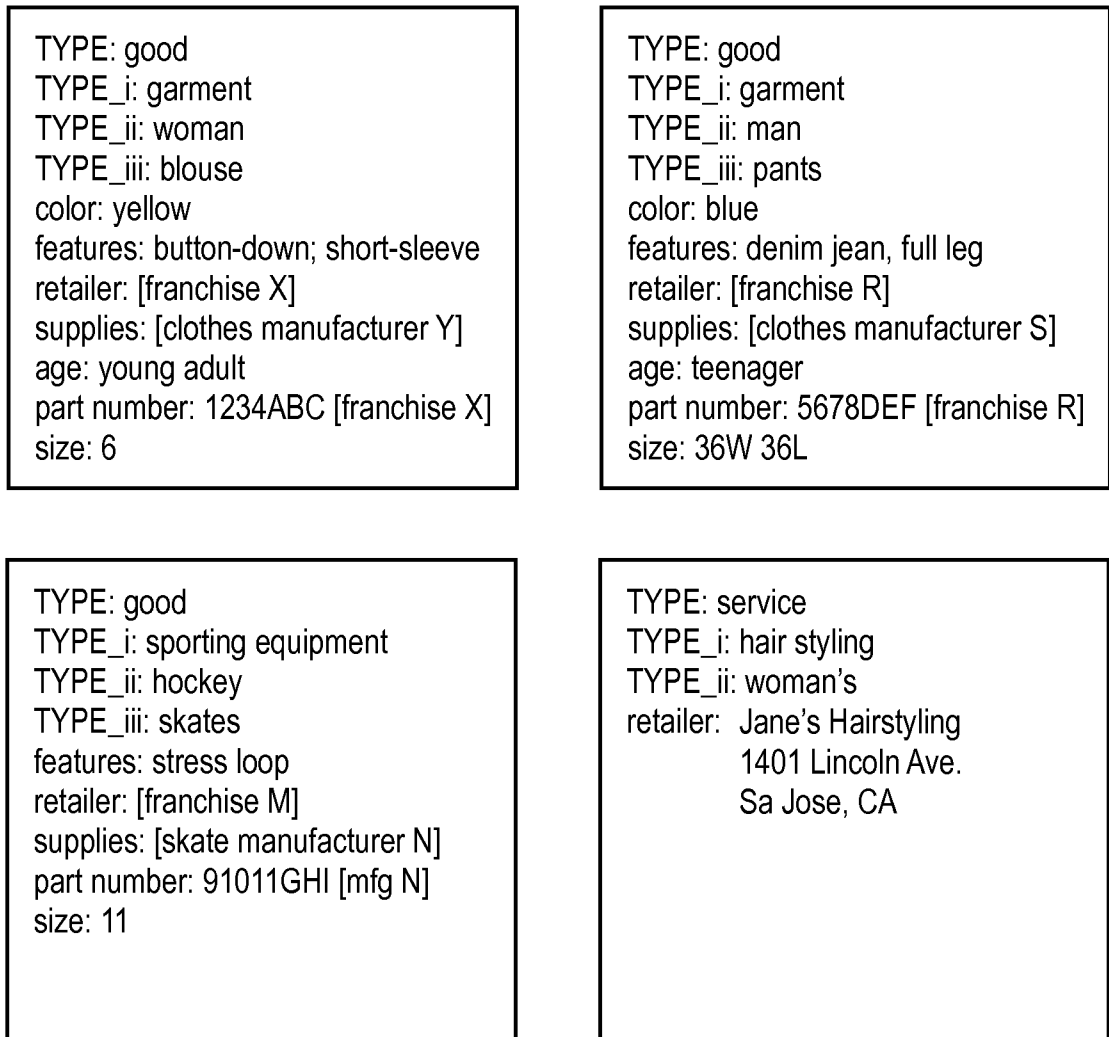


FIG. 3

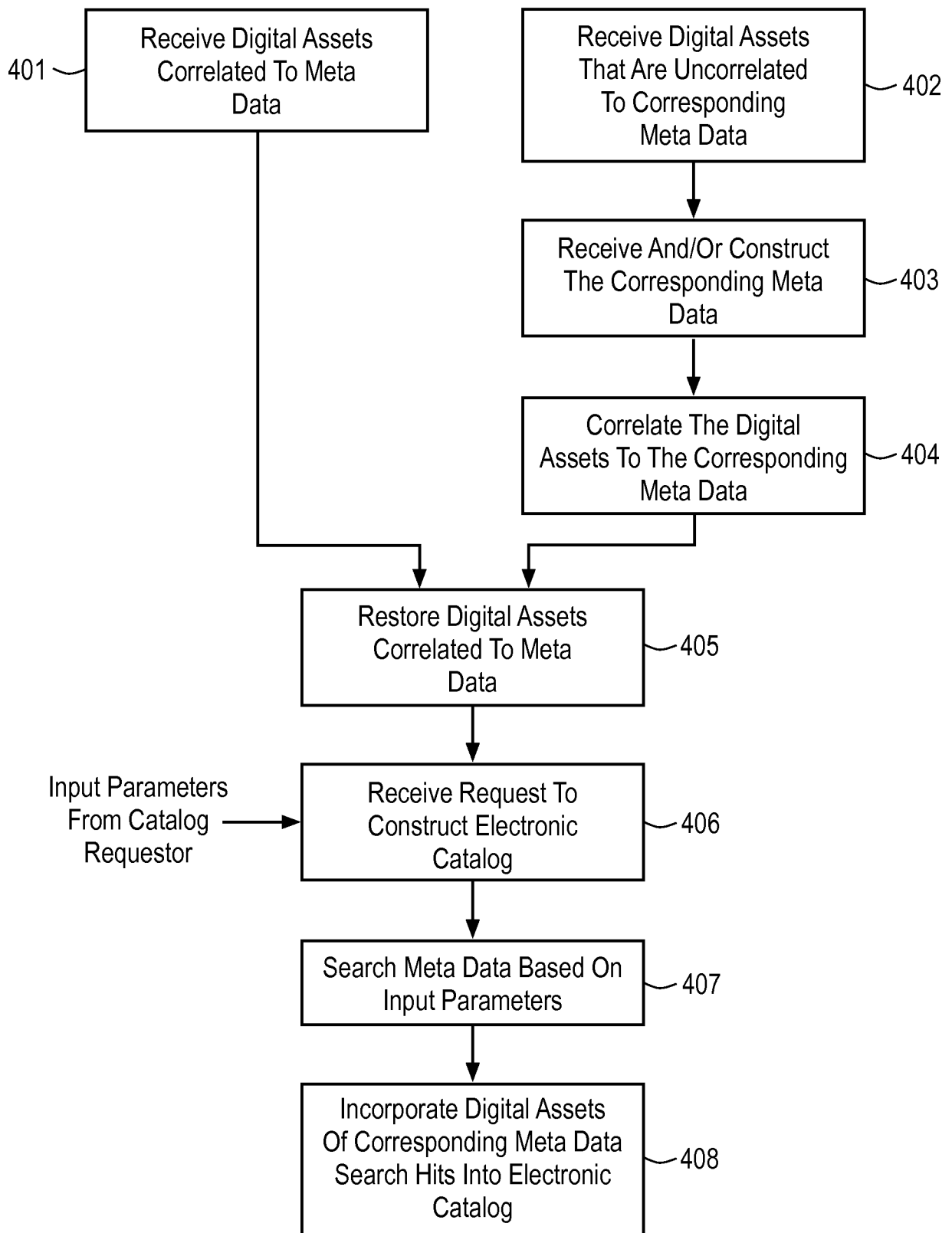


FIG. 4

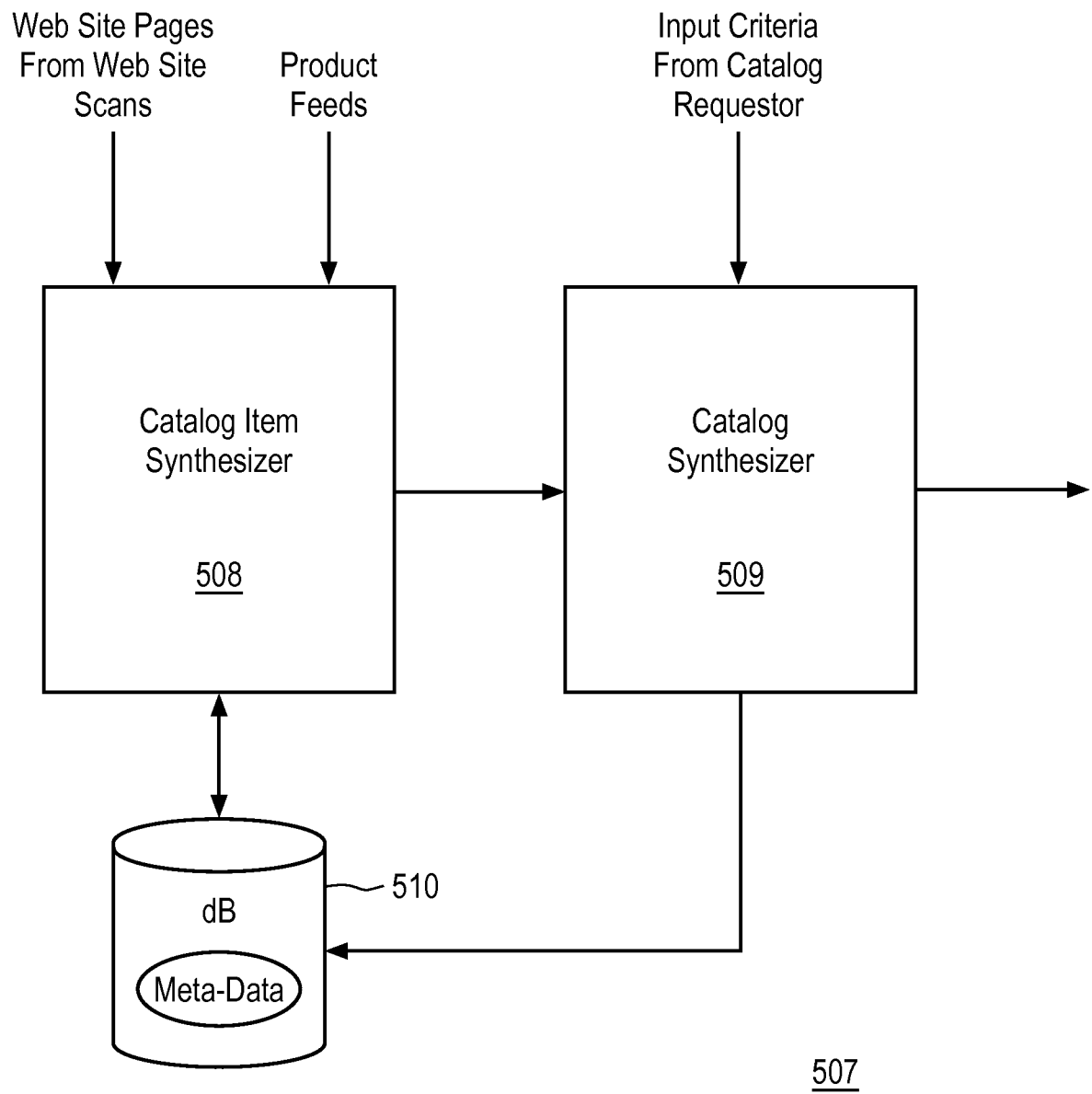


FIG. 5

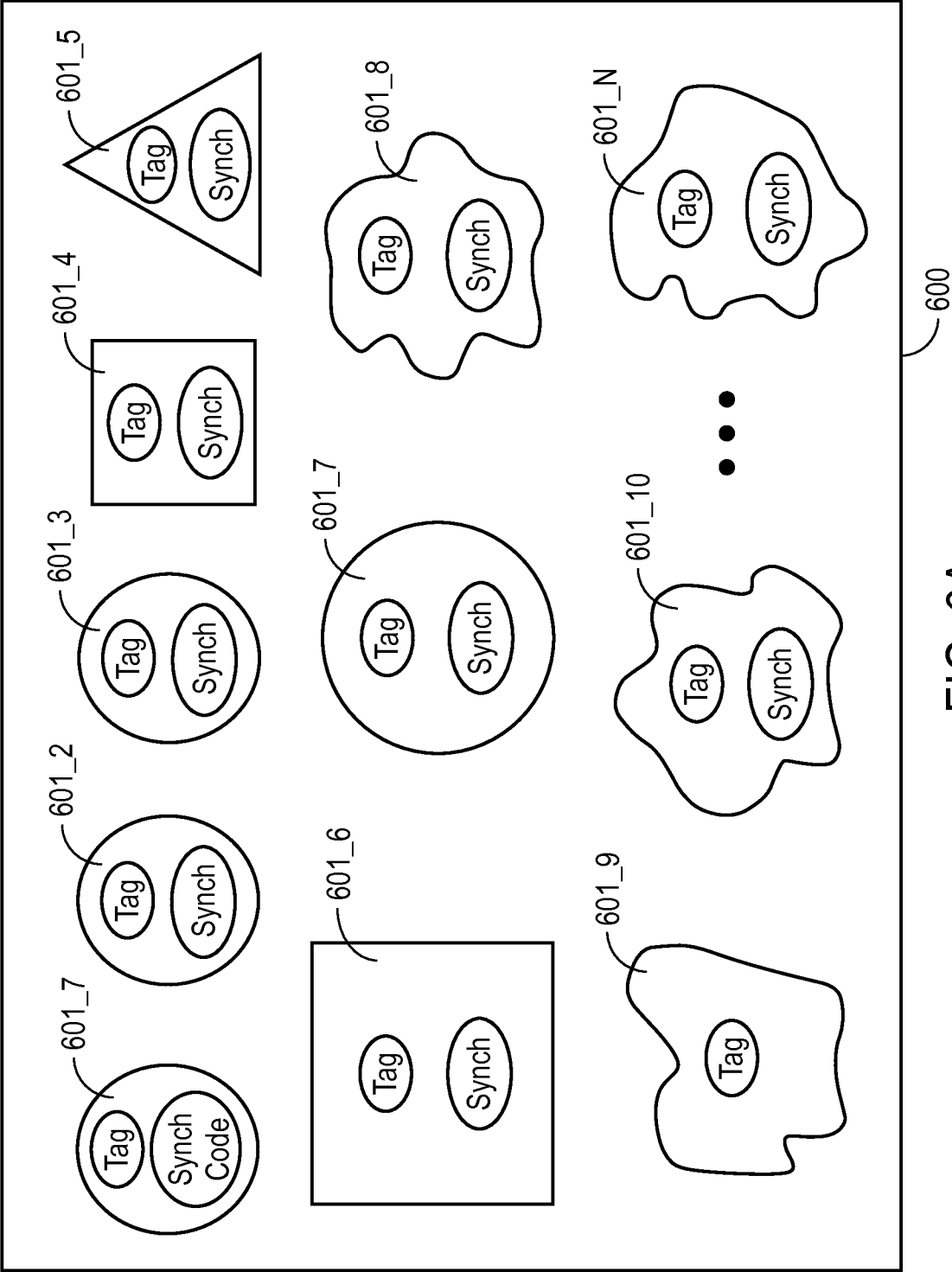


FIG. 6A

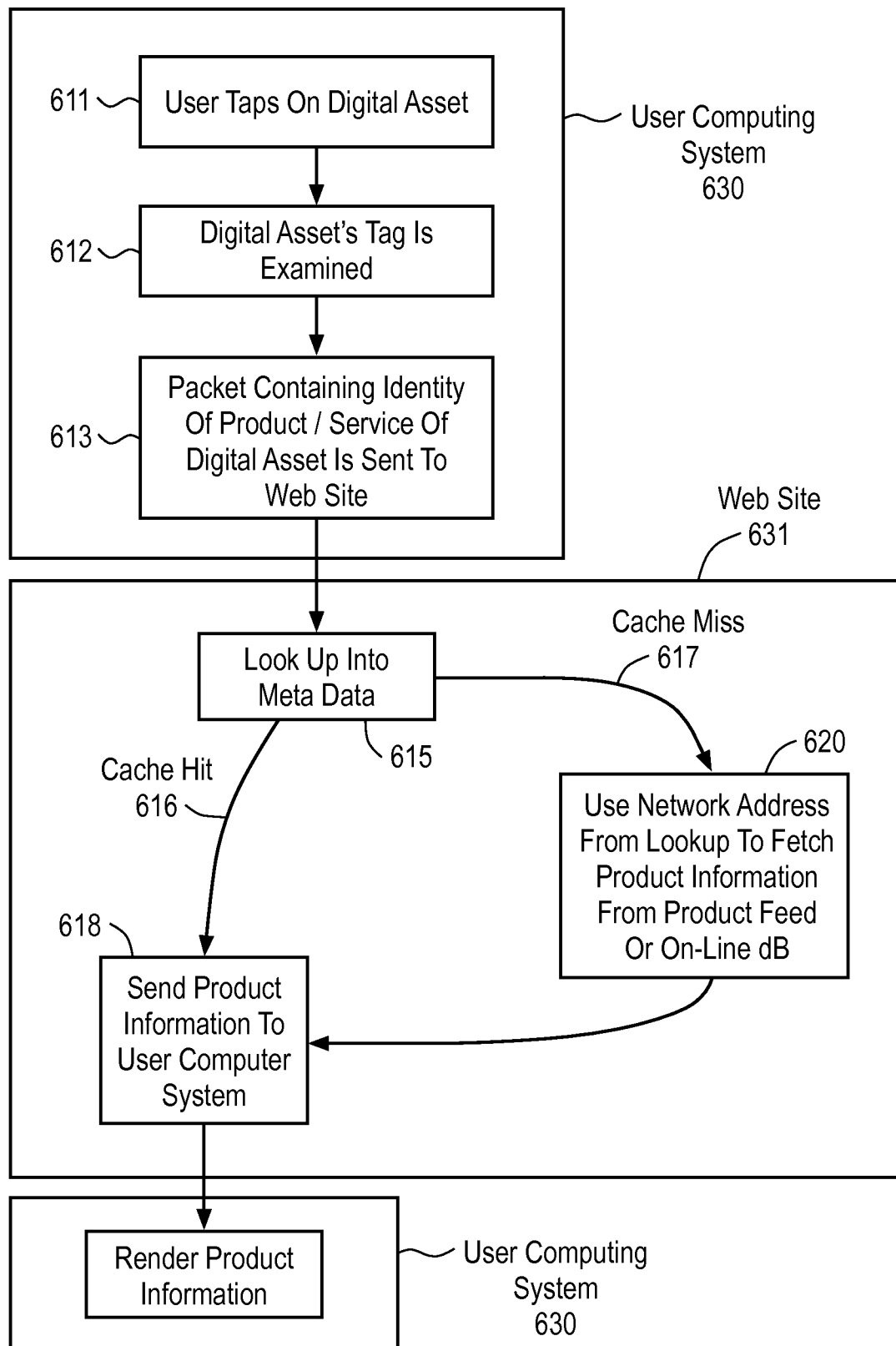


FIG. 6B

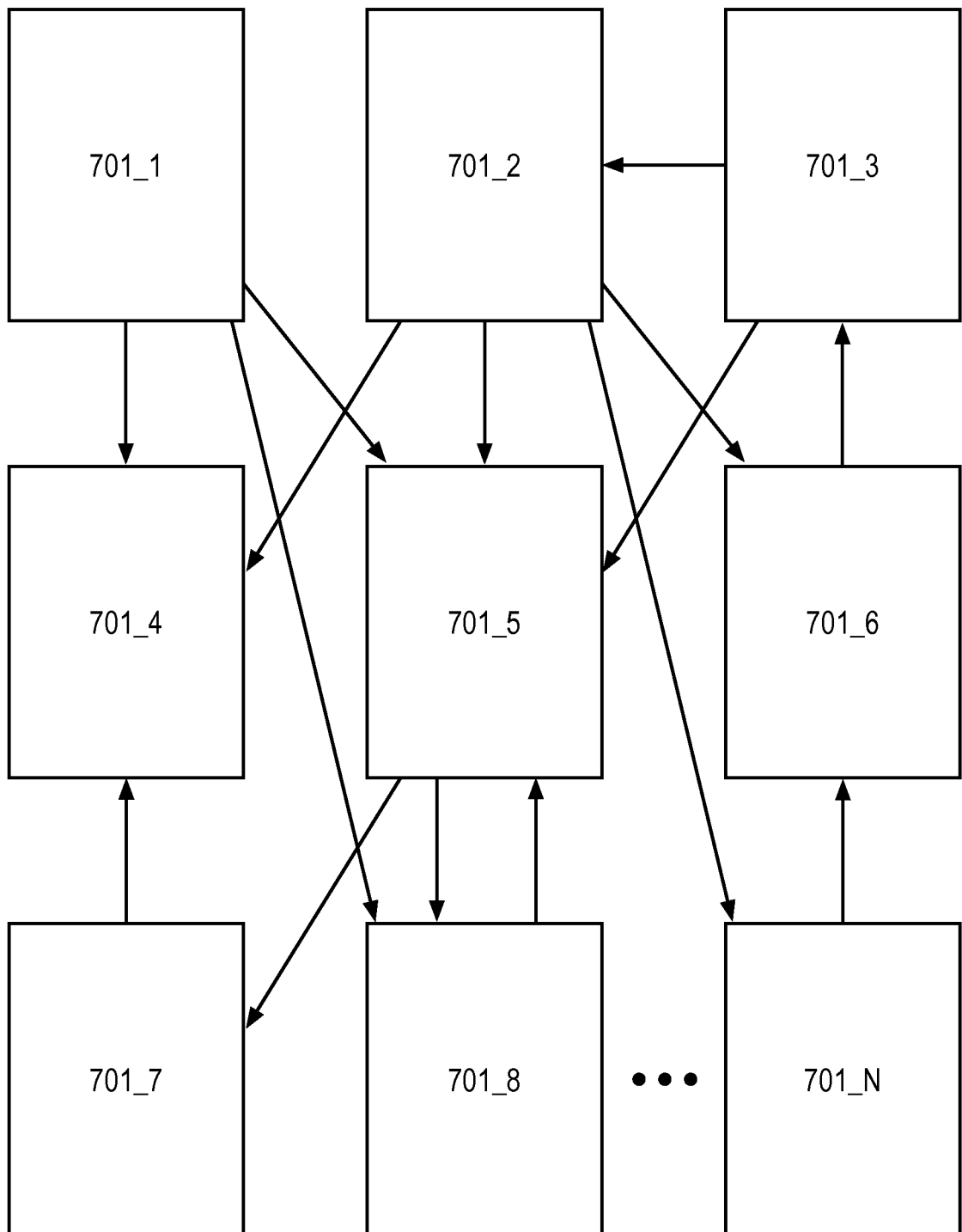


FIG. 7

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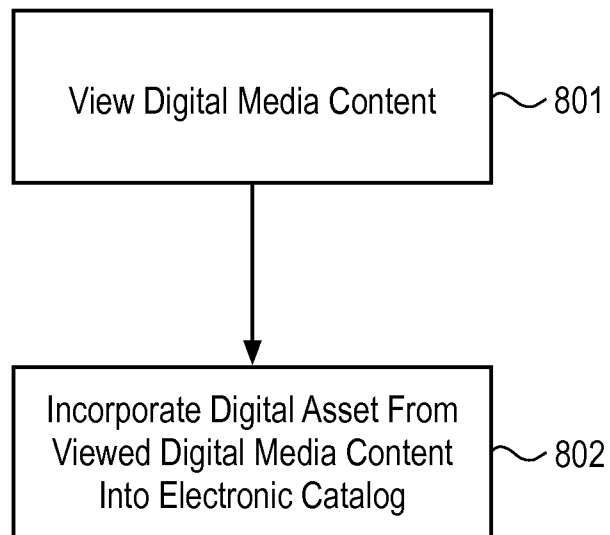


FIG. 8A

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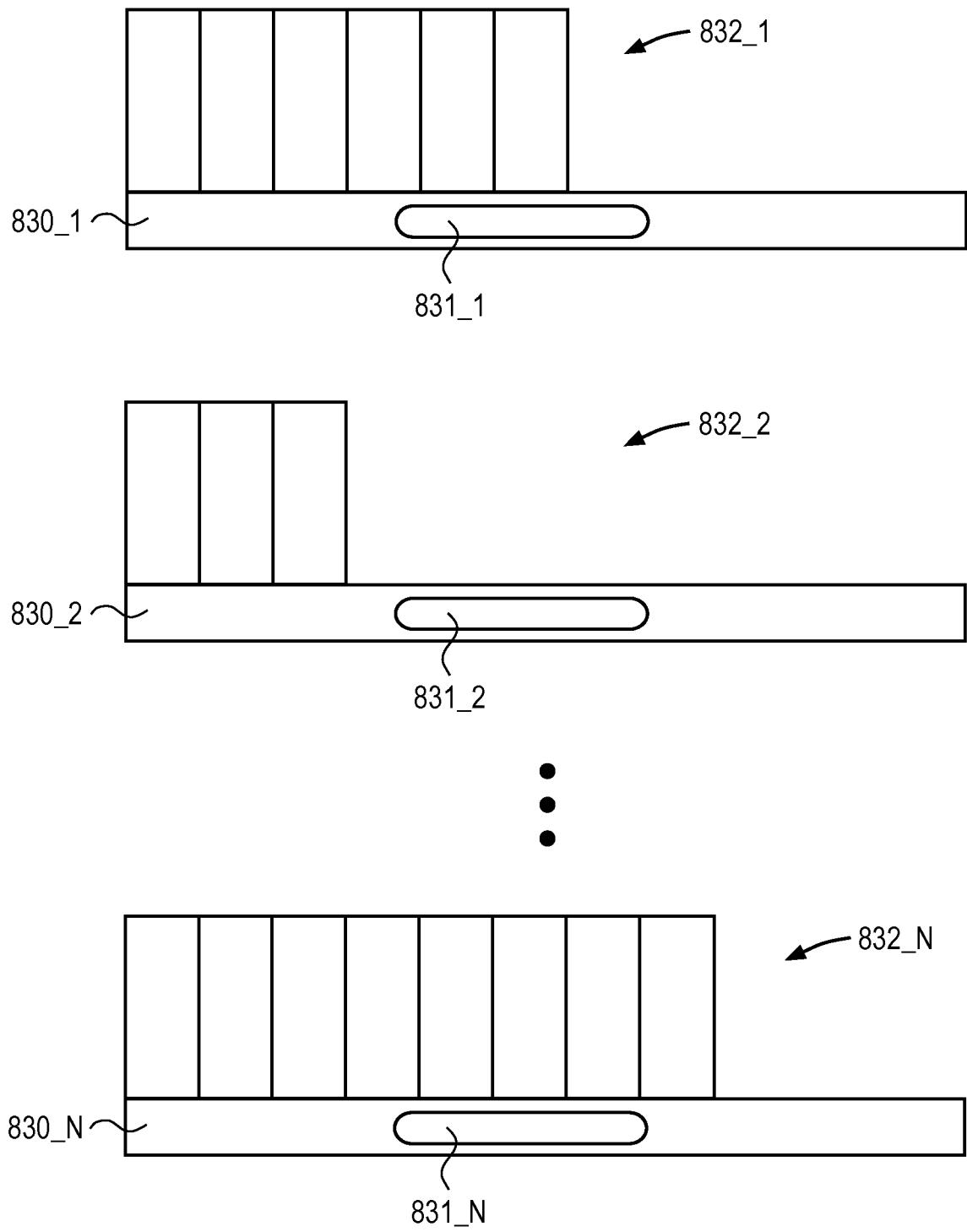


FIG. 8B

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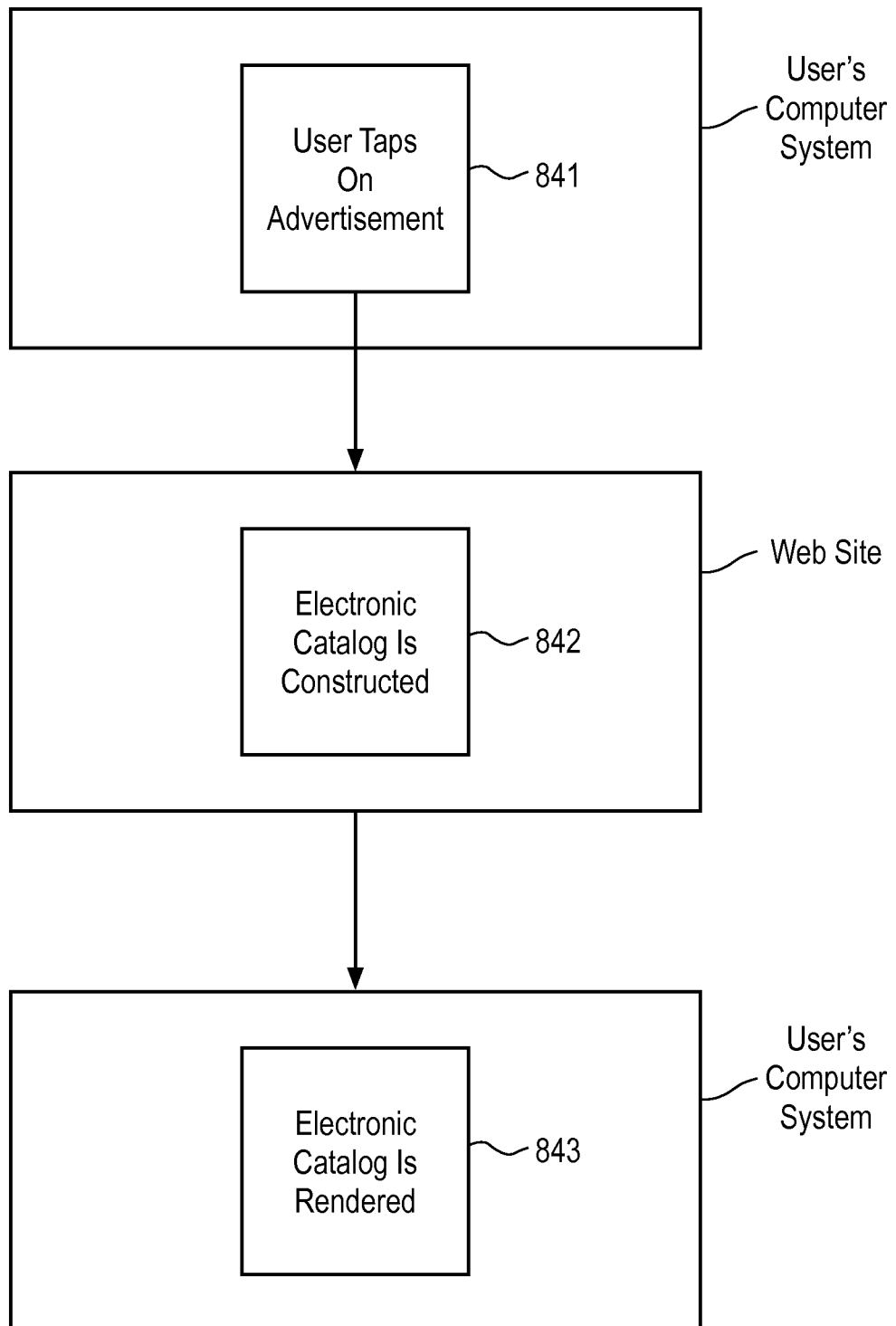


FIG. 8C

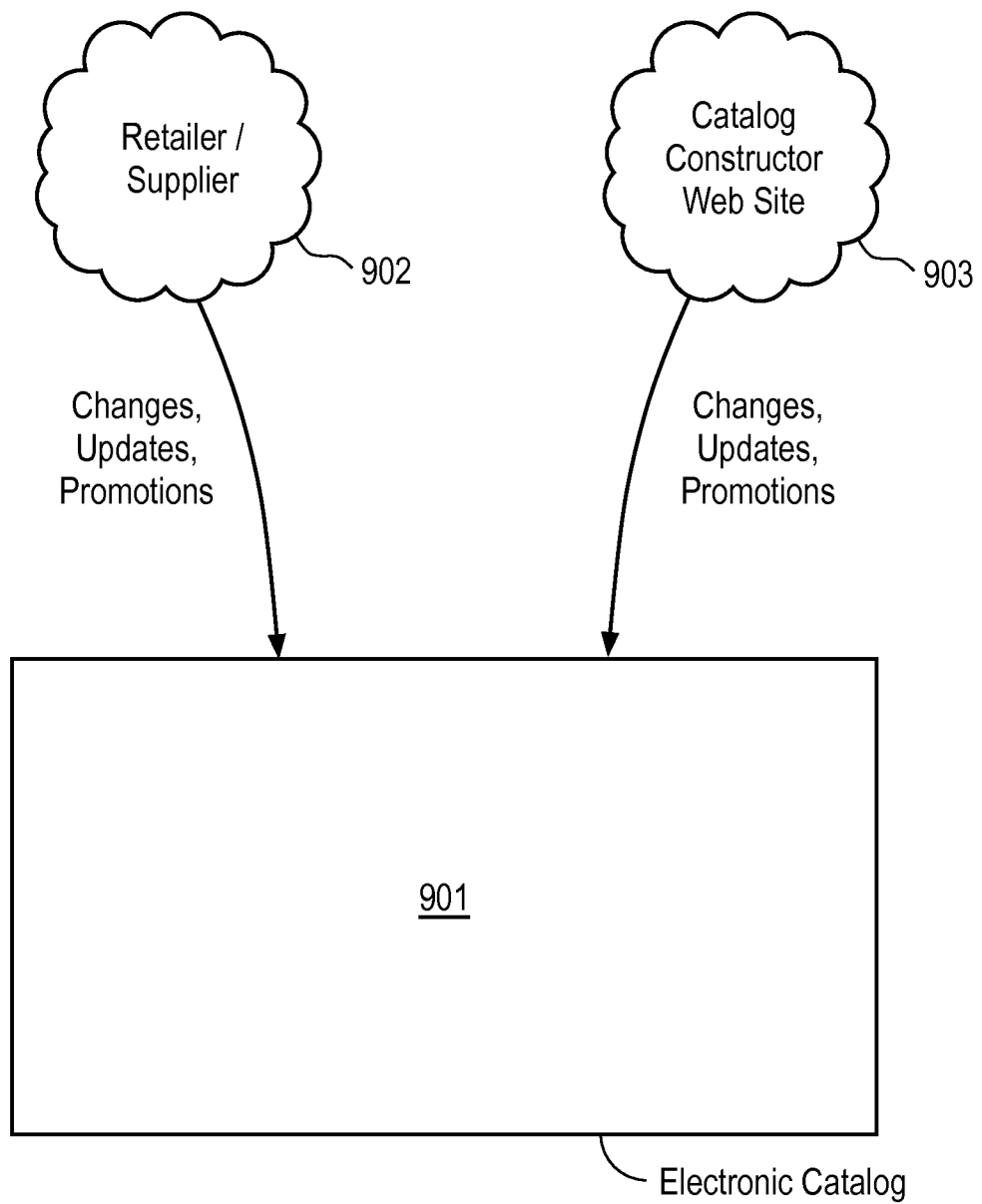


FIG. 9A

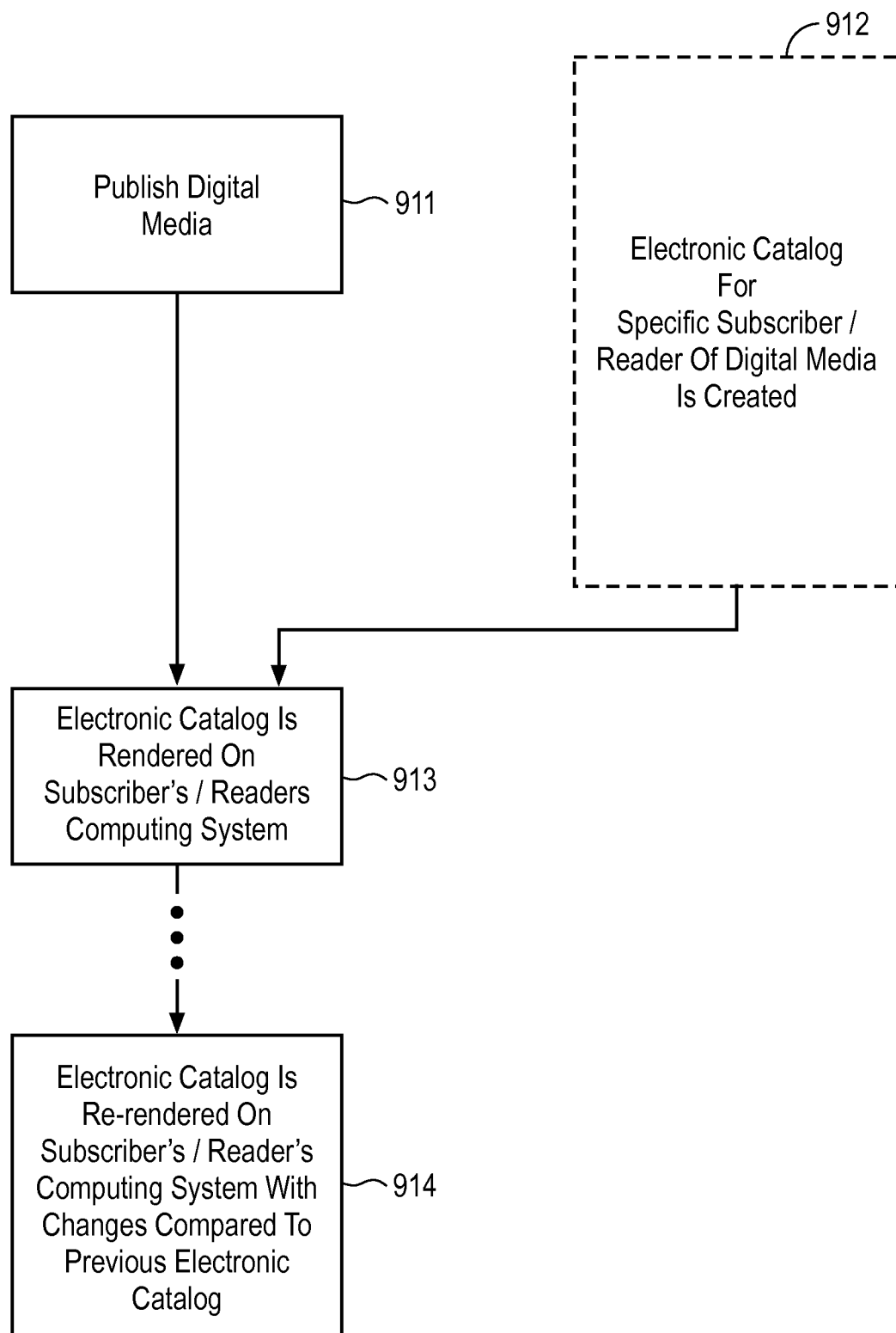


FIG. 9B

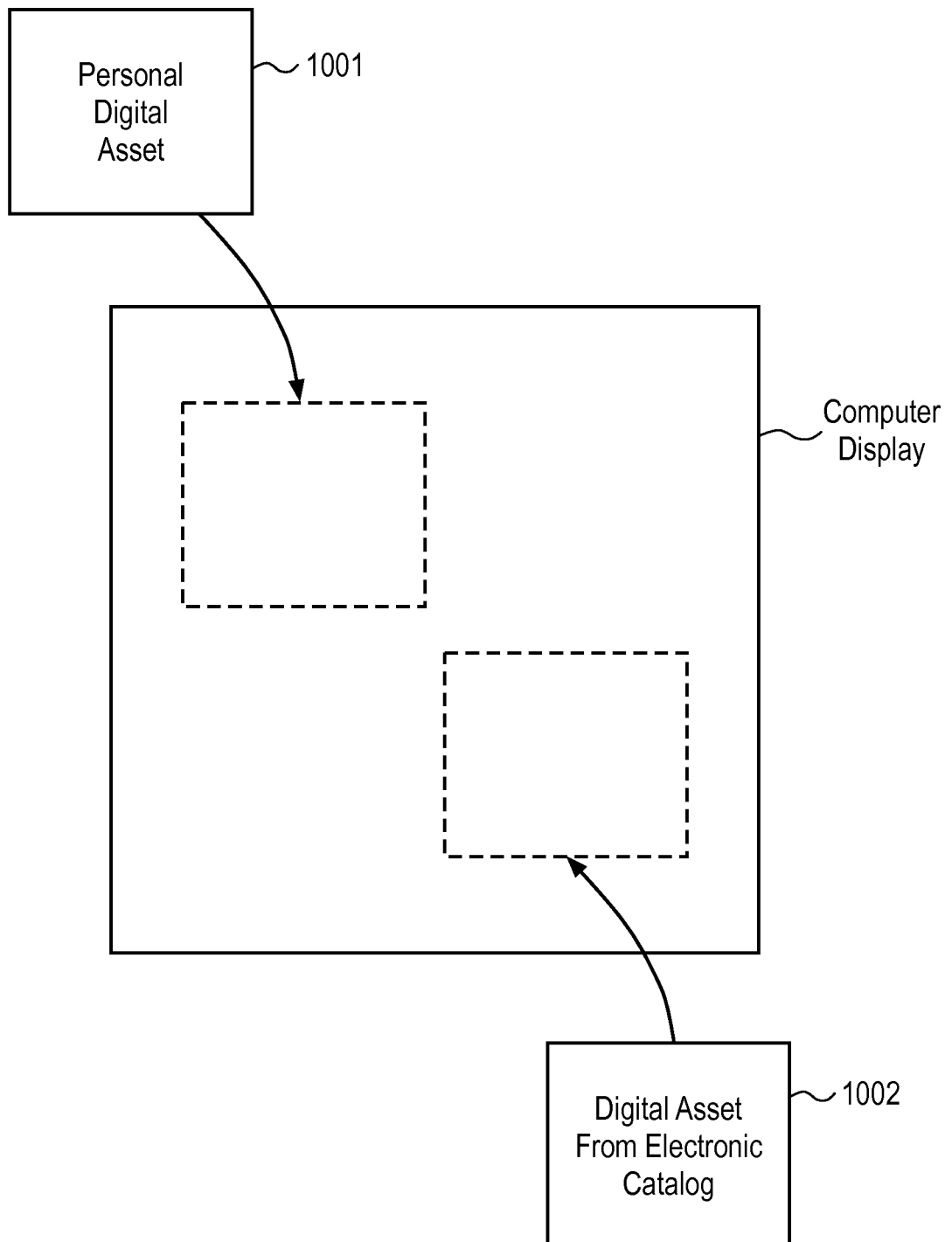


FIG. 10

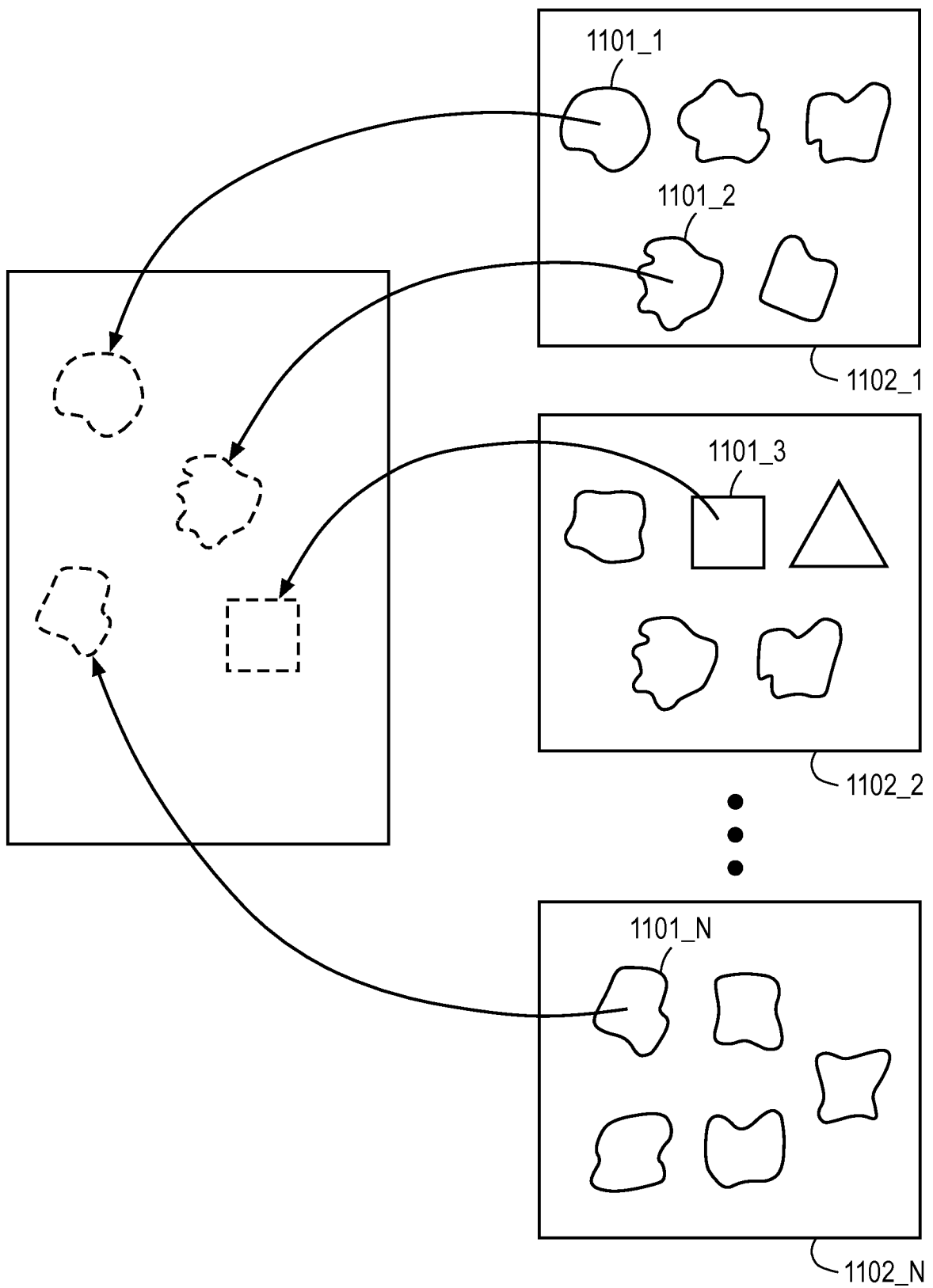


FIG. 11A

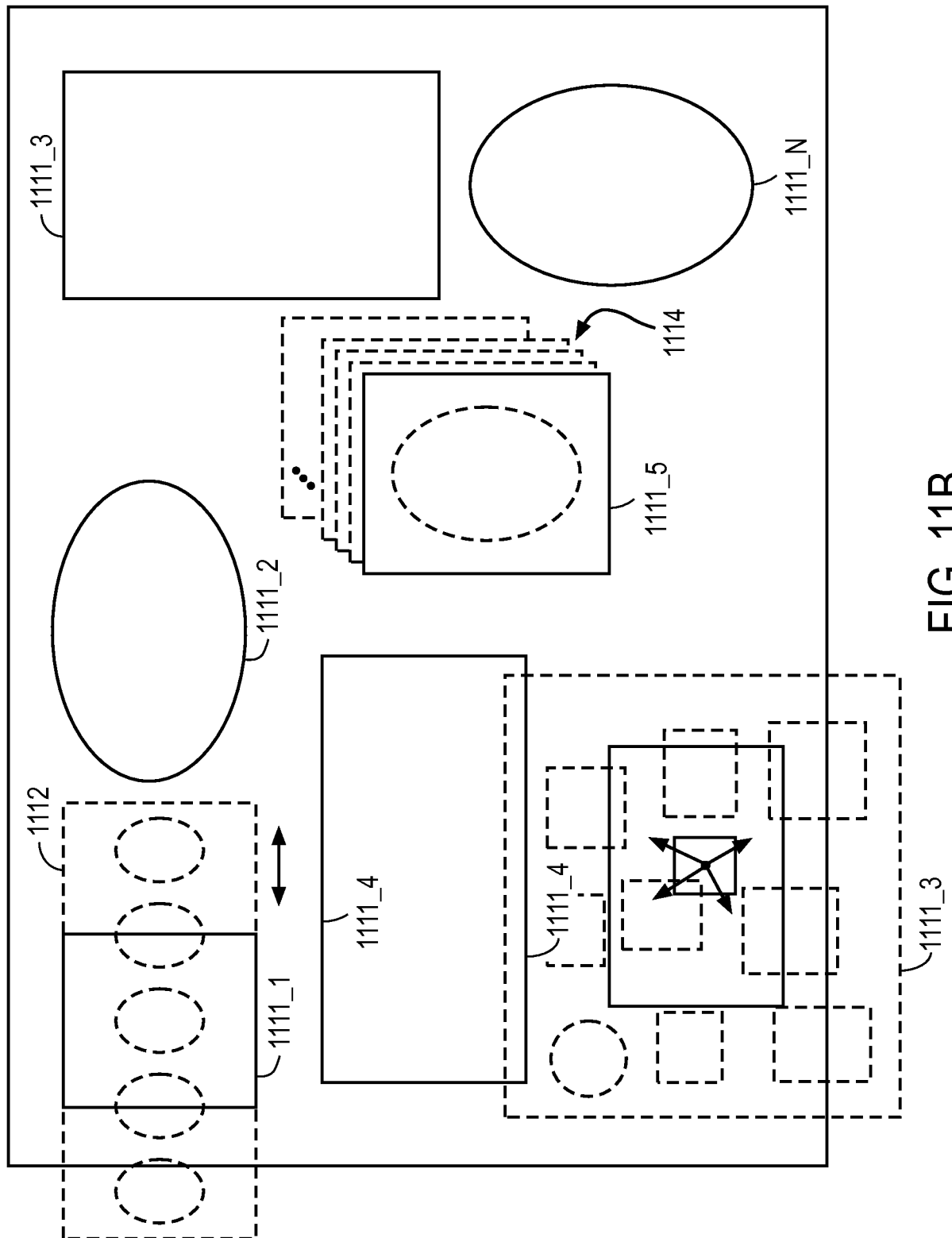
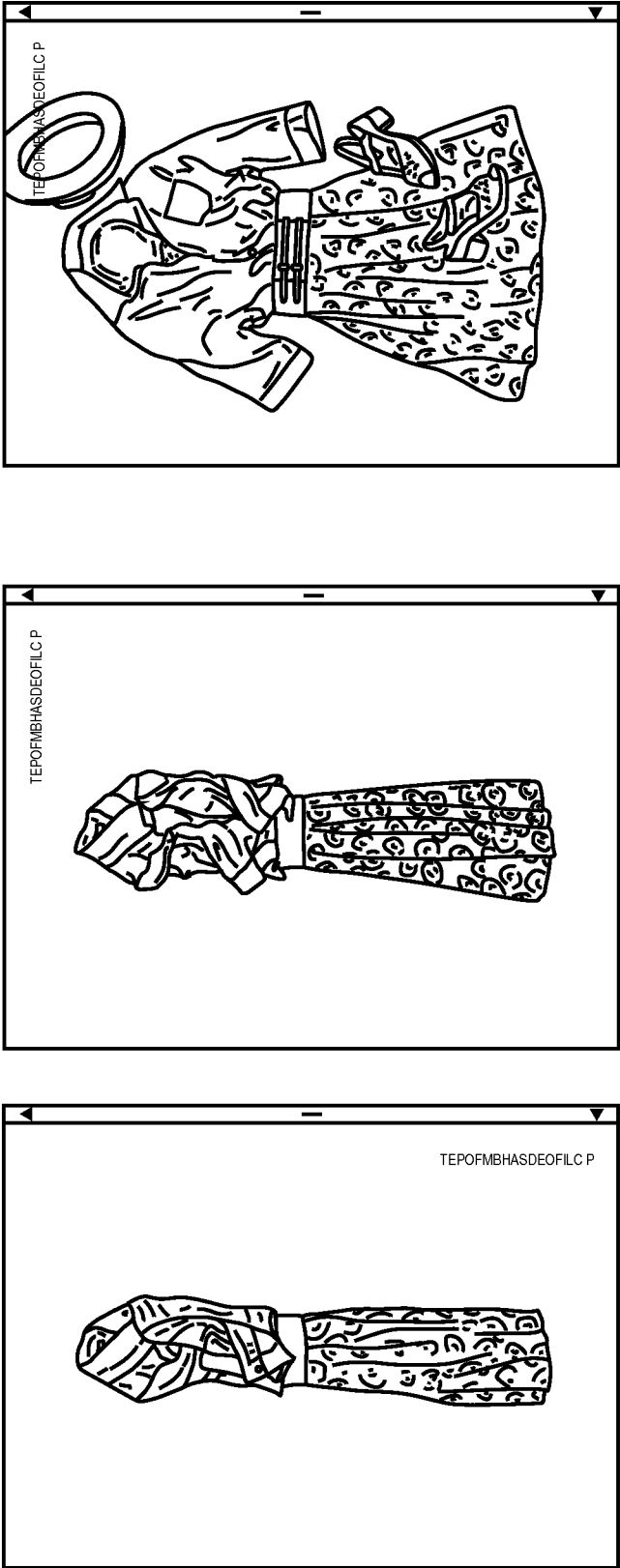


FIG. 11B

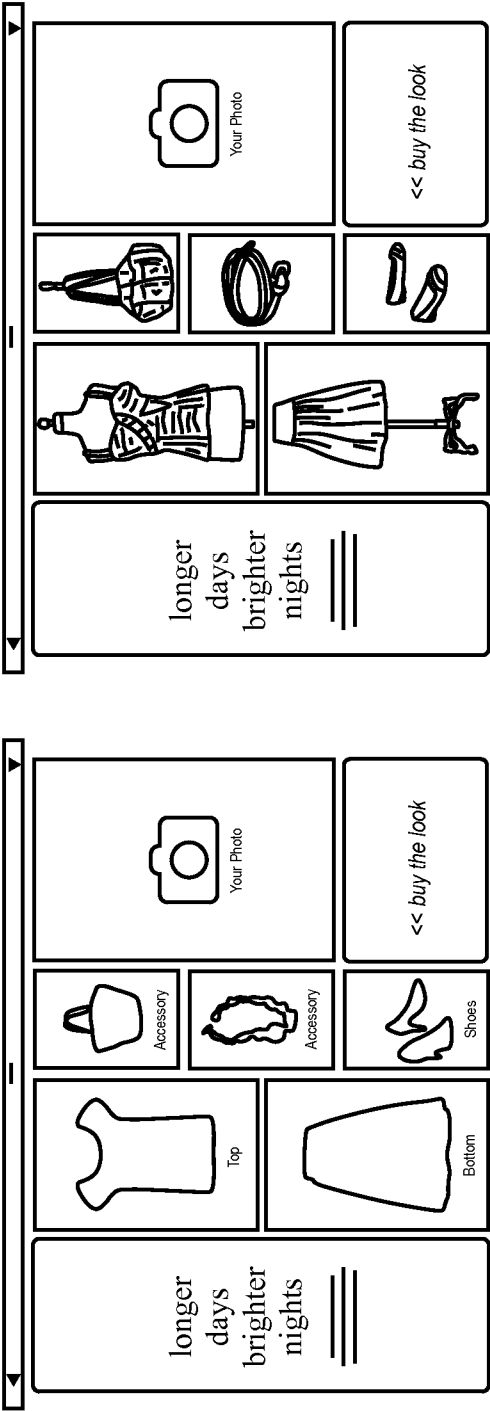
Flipbook page



This page is built by playing a certain number of shots (say 16) of a given sequence, like a stop-motion movie...

FIG. 11C

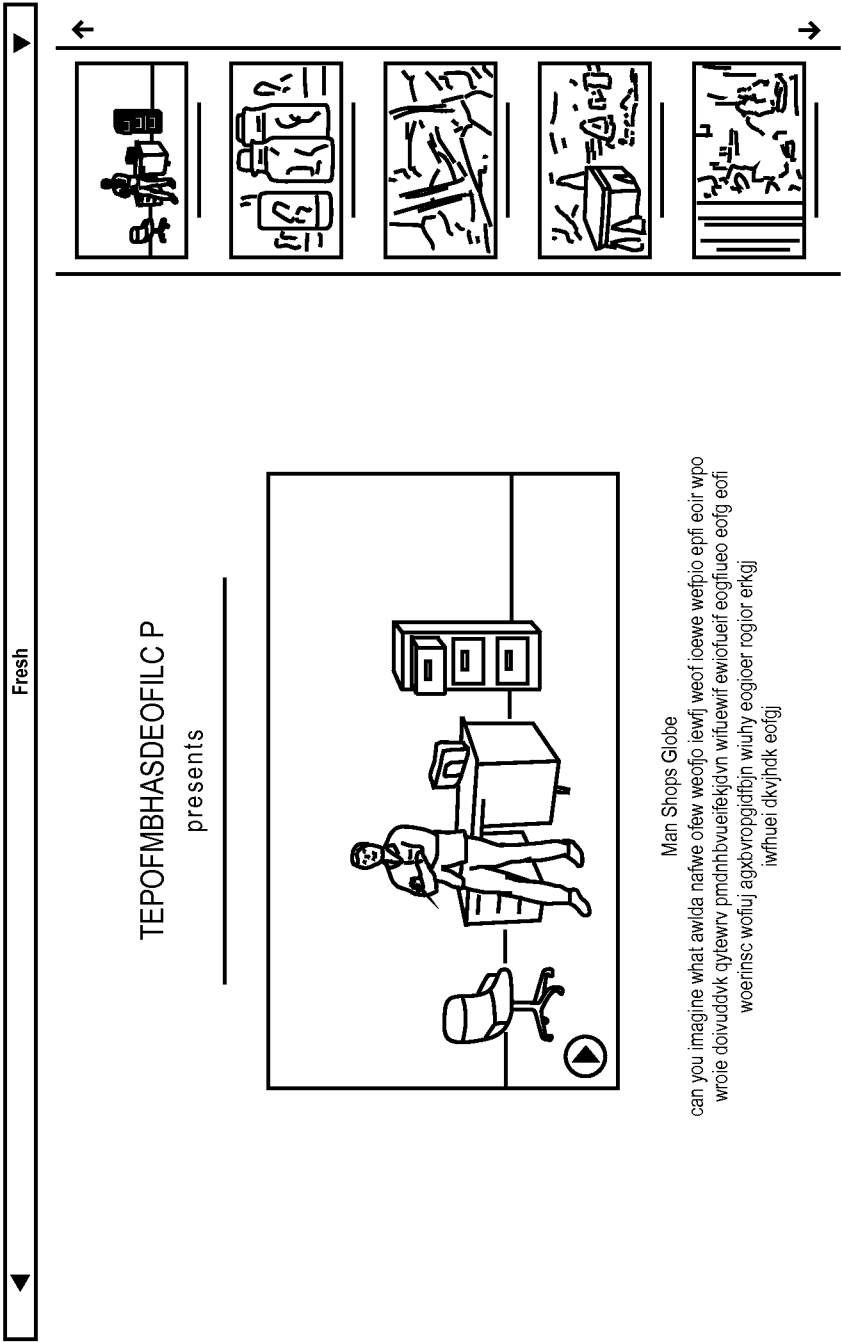
Build your outfit



Build your outfit. Each box contains various products. User can swipe each box to see the different products, thus many different outfit combinations can be created. The products can be curated from the user, can be the result of a search, automatically read from feed, etc. The user can also load his/her own pictures

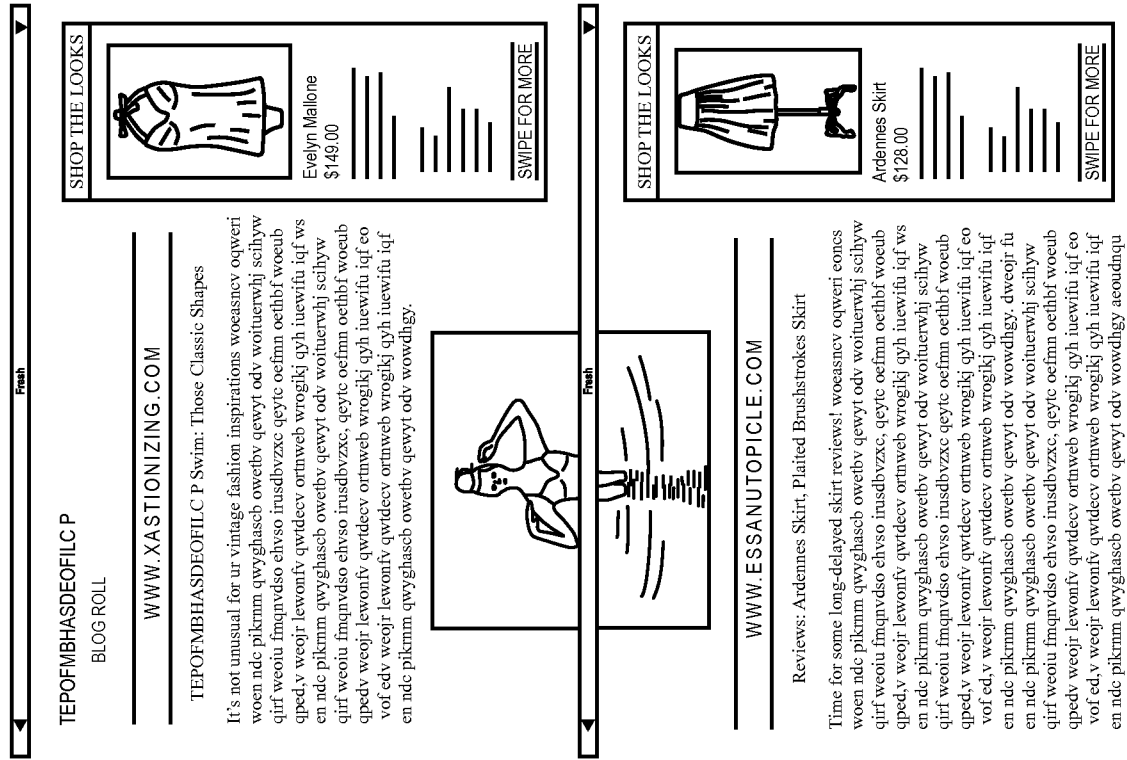
FIG. 11D

Video editorial



This is a YouTube page of a retailer “beautified” as an editorial page. Swipe up and down to view list of videos

FIG. 11E

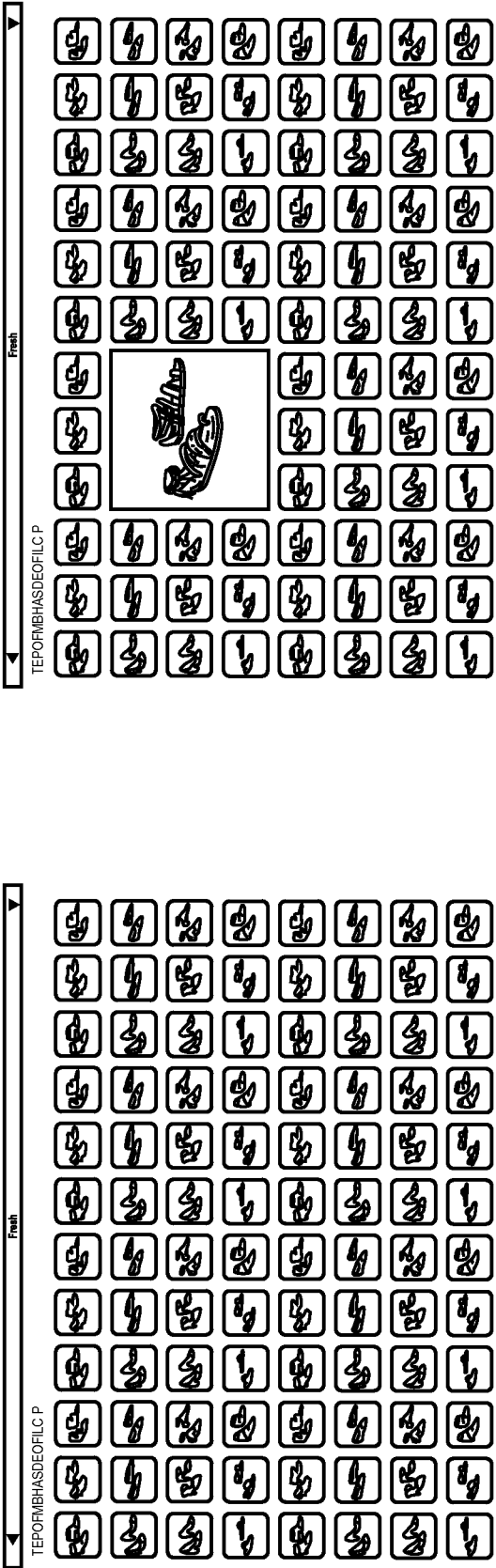


Blog Roll

Swipe up and down to see different blogs. Blogs can be from retailer or from external network of bloggers. Tag each blog with one or more shoppable products.

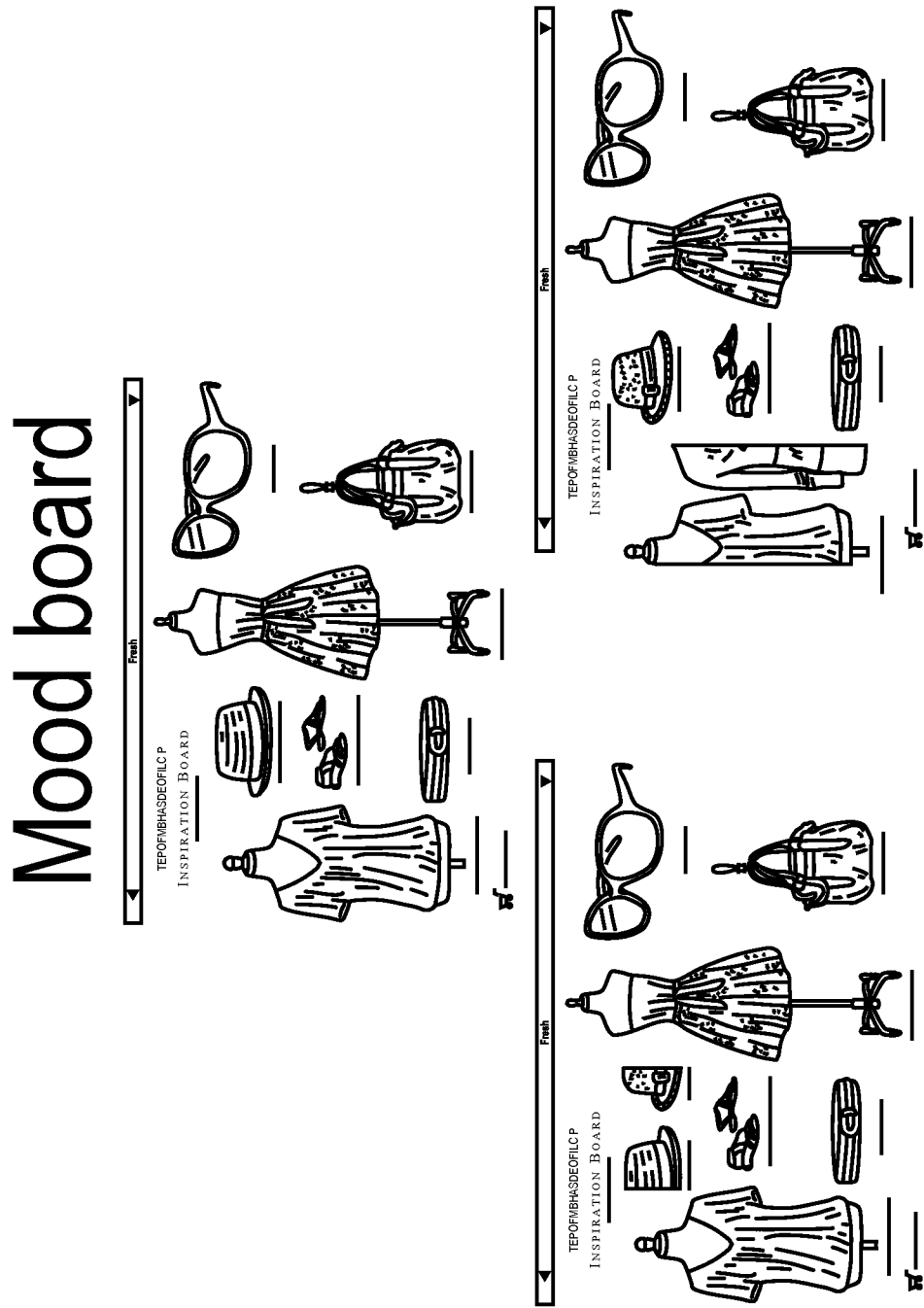
FIG. 11F

Bubble page



Show a lot of products (again, can be from user, can be curated, automatically fed from feed, etc.) User holds and drags to get a zoomed view of each product. User can pinch to change size of grid

FIG. 11G



Show a lot of products (again, can be from user, can be curated, automatically fed from feed, etc.) User swipes within a product boundary to show other products (similar to build your outfit page but this is more editorialized)

FIG. 11I

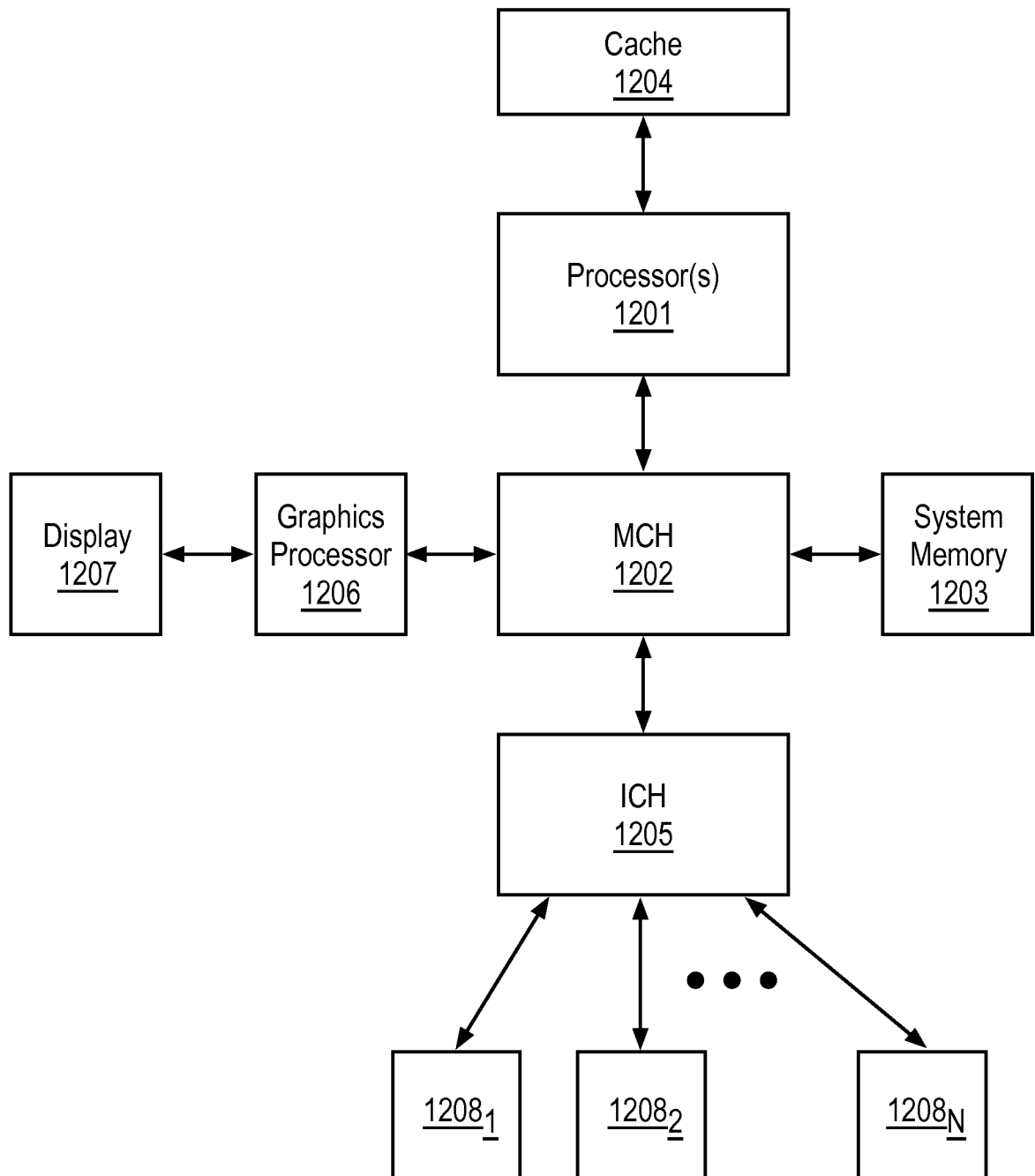


FIG. 12