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from the Media Interface to the Central Controller and Presentation Processor **1000** FIG. **2a** The data fields contained in the Presentation Rules Database **6650** will vary from Media type to Media type, depending on the types of media and interactive presentations that are supported by the given instance of the present invention and the design of the presentations. Some fields that might be maintained are presentation templates; blocked words; blocked phrases; blocked references; blocked URLS; grammar guidelines; spelling dictionaries; presentation size restrictions; photo or graphics specifications such as size, compression, and file format; and any other guidelines, benchmarks, or controlling algorithms.

The Media Inventory Database (optional) **6665** will have data fields containing information that monitors and controls the inventory of products and services offered by the Media within the interactive Presentation and Configuration Program **4715** of the Seller Interface **4000** of the present invention In the preferred embodiment of the present invention, the Media Accounting or Management Program **6000B** maintains the inventory data If that software cannot communicate or can only communicate partial data with the present invention, then the Media Inventory Database **6665** would be used alone or in combination with the Media Accounting or Management Program **6000B**, respectively The embodiment of the present invention communicates with the Media Accounting or Management Program **6000B** for the synchronization of inventory and other data that can be coordinated The data fields within the Inventory Database (optional) **6665** will vary from Media type to Media type, depending on the type of products, goods, or services that are being sold or reserved The reason that the Media Inventory Database **6665** is optional is that some media types such as newspaper classified ads or printed directories such as regional phone directories have no real limit as to the number or quantity of presentations that they can accept. Therefore there would be no need to track or control inventory

The programs of this embodiment of Media Interface **6000** are; Media Configuration Program **6717**, Transaction Processing Program **6720**, Communication and Transport Program **6760**, Media Accounting or Management Program **6000B**, and other programs as may be necessary or desirable.

The Presentation and Configuration Program **6717** is both the gateway to the present invention and the controlling software interface for the Media The Media Configuration Program **6717** introduces the Media to the instance of the present invention The Media Configuration Program **6717** presents the Media with a series of questions to answer The answering of these questions contributes to the Media Database **6635**, Presentation Database **6640**, Presentation Rules Database **6650**, Media Inventory Database (optional) **6665**, and any other databases necessary The Media Configuration Program **6717** monitors the responses to the questions asked, text entry areas, photos, graphics, and other input, either required or optional

Within this embodiment of the present invention, the Transaction Processing Program **6720** is not utilized, as the Media Accounting or Management Program **6000B** performs its functions If there is no Media Accounting or Management Program **6000B** or it is not able to handle those functions, then the Transaction Processing Program **6720** will perform the necessary functions to process the incoming Transaction Messages. These messages may update databases; notify Media of product, goods, or services sold or reserved; notify Media of prices or rates paid; perform the

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necessary confirmations of available inventory and rates/pricing; create or send confirmation messages to buyer or other requested confirmation methods; and perform other functions necessary to process the incoming transaction.

The Communication and Transport Program **6760** monitors, directs, and controls the receiving and transmitting of messages between the Media and the Central Controller and Presentation Processor **1000** FIG. **2a**. During the setup of the Media Configuration Program **6717**, the Communication and Transport Program **6760** is initialized and tested with the Modem **6330** and/or Network Interface **6340** The functions of the Communication and Transport Program **6760** are largely transparent to the Media It should be noted, however, that in this embodiment of the present invention, the Media Interface **6000** should be left on, with the Communication and Transport Program **6760** running, 24 hours a day, 7 days a week This is necessary so that the Transaction Processing Program **6720** can receive and process any transaction messages from the Central Controller and Presentation Processor **1000** FIG. **2a** regardless of the hour of the day.

Buyer's Use of Present Invention Demonstrating Transaction Processing and Access Delivery Substitution

The preferred embodiment of the present invention allows for "open access" to all electronic presentations by assembling the presentations in an accessible format that can be searched and read by independent, public, electronic search engines as well as by individual private search programs. We are referring to Internet Search Engines such as Yahoo, Lycos, Web Crawler, Excite, Hotbot, Altavista, and other referral and/or robotic, publicly accessible "Search Engines." The block diagram of FIG. **3a** through **3k** is an example of the preferred embodiment of the present invention that, for this example, has been configured for presenting lodging and event service-type sellers.

With this open-access design or architecture, the Buyer may choose any of the available access methods to find or search for the goods, products, events, or services represented If the Buyer is aware of how to access the directory, index, or presentation site that may contain the subject presentations that the Buyer is interested in, he can go directly to the site or direct his personal search program to search the site This searching of the site may be done either on a single search basis or as part of a group or list of sites that the Buyer wants to search As an example, if the Buyer is looking for lodging in a given city, the Buyer might give instructions and search parameters to the Buyer's private search program Those instructions and search parameters would include a list of sites that the Buyer wants to search That list of sites could contain a wide range of sites that have been created under various methods including the present invention The private search program can perform the searches while the Buyer is waiting for the results or can be scheduled to search during off-peak hours, then present the search results to the Buyer at his convenience The search results delivered to the Buyer are a listing of those pages or presentations that meet the search instructions and parameters that were entered by the Buyer (blocks **10100**, **10110–10118**).

If the Buyer has the access location knowledge, he also has the option to access the presentations directly using Internet access and any Internet Browser such as Netscape 4.0 or any other browser software. Once the Buyer has accessed the site directly, he has the choice to either conduct a search for the desired products, goods, or services using the on-site search capabilities or browse the presentations much the same way one would browse the aisles of books at

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a library Search methods of the present invention can vary from instance to instance, but the preferred embodiment would always give the option of a full text-based search of all presentations or a database search of the information contained within the Final Presentation Database 2645 FIG 2b. The search function is easily accessed by the Buyer entering key words or phrases that will most likely result in finding the information that he wants (blocks 10120–10126) The search results obtained from the on-site search function will direct the Buyer to those presentations contained within that Central Presentation and Selection Server 2000, but not to other sites or sources. For the Buyer who wishes to browse the structure of the presentations contained on the Central Presentation and Selection Server 2000, the design and architecture of the presentation structure will direct him to the information he seeks by means of subject indexes and directories

Buyers who are not aware of how to access the directory, index, or presentation site can access the presentations by using the public search engines such as Yahoo, Lycos, Web Crawler, Excite, Hotbot, Altavista, and other referral and/or robotic publicly accessible "Search Engines". With the open-access format and structure, the present invention allows the search engines to have full access to the presentations to review and index the subject matter of each presentation Every search engine uses different algorithms to conduct the search and to establish the priorities in presenting the results of the requested searches. The result of these searches is presented to the Buyer in the form of direct references to the presentations which the search algorithms have determined contain the requested information (blocks 10102, 10104)

Once the Buyer has narrowed his information search to a manageable amount by either automated search systems or by browsing, the Buyer would then review the presentations available (blocks 10140, 10150) If, for example, the Buyer is searching for lodging, he would, after deciding on a specific lodging facility and room type, request a reservation for a given set of dates (blocks 10660,10162) This request is made interactively while he views the presentations on the Central Presentation and Selection Server 2000. The Transaction Negotiation Program 2725 processes that request, using the information contained within the Inventory Database 2660 and the Referral Database 2670 if necessary Continuing the lodging example, the program checks if the requested room is available for the dates requested and, if not, enters a negotiation mode. The program will suggest alternative accommodations (different rooms or even a different lodging facility and rooms), using logic to suggest the best alternative. As an example of this logic, the algorithms would not suggest a bridal suite when the Buyer has requested a single economy room, or it may offer a discount for an upgraded room (block 10170–10198). If the suggested alternatives do not meet the needs of the Buyer, then the buyer is referred back to the indexes to review the lodging possibilities again and start over (block 10140). Once the Buyer has chosen a facility, room, and dates (in the lodging example) which the Transaction Negotiation Program 2725 accepts, that program puts that particular inventory on a hold status to allow the Buyer time to respond with the additional information necessary to make the purchase or reservation (block 10200, 10202). It is important that the Buyer is not burdened with inputting the required information until the items (in the lodging example, room and dates) that he wants are confirmed to be available. If a Buyer is forced to input the additional information and then find that the inventory is not available, he will feel that the system has

wasted his time and will probably not use the service in the future Only when the program first confirms the availability of the inventory and then asks for the additional information will the Buyer view the process as appropriate and necessary The type and amount of additional information that is required largely depends on the type of products, goods, or services that are represented In the preferred embodiment of the present invention, the Buyer would be prompted to apply for a Delivery or Network ID Once the Buyer has this ID number and the associated password, then he would only have to enter that ID number for future use instead of entering all required information The Delivery or Network ID is also used as a substitute for the more traditional methods of proof-of-access such as tickets, passes, admission documents, reservations, reservation confirmations, and other physical proof of purchase In this embodiment of the present invention, the Delivery or Network ID could also be used to give discounts for use, promotional offers, upgrades, or other marketing incentives The information required in the application for the Delivery or Network ID would be owner names; contact names, numbers, and address; payment and credit information or payment method information; and any other information necessary to support the Delivery or Network ID. The Buyer would also be required to identify which physical card or ID that he currently holds, he intends to use as the Delivery or Network ID. (blocks 10220–10232) An example of the appropriate use for the Delivery or Network ID would be in conjunction with an instance of the present invention that is configured to represent professional sporting events The Buyer in our example could purchase access to a given represented sporting event through the Central Presentation and Selection Server 2000, and the only requirement of the Buyer when arriving at the facility to attend the event would be to present his Delivery or Network ID for processing If the Buyer has a Delivery or Network ID, he is prompted for the Delivery or Network ID and its password If the Buyer does not want a Delivery or Network ID, he is prompted for the necessary information in lieu of the Delivery or Network ID Depending on the information required and the responses from the Buyer, the Transaction Negotiation Program continues to prompt the Buyer until all information requirements have been met (blocks 10220–10262).

Having received and reviewed all the required information requested from the Buyer, the Transaction Negotiation Program 2725 then requests a transaction approval code from a credit card processing company If the credit card is not approved, the program then requests an alternative payment method from the Buyer (blocks 10270–10282)

A Transaction ID is assigned after the Transaction Approval Code has been received (block 10290) With the assignment of the Transaction ID, the Transaction Negotiation Program 2725 creates a confirmation proof of purchase or order (Confirmation of Booking in the lodging example). This confirmation is presented to the Buyer with prompts for choosing any additional information that may be available to add to this document prior to the Buyer printing it. With the lodging example, the additional information might include directions to the facility, description and photos of the facility and or room, list of amenities of the facility such as pool and gym, list of activities in the area, or any other information of interest or concern to the Buyer (blocks (10300–10308) If, in the preferred embodiment of the present invention, the Buyer later wishes to cancel or modify his purchase, reservation, or request, he would return to the Seller's presentation and access and modify his purchase or reservation by using his Delivery or Network ID, Transac-

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tion ID, confirmation number, credit card number, some combination of these, or some other identification method (blocks **10312–10316**)

After the Transaction ID has been assigned and the Buyer has been presented with the purchase response, the Transaction Negotiation Program **2725** determines if the inventory sold or reserved was controlled by the Resource Saver Protocol. If the inventory is controlled by the Resource Saver Protocol, the program determines if the Inventory Notification Level has been reached and if so, what the remaining inventory count currently is after subtracting the transactions currently on hold (blocks **10320–10324**) Regardless of whether the Resource Saver Protocol applies to a particular instance of this invention, the program must calculate the Inventory Confirmation Number (block **10330**) This Inventory Confirmation Number, which varies from seller type to seller type, is used as a "check number" to confirm that all components, the Central Presentation and Selection Server **2000**, the Central Controller and Presentation Processor **1000**, and the Seller Interface **4000** have their associated inventory databases in synchronization

The Transaction Negotiation Program **2725** also assigns a sequential transaction message number associated with this transaction It is through the tracking of this number that the Central Controller and Presentation Processor **1000** and Seller Interface **4000** can determine if a gap exists and a missing transaction message needs to be requested from the component that sent the missed message.

The Transaction Negotiation Program **2725** updates Buyer Database **2610**, Transaction Database **2620**, Inventory Database **2660**, and any other databases necessary. It uses all the aforementioned data to create the Transaction Message that is sent from the Central Presentation and Selection Server **2000** to the Central Controller and Presentation Processor **1000** (blocks **10340, 10342**)

Upon receipt of the Transaction Message, the Transaction Processing Program **1720** on the Central Controller and Presentation Processor **1000** confirms the transaction logic and then updates the Buyer Database **1610**, Transaction Database **1620**, Inventory Database **1660**, and any other database affected By confirming the transaction logic, we mean that the Transaction Processing Program **1720** recalculates all of the calculations done by the Transaction Negotiation Program **2725** on the Central Presentation and Selection Server **2000**. This is done for quality control and security reasons (blocks **10360–10364**)

The Transaction Processing Program **1720** then creates the Transaction Messages to send to the Seller Interface **4000** and updates any other Central Presentation and Selection Servers **2000** that may be affected by any change in inventory as a result of this transaction It should be noted that this is an example of the savings presented by the Resource Saver Protocol For those items of inventory that are controlled by the Resource Saver Protocol, Transaction Messages need not be sent to the related or sibling Central Presentation and Selection Servers **2000** unless the Notification Level has been reached or breached for that group of inventory. For those items of inventory that are not controlled by the Resource Saver Protocol, the Central Controller and Presentation Processor **1000** sends Transaction Messages to the Seller Interface **4000** and to all affected Central Presentation and Selection Servers **2000**. In this embodiment of the present invention, the Central Controller and Presentation Processor **1000** and any Central Presentation and Selection Servers **2000** are linked via a full-time network connection, which would allow the update or Transaction Message to be sent via the network The Sellers could be on the same network, but more likely would be communicating with the use of modem on demand, meaning that a communications link would only be established when there were Transaction Messages, Updates, or other data or information to exchange or deliver. The communications between the Central Presentation and Selection Server **2000**, the Central Controller and Presentation Processor **1000** and the Seller Interface **4000** is either protected by encryption or only takes place on a private network or secure line modem (blocks **10370–10400**)

Upon receiving a Transaction Message, either the Transaction Processing Program **4720** or the Seller Accounting or Management Program **4000B** of the Seller Interface **4000** confirms that the purchased inventory or reservation is available and recalculates and confirms all needed data contained within the Transaction Message If the Transaction Message is found to contain erroneous or missing data, then error messages are sent to the Central Controller and Presentation Processor **1000**, the management or administrator, and to the Buyer (blocks **10410–10432**) It should be noted that in this embodiment of the present invention, the Transaction Processing Program **4720** is present but disabled whenever a compatible Seller Accounting or Management Program **4000B** is in use and capable of performing the functions of the Transaction Processing Program **4720**

In this embodiment of the present invention, the Transaction Processing Program **4720** or the Seller Accounting or Management Program **4000B** of the Seller Interface **4000**, whichever is enabled, will have the option to be set to automatically accept or reject the purchase or reservation without any further operator interaction If the automatic option is not invoked by the management of the Seller Interface **4000**, then the processing of the Transaction Message would require the human operator to review the transaction and either accept or reject the transaction and provide the appropriate responses (blocks **10440–10456**)

All appropriate databases are updated, and then, if the Transaction Processing Program **4720** has been used instead of the Seller Accounting or Management Program **4000B**, a Transaction Message may be sent to a second-level or non-compatible accounting or management software An embodiment of the present invention distinguishes between a fully compatible Seller Accounting or Management Program **4000B** that performs all the necessary functions and a second-level or non-compatible accounting or management software that the seller may be using that does not meet the standards of the present invention (blocks **10460–10472**)

If the inventory or reservations purchased are controlled by the Resource Saver Protocol, then the Transaction Processing Program **4720** or the Seller Accounting or Management Program **4000B** performs the appropriate inventory calculations. If the inventory level has reached or breached the notification level, then the Transaction Processing Program **4720** or the Seller Accounting or Management Program **4000B** must send a transaction message to the Central Controller and Presentation Processor **1000**, which in turn sends it to the Central Presentation and Selection Servers **2000** The transaction message prompts the Central Controller and Presentation Processor **1000** and the Central Presentation and Selection Servers **2000** to update their respective databases. Regardless of whether or not the Resource Saver Protocol has been activated, the Transaction Processing Program or Seller Accounting or Management Program **4000B** sends an Acknowledgment Message to the Central Controller and Presentation Processor **1000** to confirm that it has received and processed the Transaction Message (blocks **10480–10490**)

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Depending on the Seller type, the Transaction Message may contain a request from the Buyer for a confirmation of the purchase or reservation This request will be delivered to the Seller and, by necessity, would primarily be handled or satisfied outside the realm of the present invention (blocks 10500–10512)

If the purchased item is to be delivered to the buyer, then the alternative block diagram FIG 3i-a shows the possible configuration of that transaction flow. This configuration would be for goods or products that might require physical delivery of the good or product to the Buyer The Central Presentation and Selection Server 2000 formats and sends a Transaction Message, which contains any shipping request or special instructions to the Seller The Central Controller and Presentation Processor 1000 processes the Transaction Message and then sends it to the Seller Interface 4000 The Seller will respond to those shipping and special requests outside the realm of the present invention (FIG 3i-a, blocks 10500a–10510a).

In keeping with the configuration of the block diagram that is intended for the delivery of tickets, passes, admission documents, reservations, or reservation confirmations, all processing is completed at block 10512 until the Buyer arrives at the facility, site, business, or venue to be admitted For events that might traditionally require a ticket, pass, admission document, or reservation confirmation as proof of admittance, an instance of the present invention has several options for the confirmation and delivery of said documents. It should be noted that even though the Central Presentation and Selection Server 2000 supports the use of the Network or Delivery ID, which makes repeated use of the Central Presentation and Selection Server 2000 easier for the Buyer to utilize The physical use of the Network or Delivery ID is optional at the level of the facility, site, business, or venue. The preferred embodiment of the present invention, when fully configured for the acceptance of the Delivery or Network ID, allows the Buyer several options. If the Buyer arriving at the facility, site, business, or venue chooses to use the Delivery or Network ID, he would simply have his ID Card read by an unattended automatic reader that would either print the necessary ticket, pass, admission document, or reservation confirmation or immediately allow admittance through a gate or turnstile (blocks 10550–10574) The savings to the Seller, in the form of time and labor for processing admittance, is obvious. The real advantage, however, comes in the form of Buyer goodwill resulting from the convenience of reducing the time it takes to be admitted or to obtain the physical tickets, passes, admission documents, reservations, or reservation confirmations The use of the Delivery or Network ID within an embodiment of the present invention is accomplished by either the Buyer Admission Control Program 4770, which is a component of the present invention, or by compatible third-party programs such as the Seller Admission Control Program 4000C or the Seller Accounting or Management Program 4000B with an integrated admission control program to either print tickets or passes or open physical barriers.

If the Seller's facility, site, business, or venue does not support the automatic processing of the Buyer's admittance, then the Seller may use the Delivery or Network ID, with an attendant visually examining the ID or operating the scanner or reader and responding to the results with either admittance or the printing of the tickets, passes, admission documents, reservations, or reservation confirmations. This would not be as efficient as the automatic process, but may present a transition method to the full implementation of the preferred embodiment of the present invention (blocks

10580–10612) In each of these methods, there is a small risk of the physical failure of the Delivery or Network ID or of the reader to accurately identify the Buyer In all cases of failure, the management would manually confirm the identification and process the admittance of the Buyer (block 10620) In this embodiment of the present invention, the Delivery or Network ID is a Magnetic, Smart, or Optical Card similar to a standard Credit Card. The present invention allows for the use of any unique identification method either presently in use or to be developed in the future The use of biometric scanners for voice, full face, finger print, iris, or other identification methods are just becoming commercially economical for this type of use and will require the secure and verified obtaining of the original scan or sample

Buyer is admitted to facility or event (block 10630)

Seller's Use of Present Invention

The preferred embodiment of the present invention allows Sellers to have a "self-serve" relationship to the networks, directories, indexes, printed media, and other sales and advertising channels (resident and non-resident media) available to and serviced by the given instance of the present invention. This relationship and process is accomplished through the Presentation and Configuration Program 4715 The Seller obtains the Presentation and Configuration Program 4715 on either a compact disc (CD-ROM), DVD disc, downloaded file, or some other method, then installs the Presentation and Configuration Program 4715 and its associated programs on an either dedicated or shared-use computer (diagrammed block 11102 to 11106 FIG 4a) This embodiment of this component of the present invention is shown as Seller Interface 4000 FIG 2c, which shows the relationship between the Presentation Program 4715 and the associated hardware, programs and databases of Seller Interface 4000.

Once installed and configured, the Presentation and Configuration Program 4715 allows the Seller to control access to the program through password protection (block 11120), allowing only authorized personal of the Seller to access the program This access control is important because the Presentation and Configuration Program 4715 may control substantial portions of the seller's sales, therefore the presentations should only be created or modified by authorized personnel

Upon accessing the Presentation and Configuration Program 4715, the new Seller/client is presented with a series of forms containing yes/no choices, text entry areas, menu-driven choices, and other data and information entry methods These forms lead the Seller through his establishment as a client of the given instance of the present invention This portion of the Presentation and Configuration Program 4715 prompts the Seller for information such as contact numbers, contact address, payment methods, and other Seller/client information for the use of the management of the instance of the present invention in working with and servicing the Seller This portion of the Presentation and Configuration Program 4715 also presents the service contract for the review and agreement of the Seller. This agreement, complete with the management information, is then transmitted to the Central Controller and Presentation Processor 1000 along with all other Seller client information upon the first submission of the Seller's presentation information. In the case of an existing Seller/client, the Seller enters his password (block 11120) to access the body of the program for creation and maintenance of his presentations

Upon entering the information to establish the client relationship, the new Seller/client is presented with the forms that give the choices of presentations, interactive sales

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presentations, resident and non-resident media that are supported by the given instance of the present invention These choices are accompanied with descriptions of each choice and the approximate cost of each presentation for all choices of presentations, resident and non-resident media This information comes from the Presentation Rules Database 4650 Because in many cases the Seller will be receiving transactions and taking orders over the instance of the present invention, the Seller may be given the option of paying for the services by monthly, quarterly, or annual subscriptions; on a per sale or percentage basis; some combination of any of the above; or another payment method. As an example, if the instance of the present invention were configured to support "Sailboats For Sale," the Seller may be given the choice of three Internet Directories that specialize in boating-related goods and services, two printed magazines, and a subscription-based CD-ROM The Seller could then choose one or two or all of the media/means of communication in which to be represented, with all presentations created by the Presentation and Configuration Program 4715 (blocks 11130, 11132) The Presentation and Configuration Program 4715 would then prompt the Seller for the necessary and optional information to complete the presentations (block 11140, 11142) It should be noted that each presentation might have very different standards for publishing the same information In those cases, the same questions or at least similar prompts may be presented to the Seller, requiring the entering of virtually the same information in multiple locations on the forms. Although this may seem redundant to the Seller, the differences will become apparent because each separate entry is controlled by the information contained within the Presentation Rules Database 4650. As a simple example, the description in a particular Internet Directory may allow for up to 3000 characters, whereas a printed magazine may allow only 300, depending on the presentations chosen. As the Seller enters information, the Presentation and Configuration Program 4715, using the information contained in the Presentation Rules Database 4650, controls and monitors that entered information to conform to the controlling format and style for each targeted media venue or outlet presentation

After the Seller has chosen the channels and means of communication and has entered the information necessary to create all the selected presentations, the Presentation and Configuration Program 4715 notifies the Seller of the cost of and payment methods acceptable for those presentations or modifications and prompts the Seller for acceptance of the charges If the Seller does not accept the charges, then the Presentation and Configuration Program 4715 rolls the information or modifications back and notifies the Seller that the information will not be published or modified (blocks 11150–11156)

The Seller is allowed to print reports for management review or for hard copy records. Those reports include the charges and conditions that have been agreed to by the Seller (blocks 11160, 11162)

The information entered, either as a new presentation or as modifications to an existing presentation, can be sent to the Central Controller and Presentation Processor 1000 immediately or delayed for publication later. The reasons for delay could be that the presentation is geared to a given date or holiday, such as a Valentine's Day getaway offer from a resort, or is a special promotional offer to be used upon reaching a given inventory level (blocks 11170, 11172)

The Communication and Transport Program 4760 performs the transmission of the Seller's presentation information from the Seller Interface 4000 to the Central Controller and Presentation Processor 1000 The Communication and Transport Program 4760 utilizes either the modem or network connections to perform this transmission. The Communication and Transport Program 4760 applies the appropriate level of encryption of data necessary, depending on the method of transmission. In this embodiment of the present invention, the connection used for transmission between the Seller Interface 4000 and the Central Controller and Presentation Processor 1000 is a direct dial-up modem connection This configuration is more secure than public networks, even with encryption, and, due to the relatively small amount of data transmitted, has sufficient transmission capacity (blocks 11180–11190)

Once the Central Controller and Presentation Processor 1000 receives the presentation message from the Seller Interface 4000 (block 11200), the Presentation Generation Program 1710 determines if the presentation message is information from a new Seller/client or modification to an existing current presentation from an existing Seller client (block 11210). If it is a presentation message from a new Seller/client, the presentation message is passed to the General Management Program 1730 The General Management Program 1730 sets up the necessary Seller/client control accounts, payment information, contact information, database records, and any other administrative functions necessary to establish the Seller/client within the instance of the present invention and allows the creation of presentations by the Presentation Generation Program 1710 (blocks 11212, 11214). If the presentation message is from an existing Seller/client, the presentation message does not leave the control of the Presentation Generation Program 1710, which confirms the authenticity of the Seller/client presentation message prior to processing the message (block 11220, 11222).

Once the Presentation Generation Program 1710 has either confirmed the authenticity and origin of the presentation message or the message has passed through the General Management Program 1730, the Presentation Generation Program 1710 then analyses the information using the format and style guidelines contained within the Presentation Rules Database 1650 (blocks 11230, 11232) This process parallels the functions performed by the Presentation and Configuration Program 4715 and the Presentation Rules Database 4650. This duplication of function ensures both quality control of content and prevents tampering of the process by either the Seller or any non-authorized entity. This duplication of function also ensures that the latest version of the Presentation Rules Database 1650 has been applied to every presentation This embodiment of the present invention updates any changes in the Presentation Rules Database 1650 to the Presentation Rules Database 4650 using update messages to the Seller Interface 4000. Although this method should result in the Presentation and Configuration Program 4715 always using the best and most current information that has been updated to the Presentation Rules Database 4650, the integrity of the presentations is critical enough to require the duplication of this function

During the analysis of the presentation performed by the Presentation Generation Program 1710, the program reviews the information and assigns the presentations into one of three processing categories: pass, fail, and needs review (blocks 11240–11272) A presentation in the "fail" category causes a rollback of data in the Presentation Database 1640, and a message is sent to the Seller notifying them that the presentation failed and the reason why (blocks 11242–11246) Messages are also sent to the management of

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the instance of the present invention because the synchronization of the Presentation Rules Database **1650** and Presentation Rules Database **2650** should prevent this failure The management would investigate the reason for the failure and take appropriate action Those presentations in the "needs review" category are ones which have content that is not recognized as being either allowed or not allowed by the Presentation Generation Program **1710**. These presentations are referred to a human operator for review (blocks **11250–11262**) The operator will pass, fail, or edit the presentations at this point. Those that fail return to block **11242** Those that are edited are sent back to block **11230** This forces the analysis done by the Presentation Generation Program **1710** to pass every presentation. It is through this process of forcing corrections to be made, examined, and reviewed by management that the information contained within the Presentation Rules Database **1650** and the algorithms which apply that information within the Presentation Generation Program **1710** are refined (block **11272**)

Once the presentation has worked through the analysis and review process, the Presentation Generation Program **1710** passes information to the General Management Program **1730** confirming the acceptability of the presentations. The General Management Program **1730** then confirms payment method and amounts, processes credit card payments, updates databases, and performs any other administrative procedures necessary (blocks **11280–11284**).

Having passed the presentation information for content and style, the Presentation Generation Program **1710** next determines the directories and presentation indexes in which this information should be published (blocks **11290–11296**) In the preferred embodiment of the present invention, each Central Controller and Presentation Processor **1000** may support any number of client outlets, channels, resident media, or non-resident media. These client outlets, channels, resident media, or non-resident media may include Central Presentation and Selection Servers **2000**; Independent Presentation **3000**; Printed Publications, Periodicals, Directories, CD-ROMs, and other Media Interface **6000** FIG 2e; and other sales outlets, channels, or advertising methods.

The Presentation Generation Program **1710**, using the information contained within the Presentation Rules Database **1650**, then formats the presentation information for each client outlet, channel, resident media, or non-resident media (blocks 11300, 11294). New presentations are created in their entirety, while only the portions of existing presentations affected by any modifications are republished After creating or modifying the presentations, messages confirming any edits or modifications of submissions are created and sent to the Sellers (blocks **11310–11336**)

The presentations are then separated by their publication destination: resident or non-resident The presentations destined for non-resident publication are formatted into media transaction messages and sent to the appropriate Media Interface **6000** for processing and ultimate publication Upon receiving the media transaction message, the Media Interface **6000** and specifically the Transaction Processing Program **6720** or Media Accounting or Management Program **6000B** if available, will process the message and schedule the publication of the presentation depending on media type, venue, available dates or other considerations. It should be noted that the non-resident media category and Media Interface **6000** is designed to provide a nearly seamless, self serve transaction environment that can be configured for an extremely broad spectrum of media vendors, resellers, and representatives The makeup of these

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media vendors, resellers, and representatives will be in direct response to the demographics of buyers and sellers of the given instance of the present invention The configuration of the offerings to the Sellers and also the design and configuration of the Media Interface **6000** are a result of the media vendors, resellers and representatives (blocks **11340–11358**)

The presentations that are to be published in resident media are then sorted into those that the Central Controller and Presentation Processor **1000** publishes to directly, supported electronic media such as Internet, Intranet, and other similar electronic presentations and those "other" supported resident media For any given instance of the present invention there may or may not be other resident media such as printed directories and presentations. Their inclusion is entirely optional (blocks **11360, 11362**).

Presentations that the Central Controller and Presentation Processor **1000** will directly publish on media such as the Central Presentation and Selection Servers **2000** may be published either on an "urgent" or "course of business" basis. This designation is set by the Seller at the time that the "original presentation" or "update to a publication" information is sent to the Central Controller and Presentation Processor **1000** thereby allowing the Seller a measure of control if the nature of the presentation or correction warrants it. The "urgent" designation means that the Central Controller and Presentation Processor **1000** will process that presentation as soon as it receives the message. The "course of business" designation allows the Central Controller and Presentation Processor **1000** to place the presentation and any associate files into a queue for processing and publishing at a time when the resources of the network are at their lowest utilization (blocks **11370–11374**)

The publications that are directed for resident media and are to be electronically published on the Internet, Intranet, or other electronic presentation channels are matched to the supporting, linking, dependent, reference, attached, or other affected parts or components of the directories, indexes, or presentation structures to which the presentations are published Once identified, those parts or components are updated to reflect the changes caused by the new and updated presentations and information As an example of the cascading or domino effect that the publication of a new presentation might have on an instance of the present invention, suppose the Central Controller and Presentation Processor **1000** is supporting a Central Presentation and Selection Server **2000** that is configured to represent lodging A given directory for lodging may require that the new presentation be indexed by the state and city in which the lodging facility is located In the interest of giving the best and most useful presentation to potential Buyers of the lodging services, the directory could also index the lodging facility by other categories to make the Buyer's selection easier. Some of the possible logical divisions are by locations such as "Lodging by the Ocean" or "Lodging in the Mountains", by services or specialties such as "Weddings" or "Business Conference and Meeting Facilities", or by promotional offerings such as "Romantic Getaways" or "Corporate Retreats" Each of these additional categories would need indexes and supporting structures that would be updated and changed when the referenced facilities were changed or updated. It should be noted that the prior art generally allowed these indexes or categories to be accessed by the buyer using database searches thereby not allowing or promoting the open access created by the present invention.

This embodiment of the present invention is not configured to support resident media other than the core presen-

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tations intended for Internet, Intranet, and interactive electronic presentations However, depending on the demographics of the Buyers and Sellers, additional resident media can be added by the management of the instance of the present invention (block **11380**)

At this point the Presentation Generation Program **1710** contains all the presentations and presentation components that have been created or edited The Presentation Generation Program **1710** will proceed to publish or place the presentations and any supporting components in their proper locations on the Central Presentation and Selection Servers **2000** and Independent Presentation Directories and Indexes **3000** (block **11390–11414**)

Seller Setup and Use of the Resource Saver Protocol

The preferred embodiment of the present invention utilizes the Resource Saver Protocol to reduce the number of messages sent and received by all components of the present invention while maintaining the control and synchronization of any qualified inventory that is offered for sale With the reductions in the quantity of messages needed to maintain inventory synchronization, there is a corresponding reduction in all other aspects of communications and processing overhead between both collocated and remote components This savings is especially significant, with magnified results, when more than one Central Presentation and Selection Servers **2000**, sales outlets or channels are used in the marketing of the controlled inventory Although most inventory types can benefit substantially from the utilization of the Resource Saver Protocol, it is most effective when controlling those inventory items that are substitutable but may be limited in availability

It should be noted that the term inventory is used in a very broad and general sense. The term inventory can apply to goods, products, services, reservations for services, or any other identifiable unit or item to be sold, conveyed, or reserved.

The block diagram of FIGS. *5a* through *5h* is an example of the Seller's setup and use of the Resource Saver Protocol as part of this embodiment of the present invention In the first example, the instance of the present invention has been configured to represent Hotels and Lodging, and the Seller is a hotel with 312 rooms of the following types: 200 standard rooms, 100 upgrade rooms, and 12 suites

The setup of the Resource Saver Protocol is accomplished within the Presentation and Configuration Program **4715** of the Seller Interface **4000**. The seller divides the inventory into its logical groups for marketing, presentation, and sales to the Buyers In this case, the groups are standard rooms, upgrade rooms, and penthouse suites (blocks **13100, 13110**) Each item in each group of inventory must be substitutable with all the other items within that group With the example hotel, we will assume that all rooms are identical within their groups without special view or amenities (blocks **13120–13132**) If the inventory were not absolutely substitutable to any given Buyer, then the Seller would not use the Resource Saver Protocol with this inventory That does not mean that all the Inventory items or groups of a Seller must either be or not be controlled by the Resource Saver Protocol. The Seller may have any combination of Inventory items or groups controlled or not controlled by the Resource Saver Protocol

In the case of the current hotel example, the inventory is considered to be both Limited and Time Sensitive There are only a limited number of rooms of each type, and they are time sensitive in the fact that the inventory is sold by the "unit night" which, if not sold, can never be used or recovered (block **13150**)

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Next, the Seller must set the maximum units of inventory that any given Buyer will be allowed to purchase in any given single purchase. In our hotel example, the Seller might set a limit of 4 rooms for any given Buyer to purchase from any Central Presentation and Selection Server **2000** serviced by this instance of the present invention (block **13140**) By setting a reasonable maximum number of units of inventory that any given Buyer may purchase, the Seller prevents that rare but possible case of a self-serve Buyer purchasing or reserving more inventory than is available The Buyer is still allowed to purchase as much as he would like, but the purchase must be transacted in sequential "maximum unit" transactions as opposed to one large transaction

The explanation for blocks **13152** to **13184**, which covers common inventory, follows the next example The next decision pertaining to the suitability of each inventory group for control by the Resource Saver Protocol must be arrived at by assigning a number for the buffer inventory level. The purpose of this buffer is to allow for a margin of error, based on processing time and communications delays, that prevents the overselling of inventory (overbooking in the hotel example) This number is an estimate intended to be adjusted, based on the Seller's experience over time The only loss of efficiency associated with setting the buffer number too high is the cost of the communications for the extra units within the buffer category (block **13190**). In our hotel example, the management might set the buffer at 8 units (twice the maximum single purchase) as a starting point, to be adjusted later based on experience

To determine if there is sufficient inventory to realize a savings by utilizing the Resource Saver Protocol, the Seller subtracts the total of maximum single purchase units and buffer units from the total inventory. In our hotel example, the 200 standard rooms minus 4 maximum purchase rooms and minus 8 buffer rooms results in 188 rooms for which the Seller could realize savings For the upgrade rooms, the management might use the same maximum purchase number and buffer number, resulting in savings for 88 rooms In the case of the suites, the management might set the maximum purchase at 3 and the buffer at 6, which would only result in savings on 3 units This "savings" would probably not be worth implementing the Resource Saver Protocol (blocks **13210,13212**)

If the savings are sufficient enough to utilize the Resource Saver Protocol, then the Seller must determine the Notification Level The Notification Level equals the maximum purchase units plus the buffer units. In our hotel example, the Notification Level for the standard rooms and upgrade rooms would be 12, and the suites would not be covered by the Resource Saver Protocol at all due to the limited inventory (blocks **13210–13232**)

Once all groups of inventory have been analyzed and any notification levels have been set then the Presentation and Configuration Program **4715** would update its databases and transmit the settings to the Central Controller and Presentation Processor **1000**. The Central Controller and Presentation Processor **1000** would update its databases and then forward the information to any Central Presentation and Selection Servers **2000** that are affected (blocks **13260, 13262**)

It should be noted that the savings generated are more substantial than they appear to be for some Seller types. This is because the typical total sales of inventory in any given period does not reach the level that triggers the notification of Central Presentation and Selection Servers **2000** or other outlets and channels. With our hotel example, the hotel may only operate above the 88 percent occupancy of the standard

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and upgrade rooms a few days a month, thereby not triggering the communications and processing required above that notification level except for those few days.

The savings become obvious when one looks at the processing of the individual transaction messages as outlined on FIG. 5d. All transactions, from all sources, are entered in such a way as to produce transaction messages that are then processed within the total system (blocks 13270–13284) As the transaction messages are processed by the Seller Interface 4000, more specifically the Transaction Processing Program 4720 or the Seller Accounting or Management Program 4000B Only those that are not controlled by the Resource Saver Protocol and those that have reached or breached the notification level trigger the sending of transaction messages with the current inventory count to the Central Controller and Presentation Processor 1000 The Central Controller and Presentation Processor 1000 then sends that message on to all Central Presentation and Selection Servers 2000 that are affected. If that Central Controller and Presentation Processor 1000 is controlling 3 Central Presentation and Selection Servers 2000, then each message that is passed to the Central Controller and Presentation Processor 1000 generates 3 additional messages to the Central Presentation and Selection Servers 2000 (blocks 13290–13296). Those transaction messages that are controlled by the Resource Saver Protocol and do not reach or breach the Notification Level would require no messages to be sent to the Central Controller and Presentation Processor 1000 and then on to the Central Presentation and Selection Servers 2000 (blocks 13310–13320).

It would not be unreasonable to expect the hotel in our example to experience a 95 percent saving in transaction communications and the associated overhead by using the Resource Saver Protocol

Common goods and products experience the most savings within the present invention by utilizing the Transmission Level Method in conjunction with the setting of the Transmission Period.

As an example, consider a Seller of music CDs. The Seller would separate his inventory into titles to be offered Each CD of a given title is obviously substitutable with any other CD with that same title and is available in an almost unlimited supply The Seller could order or press more if needed (blocks 13100 to 13130) The inventory is substitutable and almost unlimited in supply, therefore common The setting of the maximum units of inventory that any given Buyer will be allowed to purchase with common inventory is not as critical to prevent overselling as with Limited or Time-Sensitive inventory; however, this is one of the controlling factors in setting the Transmission Level (block 13140) With a common type inventory, the savings of communications and processing while utilizing the present invention comes from the periodic processing and transmission of all transaction messages based on the setting of Transmission Levels, Transmission Periods, and Transmission Times The use of these settings is possible with common inventory items because there is no concern for overselling the inventory. The Transmission Level is the total cumulative number of inventory items sold at any given Central Presentation and Selection Server 2000 or outlet that forces a transmission of the transactions messages The Transmission Level is the maximum units of inventory allocated by the transaction messages saved, stored, or held as a batch by the Central Presentation and Selection Server 2000 or outlet that then forces the transaction messages to be transmitted to the Central Controller and Presentation Processor 1000 The initial setting of this number by the Seller

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requires the consideration of the availability of inventory and the processing and delivery of the sold inventory With our CD Seller example, if the Seller were represented on 20 Central Presentation and Selection Servers 2000, the potential sales surge caused by the maximum held units is 20 times the setting of the Transmission Level It may be unlikely that all Central Presentation and Selection Servers 2000 and outlets would reach maximum held items at the same time, but this volume can be handled with planning If the CD Seller were to set the Transmission Level at 100, then whenever each Central Presentation and Selection Servers 2000 or outlet was holding that many combined sales, it would trigger the transmission of all transaction messages and the clearing of that number or buffer (blocks 13152–13158) If the Seller utilizes the Transmission Level Method, he must also set the Transmission Period This prevents the Central Presentation and Selection Servers 2000 or outlet from holding the transactions messages indefinitely when the Transmission Level has not been reached and ensures a reasonable processing flow of transactions. If the Seller does not utilize the Transmission Level Method, he may set the Transmission Period alone to control the sending of transaction messages on a regular basis (block 13146)

The setting of the Transmission Time Control allows the Seller to direct the Central Presentation and Selection Servers 2000 or outlets to transmit their transaction messages at a specific time. The intent of this setting is to allow the Seller to schedule the transmissions to take place when the communications and processor utilization is at the lowest point during the daily business cycle The Seller is allowed to either set each Central Presentation and Selection Server 2000 or outlets to a specific time for transmission or set a specific time to be used with random offsets that have been set for the Central Presentation and Selection Servers 2000s or outlets. The use of offsets creates a spread or staggering of the times at which the Central Presentation and Selection Servers 2000s or outlets are transmitting their transaction messages, thereby better utilizing all communications and processing resources (blocks 13162–13184).

In the CD Seller example, the major savings experienced utilizing the Resource Saver Protocol would not only be in limiting the number of times messages are transmitted back and forth, but would also be in the utilization of the automatic scheduling of the communications and processing usage times so that transaction messages will be received at times of less usage This last method of savings is even more powerful when the Seller realizes more accessibility by potential buyers at high usage times when the computers and networks are freed up from transaction messages

The block diagram of FIGS. 5e through 5f is an example of the Resource Saver Protocol as used by an instance of a Central Presentation and Selection Server 2000 as part of the preferred embodiment of the present invention

Once the Buyer has made his purchase decision and has provided the necessary purchase information, the Central Presentation and Selection Server 2000 and more specifically the Transaction Negotiation Program 2725 processes and creates a transaction message for transmission to the Central Controller and Presentation Processor 1000 (block 13330) If the item of inventory is "common" and the Seller is using the Transmission Level method to control the transmission of the transaction messages, then the transaction messages being processed are placed on hold If the total of all sold inventory represented by the held transaction messages equals or exceeds the Transmission Level, then all messages are immediately sent to the Central Controller and

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Presentation Processor (blocks **13342** and **13366**) The Transmission Level is set by the Seller to prevent the accumulation of too much sold inventory on any given Central Presentation and Selection Server **2000** or other sales outlet. If the accumulated inventory sales exceed the Transmission Level at any time, then all messages are sent immediately If the Transmission Level has not been exceeded, then the transaction messages are held until the Transmission Period has elapsed and the Transmission Time has arrived (blocks **13262** through **13366**) By setting the Transmission Period, the Seller can require all transaction messages being held to be transmitted on a regular or periodic basis As an example, the Seller might require the transaction messages to be sent every 24 hours This setting allows the Seller to set the urgency of the processing of transactions messages and ensures that transaction messages are processed in a timely fashion Another setting that allows the Seller to control the workflow and processing of trans-action messages is the Transmission Offsets, which are specific to each sales outlet The Transmission Offset is a number of minutes that is assigned to each sales outlet, which is then added to the Transmission Time that has been selected by the Seller. This sets the actual time an outlet is to transmit its accumulated transaction messages. This offset allows the Seller to prevent all Central Presentation and Selection Server **2000** and other sales outlets from attempt-ing to transmit their transaction messages at exactly the same time (blocks **13356–13366**). The Seller has the option of not utilizing the Transmission Level, instead setting only the Transmission Period (blocks **13340, 13350**) This com-bination might be used for a Seller that has an unlimited inventory such as the music CDs. If the Seller sells out of current inventory, they can create unlimited additional units.

If the inventory is of a more unique or time-sensitive nature, then the Seller would probably not use the previous two methods, instead favoring the Notification Level method of the Resource Saver Protocol for all but the very unique inventory items (block **13370**) With the Notification Level being the controlling method of processing, the cri-terion is whether the Notification Level as set by the Seller has been reached or breached. If the current status of the Notification Level is such that it has not been reached or breached, then the transaction message is transmitted imme-diately to the Central Controller and Presentation Processor **1000**. If the current Notification Level has been reached or breached then the current sold units of inventory are sub-tracted from the inventory count and that information is updated to the database and added to the transmission message to be sent to the Central Controller and Presentation Processor **1000** The transmission message is processed and then transmitted from the Central Controller and Presenta-tion Processor **1000** to the Seller Interface **4000** (blocks **13372–13400**).

It should be noted that the Seller Interface **4000**, and specifically the Transaction Processing Program **4720** or the Seller Accounting or Management Program **4000B**, will make the determination for when the Notification Level has been reached or breached (block **13410**) As soon as any given transaction, either electronic or otherwise, has reduced the available inventory so that the Notification Level is reached or breached, then either the Transaction Processing Program **4720** or the Seller Accounting or Management Program **4000B** sends updates to the Central Controller and Presentation Processor **1000** and any other sales outlets affected. The Central Controller and Presentation Processor **1000** processes the message, updates its databases, and then sends the updates to any Central Presentation and Selection

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Servers **2000** under its control (blocks **13410–13418**). In any given instance of the present invention, once the Central Presentation and Selection Servers **2000** or any other sales outlet has been notified that the Notification Level has been reached or breached and given the current inventory level, then each Central Presentation and Selection Server **2000** or outlet adjusts the available inventory and adds that infor-mation to each future transaction message processed (blocks **13372–13376**)

The block diagram of FIG 5g through 5h is an example of the inventory setup and maintenance using the Resource Saver Protocol and Seller Interface **4000** as part of the preferred embodiment of the present invention.

Initial setup or adjustment of the inventory takes place by the Seller when first setting up their account and creating their presentations within the Presentation and Configura-tion Program **4715**. The seller establishes the type of inven-tory and the settings that are appropriate for the inventory's sale and control (blocks **13500**) Replaceable inventory is managed by either the Transaction Processing Program **4720** or by the Seller Accounting or Management Program **4000B** setting, adding to, or adjusting the inventory count as appropriate (blocks **13502–13516**). Fixed inventory is man-aged at the Central Presentation and Selection Server **2000** level with the inventory being set into the future at the given level set by the Seller from the Seller Interface **4000** (blocks **13510–13562**) The inventory level may vary even with fixed inventory based on Buyers purchasing or canceling the purchase of the inventory. This means that the controls utilized by the Notification Level for a given inventory could be turned on, then off, then back on, several times based on purchases and cancellation of purchases This on-again off-again tracking of inventory, although appearing confusing, will maintain the synchronization of the inven-tory and prevent overselling to the Buyer.

If the Resource Saver Protocol is not used to control inventory, then the inventory offered for sale is synchronized by the present invention between all components, Seller Interface **4000**, Central Controller and Presentation Proces-sor **1000**, and Central Presentation and Selection Server **2000** This synchronization is maintained at all times with the utilization of the transaction messages between all components

When the Notification Level method of the Resource Saver Protocol is used, then the inventory offered for sale is synchronized by the present invention from the time the Notification Level is reached or breached until all inventory is sold When all inventory is sold in either case above, then the Transaction Negotiation Program **2725** of the Central Presentation and Selection Server **2000** of an instance of the present invention notifies the buyer that no inventory is available and may offer possible alternatives or substitutes. The adding to or the replacement of inventory increases the inventory count or level. These events are processed as transactions messages that are sent from the Transaction Processing Program **4720** or the Seller Accounting or Man-agement Program **4000B** of the Seller Interface **4000** to the Central Controller and Presentation Processor **1000** The data for the inventory increase or replacement is either entered by the operator of the Seller Interface or is auto-matically updated by the aforementioned programs The Central Controller and Presentation Processor **1000** then transmits transaction messages to any Central Presentation and Selection Servers **2000** or other outlets that are affected Those Central Presentation and Selection Servers **2000** or outlets reset their inventory counts or levels and any control settings that are affected

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The invention allows sellers to present their inventory, products, goods and services in a choice of one or a variety of supported media outlets: in print, such as newspapers, magazines, periodicals, guidebooks, catalogs, brochures, fliers, and directories; in electronic form, such as online directories, web sites, bulletin boards, news groups, CD-ROMs, and interactive media and networks; and in other media, such as billboards, skywriters, bus benches, radio, interactive kiosk and any other form of customer outreach or information distribution. When these media choices are made, the present invention prompts the seller for information that is then used in the creation of presentations for the media outlets he has chosen. The Presentation Rules Database 1650 and 4650 holds all the criteria, formatting architecture, and distribution factors for each participating media outlet. The present invention's Presentation Generation Program 1710, along with the Presentation Rules Database 1650 and 4650, then creates a presentation for each and every media outlet the seller has chosen. The Presentation Generation Program 1710 then either transmits the presentation to the appropriate destination or holds it for a publication date to be submitted for a particular deadline or predetermined promotional market

The seller can then print out a report that shows him each presentation, distribution or media outlet, and the pricing of each media choice for an overall marketing valuation.

The present invention allows the Seller to update, change, control inventory, and automatically process sales either from his in-house or third-party accounting or management software that has a compatible communication component with the present invention or in the present invention. He can accomplish this updating and inventory control to all media outlets simultaneously

The Presentation Generation Program 1710 creates presentations that can be accessed by the buying public in location/outlet-appropriate formats and availability through the Central Presentation and Selection Server 2000; Independent Presentation Directories and Indexes or Independent stand-alone Presentations 3000; Printed Publications, Periodicals, Directories, CD-ROMs, and other Media and Presentations 6000; and the Buyers Interface 5000. The present invention allows buyers to review descriptions; specifications; photos; graphics; pricing; and the availability of products, goods, and services, including time- and allocation-critical services. The buyer can access this information and these resources through either a search specific mode or a browsing mode, depending on the advertising channel or media outlet he is using

The invention allows buyers to hold or commit to the purchase; reservation; or utilization of those products, goods, and services, within the practical limits of the expiration of their utility or availability, on those media outlets supported by a Central Presentation and Selection Server 2000. The buyer can confidently select products, goods, and services with real-time or near real-time purchasing. Once the buyer has committed to a purchase, the commitment is transmitted to the seller and the inventory is updated. With the present invention, inventory control of the suppliers, vendors, service providers, purveyors, and other types of sellers is maintained with transaction and, when necessary, confirmation message units sent between the Central Controller and Presentation Processor 2000 and those same suppliers, vendors, service providers, and purveyors.

Once the buyer makes a purchase or reservation, he can choose a method of confirmation, get a print-out of seller's commitment for delivery, an entry code number or whatever means of confirmation determined by the Seller. As an

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example, the buyer can even get a complete printout of directions to the facility if the purchase involves him arriving at a place of lodging, restaurant, arena, store, or any other facility. All these methods of confirmation can be near real-time. The buyer does not have to wait for printed tickets, passes, admission documents, reservation confirmations, or other physical substantiation to be mailed or conventionally delivered to him

Thus, the full implementation of the present invention makes the usual requirement of delivery of tickets, passes, admission confirmations, or reservation confirmations unnecessary. These traditional conveyance forms are replaced or augmented by the buyer's Reservation/Ticket Network ID card or confirmation of biometric ID. The present invention allows buyers of tickets, passes, admission documents, and reserved services to purchase or reserve those tickets, passes, admission documents, or services remotely via electronic network presentations, Internet, Intranet, dial-up self-serve or operator-served systems using standard telephone communications, or other means. The invention allows the buyer to confirm or prove his purchase at the facility, site, business, or venue by means of magnetic, smart, or optical ID cards or by electronic biometric authentication. These means of proof can be issued by the operators of an instance either for exclusive use for that instance of the present invention, for multi-use in conjunction with other entities and the operators of the other instances of the present invention, or through a "piggy-back" method that will allow the issue of Credit Cards, Membership ID Cards, or other ID Cards. For those services or events that require printed tickets, passes, admission documents, reservation confirmations, or other physical substantiation, those means of confirmation can be printed on demand from either automatic or manual vendors upon electronic reading or scanning of the buyer's Network ID card, the buyer entering a code, or by biometric authentication

The invention's Resource Saver Protocol allows for the coordination and synchronization of the sales and availability of products, goods, and services between interactive electronic presentations and other sales outlets, channels, or sources while reducing the communications and resources necessary to maintain that coordination and synchronization. The present invention does this while both allowing for the purchase or reservation through electronic networks and other diverse channels or outlets and keeping control of inventory to prevent overselling or overbooking. The seller can define his inventory and establish the settings that are appropriate for the sale and control of said inventory. Then communications will be transmitted when the levels he sets are reached or breached, when a notification time has been reached, or when a notification level has been met. If the seller does not have similar or substitutable inventory, then transmissions must be made for each and every sale. However, the seller may have some inventory that can benefit from the Resource Saver Protocol while other inventory is unique. This cost saving device will also allow the seller to schedule transmissions to be made when other uses of the Central Presentation and Selection Servers 2000 is at a low traffic level

The invention will not only transmit all sales and reservations to the seller's compatible in-house accounting and management program or to an instance of the present invention at his location, but it will also update and control inventory offered on all the media channels and outlets on which that seller has chosen to sell his products, goods, and services.

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Example Use of Invention

The following is a hypothetical example for the use of the present Invention in one possible embodiment Only the major steps are included in this example to give an overview of one possible application or embodiment of the present invention. This example demonstrates some of the possible interface and interactions between operators of the invention, sellers or providers of goods or services, and customers or buyers of those goods or services. It is also meant to give an overview of the transaction flow of information, purchase decisions, and possible consummation of those purchase decisions.

For the purpose of this hypothetical example, we will presume that this instance of the Invention has been established for some time and is managed by the ABC Company that promotes it to Professional Sports Franchises and Venues

Example Clients Are

Seller

XYZ is a corporation that owns the XYZ professional basketball team and wishes to promote that team and sell its tickets as efficiently as possible

Media

DEF is a basketball oriented web site owned by the DEF Corporation with content and discussion groups about the sport of basketball Its demographics are centered on young male basketball enthusiasts.

GHI is an all sports oriented web site owned by the GHI Corporation with content and discussion groups covering all sports. Its demographics are largely young male.

JKL is a national sports magazine, published by the JKL Corporation monthly with subscription and retail rack sales Its demographics are centered on an all sports audience

MNO is a sports newsletter, published by the MNO Corporation with a circulation that is primarily within the geographic area of the home stadium of the XYZ basketball team.

PQR is a broad-based chain of newspapers published across the country by the PQR Holding Corporation Their circulation is a general one with a sports section daily and a special sports insert on weekends.

STU is a chain of music and video stores that have displays within their stores allowing sports and event information and ticket sales Their stores are located within urban malls and their customer base primarily is mixed gender between 15 and 25 years of age with good disposable income and leisure time. STU has also installed the biometric readers necessary to do the initial entry of buyers into the ticket and reservation network, which is part of the ABC instance of the invention

Buyer

John Q. Public is a basketball enthusiast

Media Participation

The DEF Corporation was approached by the ABC Company and agrees to be represented on the ABC instance of the invention.

1) The DEF Corporation decides that it will promote one of the five Internet Web Sites that it publishes on the ABC instance of the invention DEF will promote its basketball site because it matches well with the focus and demographics of the ABC instance of the invention.

2) ABC sends DEF the necessary software to be installed on their computer.

3) A computer operator at DEF installs the software on their computer that then is configured as Media Interface 6000 FIG 2e.

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4) After installation and setup the DEF operator does basic information input as prompted by the Media Interface 6000 FIG 2e of the present Invention

5) After the input of basic information by the operator, the Media Interface 6000 prompts the operator for input that describes and sets the standards for the presentations that Seller Clients of ABC will use (by way of the invention to publish presentations) on the DEF Web Site. The inputs set the upper and lower limits of quantities such as amounts of text and size of images, restrictions of language and reference, standards of style and presentation, choices of type fonts and colors, as well as the cost of presentations and demographics of the DEF subscribers or viewers Any disclaimers and contracts or agreements are added to be delivered and acknowledge electronically concurrent with the submission of presentations

6) DEF has also chosen to offer interactive sales of appropriate products and services through its web site as managed by the ABC Central Presentation and Selection Server.

7) At any point during the input of information the operator may test the presentations that will be created using the standards set within the Media Interface 6000 FIG 2e This allows the operator and DEF's management to insure that those presentations received for publication from the ABC Seller Clients will indeed meet the standards for DEF publication.

8) The other Media GHI, JKL, MNO, PQR, and STU have gone through a similar process to establish their Media offerings on the ABC instance of the invention.

9) The following steps pick up from the Sellers Participation below at step number 18 That Seller's action effects the following media

10) The DEF Sports Web receives electronically the Seller information, agreements, payment information, web pages to be displayed and banner advertising to be placed on their web site. DEF also receives the web interface for the sale of the XYZ tickets.

11) The KLM Newspaper Chain receives electronically the Seller information, agreements, payment information, a requested schedule of ad placement and publishing, and the formatted ads Because KLM also maintains the associated web site it also receives the web interface for the sale of the XYZ tickets

12) The HIJ Basketball Magazine receives electronically the Seller information, agreements, payment information, a requested schedule of ad placement and publishing, and the formatted ads to be placed in their magazine.

13) The STU music stores receive electronically the Seller information, agreements, payment information, and the interface for the sale of the XYZ tickets on its in-store displays.

14) Once the Ads and Presentations are received by the Media, any changes or updating are either allowed or denied by the Seller Interface 4000 FIG 2c based on the restrictions entered by the Media during their setup.

Seller Participation

1) The XYZ Corporation makes the decision to use ABC's services to promote its Basketball team

2) ABC sends XYZ the necessary software to be installed on their computer.

3) A computer operator at XYZ installs the software on their computer that then is configured as Seller Interface 4000 FIG 2c.

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4) After installation and setup the XYZ operator does basic information input as prompted by the Seller Interface **4000** FIG. **2c** of the present Invention

5) After the input of basic information by the operator, the Seller Interface **4000** presents available media venues and associated information for review by the XYZ Corporation management

6) ABC currently represents 15 different Media venues within its instance of the present invention Information such as distribution, users or viewers, price, content restrictions, etc. about each Media venue is available for review by the XYZ management.

7) XYZ management reviews available media and chooses The DEF Sports Web, The HIJ Basket Ball Magazine, and The KLM Newspaper Chain to advertise their schedule of games. With the KLM Newspaper there is also the associated KLM Web Site on which KLM offers information as well as sales of products and services as advertised within the KLM Chain of newspapers. STU music stores are also chosen strictly for the distribution and sales of tickets

8) The Seller Interface **4000** then presents the publication dates, any specific disclaimers, and the charges for review and approval by the XYZ management

9) Upon approval of those items, the Seller Interface **4000** prompts the operator for the necessary text, graphics, and any other information as required by the three chosen media to create and format the individual ads for the chosen media

10) XYZ management has also elected to offer tickets to their basketball games held within the XYZ stadium They have installed the necessary software that synchronizes the XYZ ticket sales and accounting software with the sales and inventory control provided by the ABC instance of the invention within the Central Presentation and Selection Server **2000**. XYZ chooses to offer ticket sales on the DEF Sports Web, the KLM Newspaper associated site that offers interactive electronic sales, and the STU music and video stores in store electronic ticket sales displays.

11) Due to the large number of seats within the stadium and similarity of pricing and desirability among each class of seat, XYZ management has also elected to use the Resource Saver Protocol to allow for better customer service between the various sales outlets.

12) The XYZ management sets the various seat and ticket restrictions, standards and pricing. This information will be available to the Buyer when purchasing through the ABC Central Presentation and Selection Server Each seat or ticket class is assigned a maximum single purchase number and a buffer number, the total of those two numbers become the notification level. It is the notification level that controls the flow of the communications involving the sale of tickets for XYZ.

13) In order to take full advantage of the services offered by ABC Central Presentation and Selection Server XYZ elects to install new automatic ticket vendors using the existing ID cards and biometric methods supported by the ABC Central Presentation and Selection Server.

14) At any point during the content input phase, the operator may view the final formatted presentation products based on each Media venue's restructuring of the information to create specific Media presentations.

15) When the XYZ management is satisfied with the results, as presented by the Seller Interface **4000**, they

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indicate their approval of the presentations and charges and then transmits the information to the ABC Central Controller and Presentation Processor **1000**. In addition to the presentation information, the game dates, ticket prices, and information that synchronize current sold and available tickets are transmitted also

16) When the ABC Central Controller and Presentation Processor **1000** receives the presentation information it establishes an account for XYZ, reviews and analyzes the presentation information submitted, and then notifies XYZ as to the acceptance, editing or rejection of the material and any adjusted publishing dates.

17) The ABC Central Controller and Presentation Processor **1000** then transmits the appropriate formatted presentations to each media that was selected by XYZ

18) The flow of information transfers to the Media Participation section above at step 9

Buyer Use

For this example we will follow John Q. Public (our example buyer) as he uses the invention

John is an avid basketball fan and subscribes to the JKL sports magazine, receives the local PQR newspaper, and frequents the DEF web site to participate in the free discussion groups centering on basketball that are hosted there. John has seen the ads within the PQR newspaper promoting the teams winning record and giving dates of upcoming games. Within the ads it was stated that tickets could be obtained from the PQR web site

(1) Unexpectedly one of John's friends called, stated that he would be in town the next night and would it be possible to go to the basketball game. John said that he would find out and call back. John remembered that the PQR newspaper ad for the XYZ team stated that one could buy tickets at the PQR web site

(2) John uses his computer and navigates to the PQR web site. Once there he finds the XYZ ticket purchase section, chooses the seats he wants, and asks for availability.

(3) With availability confirmed John enters his payment information and is then asked how he wants the tickets delivered to him. This presents a dilemma for John because he must work tomorrow and will not have time to go to the stadium to pickup the tickets. He could pick them up at a "will call" station when he and his friend go to the game, but there is always a long line and John does not want to wait

(4) Another option that is presented to John is that of using one of several forms of ID (either credit cards, ID cards, or biometric) as the identification method in lieu of advanced ticket delivery to him. John recognizes that he has one of the accepted brands of Credit Card and chooses to use the system using that Credit Card as his personal ID. He enters the card number as his ID, the system accepts the ID and gives John instructions as to the systems use when they arrive at the stadium

(5) John calls his friend back and they agree to meet just before the game

(6) When John and his friend meet at the stadium they are late and the game is about to start. There is a long line at the "will call" booth and John is glad to avoid that line. John goes to the Automatic Ticket Vending Machine, swipes his credit card, and the Automatic Ticket Vending Machine prints the tickets with the seat location and dispenses them to John.

(7) John and his friend enter the stadium to watch the game

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(8) During the game John notices within the free program a notice that he can have his thumbprint taken at the "Will Call" both and then that will become his identification method when he next attends an event at the XYZ stadium As John is leaving the game, he stops and has his thumb print scanned to serve as his future identification.

Summary

In the simplest scenario when the chosen section or ticket category was not near a sell out (reaching notification level), the sales location that John was purchasing from simply assigned a set of tickets for that section and confirms the sale The sales location then transmits all data to the Central Presentation and Selection Server **1000** that transmits the information to the XYZ Seller Interface **4000** that then passes the information to the XYZ in-house Accounting and Ticket Sales software.

Whenever sales in any given section reaches the notification level then all sales sites are notified that the quantity of available tickets is limited and that all sales must be confirmed with the Seller prior to releasing confirmation of the sale to the buyer

With the Biometric scan (thumbprint) that John had done as he was leaving the stadium he can now reserve seats at any of the events featured on the ABC instance of the current invention and will be able to use his thumbprint as his ID for access to the event or facility instead of or in addition to his existing Credit Card.

Presentation Generation Program: This component of the present invention relates to the creation and placement of presentations of commercial information with the purpose of informing buyers as to available products, goods, and services. The invention's purpose is to allow the seller the ability to influence the buyer and induce said buyer to purchase those products, goods, and services while specifically allowing for the advanced purchase or reservation of those products, good, and services when appropriate

The invention allows sellers to create presentations on their computers that are automatically transmitted to be published and viewed on a variety of traditional and electronic media networks. The present invention partially resides on the sellers' computers, controls and edits the presentation, and then automatically transmits that information and data for publication on traditional media and electronic networks

The invention allows for the automatic publishing or updating of presentations within a simple environment that does not require lower-level coding or formatting of the presentation material. The present invention employs a text-only entry of information and data, thereby not requiring the seller to have knowledge of presentation computer codes or low-level formatting

The invention will provide substantial savings in this area of commerce because the seller can choose the media or outlet for sale of his products, goods, or services His instance of the present invention can then create presentations that conform to each and every media outlet he chooses, submit the presentation, and prepare a report of the cost for such publication choices. The present invention allows sellers to offer their inventory, products, goods, and services for sale in a choice of one or a variety of supported media outlets: in print, such as newspapers, magazines, periodicals, guidebooks, catalogs, brochures, fliers and directories; in electronic form, such as online directories, web sites, bulletin boards, news groups, CD-ROMS, and interactive media and networks; and in other media, such as billboards, skywriters, bus benches, radio, interactive kiosk, and any other form of customer outreach or information distribution.

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After the seller makes these media choices, the present invention prompts him for information, based on the criteria set forth by each media outlet and held in The Presentation Rules Database **1650** and **4650**, that is then used in the creation of presentations. The Presentation Rules Database **1650** and **4650** holds all the criteria, formatting architecture, distribution factors, and prices for each participating media outlet.

The present invention's Presentation Generation Program **1710**, along with the Presentation Rules Database **1650** and **4650**, not only creates a presentation designed to conform to the requirements set forth by each media, but it also "dynamically generates" both static presentations which can be accessed by traditional search methods of the buyer and dynamic presentations which respond to the buyer This function creates two very distinctively different presentations in a labor-saving database method so the seller can save time and resources while creating presentations that incorporate the best of both "dynamic" and "static" type of presentations. {Note: static presentations are easily indexed and accessed by search engine and search modes. These are the best formats for accessibility in electronic media. Dynamic presentations are database-driven and respond to the queries of the viewer (buyer) with current and real-time inventory changes, updates, and control}. An Internet or Intranet presentation that utilizes both methods for delivering information is far superior to any other presentation online today.

The Presentation Generation Program allows for the creation of traditional and electronic sales and information by minimally trained personnel who merely have to input information into the program, aided by prompting from the present invention

Once the present invention generates the presentation, it either automatically publishes the presentation to the appropriate electronic destination or holds the presentation for a scheduled publication date to be submitted for a particular deadline or predetermined promotional market. These presentations can be updated for either presentation content or inventory control in near real time by either manual or automatic means via electronic message units from third-party management or inventory control software. This means the seller can update or control his inventory in every media with just one in-house updating function.

The presentations created by the present invention allow for the sale of the products, goods, or services and for the making of payments by buyers on those interactive sites that support electronic sales. Inventory adjustments for production, sales, and other reasons are made in near real time, allowing for an accurate presentation of availability of inventory to buyers in all supported media. The present invention, when used in both electronic and traditional media, also allows for lower cost to both the seller and the media management by creating a self-serve, automated billing environment for the seller's creation and publishing of the presentations. The present invention provides substantial savings in the area of commerce because it allows for transactions to occur instantly at "point of sale" or, to use an appropriately faster term, "point of decision".

Interactive Sale and Reservations: On the buyer's side of the process, the present invention provides consistent, vendor-appropriate information in all forms of media for products, goods, and services offered for sale. Prior art, in regards to online presentations, often does not give the buyer current information because that inventory must be manually updated, so real-time or near real-time transaction becomes an inaccurate phrase. The information the buyer

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gets from one media outlet, electronic mall, or directory may be in conflict from another media outlet, electronic mall, or directory. This conflicting information may contribute to a Buyer's potential dissatisfaction of the Seller and the whole online presentation and sales process.

As previously stated, the present invention's electronic presentations are created to give the buyer products, goods, and services that are easily accessible and that dynamically produce the latest, current information, pricing, and availability. Because the seller can automatically update all media outlets from his in-house management or accounting software or an instance of the present invention, the buyer can feel confident in getting current information and inventory. The Buyer has the choice to either conduct a search for the desired products, goods, or services using the on-site search capabilities or browse the presentations much the same way one would browse the aisles of books at a library.

Once the Buyer has made a selection on those supported interactive outlets, he can purchase, reserve, or hold products, goods, or services. The present invention will then tell him that his request is available and ask him to reaffirm his choice.

If his selection is not available, the present invention may give him the opportunity to choose something else, change his purchase request, or provide him with optional choices from the Referral Database 2670. The Referral Database is an option that Sellers can use to recommend other Sellers of similar products, goods, and services. In the case of lodging facilities, often Sellers will refer their overflow to other lodging facilities in their immediate area. In the preferred embodiment of the present invention, Sellers will input referral to other Sellers into their instance of the present invention.

Once the Buyer has been assured that his choice of a product, goods, or service is available, the present invention will then prompt him to enter the information required by the Seller. The Buyer Database 2610 maintains data on buyers who make interactive purchases or reservations of the products, goods, and services offered by the Seller over the Central Presentation and Selection Server 2000 or Independent Presentations 3000. Data fields may contain Buyer's name, network or delivery ID, physical address, phone, email address, credit card information, and any other information deemed necessary to support the Buyer and the Seller's required buyer information. If the Buyer has previously made a purchase through the same instance of the present invention, most or all the information needed may already be in the Buyer Database 2610. In this case, the information required by the Seller will come up on the screen and the Buyer will be prompted to update any information that may have changed or needs to be added.

Once the buyer has committed to a purchase and has completed all the transaction data required, the commitment is transmitted to the seller and the inventory is updated. With the present invention, inventory control of the suppliers, vendors, service providers, purveyors, and other types of sellers is maintained with a transaction and confirmation message unit sent between the Central Presentation and Selection Servers 2000, Central Controller and Presentation Processor 1000, and those suppliers, vendors, service providers and purveyors.

The present invention will then ask the Buyer to choose a confirmation method. Choices of confirmation may be by phone, fax, email, confirmation number, or any requirements the Seller may select for proof of purchase. Once the Buyer chooses a method of confirmation, he can get a print-out of the Seller's commitment for delivery, a confirmation

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number, or whatever means of confirmation determined by the Seller. As an example, he can even get a complete print-out of directions to the facility if the purchase involves him arriving at a place of lodging, restaurant, arena, store, or any other facility.

Network ID Card: This component of the present invention relates to the verification and substantiation of the purchase of access or admission to those services or events that traditionally have controlled access by means of tickets, passes, admission documents, reservations, reservation confirmations, or other substantiation at the facility, site, business, or venue.

The full implementation of the present invention makes the usual requirement of delivery of tickets, passes, admission confirmations, or reservation confirmations unnecessary. These traditional conveyance forms are replaced or augmented by the buyer's Reservation/Ticket Network ID card or confirmation of biometric ID. The present invention allows buyers of tickets, passes, admission documents, and reserved services to purchase or reserve those tickets, passes, admission documents, or services remotely.

The present invention allows the buyer to confirm or prove his purchase at the facility, site, business, or venue by means of his existing magnetic, smart, or optical ID card; by entry code; or by electronic biometric authentication. These means of proof can be approved by the operators of an instance either for exclusive use for that instance of the present invention, for multi-use in conjunction with other entities and the operators of the other instances of the present invention, or by a "piggy-back" method that will allow the issue or use of new or existing Credit Cards, Membership ID Cards, or other ID Cards.

For those services or events that require printed tickets, passes, admission documents, reservation confirmations, or other physical substantiation, those means of confirmation can be printed on demand from either automatic or manual vendors upon electronic reading or scanning of the buyer's ID card, entry of a code, or biometric authentication. Network or Delivery ID cards may be approved by either one operator of an instance of the present invention or a group of operators of different instances of the present invention with cross-use allowed. Network or Delivery IDs may be Single-use or Multi-use cards that are also access cards to the Network or Delivery ID.

Resource Saver Protocol: This component of the present invention provides a method and apparatus to control, coordinate, and synchronize the sales and availability of either common, unique, or time-sensitive products, goods, and services. The present invention does this while allowing for the purchase or reservation of these products, goods, and services through electronic networks and other diverse channels or outlets and keeping control of inventory to prevent overselling or overbooking. The preferred embodiment of the present invention utilizes the Resource Saver Protocol to reduce the number of messages sent and received by all components of the present invention while maintaining the control and synchronization of any qualified inventory that is interactively offered for sale. With the reductions in the quantity of messages needed to maintain inventory synchronization, there is a corresponding reduction in all other aspects of communications and processing overhead between the remote components and sales outlets.

The invention automatically updates all components of the present invention on multiple sites or media channels in a time-sensitive and time-appropriate basis. The automatic two-way network communications method of the present invention provides the necessary coordination of inventory

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and sales. With the added dimension of the Resource Saver Protocol, the Seller can divide his inventory into logical groups for marketing, presentation, and sales to the Buyer. Using a hotel as an example, the instance of the present invention is configured to represent Hotels and Lodging, and the Seller is a hotel with 312 rooms of the following types: 200 standard rooms, 100 upgrade rooms, and 12 suites.

The setup of the Resource Saver Protocol is accomplished within the Presentation and Configuration Program **4715** or the Seller Interface **4000**. The Seller divides the inventory into its logical groups for marketing, presentation, and sales to the Buyer. In this case, the groups are standard rooms, upgrade rooms, and suites. Each item in each group of items must be substitutable with all the other items within that group.

If the inventory were not absolutely substitutable to any given Buyer, then the Seller would not use the Resource Saver Protocol in this inventory. That does not mean that all the Inventory items or groups of a Seller must either be or not be controlled by the Resource Saver Protocol. The Seller may have any combination of Inventory items or groups controlled or not controlled by the Resource Saver Protocol.

In the case of the current hotel example, the inventory is considered to be both Limited and Time Sensitive. There are only a limited number of rooms of each type, and they are time sensitive in the fact that the inventory is sold by the "unit night" which, if not sold and utilized by that night, can never be used or recovered.

The Seller must then set the maximum units of inventory that any given Buyer will be allowed to purchase in any given single transaction. In the hotel example, the Seller might set a limit of 5 rooms for any given Buyer to purchase from any Central Presentation and Selection Server **2000** or other outlets serviced by this instance of the present invention. By setting a reasonable maximum number of units of inventory that a Buyer may purchase, the Seller prevents that rare but possible case of a self-serve Buyer purchasing or reserving more inventories than is available. The Buyer is still allowed to purchase or reserve as much inventory as he likes, but the purchase must be transacted in sequential "maximum unit" transactions as opposed to one large transaction.

Next, the Seller sets a buffer number for each of the groups of items to be offered to the Buyer. The purpose of this buffer is to allow for a margin of error, based on processing time and communication delays, to prevent the overselling of inventory (overbooking in the hotel example). This number is an estimate intended to be adjusted, based on the Seller's experience over time. In the hotel example, the management might set the buffer number at 10 units (twice the maximum single purchase) as a starting point, to be adjusted later based on the Sellers experience.

Then the Seller must determine the Notification Level. This level equals the maximum purchase units a Buyer can make at one time plus the buffer number. For instance, if the Seller is a hotel, it has for purchase 200 units of the same type of room, the maximum purchase units are 5 rooms, and the buffer number is 10 rooms, then his Notification Level would be 15. This means that the Seller would receive transmissions from all of his outlets when a purchase is made. However, he would not have to communicate back to those outlets (via one transmission message to the Central Processor and Control Server **1000**) until his remaining units reached or breached the available inventory level of 15 units. If the level were reached or breached, transmissions for units within the unit group would be communicated back and forth for each purchase from the available inventory level of 15 until all units are sold for that period of time.

A demonstration of the transmission savings for the example hotel would be as follows. There are 100 rooms available at the example hotel and 5 sale outlets or channels are used. Without the use of the Resource Protocol, 320 (80 messages each to 4 outlets) inventory update messages would have to be sent in order to accomplish the total individual booking of 80 rooms. Each outlet or channel would maintain the availability count for the rooms, and one update message for the booking of each room would be sent to each of the sale outlets or channels that did not originate a given sale. With presale verification of available inventory for each transaction, our same example hotel would receive and send a combination of 240 queries, responses, and updates (80 each) to reach the 80 rooms booked. The actual number could be much more because the 240 number assumes that each query results in a booking, whereas in actual practice, the experience would be that many queries did not result in booking. In addition, the buyer would be required to wait for the amount of time that it took for the transaction verification process to take place. That amount of time may or may not be significant, depending on several factors such as the current network use, network connection speeds, etc.

With the present invention, each sales outlet, channel, or other source of unique or time-sensitive products queries availability only after receiving notice of a predetermined inventory level or count. This means that with our example hotel, only 80 booking messages would be sent if the management sets the notification level (predetermined available inventory count) at 15 units remaining. This would cause a 66% to 80% savings of communications and computer resources. For our example hotel to reach 100% occupancy, the total message load would be 160 messages (100 booking plus 60 update to four outlets or channels). With verification being required, the total message load would be 190 (100 booking plus 60 update plus 30 queries and responses). This compares with a total of 500 messages without verification and 700 messages with verification (100 booking, plus 400 inventory update message, plus 200 queries and responses for verification), showing savings of 68% to 73%, depending on the method used after the notification level is reached or breached.

It should be noted that the savings generated are more substantial than they appear to be for some Seller types. This is because the typical total sales of inventory in any given period does not reach the level that triggers the notification of the Central Presentation and Selection Servers **2000** or other outlets and channels.

For more common or commodity-like products, goods, or services, there is little concern of overselling. In order to conserve on communication and other resources, the Resource Saver Protocol allows the electronic networks and traditional sales outlets, channels, or other sources of sales to batch or hold the sales transaction messages. These messages are then transmitted once a certain quantity has been sold, once a specified time period has passed, or a combination of both bases. The operator of a given instance of the present invention has the option of settings for transmission levels or transmission periods and specific transmission times, or general transmission times plus specific outlet offsets.

As an example, a Seller of music CDs who has sufficient inventory might set the transmission level at 35, the transmission period at 24 hours, and the transmission time at 01.00 AM plus any offset. This would then set the electronic networks and traditional sales outlets, channels, or other sources to either transmit transaction messages any time

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they are holding 35 transactions or more, transmit transaction messages at least every 24 hours, and/or transmit any remaining transactions at 01:00 AM plus any offset The instruction for transmitting any remaining transactions at a specific time plus offset allows the Seller to set each outlet s specific transactions so that the transmissions are spread over some time frame The Seller can then choose a time for transmission so he can take advantage of low processing and communications loads The potential savings by using the present invention in connection with controlling the inventory and sales of common products, goods, or services are obvious but widely varied, based on the Seller's settings and goals

Operators of the present invention may provide additional transaction certainty and verification in the form of "confirmation of the transaction" messages or "inventory count and/or "sequence numbers" data fields with each transaction message All of these methods are optional at the discretion of the operators of the instance of the present invention, based on their experience or concerns

With the "confirmation of the transaction" method, a confirmation message is sent back to the originating outlet, repeating or confirming each transaction message that has been sent. Although this doubles the message units passed between Sellers and outlets, these "confirmation of the transaction" messages can be sent at times of low processing and communications loads, thereby reducing the impact of their use The use of these confirmation messages virtually reduces transmission errors to zero This method can be used during initial periods to build operator confidence in the present invention more than as a method that is used all the time

The "inventory count" is a field that is passed on all transaction messages where a total inventory has been established and each outlet is comparing and subtracting each sales transaction from that inventory The establishment of total inventory or noticed inventory is based on whether or not the Seller is using the Notification Level method of monitoring and controlling inventory If the Seller is not using that method, then the total inventory is known by the outlets and is used as the "inventory count" to be passed If the Seller is using the Notification Level method, then the "inventory count" field is only included after the Notification Level has been reached or breached at the Seller's location and the Notification Level messages have been sent to the outlets This "inventory count" is used by the present invention to verify that each component (Seller's location and all sales outlets) is synchronized as to the inventory level that all are working off of

Although the embodiments of the present invention have been described in detail herein, it is to be understood that these descriptions are merely illustrative The inventive system may be modified in a variety of ways and equivalents in order to suite a particular purpose while still employing the unique concepts set forth

What is claimed is:

1 A method of using a network of computers to contract for, facilitate and control the creating and publishing of presentations, by a seller, to a plurality of media venues owned or controlled by other than the seller, comprising:

a) providing a media database having a list of available media venues;

b) providing means for applying corresponding guidelines of the media venues;

c) providing means for transmitting said presentations to a selected media venue of the media venues;

d) providing means for a seller to select the media venues; and

e) providing means for the seller to input information; whereby the seller may select one or more of the media venues, create a presentation that complies with said guidelines of the media venues selected, and transmit the presentation to the selected media venues for publication

2. The method of claim 1 further providing a seller database having a list of seller

3 The method of claim 1 further providing a means for creating structured presentations from the sellers information

4 The method of claim 3 farther providing a means for transferring said created presentations to the media venues for publishing

5 The method of claim 1 further providing a means for said media venues to input said guidelines and information.

6. The method of claim 1 further providing means for said media venues to receive the sellers presentations

7 The method of claim 1 further providing a media buyers database having a list of media buyers.

8 The method of claim 1 further providing a media transactions database having a list of media transactions.

9 The method of claim 1 further providing a media inventory database having a list of media inventory.

10 The method of claim 1 further providing a presentations database containing created presentations

11 The method of claim 1 further providing an inventory database containing available inventory.

12 The method of claim 1 further providing a transaction database containing transactions made

13 The method of claim 1 further providing means with instructions for a buyer to select and purchase offers of sellers.

14 The method of claim 13 further providing a transaction database for recording the purchases of the buyers.

15 The method of claim 13 further providing a means for the buyers to purchase goods or services offered by the seller

16 The method of claim 1 wherein the media database includes a list of available media and corresponding editorial, design and publication standards

17 The method of claim 1 wherein the media database includes a list of available media and corresponding pricing and media inventory availability

18. The method of claim 1 further providing means for transferring said presentations to said selected media venues

19 The method of claim 1 further providing a computer to control and facilitate the network of computers

20 The method of claim 1 further providing a computer to control and facilitate creation and distribution of all presentations to said selected media venues.

21 The method of claim 1 further providing a means for automatically creating open-access electronic presentations

22 The method of claim 1 further providing a means for publishing open-access presentations electronically.

23 The method of claim 1 further providing a computer to present dynamic presentations electronically

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