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(54) METHOD AND SYSTEM TO DELIVER A DIGITAL GOOD

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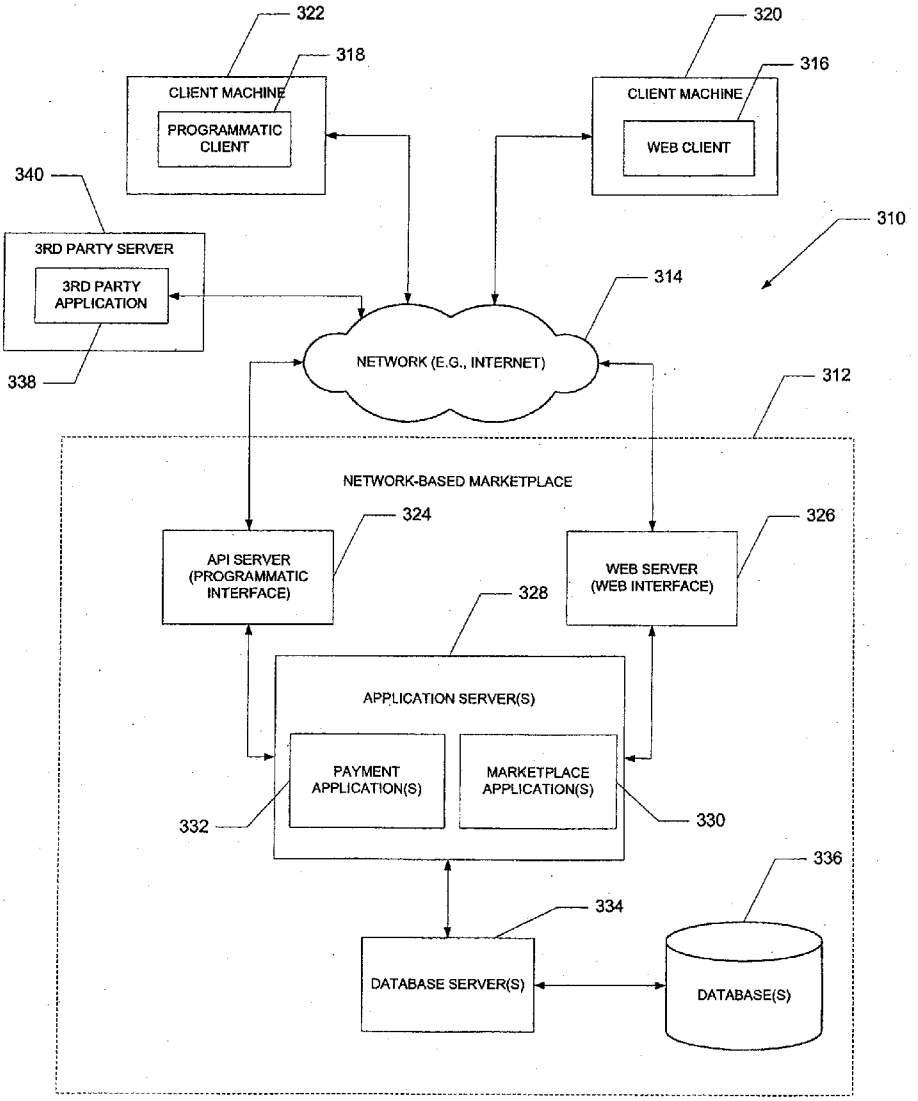
(52) **U.S. Cl.** **709/219**

(57) **ABSTRACT**

A system to deliver a digital good from a seller to a buyer is disclosed. The system includes an interface to receive a digital goods package from the seller, the digital goods package including the digital good and a buyer identifier. A digital goods database is provided to store the digital goods package, with an identifier extractor being provided to extract the buyer identifier from the digital goods package. The system further includes a notifier to notify the buyer, based on the buyer identifier, that the digital good has been received from the seller and is ready to be collected by the buyer, wherein, after having sent the notification that the digital good is ready to be collected, the system allows the buyer to access and retrieve the digital good.



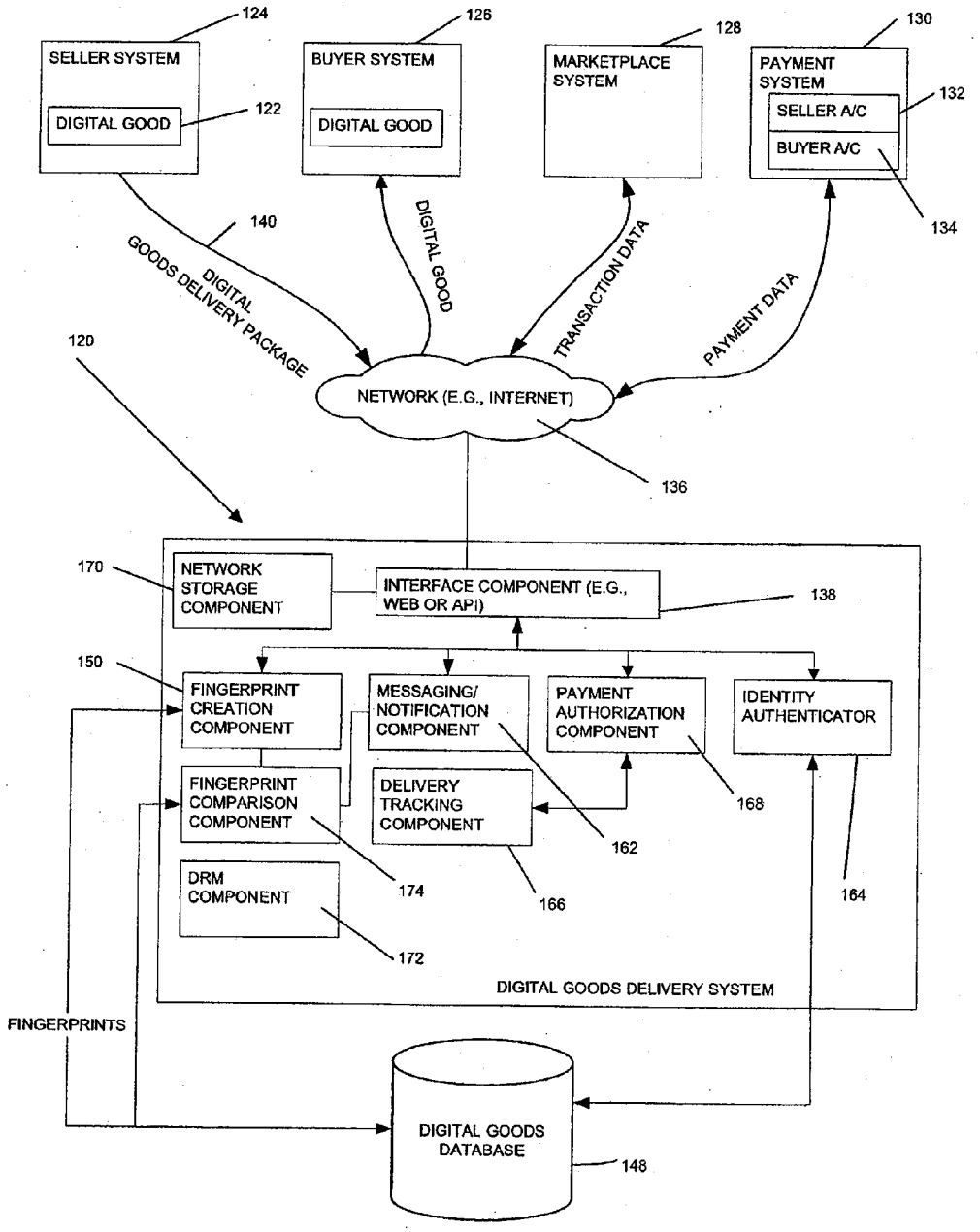
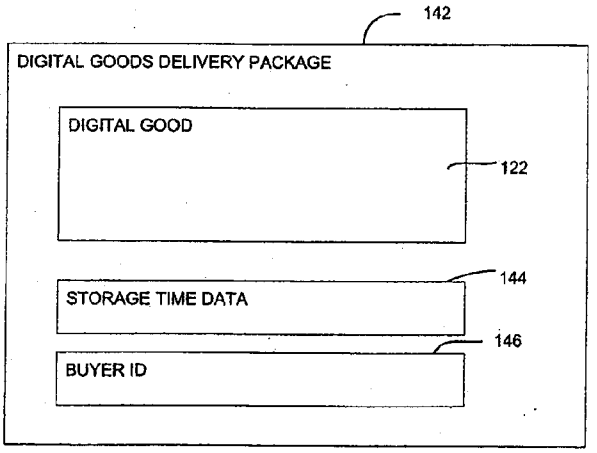

124
126
128
130
SELLER SYSTEM
DIGITAL GOOD
122
BUYER SYSTEM
DIGITAL GOOD
MARKETPLACE SYSTEM
PAYMENT SYSTEM
SELLER A/C
BUYER A/C
132
134
140
DIGITAL GOODS DELIVERY PACKAGE
DIGITAL GOOD
TRANSACTION DATA
PAYMENT DATA
120
NETWORK (E.G., INTERNET)
136
170
NETWORK STORAGE COMPONENT
INTERFACE COMPONENT (E.G., WEB OR API)
138
150
FINGERPRINT CREATION COMPONENT
MESSAGING/ NOTIFICATION COMPONENT
PAYMENT AUTHORIZATION COMPONENT
IDENTITY AUTHENTICATOR
FINGERPRINT COMPARISON COMPONENT
DELIVERY TRACKING COMPONENT
168
162
DRM COMPONENT
174
166
164
172
DIGITAL GOODS DELIVERY SYSTEM
FINGERPRINTS
DIGITAL GOODS DATABASE
148

FIGURE 1

FIGURE 2



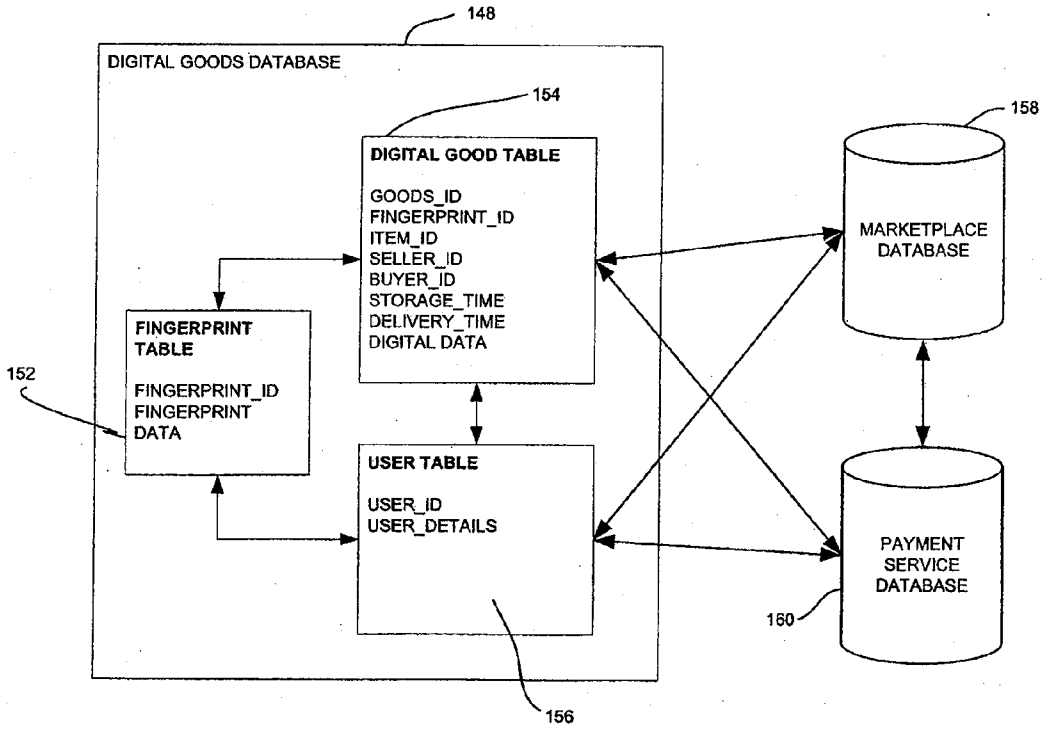


FIGURE 3

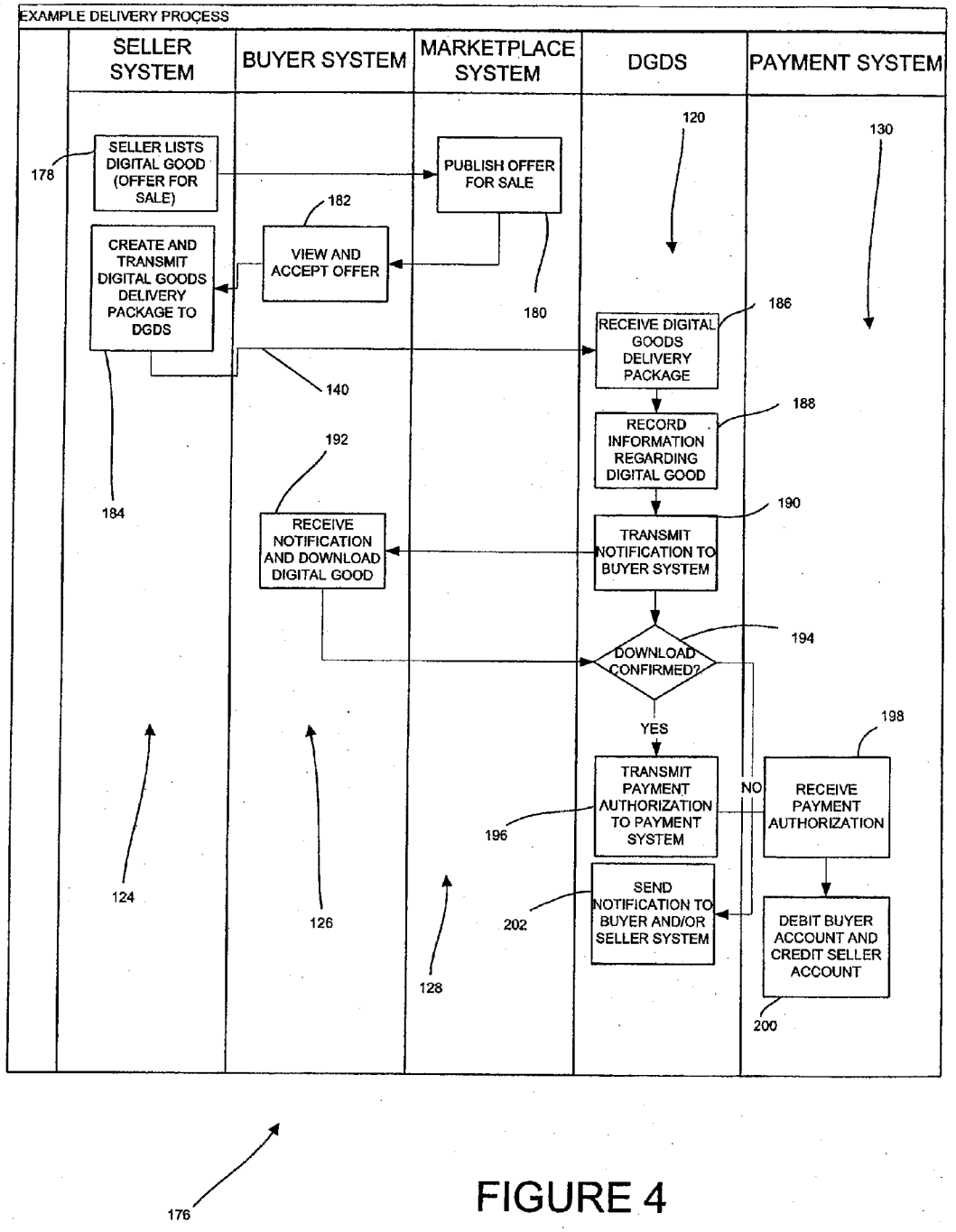

EXAMPLE DELIVERY PROCESS
SELLER SYSTEM
BUYER SYSTEM
MARKETPLACE SYSTEM
DGDS
PAYMENT SYSTEM
120
130
178
SELLER LISTS DIGITAL GOOD (OFFER FOR SALE)
PUBLISH OFFER FOR SALE
182
VIEW AND ACCEPT OFFER
CREATE AND TRANSMIT DIGITAL GOODS DELIVERY PACKAGE TO DGDS
180
186
RECEIVE DIGITAL GOODS DELIVERY PACKAGE
140
188
RECORD INFORMATION REGARDING DIGITAL GOOD
184
192
190
RECEIVE NOTIFICATION AND DOWNLOAD DIGITAL GOOD
TRANSMIT NOTIFICATION TO BUYER SYSTEM
194
DOWNLOAD CONFIRMED?
YES
198
TRANSMIT PAYMENT AUTHORIZATION TO PAYMENT SYSTEM
NO
RECEIVE PAYMENT AUTHORIZATION
196
124
126
SEND NOTIFICATION TO BUYER AND/OR SELLER SYSTEM
202
DEBIT BUYER ACCOUNT AND CREDIT SELLER ACCOUNT
128
200
176

FIGURE 4

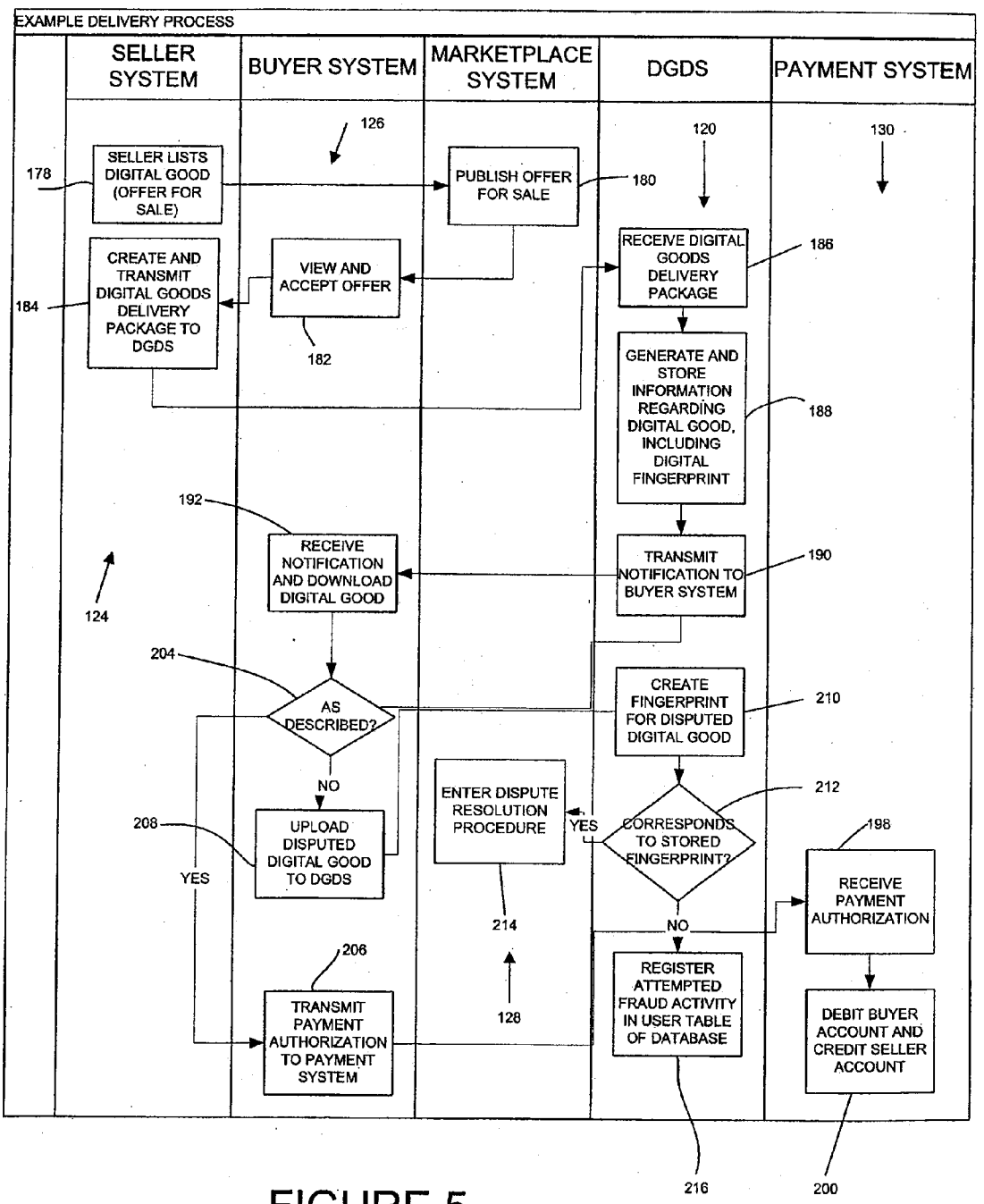

EXAMPLE DELIVERY PROCESS
SELLER SYSTEM
BUYER SYSTEM
MARKETPLACE SYSTEM
DGDS
PAYMENT SYSTEM
126
120
130
178
SELLER LISTS DIGITAL GOOD (OFFER FOR SALE)
PUBLISH OFFER FOR SALE
180
RECEIVE DIGITAL GOODS DELIVERY PACKAGE
186
CREATE AND TRANSMIT DIGITAL GOODS DELIVERY PACKAGE TO DGDS
184
VIEW AND ACCEPT OFFER
182
GENERATE AND STORE INFORMATION REGARDING DIGITAL GOOD, INCLUDING DIGITAL FINGERPRINT
188
192
RECEIVE NOTIFICATION AND DOWNLOAD DIGITAL GOOD
TRANSMIT NOTIFICATION TO BUYER SYSTEM
190
124
204
AS DESCRIBED?
CREATE FINGERPRINT FOR DISPUTED DIGITAL GOOD
210
NO
ENTER DISPUTE RESOLUTION PROCEDURE
YES
CORRESPONDS TO STORED FINGERPRINT?
212
208
UPLOAD DISPUTED DIGITAL GOOD TO DGDS
YES
198
RECEIVE PAYMENT AUTHORIZATION
214
NO
206
REGISTER ATTEMPTED FRAUD ACTIVITY IN USER TABLE OF DATABASE
TRANSMIT PAYMENT AUTHORIZATION TO PAYMENT SYSTEM
128
DEBIT BUYER ACCOUNT AND CREDIT SELLER ACCOUNT
216
200

FIGURE 5

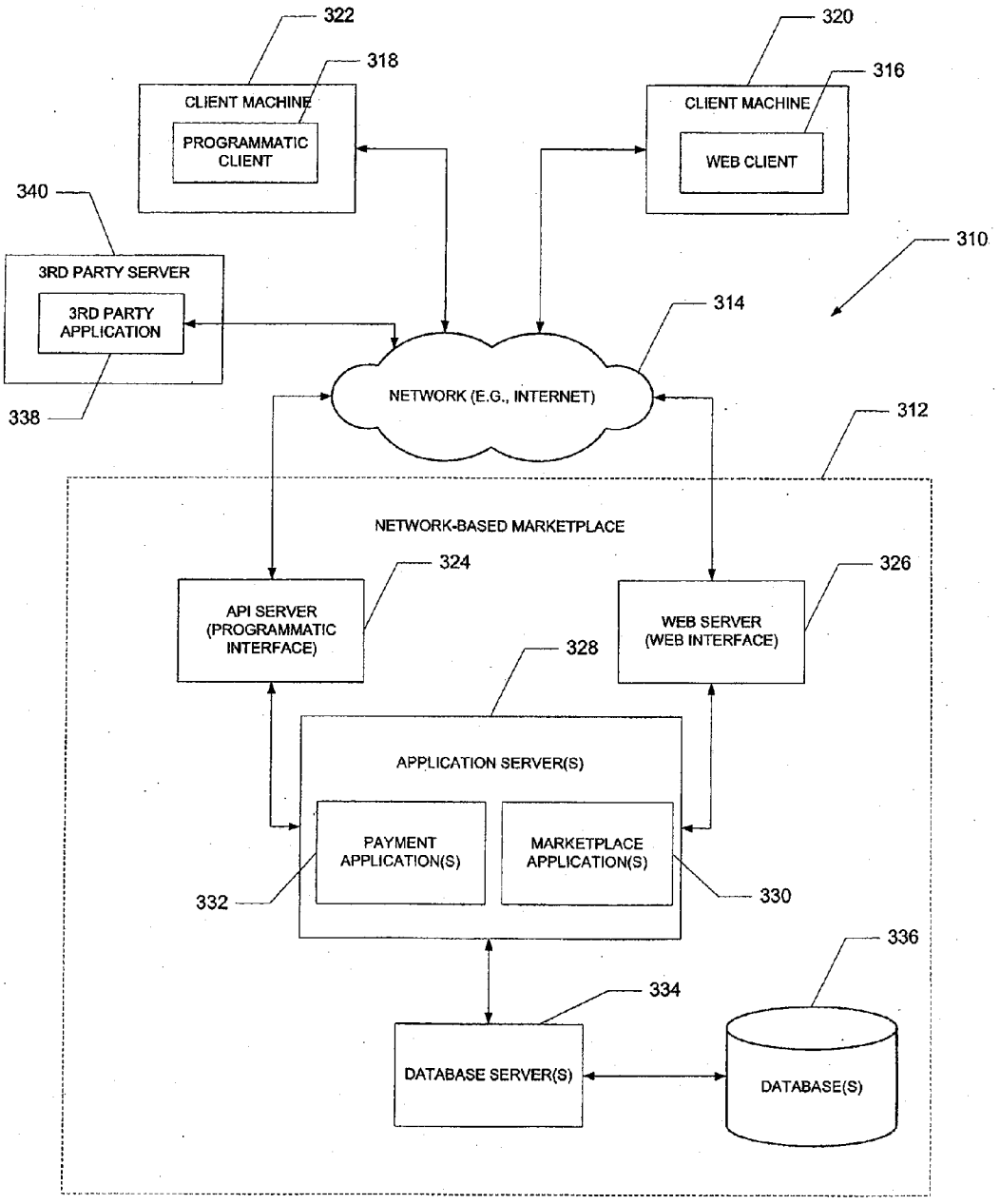

322
318
CLIENT MACHINE
PROGRAMMATIC CLIENT
320
316
CLIENT MACHINE
WEB CLIENT
340
3RD PARTY SERVER
3RD PARTY APPLICATION
338
310
314
NETWORK (E.G., INTERNET)
312
NETWORK-BASED MARKETPLACE
324
API SERVER (PROGRAMMATIC INTERFACE)
326
WEB SERVER (WEB INTERFACE)
328
APPLICATION SERVER(S)
PAYMENT APPLICATION(S)
MARKETPLACE APPLICATION(S)
332
330
336
334
DATABASE SERVER(S)
DATABASE(S)

FIGURE 6

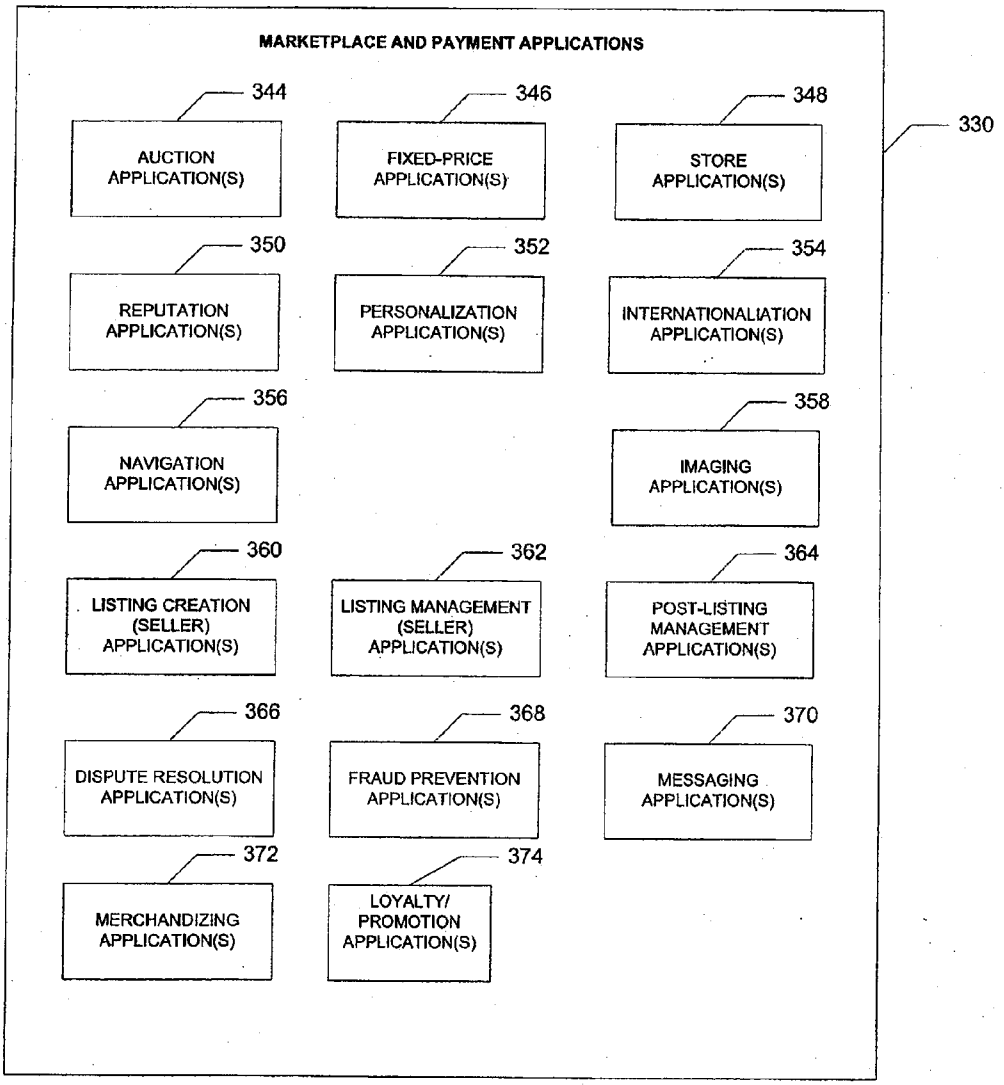

MARKETPLACE AND PAYMENT APPLICATIONS
330
344
AUCTION APPLICATION(S)
346
FIXED-PRICE APPLICATION(S)
348
STORE APPLICATION(S)
350
REPUTATION APPLICATION(S)
352
PERSONALIZATION APPLICATION(S)
354
INTERNATIONALIATION APPLICATION(S)
356
NAVIGATION APPLICATION(S)
358
IMAGING APPLICATION(S)
360
LISTING CREATION (SELLER) APPLICATION(S)
362
LISTING MANAGEMENT (SELLER) APPLICATION(S)
364
POST-LISTING MANAGEMENT APPLICATION(S)
366
DISPUTE RESOLUTION APPLICATION(S)
368
FRAUD PREVENTION APPLICATION(S)
370
MESSAGING APPLICATION(S)
372
MERCHANDIZING APPLICATION(S)
374
LOYALTY/ PROMOTION APPLICATION(S)

FIGURE 7

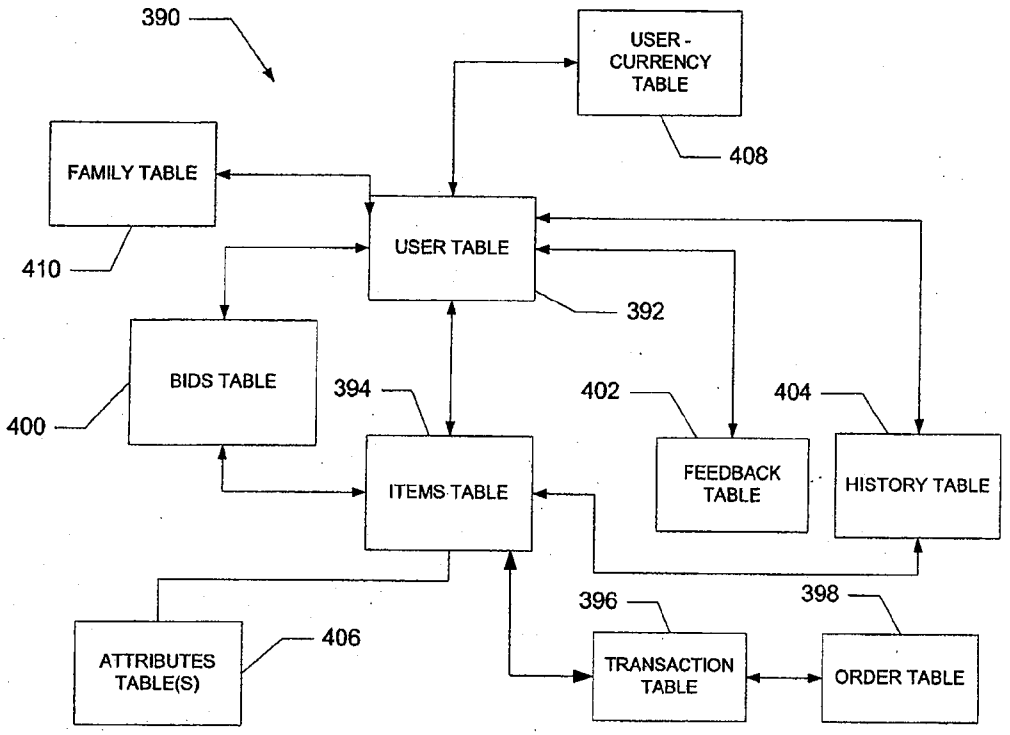

390
USER - CURRENCY TABLE
408
FAMILY TABLE
410
USER TABLE
392
BIDS TABLE
400
394
ITEMS TABLE
402
FEEDBACK TABLE
404
HISTORY TABLE
396
398
ATTRIBUTES TABLE(S)
406
TRANSACTION TABLE
ORDER TABLE

FIGURE 8

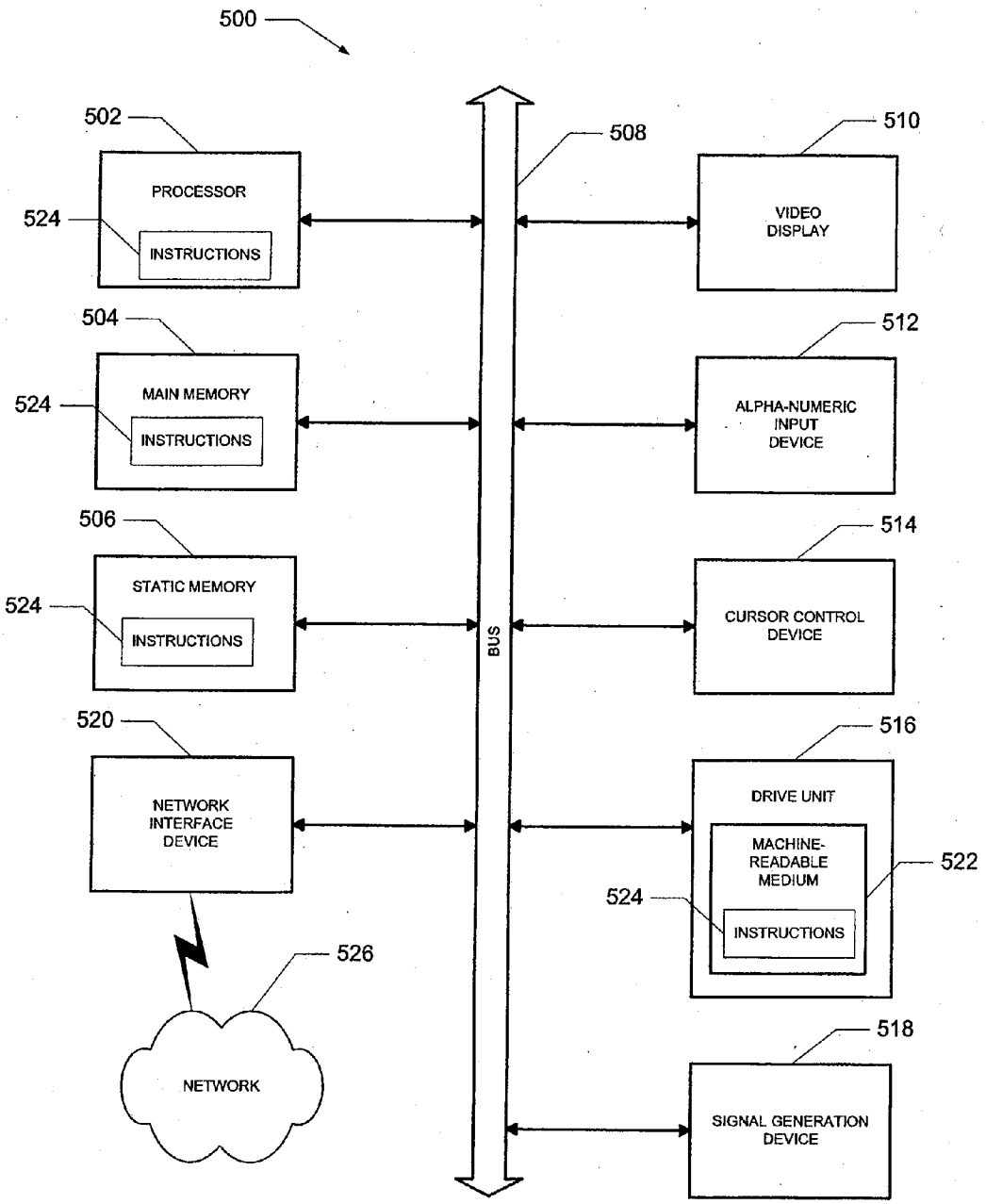

500
502
PROCESSOR
524
INSTRUCTIONS
504
MAIN MEMORY
524
INSTRUCTIONS
506
STATIC MEMORY
524
INSTRUCTIONS
520
NETWORK INTERFACE DEVICE
526
NETWORK
508
BUS
510
VIDEO DISPLAY
512
ALPHA-NUMERIC INPUT DEVICE
514
CURSOR CONTROL DEVICE
516
DRIVE UNIT
MACHINE-READABLE MEDIUM
522
524
INSTRUCTIONS
518
SIGNAL GENERATION DEVICE

FIGURE 9

METHOD AND SYSTEM TO DELIVER A DIGITAL GOOD

RELATED APPLICATION

[0001] This present application is a continuation application of application Ser. No. 11/052,653, filed Feb. 7, 2005, and entitled "METHOD AND SYSTEM TO DELIVER DIGITAL GOOD," which claims the priority benefit of U.S. provisional application Ser. No. 60/638,670, filed Dec. 22, 2004, and entitled "METHOD AND SYSTEM TO DELIVER A DIGITAL GOOD," the disclosures of which are incorporated herein by reference.

TECHNICAL FIELD

[0002] The present application relates generally to the technical field of digital goods delivery. The term "digital good" refers to any digital document, file or information, and is meant to include but not be limited to music, photographs, text documents and videos.

BACKGROUND

[0003] For transactions concerning physical goods, there are typically four parties involved: the seller, the buyer, the payment system, and the delivery mechanism. While physical goods could be exchanged locally without a formal delivery system, the tracking information provided by the delivery system is invaluable for resolving disputes between the buyer and the seller.

[0004] With digital goods, the seller could theoretically send the digital good directly to the buyer, either through e-mail, an online server, or in a closed-loop environment. One of the problems with such an arrangement is that there is no objective third party tracking of the consummation of the transaction. Without this information, the buyer is vulnerable to non-delivery, and the seller is vulnerable to fraudulent chargebacks.

SUMMARY

[0005] According to one embodiment there is provided a system to deliver a digital good from a seller to a buyer, the system including:

[0006] an interface to receive a digital goods package from the seller, the digital goods package including the digital good and a buyer identifier;

[0007] a digital goods storage to store the digital goods package;

[0008] an identifier extractor to extract the buyer identifier from the digital goods package; and

[0009] a notifier to notify the buyer, based on the buyer identifier, that the digital good has been received from the seller and is ready to be collected by the buyer,

wherein, after having sent the notification that the digital good is ready to be collected, the system allows the buyer to access and retrieve the digital good.

[0010] According to a further embodiment, there is provided a method of delivering a digital good from a seller to a buyer, the method including:

[0011] receiving a digital goods package from the seller, the digital goods package including the digital good and a buyer identifier;

[0012] storing the digital goods package;

[0013] extracting the buyer identifier from the digital goods package;

[0014] notifying the buyer, based on the buyer identifier, that the digital good has been received from the seller and is ready to be collected by the buyer; and

[0015] allowing the buyer to access and retrieve the digital good.

[0016] Other features of the present invention will be apparent from the accompanying drawings and from the detailed description that follows.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] 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:

[0018] FIG. **1** is a system diagram of a digital goods delivery system of one example embodiment the present invention;

[0019] FIG. **2** is a block diagram showing components, according to one example embodiment, of a digital goods delivery package used in the system shown in FIG. **4**;

[0020] FIG. **3** is a block diagram of a digital goods storage used in the system shown in FIG. **1**;

[0021] FIG. **4** is a flow diagram of a digital good delivery process according to one example embodiment of the present invention in which there is no dispute regarding the digital good delivered to the buyer;

[0022] FIG. **5** is a flow diagram of a digital good delivery process according to one example embodiment of the present invention in which there is a dispute regarding the digital good delivered to the buyer;

[0023] FIG. **6** is a network diagram depicting a system, according to one example embodiment of the present invention;

[0024] FIG. **7** is a block diagram illustrating multiple marketplace and payment applications;

[0025] FIG. **8** is a high-level entity-relationship diagram; and

[0026] FIG. **9** shows a diagrammatic representation of a machine for performing any one or more of the operations described herein.

DETAILED DESCRIPTION

[0027] A method and system to deliver a digital good from a seller to a buyer are described. In the following description, for purposes of explanation, numerous specific details are set forth in order to provide a thorough understanding of the present invention. It will be evident, however, to one skilled in the art that the present invention may be practiced without these specific details.

[0028] FIG. **1** is a system diagram of a digital goods delivery system **120**, according to one example embodiment of the present invention, to deliver a digital good **122** from a seller to a buyer. The seller and the buyer have an associated seller system **124** and a buyer system **126**, respectively. A marketplace system **128** may manage the transfer of transaction data between the various parties. A payment system **130** is used to manage the transfer of payment data between the various parties, and comprises a seller account **132** associated with the seller and a buyer account **134** associated with the buyer.

[0029] The systems **124**, **126**, **128** and **130** are in communication with each other and with the digital goods delivery system **120** using a communications network **136**, such as the Internet.

[0030] The digital goods delivery system **120** includes an interface **138** to receive a digital goods package from the seller, as indicated by arrow **140**. Turning now to FIG. **2**, the digital goods package **142** includes, in one example embodiment, the digital good **122**, storage time data **144**, which will be discussed in more detail further below, and a buyer identifier **146** to enable the system **120** to identify the correct buyer.

[0031] Referring back to FIG. **1**, the digital goods delivery system **120** further includes a digital goods storage, in the exemplary form of a database **148** to store the digital goods package **142**. In a further embodiment, the storage may for example be a file system.

[0032] A fingerprint creator **150** is used to create an electronic fingerprint of each digital good received from the seller, the fingerprint being used to identify the digital good. There are a number of ways of generating a digital fingerprint, including checksums and hash algorithms.

[0033] In one example version, the fingerprint creator **150** defines an identifier extractor to extract the buyer identifier **146** from the digital goods package **142**.

[0034] The digital goods database **148** will now be described in more detail with reference to FIG. **3**. The database **148** includes a fingerprint table **152**, which stores identification data for each electronic fingerprint as well as the actual fingerprint data for the particular digital good. The database **148** further includes a digital good table **154**, which not only stores the actual digital good that is being bought by the buyer but also the identification data for each electronic fingerprint, as well as identification data for identifying the actual digital good, the buyer identifier and a seller identifier. The storage time data **144** is also stored in the digital good table **154**, this data including the receipt time of the digital good from the seller. The storage time data **144** can also be used by the seller to specify the duration that the digital good is to be stored in the digital goods database **148**. A user table **156** is provided to allow a user to access and manipulate the digital goods database **148**, with authorized users having an identifier and associated details.

[0035] Both the digital good table **154** and the user table **156** can access and utilize a marketplace database **158** associated with the marketplace system **128** and a payment service database **160** associated with the payment system **130**.

[0036] A notifying component **162** is used to notify the buyer, based on the buyer identifier **146**, via the network **136** and associated buyer system **126**, that the digital good **122** has been received from the seller and is ready to be collected/downloaded by the buyer. Thus, after having sent the notification that the digital good is ready to be collected, the system **120** allows the buyer to access and retrieve the digital good from the digital goods database **148**. In this regard, the system **120** includes an identity authenticator **164** to authenticate that a person wishing to collect a digital good is the correct buyer.

[0037] A delivery tracking component **166** is used to track delivery of the digital good to the buyer, with, for example, the time that the digital good is delivered to the buyer being stored in the digital good table **154**. Detection of delivery initiates a payment authorization component **168**, which is linked to the payment system **130**, to carry out the necessary financial transaction between the seller and the buyer.

[0038] An optional network storage component **170** can be provided to store the digital good within the system **120**.

[0039] A digital rights management (DRM) component **172** provides DRM services for the various digital goods being transacted.

[0040] The system **120** further includes a fingerprint comparator **174** to compare the fingerprints of two digital goods. This will be used in the event of there being a dispute regarding the delivered digital good, which will be described in detail with reference to FIG. **5**.

[0041] A digital good delivery process **176**, according to an example embodiment the present invention, in which there is no dispute regarding the digital good delivered to the buyer will now be described with reference to FIG. **4**. For ease of understanding, the various operations that occur at the seller system **124**, the buyer system **126**, the marketplace system **128**, the digital goods delivery system (DGDS) **120** and the payment system **130** during the delivery process are shown.

[0042] The seller first lists the digital good for sale, shown at operation **178**, which then gets published by the marketplace system **128** (or some other commerce or publication system) at operation **180**. Upon the buyer's acceptance of the offer, at operation **182**, the seller system **124**, at operation **184**, creates and transmits a digital goods delivery package, as described above, to the digital goods delivery system **120**, as shown by arrow **140**.

[0043] Upon receiving the digital goods package from the seller, at operation **186**, the digital goods delivery system **120** stores the information regarding the digital good, at operation **188**. This operation includes, for example, the creation of a digital fingerprint and extracting the buyer identifier, which have already been described above. A notification is then prepared and sent to the buyer system **126**, at operation **190**. After the buyer has received and downloaded the digital good, at operation **192**, and the download is confirmed by the digital goods delivery system **120** at operation **194**, a payment authorization is sent by the system **120** to the payment system **130**, at operation **196**.

[0044] Upon receiving the payment authorization at operation **198**, the payment system **130** conducts the necessary financial transaction by debiting the buyer's account and crediting the seller's account, shown at operation **200**. If, however, the download is not confirmed by the digital goods delivery system **120**, a suitable notification is sent to the buyer and/or seller system, shown at operation **202**.

[0045] In the event of there being a dispute regarding the digital good delivered to the buyer, and referring now to FIG. **5**, operations **178**, **180**, **182**, **184**, **186**, **188**, **190** and **192** would still take place as described above. FIG. **5** does illustrate an alternative way in which payment can be made in the event of there not being a dispute. This alternative way comprises the buyer confirming that the delivered digital good is as described, at operation **204**, with the buyer then him- or herself transmitting a payment authorization to the payment system **130**, as shown by operation **206**. The operations **198** and **200** would then take place as described above with reference to FIG. **4**.

[0046] However, in the event of the buyer indicating that the delivered digital good is not as described, at operation **204**, the buyer will need to upload the delivered digital good back to the digital goods delivery system **120**, at operation **208**. The digital goods delivery system **120** will then create a digital fingerprint of the disputed, allegedly incorrect delivered digital good, indicated by operation **210**. The digital goods delivery system **120**, using the fingerprint comparison component **174** shown in FIG. **1**, can then compare the digital fingerprint

of the disputed digital good with the digital fingerprint of the digital good that was actually delivered to the buyer, which would have been stored in digital good table **154** of the digital goods database **148**, as shown by operation **212**.

[0047] Should the two digital fingerprints match, then a genuine dispute is recognized and a dispute resolution procedure can be entered into, as shown by operation **214**. For example, matching fingerprints indicate that the digital good that the buyer is disputing is the same digital good that was delivered to the buyer via the digital good delivery system **120**.

[0048] In one embodiment, the digital goods delivery system **120** may itself included a dispute resolution component (not shown). In an alternative embodiment, the dispute resolution procedure may be supported by a dispute resolution mechanism provided external to the digital goods delivery system **120**. For example, the marketplace system **128** may provide such a dispute resolution mechanism (e.g., the dispute resolution applications **366** discussed below with reference to FIG. **7**). The dispute resolution component is to facilitate resolution of a dispute regarding the digital good, and, in one embodiment, to recognize a genuine dispute concerning the digital good if the fingerprint of the digital good in question and corresponds to a fingerprint of a further digital good uploaded to the system as part of a dispute registration.

[0049] If, however, the two digital fingerprints do not match, then an attempted fraud activity against the buyer can be logged in the user table **156** of the digital goods database **148**, as shown by operation **216**.

Platform Architecture

[0050] FIG. **6** is a network diagram depicting a system **310**, according to one example embodiment of the present invention, having a client-server architecture. A commerce (or publication) system, in the example form of a network-based marketplace **312**, provides server-side functionality, via a network **314** (e.g., the Internet) to one or more clients. FIG. **6** illustrates, for example, a web client **316** (e.g., a browser, such as the Internet Explorer browser developed by Microsoft Corporation of Redmond, Wash. State), and a programmatic client **318** executing on respective client machines **320** and **322**.

[0051] Turning specifically to the network-based marketplace **312**, an Application Program Interface (API) server **324** and a web server **326** are coupled to, and provide programmatic and web interfaces respectively to, one or more application servers **328**. The application servers **328** host one or more marketplace applications **330** and payment applications **332**. The application servers **328** are, in turn, shown to be coupled to one or more databases servers **334** that facilitate access to one or more databases **336**.

[0052] The marketplace applications **330** provide a number of marketplace functions and services to users that access the marketplace **312**. The payment applications **332** likewise provide a number of payment services and functions to users. The payment applications **330** may allow users to quantify for, and accumulate, value (e.g., in a commercial currency, such as the U.S. dollar, or a proprietary currency, such as "points") in accounts, and then later to redeem the accumulated value for products (e.g., goods or services) that are made available via the marketplace applications **30**. While the marketplace and payment applications **330** and **332** are shown in FIG. **6** to both form part of the network-based marketplace **312**, it will be appreciated that, in alternative embodiments of the present invention, the payment applications **332** may form part of a payment service that is separate and distinct from the marketplace **312**.

[0053] Further, while the system **310** shown in FIG. **6** employs a client-server architecture, the present invention is of course not limited to such an architecture, and could equally well find application in a distributed, or peer-to-peer, architecture system. The various marketplace and payment applications **330** and **332** could also be implemented as standalone software programs, which do not necessarily have networking capabilities.

[0054] The web client **316**, it will be appreciated, accesses the various marketplace and payment applications **330** and **332** via the web interface supported by the web server **326**. Similarly, the programmatic client **318** accesses the various services and functions provided by the marketplace and payment applications **330** and **332** via the programmatic interface provided by the API server **324**. The programmatic client **318** may, for example, be a seller application (e.g., the TurboLister application developed by eBay Inc., of San Jose, Calif.) to enable sellers to author and manage listings on the marketplace **312** in an off-line manner, and to perform batch-mode communications between the programmatic client **318** and the network-based marketplace **312**.

[0055] FIG. **6** also illustrates a third party application **338**, executing on a third party server machine **340**, as having programmatic access to the network-based marketplace **312** via the programmatic interface provided by the API server **324**. For example, the third party application **338** may, utilizing information retrieved from the network-based marketplace **312**, support one or more features or functions on a website hosted by the third party. The third party website may, for example, provide one or more promotional, marketplace or payment functions that are supported by the relevant applications of the network-based marketplace **312**.

Marketplace Applications

[0056] FIG. **7** is a block diagram illustrating multiple marketplace and payment applications **330** that, in one example embodiment of the present invention, are provided as part of the network-based marketplace **312**. The marketplace **312** may provide a number of listing and price-setting mechanisms whereby a seller may list goods or services for sale, a buyer can express interest in or indicate a desire to purchase such goods or services, and a price can be set for a transaction pertaining to the goods or services. To this end, the marketplace applications **30** are shown to include one or more auction applications **344** which support auction-format listing and price setting mechanisms (e.g., English, Dutch, Vickrey, Chinese, Double, Reverse auctions etc.). The various auction applications **344** may also provide a number of features in support of such auction-format listings, such as a reserve price feature whereby a seller may specify a reserve price in connection with a listing and a proxy-bidding feature whereby a bidder may invoke automated proxy bidding.

[0057] A number of fixed-price applications **346** support fixed-price listing formats (e.g., the traditional classified advertisement-type listing or a catalogue listing) and buyout-type listings. Specifically, buyout-type listings (e.g., including the Buy-It-Now (BIN) technology developed by eBay Inc., of San Jose, Calif.) may be offered in conjunction with an auction-format listing, and allow a buyer to purchase

goods or services, which are also being offered for sale via an auction, for a fixed-price that is typically higher than the starting price of the auction.

[0058] Store applications **348** allow sellers to group their listings within a "virtual" store, which may be branded and otherwise personalized by and for the sellers. Such a virtual store may also offer promotions, incentives and features that are specific and personalized to a relevant seller.

[0059] Reputation applications **350** allow parties that transact utilizing the network-based marketplace **312** to establish, build and maintain reputations, which may be made available and published to potential trading partners. Consider that where, for example, the network-based marketplace **312** supports person-to-person trading, users may have no history or other reference information whereby the trustworthiness and credibility of potential trading partners may be assessed. The reputation applications **350** allow a user, for example through feedback provided by other transaction partners, to establish a reputation within the network-based marketplace **312** over time. Other potential trading partners may then reference such a reputation for the purposes of assessing credibility and trustworthiness.

[0060] Personalization applications **352** allow users of the marketplace **312** to personalize various aspects of their interactions with the marketplace **312**. For example a user may, utilizing an appropriate personalization application **352**, create a personalized reference page at which information regarding transactions to which the user is (or has been) a party may be viewed. Further, a personalization application **352** may enable a user to personalize listings and other aspects of their interactions with the marketplace **312** and other parties.

[0061] In one embodiment, the network-based marketplace **312** may support a number of marketplaces that are customized, for example, for specific geographic regions. A version of the marketplace **312** may be customized for the United Kingdom, whereas another version of the marketplace **312** may be customized for the United States. Each of these versions may operate as an independent marketplace, or may be customized (or internationalized) presentations of a common underlying marketplace.

[0062] Navigation of the network-based marketplace **312** may be facilitated by one or more navigation applications **356**. For example, a search application enables key word searches of listings published via the marketplace **312**. A browse application allows users to browse various category, catalogue, or inventory data structures according to which listings may be classified within the marketplace **312**. Various other navigation applications may be provided to supplement the search and browsing applications.

[0063] In order to make listings, available via the network-based marketplace **312**, as visually informing and attractive as possible, the marketplace applications **330** may include one or more imaging applications **358** utilizing which users may upload images for inclusion within listings. An imaging application **358** also operates to incorporate images within viewed listings. The imaging applications **358** may also support one or more promotional features, such as image galleries that are presented to potential buyers. For example, sellers may pay an additional fee to have an image included within a gallery of images for promoted items.

[0064] Listing creation applications **360** allow sellers conveniently to author listings pertaining to goods or services that they wish to transact via the marketplace **312**, and listing management applications **362** allow sellers to manage such listings. Specifically, where a particular seller has authored and/or published a large number of listings, the management of such listings may present a challenge. The listing management applications **362** provide a number of features (e.g., auto-relisting, inventory level monitors, etc.) to assist the seller in managing such listings. One or more post-listing management applications **64** also assist sellers with a number of activities that typically occur post-listing. For example, upon completion of an auction facilitated by one or more auction applications **344**, a seller may wish to leave feedback regarding a particular buyer. To this end, a post-listing management application **364** may provide an interface to one or more reputation applications **350**, so as to allow the seller conveniently to provide feedback regarding multiple buyers to the reputation applications **350**.

[0065] Dispute resolution applications **366** provide mechanisms whereby disputes arising between transacting parties may be resolved. For example, the dispute resolution applications **366** may provide guided procedures whereby the parties are guided through a number of steps in an attempt to settle a dispute. In the event that the dispute cannot be settled via the guided procedures, the dispute may be escalated to a third party mediator or arbitrator.

[0066] A number of fraud prevention applications **368** implement various fraud detection and prevention mechanisms to reduce the occurrence of fraud within the marketplace **312**.

[0067] Messaging applications **370** are responsible for the generation and delivery of messages to users of the network-based marketplace **312**, such messages for example advising users regarding the status of listings at the marketplace **312** (e.g., providing "outbid" notices to bidders during an auction process or to provide promotional and merchandising information to users).

[0068] Merchandising applications **372** support various merchandising functions that are made available to sellers to enable sellers to increase sales via the marketplace **312**. The merchandising applications **380** also operate the various merchandising features that may be invoked by sellers, and may monitor and track the success of merchandising strategies employed by sellers.

[0069] The network-based marketplace **312** itself, or one or more parties that transact via the marketplace **312**, may operate loyalty programs that are supported by one or more loyalty/promotions applications **374**. For example, a buyer may earn loyalty or promotions points for each transaction established and/or concluded with a particular seller, and be offered a reward for which accumulated loyalty points can be redeemed.

Data Structures

[0070] FIG. **8** is a high-level entity-relationship diagram, illustrating various tables **390** that may be maintained within the databases **336**, and that are utilized by and support the marketplace and payment applications **330** and **332**. A user table **392** contains a record for each registered user of the network-based marketplace **312**, and may include identifier, address and financial instrument information pertaining to each such registered user. A user may, it will be appreciated, operate as a seller, a buyer, or both, within the network-based marketplace **312**. In one example embodiment of the present invention, a buyer may be a user that has accumulated value (e.g., commercial or proprietary currency), and is then able to

exchange the accumulated value for items that are offered for sale by the network-based marketplace **312**.

[0071] The tables **390** also include an items table **394** in which are maintained item records for goods and services that are available to be, or have been, transacted via the marketplace **312**. Each item record within the items table **394** may furthermore be linked to one or more user records within the user table **392**, so as to associate a seller and one or more actual or potential buyers with each item record.

[0072] A transaction table **396** contains a record for each transaction (e.g., a purchase transaction) pertaining to items for which records exist within the items table **394**.

[0073] An order table **398** is populated with order records, each order record being associated with an order. Each order, in turn, may be with respect to one or more transactions for which records exist within the transactions table **396**.

[0074] Bid records within a bids table **400** each relate to a bid received at the network-based marketplace **312** in connection with an auction-format listing supported by an auction application **344**. A feedback table **402** is utilized by one or more reputation applications **350**, in one example embodiment, to construct and maintain reputation information concerning users. A history table **404** maintains a history of transactions to which a user has been a party. One or more attributes tables **406** record attribute information pertaining to items for which records exist within the items table **394**. Considering only a single example of such an attribute, the attributes tables **406** may indicate a currency attribute associated with a particular item, the currency attribute identifying the currency of a price for the relevant item as specified in by a seller.

[0075] FIG. **9** shows a diagrammatic representation of machine in the example form of a computer system **500** within which a set of instructions, for causing the machine to perform any one or more of the methodologies discussed herein, may be executed. In alternative embodiments, the machine operates as a standalone device or may be connected (e.g., networked) to other machines. In a networked deployment, the machine may operate in the capacity of a server or a client machine in server-client network environment, or as a peer machine in a peer-to-peer (or distributed) network environment. The machine may be a server computer, a client computer, a personal computer (PC), a tablet PC, a set-top box (STB), a Personal Digital Assistant (PDA), a cellular telephone, a web appliance, a network router, switch or bridge, or any machine capable of executing a set of instructions (sequential or otherwise) that specify actions to be taken by that machine. Further, while only a single machine is illustrated, the term "machine" shall also be taken to include any collection of machines that individually or jointly execute a set (or multiple sets) of instructions to perform any one or more of the methodologies discussed herein.

[0076] The example computer system **500** includes a processor **502** (e.g., a central processing unit (CPU) a graphics processing unit (GPU) or both), a main memory **504** and a static memory **506**, which communicate with each other via a bus **508**. The computer system **500** may further include a video display unit **510** (e.g., a liquid crystal display (LCD) or a cathode ray tube (CRT)). The computer system **500** also includes an alphanumeric input device **512** (e.g., a keyboard), a cursor control device **514** (e.g., a mouse), a disk drive unit **516**, a signal generation device **518** (e.g., a speaker) and a network interface device **520**.

[0077] The disk drive unit **516** includes a machine-readable medium **522** on which is stored one or more sets of instructions (e.g., software **524**) embodying any one or more of the methodologies or functions described herein. The software **524** may also reside, completely or at least partially, within the main memory **504** and/or within the processor **502** during execution thereof by the computer system **500**, the main memory **504** and the processor **502** also constituting machine-readable media.

[0078] The software **524** may further be transmitted or received over a network **526** via the network interface device **520**.

[0079] While the machine-readable medium **522** is shown in an example embodiment to be a single medium, the term "machine-readable medium" should be taken to include a single medium or multiple media (e.g., a centralized or distributed database, and/or associated caches and servers) that store the one or more sets of instructions. The term "machine-readable medium" shall also be taken to include any medium that is capable of storing, encoding or carrying a set of instructions for execution by the machine and that cause the machine to perform any one or more of the methodologies of the present invention. The term "machine-readable medium" shall accordingly be taken to include, but not be limited to, solid-state memories, optical and magnetic media, and carrier wave signals.

[0080] Thus, a method and system to deliver a digital good from a seller to a buyer have been described. Although the present invention has been described with reference to specific example embodiments, it will be evident that various modifications and changes may be made to these embodiments without departing from the broader spirit and scope of the invention. Accordingly, the specification and drawings are to be regarded in an illustrative rather than a restrictive sense.

What is claimed is:

1. A method of delivering a digital good from a seller to a buyer, the method including:

receiving a digital goods package from the seller, the digital goods package including the digital good and a buyer identifier;

storing the digital goods package;

extracting the buyer identifier from the digital goods package;

notifying the buyer, based on the buyer identifier, that the digital good has been received from the seller and is ready to be collected by the buyer; and

allowing the buyer to access and retrieve the digital good.

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