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(54) **ENTERPRISE SYSTEM AND COMPUTER PROGRAM PRODUCT FOR INTER-CONNECTING MULTIPLE PARTIES IN AN INTERACTIVE ENVIRONMENT EXHIBITING VIRTUAL PICTURE BOOKS**

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H04M 11/00 (2006.01)

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(58) **Field of Classification Search** 348/14.01-14.09, 348/14.11; 709/204; 725/106, 62, 133, 141, 725/153

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

7,080,042 B2 * 7/2006 Koike et al. 705/52
7,262,788 B2 * 8/2007 Ono et al. 348/14.09
7,546,334 B2 * 6/2009 Redlich et al. 709/201

2002/0161839 A1 * 10/2002 Colasurdo et al. 709/204
2005/0289590 A1 * 12/2005 Cheok et al. 725/37
2006/0271627 A1 * 11/2006 Szczepanek 709/204
2008/0098442 A1 * 4/2008 Greenbaum 725/86
2009/0254802 A1 * 10/2009 Campagna et al. 715/209
2010/0070899 A1 * 3/2010 Hunt et al. 715/769
2010/0071003 A1 * 3/2010 Bychkov et al. 725/46
2010/0223161 A1 * 9/2010 Hayashi et al. 705/27
2011/0063404 A1 * 3/2011 Raffle et al. 348/14.08
2011/0271192 A1 * 11/2011 Jones et al. 715/727

* cited by examiner

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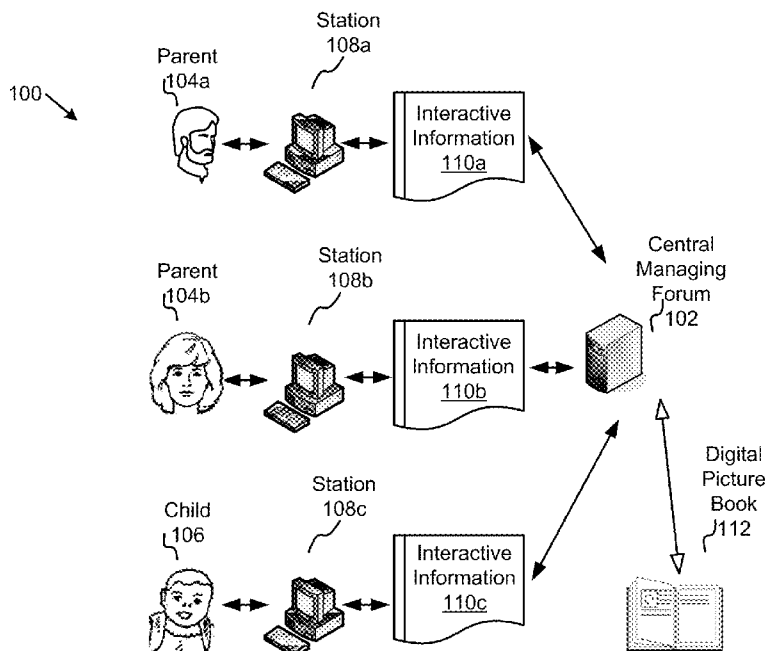
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(57) **ABSTRACT**

A method, computer program product and system are disclosed for facilitating the recreational review of printed picture books by two distantly separated parties video conferencing via the Internet, LAN, WAN or the like. A central managing forum uses uniquely configured data processing device(s) to electronically bring two or more related parties into audio, video and autographic contact in a manner which simulates the bedside reading of picture book and prompts the interconnected parties to interactively navigate virtual copies of popular printed media uniquely stored and made digitally available by the central managing forum.

23 Claims, 7 Drawing Sheets



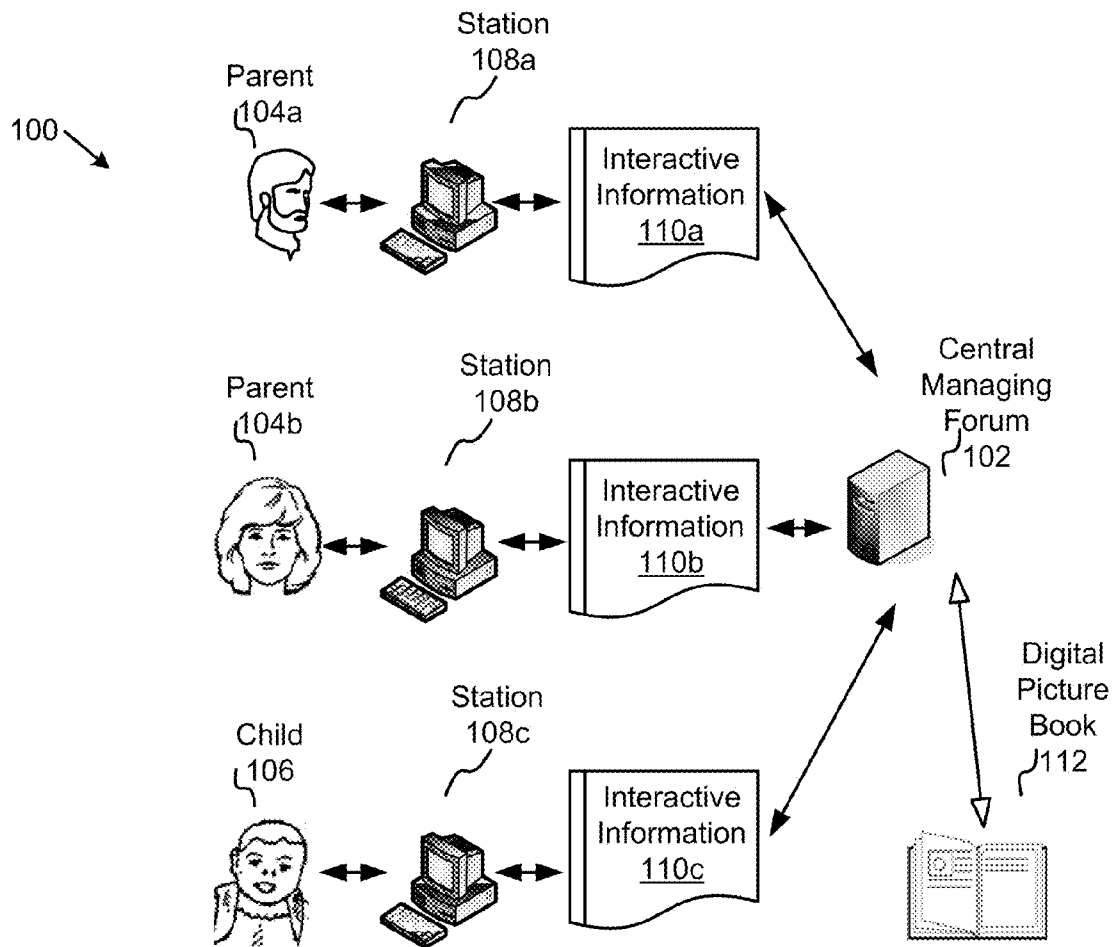


FIG. 1

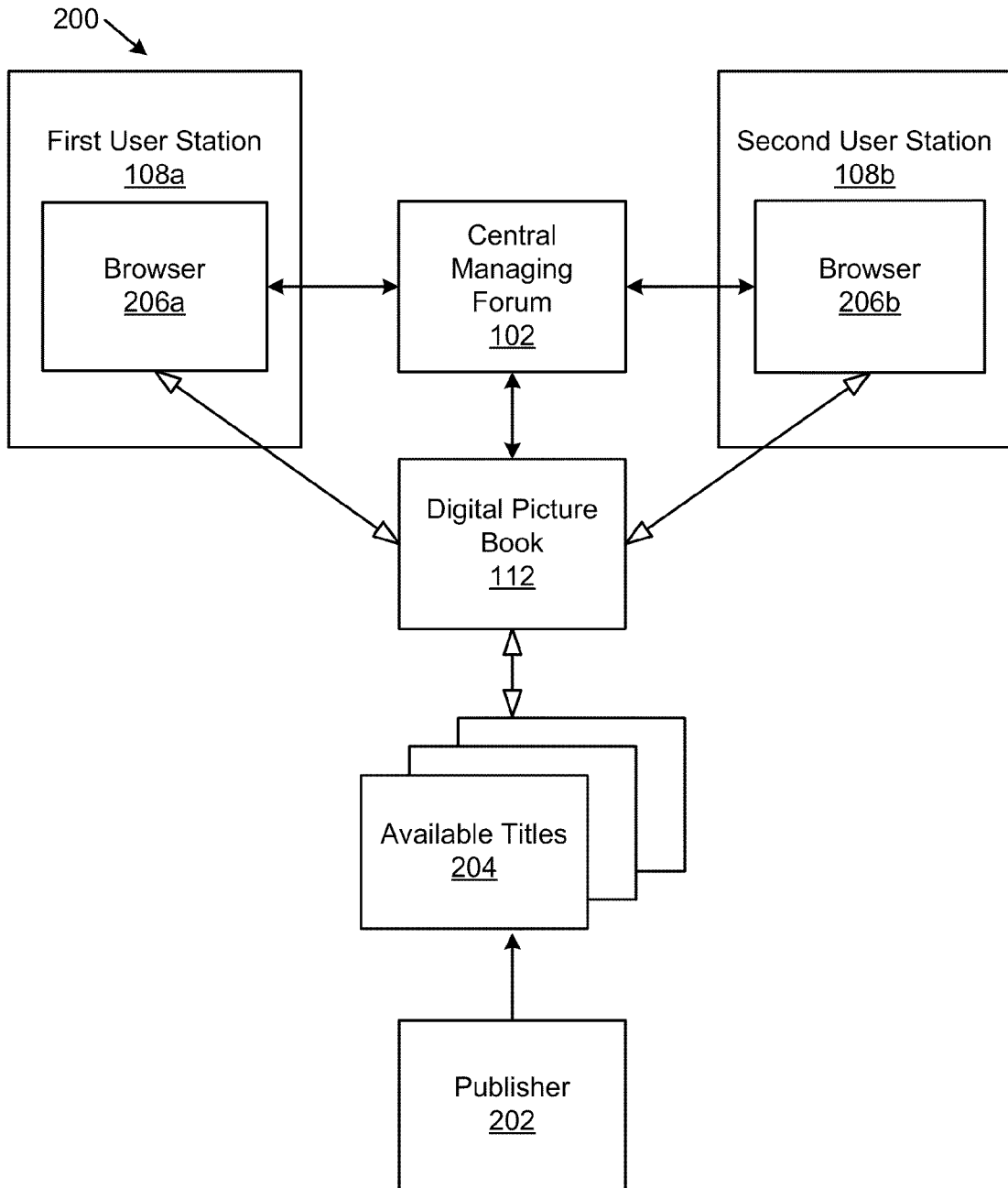


FIG. 2

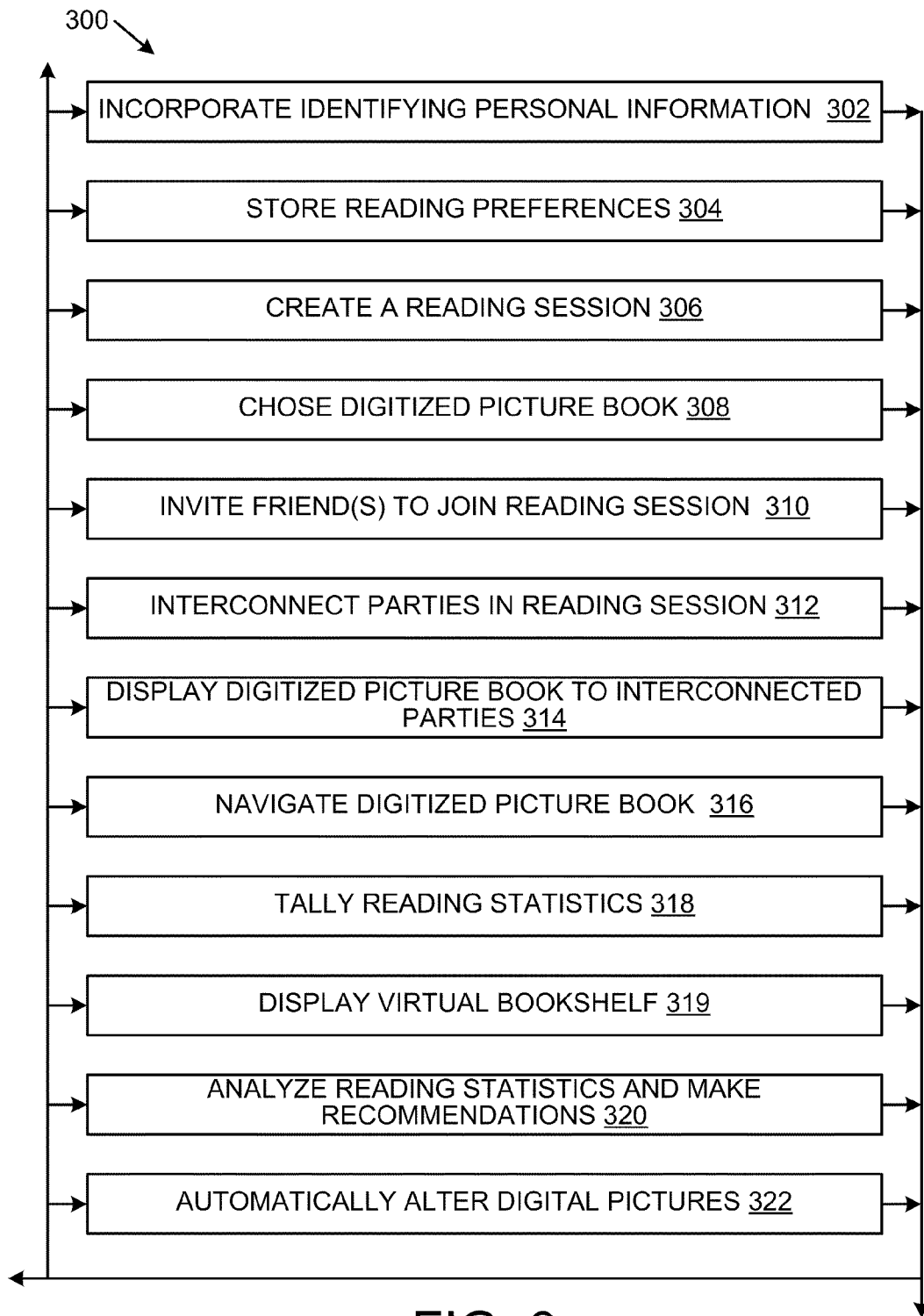


FIG. 3

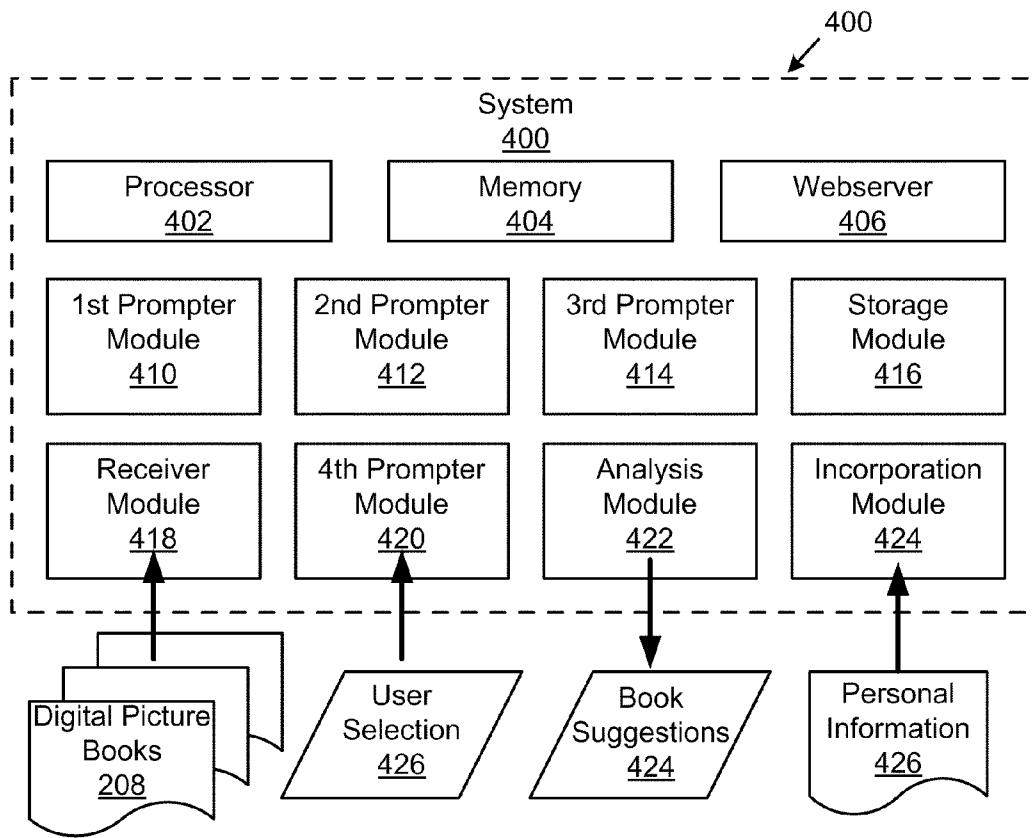


FIG. 4

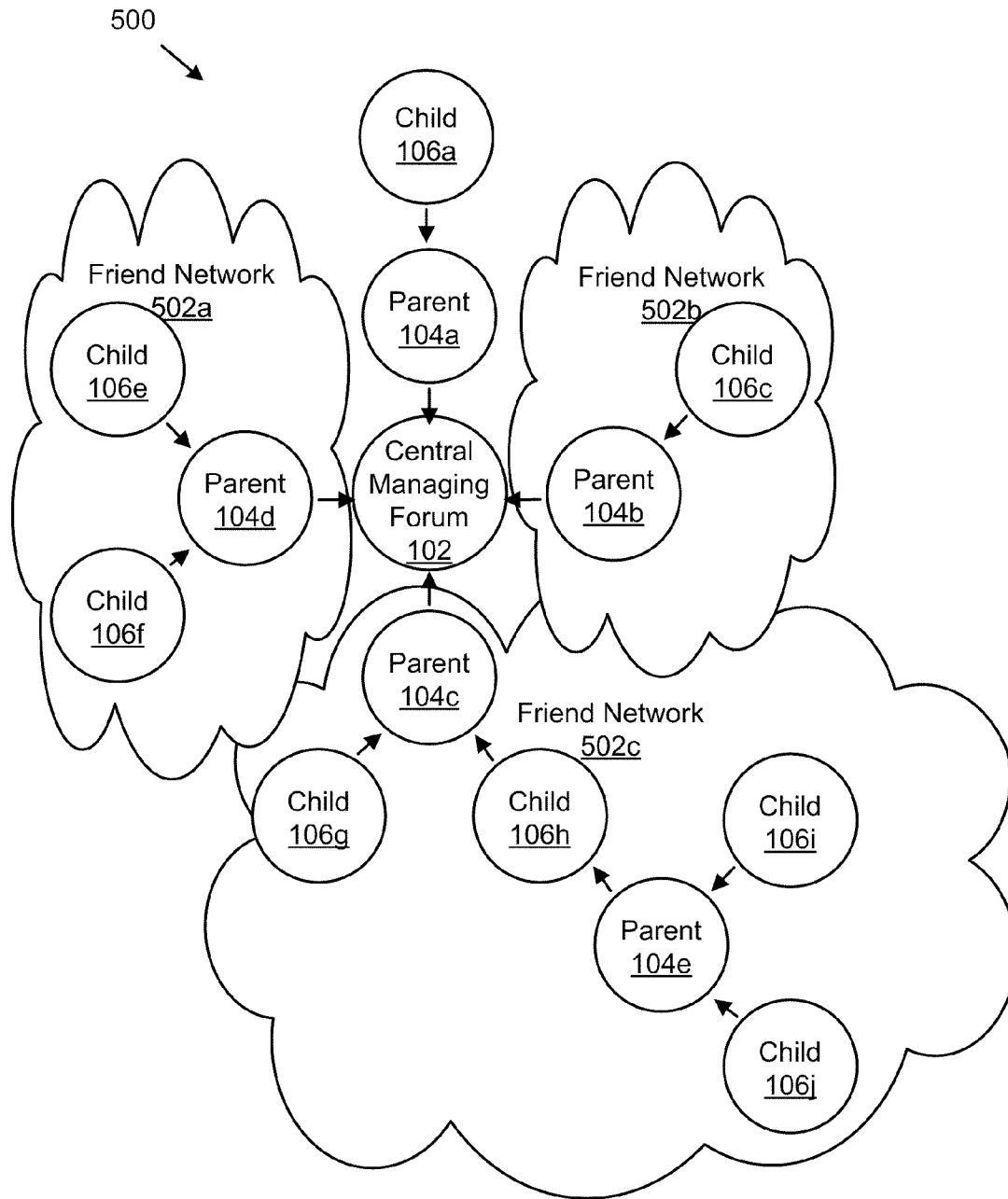


FIG. 5

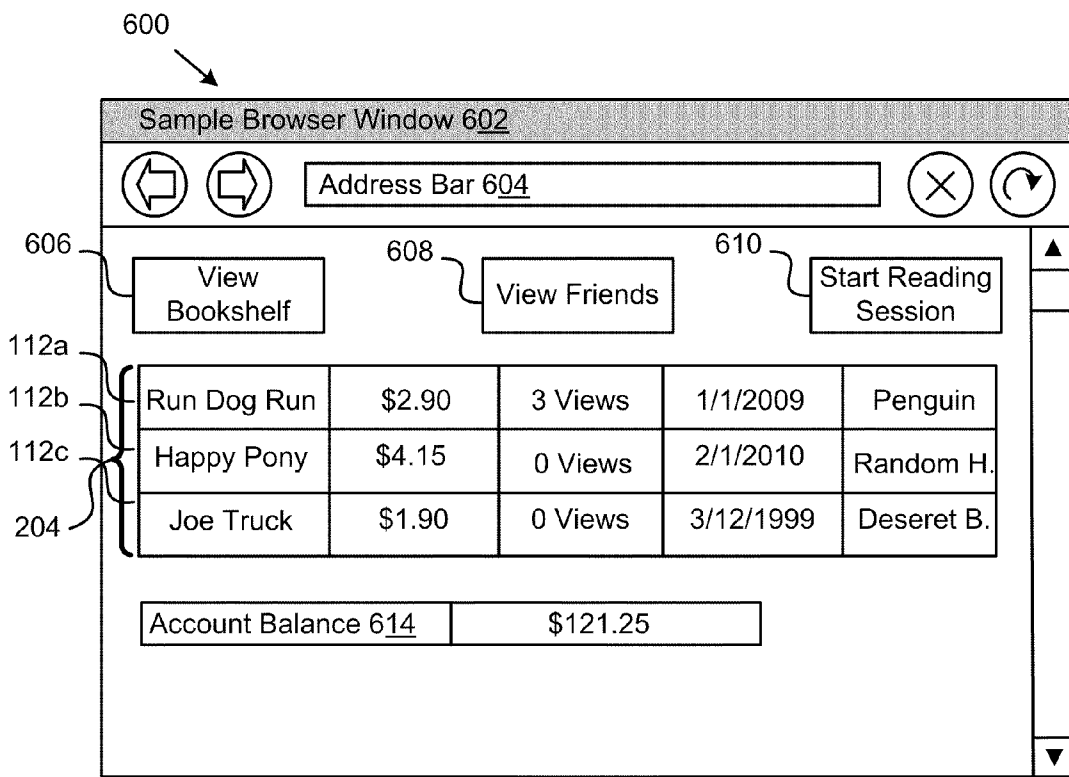


FIG. 6

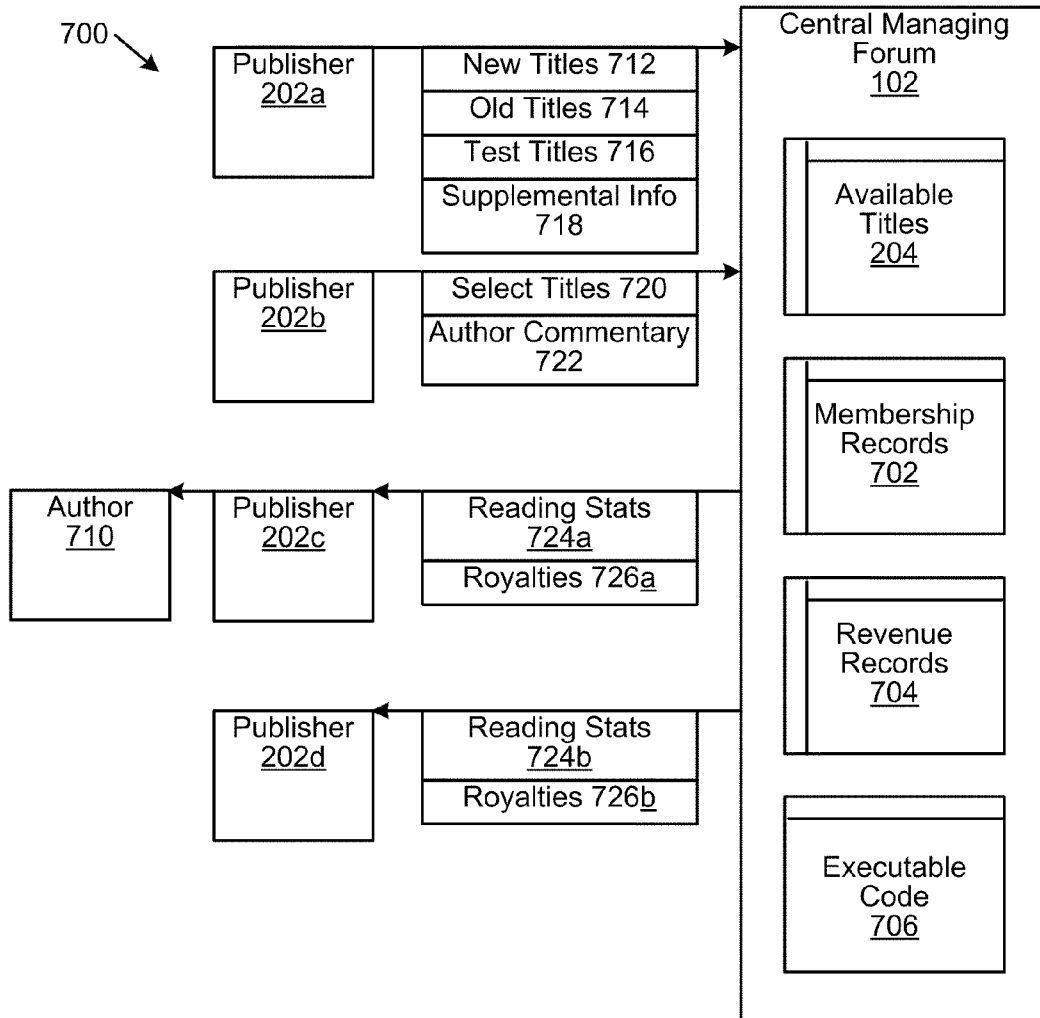


FIG. 7

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**ENTERPRISE SYSTEM AND COMPUTER
PROGRAM PRODUCT FOR
INTER-CONNECTING MULTIPLE PARTIES
IN AN INTERACTIVE ENVIRONMENT
EXHIBITING VIRTUAL PICTURE BOOKS**

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to online video conferencing software that simulates the bedside reading of a digital picture book to a child by a parent or relative.

2. Description of the Related Art

Parents who are compelled by professional and business obligations to travel frequently often find themselves unable to interact meaningfully with their children while separated from them. This separation can be a source of anxiety, distress, and depression for both parents and children alike.

While parents often attempt to mitigate the effects of this parental separation with phone calls and/or written correspondence with their children, parents find that their younger children lack the communicative abilities to carry on consequential, memorable or emotive exchanges through the strictly written and oral mediums currently available to them.

Parents separated by great distances from their children wish to have the same ability while separated that they have with their children when present: the ability make use of picture books and visual props to interact interpersonally with their children in a relaxed environment, as many parents enjoy before bedtime.

SUMMARY OF THE INVENTION

From the foregoing discussion, it should be apparent that a need exists for an enterprise system and computer program product for inter-connecting multiple parties in an interactive environment exhibiting virtual picture books. The present invention has been developed in response to the present state of the art; and, in particular, in response to the problems and needs in the art that have not yet been fully solved by currently available methods, systems and apparatus, and that overcome many or all of the above-discussed shortcomings in the art. Accordingly, the present invention has been developed to provide an enterprise system and computer program product for inter-connecting multiple parties in an interactive environment exhibiting virtual picture books

Furthermore, the described features, advantages, and characteristics of the invention may be combined in any suitable manner in one or more embodiments. One skilled in the relevant art will recognize that the invention may be practiced without one or more of the specific features or advantages of a particular embodiment. In other instances, additional features and advantages may be recognized in certain embodiments that may not be present in all embodiments of the invention.

The present invention discloses a computer program product comprising a computer readable medium having computer usable program code executable to perform operations for displaying digitized graphic media to multiple interconnected parties. The operations of the computer program product comprise incorporating identifying personal information of one or more users into a database under the exclusive control of a central managing forum, wherein said identifying personal information is voluntarily provided by the one or more users to the central managing forum via a computer network for a purpose of creating exclusive user accounts.

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The operations of the computer program product further comprise storing reading preferences of the one or more users in the database; prompting a user to create a reading session; prompting the user to choose a digitized picture book from a pool of digitized picture books stored in a computer readable medium; and prompting via a computer network one or more users to join the reading session who have been selected by the user creating the session;

The operations of the computer program product further comprise interconnecting one more users prompted to join the reading with the user creating the reading session, such that each of the users in the reading session are in video, audio and autographic contact with each of the other users in the reading session; simultaneously displaying the digitized picture book to each of the one or more users in the reading session; prompting the one or more users in the reading session to interactively navigate the digitized picture book; and tallying the number of times the digitized picture book is displayed in reading sessions created by users.

The computer program product may further comprise, in some embodiments, offering the functional ability to create a membership network accessible only to users who have opted in to the membership network and been approved by one or more network administrators.

The central managing forum may store and display a plurality of icons hyperlinked to digitized picture books preselected by a user to appear in a virtual bookshelf, wherein the virtual bookshelf is designed to visually resemble an actual bookshelf and exclusively accessible to a single user and the central managing forum. In some embodiments, the user preselecting one or more digitized picture books to appear in the virtual bookshelf may be a user other than the user with exclusive access to the virtual bookshelf.

The central managing forum may analyze similarities and differences between the digitized picture books appearing in a plurality of virtual bookshelves and make recommendations that one or more users add specific digitized picture books to one or more virtual bookshelves which specific digitized picture books are identified from the analysis of similarities and differences.

The first user may make a recommendation that one or more second users add a specific digitized picture book to a virtual bookshelf. The computer program product may further comprise previewing a digitized picture book to a user in a pop-up window on a computer display. The computer program product may further comprise displaying statistics representative of a plurality of users' reading habits to a user.

The pool of digitized picture books may be updated by a plurality of third-parties in logical connection with the central managing forum, wherein the central managing forum awaits the active update of the pool of digitized picture books by the third-parties.

The simultaneously displayed digitized picture book may be overlaid with virtual buttons activated by the interconnected users to navigate pages of the displayed digitized picture book. The pictures in the simultaneously displayed digitized picture book may be automatically altered by the central managing forum to create the perception of animation using one effect from the group consisting of: a zooming effect, a fading out effect, a morphing to another image effect, a spiraling effect, and an exploding effect. The computer program product may further comprise inviting a plurality of users to join a reading session created by an author who has written the digitized picture.

It is another feature of the present invention to provide a system to display digitized graphic media to multiple interconnected parties, the system comprising a processor; a data

storage means for storing data; and a central managing forum to store, transfer and deliver data over an Internet to a plurality of users.

The central managing forum recited by the system substantially incorporates all of the operations of the above disclosed computer program product, including an incorporation module configured to incorporate identifying personal information of one or more users into a database under the exclusive control of a central managing forum, wherein said identifying personal information is voluntarily provided by the one or more users to the central managing forum via a computer network for a purpose of creating exclusive user accounts; a storage module configured to store reading preferences of the one or more users in the database; and other modules substantially incorporating the operations of the computer program product.

These features and advantages of the present invention will become more fully apparent from the following description and appended claims, or may be learned by the practice of the invention as set forth hereinafter.

BRIEF DESCRIPTION OF THE DRAWINGS

In order that the advantages of the invention will be readily understood, a more particular description of the invention will be rendered by reference to specific embodiments that are illustrated in the appended drawings. Understanding that these drawings depict only typical embodiments of the invention and are not therefore to be considered to be limiting of its scope, the invention will be described and explained with additional specificity and detail through the use of the accompanying drawings, in which:

FIG. 1 is a block diagram illustrating one embodiment of a computer system that inter-connects multiple parties in an interactive environment exhibiting virtual picture books in accordance with the present invention;

FIG. 2 is a system resources chart illustrating one embodiment of a system that inter-connects multiple parties in an interactive environment exhibiting virtual picture books in accordance with the present invention;

FIG. 3 is a flowchart illustrating methods of the present invention, including steps which may be performed for inter-connecting multiple parties in an interactive environment exhibiting virtual picture books in accordance with the present invention;

FIG. 4 is a block diagram illustrating components of one embodiment of an enterprise system for inter-connecting multiple parties in an interactive environment exhibiting virtual picture books in accordance with the present invention;

FIG. 5 is a Booch relationship diagram illustrating the interrelationships and organization of membership records created by the operations and modules of the present invention;

FIG. 6 is a layout of browser manipulated by one embodiment of the present invention to inter-connect multiple parties in an interactive environment exhibiting virtual picture books in accordance with the present invention; and

FIG. 7 is an entity-relationship diagram illustrating data flow between interconnected data entities in communication with a system that inter-connects multiple parties in an interactive environment exhibiting virtual picture books in accordance with the present invention.

DETAILED DESCRIPTION OF THE INVENTION

Reference throughout this specification to "one embodiment," "an embodiment," or similar language means that a

particular feature, structure, or characteristic described in connection with the embodiment is included in at least one embodiment of the present invention. Appearances of the phrases "in one embodiment," "in an embodiment," and similar language throughout this specification may, but do not necessarily, all refer to the same embodiment.

The described features, structures, or characteristics of the invention may be combined in any suitable manner in one or more embodiments. In the following description, numerous specific details are provided. One skilled in the relevant art will recognize, however, that the invention may be practiced without one or more of the specific details, or with other methods, components, materials, and so forth. In other instances, well-known structures, materials, or operations are not shown or described in detail to avoid obscuring aspects of the invention. The apparatus modules recited in the claims may be configured to impart the recited functionality to the apparatus.

FIG. 1 is a block diagram illustrating one embodiment of a computer system **100** that inter-connects multiple parties in an interactive environment exhibiting virtual picture books in accordance with the present invention. The system **100** includes a central managing forum **102**, parents **104a-b**, a child **106**, stations **108a-c**, interactive information **110a-c**, and a digital picture book **112**.

The central managing forum **102** comprises a system or computer program running on one or more data processing devices (DPDs), such as a server, computer workstation, router, mainframe computer, or the like. In various embodiments, the DPD comprises one or more processors. The processor is a computing device well-known to those in the art and may include an application-specific integrated circuit ("ASIC").

In the present invention, the central managing forum **102** interconnects one or more stations **108** by routing video, graphic and audio data captured by cameras and microphones at each station **108a-c** and retransmitting that data, along with digital images of the pages of picture book preselected by one more station users, to other stations **108** in logical connection with the central managing forum **102**, which stations **108a-c** are in the same reading session with one another.

The central managing forum **102** stores digital copies of picture books in computer readable memory, which digital picture books have been downloaded, received, and/or gathered from one or more book publishers electronically via the Internet. Parents **104a-b** or the child **106** browse the pool of digital picture books stored and made available by the central managing forum **102** and choose a digital picture book **112** to be made navigable during virtual read sessions established by one of the parents **104a-b** or child **106**.

The central managing forum **102** may, in typical embodiments, be in logical communication with publishers and/or stations **108** through a networked environment, such as local area network (LAN) or wide area network (WAN). Publishers, in some embodiments, upload, or transfer, digital picture books **112** to the central managing forum **102** using variations of the Simple Mail Transfer Protocol (SMTP), Internet Message Access Protocol (IMAP), Post Office Protocol (POP), File Transfer Protocol (FTP), or other protocols well-known to those of skill in the art.

The parents **104a-b** and/or child **106** interface with the central managing forum **102** through the stations **108a-c**. The stations **108a-c** may comprise on one or more data processing devices (DPDs), such as a server, computer workstation, router, mainframe computer, or the like. The processor is a computing device well-known to those in the art and may include an application-specific integrated circuit ("ASIC").

The stations **108a-c** may also comprise personal DPDs such as laptops, Palm Pilots®, digital cameras, and the like. The stations **108a-c** comprise the software, systems and functionality necessary to facilitate video-conferencing and video playback.

The central managing forum **102**, in the shown embodiment, comprises a database management system (DBMS) or relational database management system (RDBMS), such as Oracle, SQL, FireBird, IBM DB2®, or the like. In the shown embodiment, one or more parents **104** login to an account they have created with the central managing forum **102**, which account membership information is stored in computer readable database memory accessible by the central managing forum **102**.

The membership information, in the preferred embodiment, is stored in a database; and comprises not just personal identifying information, such as name, address, email, telephone, IP address information, age, address, gender, credit rating, email, telephone number, income, and education, but also reading preference information.

The reading preference information comprises titles of picture books which a parent **104** or a child **106** (interchangeably a “user”) prefer over the other titles available and uploaded by publishers to the central managing forum **102**. In some embodiments, the reading preferences are determined by the user associated with the account after reviewing available titles in reading sessions. In other embodiments, the reading preferences are determined by the central managing forum **102** after analyzing historical title selection preferences of other users with similar reading preferences. If, upon analysis, the central managing forum **102** concludes that a specific title in its pool of available titles is preferred by a statistically significant percentage of users who also share a preference for one or more other titles identified, the central managing forum **102** will automatically update the reading preferences of one or more of the parents **104a-b** or children **106**, or recommend that a parent **104** or child **106** do so.

In some embodiments of the present invention, functionality enabling a first user to make its reading preferences available to other users is presented, including other users not in the first user’s friend network.

Titles included in a user’s reading preferences are displayed, in typical embodiments, to that user in a virtual bookshelf while that user is logged into the central managing forum **102**.

During the reading session, video, audio, textual and graphic information and data is transmitted back-and-forth across signal bearing mediums accompanied by digital pictures of the pages of a picture book **112**, which digital picture book **112** is the focus of the reading session. The users to the virtual reading session are interconnected to each other through the central managing forum **102** and participate in a reading session created by one or more users.

In various embodiments of the present invention, the digitized picture book **112** may comprise digital copies of books published for adult target readership, or young adult readership, in which embodiments the digitized picture book **112** may consist of pictures of text rather than pictures of traditional graphic art, or may comprise textualized print in computer readable storage exclusive of traditional graphic art.

A large plurality of users may be interconnected during the reading session, or the reading session may interconnect only two. The central managing forum **102** prominently displays the digital picture book **112** to each of the users interconnected in the reading session such that the digital picture book **112** is the focus of the reading session. The teachings of the

present invention thus allow a parent **104** to read a book to a child **106**, even though separated from the child **106** by great distances.

The central managing forum **102** may handle data exchanges, at any given time, simultaneously for a plurality of reading sessions involving different users. For the purposes of the present invention, this information transmitted and shared among users in reading sessions is referred to as “interactive information.” The interactive information **110** transmitted to each of the users in a reading session by the central managing forum **102** varies from one user to another in that the central managing forum **102** relays a unique version of the interactive information **110** to each user interconnected to the reading session such that each version of the interactive information **110** each user receives does not contain the same interactive information **110** being transmitted in real-time by that individual user to the central managing forum **102**.

For example, in the shown embodiment, parent **104a** receives the interactive information **110a**, which comprises real-time video and audio feeds of parent **104b** and child **106**, but does not comprise parent **104a**’s own video and audio feed, which are transmitted through the central managing forum **102** in real-time to parent **104b** and child **106**.

In some embodiments of the present invention, users designated with special status by the central managing forum **102** may participate concurrently in a plurality of reading sessions. These users may include authors, publishers, politicians, or other users of renown reputation or stature.

Users of the present invention may also secretly browse the contents of their individualized virtual book shelves during reading sessions unbeknownst to other users participating in the reading session. These users, upon finding a digitized picture book **112** which they desire to review, may abandon the previously selected digitized picture book **112** and supplant it in the reading session with the newly found digitized picture book **112**.

Parents **104** and children **106** may be prompted by the central managing forum **102** to review or evaluate titles in the pool of available titles which they have read. These reviews may be compulsory before further titles can be accessed within the central managing forum. Monetary payments may be required of one or more users by the central managing forum **102** before select titles in the pool of available titles are made accessible in a reading session. These monetary payments may be made via electronic means well-known to those of skill in the art, including PayPal®, credit-card credits, direct bank deposits, eCheck, and the like. The amount of the payment may be determined in accordance with a predetermined payment criteria established automatically by the central managing forum, publishers, or third-parties who control the central managing forum.

In some embodiments of the present invention, the central managing forum **102** may offer users the option of purchasing hard-copies of one or more of the digital picture books **112** available in the pool of digital picture books through a virtual shopping cart. In some embodiments, a user’s account may be configured to automatically make a purchase of the hard-copy of one or more digital picture books **112** which exceed a predetermined threshold in one or more users’ reading preferences.

In some embodiments, users pay a monthly, weekly, annual, or bi-annual subscription for full, or partial, access to the pool of digitized picture books.

In the present invention, the central managing forum may also route interactive information to invisible third-parties

who manage the central managing forum **102**, whose presence in the reading session is not apparent to the other users participating in it.

Referring now to FIG. 2, a system resources chart illustrating one embodiment of a system **200** that inter-connects multiple parties in an interactive environment exhibiting virtual picture books in accordance with the present invention. The system **200** comprises a central managing forum **102**, a first user station **108a**, a second user station **108b**, a digital picture book **112**, a publisher **202**, a pool of available titles **204**, and browsers **206a-b**.

The central managing forum **102**, user stations **108a-b**, and digital picture book **112** are substantially described above in relation to FIG. 1.

The publisher **202** uploads digital picture books **112** to the central managing forum **102**, which digital picture books are added to the central managing forum's pool of available titles **204**. The pool of available titles **204** comprises all the digital picture books **112** available for review during a reading session by users. Users may select titles from this pool of available titles for inclusion in a user's virtual book shelf after logging into the central managing forum **102**.

FIG. 3 is a flowchart illustrating methods of the present invention, including steps which may be performed for inter-connecting multiple parties in an interactive environment exhibiting virtual picture books in accordance with the present invention.

The method **300** begins with incorporating **302** identifying personal information from a parent **104**, child **106**, or other user into a database or relational database under the control of the central managing forum **102**.

Next, the method **300** progresses by storing **304** the reading preferences of the user, which are displayable in a virtual bookshelf to the user after logging into an account exclusively associated with that user under the control of the central managing forum **102**.

In various embodiments of the present invention, digital picture books **112** may be sorted and virtually displayed to users in a plurality of virtual bookshelves indicative of a class of books featured in that bookshelf. Some bookshelves may feature newly released titles, others may feature titles with discounted price points while still others may feature titles by genre or category, such as legal, fictional, historic, or non-fictional. Still other bookshelves may feature books by digital effects associated with them, including animation, flash presentations, or author commentaries.

In some embodiments of the present invention, users may upload customized icons or labels to identify bookshelves virtually displayed within their accounts. In some embodiments of the present invention, new users are given, or assigned, virtual bookshelves organized with titles presented by the central managing forum **102** to maximize profitability to a third-party maintaining the central managing forum **102**, and/or to maximize user interest in reading digital picture books **112**, and/or to cater to the presumed preferences of the user based on age and/or demographic information, and/or titles picked by an editor, and/or titles specific to a season or holiday, and/or newly released titles by publishers doing business with the central managing forum **102**, and/or titles within a preselected range of prices.

A user, or parent **104**, logged into the central managing forum **102** creates **306** a reading session and chooses a digitized picture book **112** to read with one or more other users, such as a child **106**, in the reading session.

In typical embodiments of the present invention, users may be invited by other family members to join a membership network, or friend network, which is stored and organized in

computer readable memory by the central managing forum **102**. The friend network comprises identifying information for a plurality of users who are associated familiarly, professionally, ethnically, religiously, geographically or the like.

Users within a friend network may be prompted, or invited **310**, by other users within the same friend network to join the reading session. Once two or more users have joined the reading session, the users to the reading session are interconnected **312**, and put into real-time, asynchronous audio, video and autographic contact with one another.

In typical embodiments of the present invention, each user will have one or more friend networks exclusively associated with him or her. Thus, friend networks may be an internal product of each user's account and existentially dependent on the existence of a one or more user accounts; or, additionally and/or alternatively, friend networks may be organized and stored within a database record storing information forming a single user and existing dependently on one or more user accounts.

In some embodiments, multiple users may login to the central managing forum **102** through the same user account, or may be logged into the central managing forum **102** simultaneously with another user vis-à-vis the same account. For example, children **106** who do not have separate user accounts may use a parent's **104** account to login and join a reading session with their parent **106** in a remote locale. For that reason, a user's friend network may comprise multiple versions of a single user's own account in the friend network.

Subsequently, the method **300** continues by displaying the digital picture book **112** that was selected prior to the creation of the reading session. Virtual buttons are overlaid across the digital picture book **112** such that each user participating in the reading session has the ability to navigate **316** through the pages of the digital picture book **112** for himself and the other users in the session.

Multiple virtual bookshelves may be browsed **319** by any of the users to a reading session during the reading session. This bookshelf browsing takes place unbeknownst to the other users in the session not participating in the browsing until a substitute digital picture book selection **112** is made by the user browsing the one or more virtual bookshelves.

Users have the discretion to terminate the reading session after, or during, the navigation of the digital picture book **112**. The central managing forum **102** tallies **318** statistics gathered during the reading session, including the amount of time the users spent in the reading session, the amount of the book that the users finished navigating, and the bandwidth used by the users to the reading session, and stores these statistics in computer readable memory where they are made available to publishers **202** and used in later analysis **320** of users' reading preferences.

In certain embodiments of the present invention, the modules of the central managing forum **102** alter the data forming one or more digital picture books **112** such that images in the digital picture books **112** can be displayed in a non-static fashion. In some embodiments of the present invention, the central managing forum **102** automatically alters the digital picture books **112** to create the perception of animation of their images using one effect from the group consisting of: a zooming effect, a fading out effect, a morphing to another image effect, a spiraling effect, an exploding effect, or an effect which creates the perception of a page in the digital picture book **112** turning to a subsequent or previous page. In some embodiments, this alteration takes effect before the digital picture book **112** selected for use in a reading session is saved in memory. In other embodiments, the data forming the digital picture book **112** is manipulated in real-time as it is

viewed in a reading session to create visual effects on the displays and/or stations 108 of the users participating in the reading session.

FIG. 4 is a block diagram illustrating components of one embodiment of an enterprise system 400 for inter-connecting multiple parties in an interactive environment exhibiting virtual picture books in accordance with the present invention. The system 400 includes a processor 402, a memory 404, a webserver 406, a first prompter module 410, a second prompter module 412, a third prompter module 414, a storage module 416, a receiver module 418, a fourth prompter module 420, an analysis module 422, and an incorporation module 424.

The processor 402 is well-known to those of skill in the art.

The memory 404 comprises any computer readable memory, volatile or non-volatile, internal or external, in logical communication with the processor 402. The membership records, available titles 204, reading preferences, and friend networks are all stores in the memory 404 and accessible there by the system 400 and central managing forum 102.

The webserver 406 is well-known to those of skill in the art.

The first prompter module 410 prompts a user interacting with the system 400 to create a reading session.

The second prompter module 412 prompts a user to pick a digital picture book 112 from a virtual library which displays the titles and covers of the books in the pool of available digital picture books 208. In some embodiments of the present invention, a user is prompted through the use of an heir-down virtual menu choose whether to preview a digital picture book 112, read the digital picture book 112 in a reading session, or recommend the digital picture book 112 to other user(s).

The third prompter module 414 prompts one or more users in a friend network to join a reading session with the user who chose a digital picture book 112 from the pool of available digital picture books 208.

The storage module 416 stores interactive information, reading statistics, membership records, digital pictures books 112, and the like in memory 404. The storage module 416 may comprise a peripheral device which is internal or external to the central managing forum 102, such as a disk-drive.

The receiver module 418 is configured to receive digital picture books electronically from publishers 202, which are made available to parents 104 and children 106.

The fourth prompter module 420 prompts users interconnected during a reading session to navigate a digital picture book 112 by placing visible and/or non-visible virtual button over, or near, selected portions of the digital picture book 112 as it is displayed on users' GUIs. In some embodiments, a user may navigate to subsequent pages in the digital picture book 112 by clicking virtual buttons overlaid on the page corners, or navigate to previous pages using the virtual buttons located elsewhere in the displayed digital picture book 112. The fourth prompter module 420 allows users to navigate digital picture books 112 using virtual buttons displayed via a graphical user interface (GUI) coupled to the stations 108a-b.

The analysis module 422 analyzes the reading habits of all users in the system using predetermined algorithms to predict the future reading preferences of newer users based on the identified and saved reading preferences of older users. The analysis module 422, in various embodiments, is configured to make recommendations that users add one or more digital picture books 112 to their reading preferences shown graphically in each users' virtual bookshelf.

In various embodiments, the analysis module 422 may additionally make available to the parents 104a-b information

about a commercial offering, including pictures, video, written descriptions, hyperlinks, and contact information of third-parties who have subscribed to an advertising service made available to them by the central managing forum 102, which commercial offerings are made to targeting users during reading sessions.

The system 400 includes an incorporation module 424. Various embodiments of the incorporation module 424 may be configured to scan a parent's 104 email contacts using means well-known to those of skill in the art, including emails contacts stored in Microsoft Outlook, Thunderbird, Yahoo! Mail, and the like. The incorporation module 424 may search for contact information of parents 104, children 106, and other family members related to a specific user, then make recommendations that family members identified by that contract information registered with the central managing forum 102 through the incorporation module 424.

FIG. 5 is a Booch relationship diagram illustrating the interrelationships and organization of membership records created by the operations and modules of the present invention.

FIG. 5 illustrates the manner in which four families are incorporated in the central managing forum 102. Parents 104b-d have all formed friendship networks 502a-c, and invited their familial descendants to join each of these respective friend networks 502.

Parent 104d has prompted children 106e-f to join friend network 502a, and the children 106e-f have joined friend network 502a. Likewise parent 104c has prompted children 106g-h to join friend network 502c, and child 106h has invited a grandchild 104e to subsequently join, who has then invited other great grandchildren 106i-j to join friend network 502c. Friend networks 502 are stored in memory 404 using a modified B-tree graph data structure.

FIG. 6 is a layout of browser manipulated by one embodiment of the present invention to inter-connect multiple parties in an interactive environment exhibiting virtual picture books in accordance with the present invention.

FIG. 6 illustrates one embodiment of a browser configuration 600 containing illustrative titles of digital picture books 112 hypothetically available to a users from the pool of digital picture books 204. In this embodiment, the digital picture books 112a-c are shown with reading statistics saved in memory, along with the dates said digital picture books 112a-c were originally published, the publisher 202 who originally published, and the cost of viewing the digital picture book 112 in a reading session with other users.

The configuration 600 also includes an account balance 614 a parent 104 has in their account with the central managing forum 102, as well as virtual buttons 606, 608, and 610 activating other browser configurations, modules and functions of the present invention.

FIG. 7 is an entity-relationship diagram illustrating data flow between interconnected data entities in communication with a system 700 in accordance with the present invention. The system 700 comprises a central managing forum 102, publishers 202a-d, available titles 204, membership records 702, revenue records 704, executable code 706, an author 710, new titles 712, old titles 714, test titles 716, supplemental information 718, select titles 720, author commentary 722, reading stats 724a-b, and royalties 726a-b.

The membership records 702 comprise identifying information associated with individuals who have registered with the central managing forum 102. The membership records 702 may comprise the name and contact information of any person, company or organization that registers with the central managing forum 102.

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The revenue records **704** are stored in memory **404** and comprise computer readable records of expenditures, income, account balances and the like for each user of the system **700**. Revenue records **704**, in the preferred embodiment, are stored in a computer readable database.

The executable code **706** comprises the source code executable to perform operations for displaying digitized graphic media to multiple interconnected parties in the system **700** and computer program products of the present invention.

In some embodiments of the present invention, a publisher **202a** uploads a variety of digital picture books **112** to the central managing forum **102** in batches. One batch may comprise new titles **712**, or new digital picture books **712**. One batch may comprise old titles **714**, and another batch may comprise test titles **716**.

Test titles **716** may be a batch of digital picture books **112** that the publisher **202a** has not yet printed and made available to consumers in hard-copy. The publishers **202a** may be making the test titles **716** exclusively available to the system **700** for the purpose of testing market reaction to the titles and/or the commercial prospects of the test titles **716**. The system **700** may track reading statistics **724** which it shares with the publisher **202a** in response to receiving the test titles **716**. In the shown embodiment, reading statistics **724a-b** are shared with publishers **202c-d**, who have previously updated digital picture books **112** to system **700**.

Author commentary **722** and supplemental information **718** may be uploaded to the central managing forum **102** in the same manner that batches **712**, **714**, **716** are uploaded.

The supplemental information **718** comprises supplemental information which a publisher wishes to send the central managing forum **102**. In some embodiments of the present invention, the supplemental information **718** comprises coupon codes generated by a publisher **202**, or given to the publisher **202** by the central managing forum **102**, which, when entered by a user during registration, enable only a portion of the pool of available titles **204**. In so doing, users provided with coupon codes by a publisher **202** may be limited to access through the central managing forum **102** only to digital picture books **112** published by the publisher **202**. In still further embodiments, users provided with coupon codes by a publisher **202** may have access to all available titles in the pool of available titles **204**, but have a virtual bookshelf repopulated exclusively with digital picture books **112** published by the publisher **202**.

Royalties **726a-b** may also be returned to publishers **202** from the system **700**. The Royalties **726** may comprise PayPal payments, money wires, eChecks, credits, vouchers or the like, and may be remitted electronically to one or more publishers through other third-party banks and management systems or organizations.

Ultimately, the author **710** may receive reading statistics **724a** from a publisher **202c**.

The functions of the systems shown in the present invention correspond generally to other systems, methods, apparatus and computer program products outlined in the present invention, and further illustrates the availability of different allocations of functionality amongst modules that implement an embodiment of the invention. To the extent that hardware, software, and firmware implementations are deemed partially or fully interchangeable at the time in question (now or hereafter) by one of skill in the art, they may be utilized in embodying the invention even though the specific implementation examples discussed here are different.

The present invention may be embodied in other specific forms without departing from its spirit or essential character-

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istics. The described embodiments are to be considered in all respects only as illustrative and not restrictive. The scope of the invention is, therefore, indicated by the appended claims rather than by the foregoing description. All changes which come within the meaning and range of equivalency of the claims are to be embraced within their scope.

What is claimed is:

1. A non-transitory computer program product comprising a computer readable medium having computer usable program code executable to perform operations for displaying digitized graphic media to multiple interconnected parties, the operations of the computer program product comprising:

incorporating identifying personal information of one or more users into a database under the exclusive control of a central managing forum, wherein said identifying personal information is voluntarily provided by the one or more users to the central managing forum via a computer network for a purpose of creating exclusive user accounts;

storing reading preferences of the one or more users in the database;

prompting a user to create a reading session;

prompting the user to choose a digitized picture book from a pool of digitized picture books stored in a computer readable medium;

prompting via a computer network one or more users to join the reading session who have been selected by the user creating the session;

interconnecting one more users prompted to join the reading session with the user creating the reading session, such that each of the users in the reading session are in video, audio and autographic contact with each of the other users in the reading session;

simultaneously displaying the digitized picture book to each of the one or more users in the reading session;

prompting the one or more users in the reading session to interactively navigate the digitized picture book; and tallying the number of times the digitized picture book is displayed in reading sessions created by users.

2. The computer program product of claim **1**, further comprising offering the functional ability to create a membership network accessible only to users who have opted in to the membership network and been approved by one or more network administrators.

3. The computer program product of claim **1**, wherein the central managing forum stores and displays a plurality of icons hyperlinked to digitized picture books preselected by a user to appear in a virtual bookshelf, wherein the virtual bookshelf is designed to visually resemble an actual bookshelf and exclusively accessible to a single user and the central managing forum.

4. The computer program product of claim **3**, wherein a user preselecting one or more digitized picture books to appear in the virtual bookshelf is a user other than the user with primary access to the virtual bookshelf.

5. The computer program product of claim **3**, wherein the central managing forum analyzes similarities and differences between the digitized picture books appearing in a plurality of virtual bookshelves and makes recommendations that one or more users add specific digitized picture books to one or more virtual bookshelves which specific digitized picture books are identified from the analysis of similarities and differences.

6. The computer program product of claim **2** or claim **3**, wherein a first user makes a recommendation that one or more second users add a specific digitized picture book to a virtual bookshelf.

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7. The computer program product of claim 3, further comprising previewing a digitized picture book to a user in a pop-up window on a computer display.

8. The computer program product of claim 1, further comprising displaying statistics representative of a plurality of users' reading habits to a user.

9. The computer program product of claim 1, wherein the pool of digitized picture books is updated by a plurality of third-parties in logical connection with the central managing forum, wherein the central managing forum awaits the active update of the pool of digitized picture books by the third-parties.

10. The computer program product of claim 1, wherein the simultaneously displayed digitized picture book is overlaid with virtual buttons activated by the interconnected users to navigate pages of the displayed digitized picture book.

11. The computer program product of claim 1, wherein pictures in the simultaneously displayed digitized picture book are automatically altered by the central managing forum to create the perception of animation using one effect from the group consisting of: a zooming effect, a fading out effect, a morphing to another image effect, a spiraling effect, an exploding effect, and a perception of a page being turned.

12. The computer program product of claim 1, further comprising inviting a plurality of users to join a reading session created by an author who has written the digitized picture.

13. A system to display digitized graphic media to multiple interconnected parties, the system comprising:

a processor;

a data storage means for storing data;

a central managing forum to store, transfer and deliver data over an Internet to a plurality of users, the central managing forum comprising:

an incorporation module configured to incorporate identifying personal information of one or more users into a database under the exclusive control of a central managing forum, wherein said identifying personal information is voluntarily provided by the one or more users to the central managing forum via a computer network for a purpose of creating exclusive user accounts;

a storage module configured to store reading preferences of the one or more users in the database;

a first prompter module configured to prompt a user to create a reading session;

a second prompter module configured to prompt the user to choose a digitized picture book from a pool of digitized picture books stored in a computer readable medium;

a third prompter module configured to prompt via a computer network one or more users to join the reading session who have been selected by the user creating the session;

an interconnection module configured to interconnect one more users prompted to join the reading session with the user creating the reading session, such that each of the users in the reading session are in video, audio and autographic contact with each of the other users in the reading session;

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a display module configured to simultaneously display the digitized picture book to each of the one or more users in the reading session;

a fourth prompter module configured to prompt the one or more users in the reading session to interactively navigate the digitized picture book; and

a tally module configured to tally the number of times the digitized picture book is displayed in reading sessions created by users.

14. The system of claim 13, further comprising a friend module configured to offer the functional ability to create a membership network accessible only to users who have opted in to the membership network and been approved by one or more network administrators.

15. The system of claim 14, wherein the central managing forum is configured to store and displays a plurality of icons hyperlinked to digitized picture books preselected by a user to appear in a virtual bookshelf, wherein the virtual bookshelf is designed to visually resemble an actual bookshelf and primarily accessible to a single user and the central managing forum.

16. The system of claim 14, wherein the user preselecting one or more digitized picture books to appear in the virtual bookshelf is a user other than the user with primary access to the virtual bookshelf.

17. The system of claim 14, wherein the central managing forum analyzes similarities and differences between the digitized picture books appearing in a plurality of virtual bookshelves and makes recommendations that one or more users add specific digitized picture books to one or more virtual bookshelves which specific digitized picture books are identified from the analysis of similarities and differences.

18. The system of claim 14, wherein a plurality of virtual bookshelves are primarily associated with, and accessible to, a single user, wherein said bookshelves are prepopulated by the central managing forum with a plurality of books from a genre selected from the following group: seasonal books, newly released books, books targeting readers of certain age, books authored by a pre-identified party, books published by a pre-identified publisher, and popular books.

19. The system or claim 14, wherein a first user makes a recommendation that one or more secondary users add a specific digitized picture book to a virtual bookshelf.

20. The system of claim 14, further comprising a previewing module configured to preview a digitized picture book to a user in a pop-up window on a computer display.

21. The system of claim 13, wherein the pool of digitized picture books is updated by a plurality of third-parties in logical connection with the central managing forum, wherein the central managing forum awaits the active update of the pool of digitized picture books by the third-parties.

22. The system of claim 13, further comprising a provider module configured to provide a first user of the one or more users to the reading session the option of confidentially browsing a bookshelf exclusively associated with the first user, and choosing a second digitized picture book from the pool of digitized picture books for use in the reading session.

23. The system of claim 13, wherein the one or more users to the reading session can choose to be simultaneously connected to a plurality of reading sessions.

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