Title: INTELLECTUAL PROPERTY APPLICATION DRAFTING, PREPARATION, AND SUBMISSION TOOLS

Abstract: A patent drafting tool (PDT) which enables users to prepare drawings, draft applications, and file patent applications is described. The tool may also provide searching systems and include a system wherein software developers can develop modules compatible for use with a patent application drafting tool (PDT) is described. The PDT and modules may or may not be part of an open source system.
**Intellectual Property Application Drafting, Preparation, and Submission Tools**

**Background of the Invention**

[001] Protecting intellectual property through patent systems is a vital part of most countries' national economies and well as the global economy. However, many patent systems are facing a number of challenges due to the increased technical complexity of patent applications as well as with the challenge of hiring and training new patent examiners to cope with the increasing number of applications being filed.

[002] In 2000, 311,807 patent applications were filed in the U.S. This number increased to 409,532 applications in 2005. Globally, 145,300 applications were filed under the Patent Cooperation Treaty in 2006, representing a 6.4% growth over the previous year. This trend has held steady since 1995 with the number of applications filed increasing every year.

[003] The problems in the protection of intellectual property rights are further compounded by virtual reality games. Hundreds of thousands of players access games known as massive multi-player online games (MMOGs) and massive multi-player online role playing games (MMORPGs). Players of these games customarily access a game repeatedly (for durations typically ranging from a few minutes to several days) over a given period of time, which may be days, weeks, months or even years. Many of these games purport to give intellectual property rights to the players in their virtual creations. However, these games lack a structured system for evaluating and granting such rights.

[004] Given the increasing number of applications being filed and the increased demand for protection of intellectual property, it would be advantageous to provide alternate methods for assigning and distributing applications for examinations. Such alternate methods would relieve some of the pressure on patent systems, allowing examiner's to focus on the aspects of their duties that require human involvement.

**Brief Description of the Drawings**
Fig. 1 is a block diagram of a system 100 according to an exemplary embodiment of the present disclosure.

Fig. 2 is a block diagram of a system 100' according to an exemplary embodiment of the present disclosure.

Fig. 3 is a block diagram of a system 10 according to an exemplary embodiment of the present disclosure.

Fig. 4 is a block diagram of a system 400 according to an exemplary embodiment of the present disclosure.

Fig. 5 is a block diagram of a system 500 according to an exemplary embodiment of the present disclosure.

**Detailed Description**

According to various embodiments, the present disclosure provides systems and methods that may be used alone or in combination to draft and prepare patent application.

According to various embodiments the following terms may, but do not necessarily, have or include the following meanings:

**Advertisement** - includes any communication via any medium to any one or more end users or any person or third party. Advertisements may include text, audio, video, icons, graphics, images, etc. Advertisements may include an offer for sale, for profit or not, and may or may not include a discount, for any services, products, financial instruments, e.g., insurance, annuities, securities, e.g., stocks, bonds, options, etc. and/or any other good or service, and/or may provide information about any of the forgoing or anything, such as a request for donations to political or charitable or any other entity or organization. Or, an advertisement might be used or designed to provide information to inform or educate any constituent and/or may include communications in support of any one or more objectives such as public relations, publicity, product placement or introduction, sponsorship, underwriting, public notice or service announcement or any other objective or purpose.

**Alert** - includes the transfer, delivery or storage of information or otherwise communicating with, by, between or among any two or more of the following, including, but not limited to any real or virtual: a) end user, b) game owners, c) game or other servers, d) player or player characters, e) NPCs, f) exchanges, g) game devices or
controllers, h) cell phone or other communications hardware and/or networks, i) databases, j) software applications, k) legal agencies, l) governing bodies, m) software interfaces, n) any person, o) and/or any combination of any of the above, which may be initiated by and/or based upon an alert event or other action. Exemplary methods to determine alert events and/or to send alerts are disclosed for example, in U.S. Patent Application Serial No. 11/676,848 "Virtual Environment with Alerts" filed February 20, 2007 which is incorporated herein by reference.

[014] Alert Event - includes any change in, of or to any condition or state, and includes any action, opposite action, unexpected action, desire for action, or failure to act, and thus Alert Event includes, but is not limited to any one or more of:

1. When or after any one or more variables or data changes or is expected or is about to change within an application, service, API, communications network or one or more databases, or database variables or element, e.g., a balance is reached or exceeded
2. When an end-user acts, e.g., clicks on a word or link, or fails to act as or when expected.
3. An amount of time elapses with or without an action.
4. When or after information is transmitted and/or shared (e.g. via a communications package or other mechanism) between two or more applications, services, servers, financial institutions, or any other entities, e.g., a message sent between two servers to provide information about one or more hyperlinks.

[015] Approval Queue- includes a queue of documents and or prior art associated with those documents that is awaiting an approval mark from an entity such as a patent examiner

[016] Boilerplate - includes any text, word, words, or phrases and/or part or all of a document which may be readily or otherwise reused with little or no modification and/or to serve as the basis of a new phrase or document, which use may save time and effort in the creation of said phrase or document. Boilerplate may include standard documents, terms, conditions, words, phases, etc., that can be incorporated or reused in multiple applications.
[017] Blog - includes a user-generated website or other system where entries may be made in a journal or other style and may be displayed in a reverse chronological or other order. Blogs often provide commentary or news on a particular subject, such as food, politics, or local news; some function as more personal online diaries. Blogs may include and/or combine or use text, images, and may include links, including hyperlinks to other blogs, web pages, documents, words, and other media related to its topic or subject matter. The term "blog" is derived from the term "Web log." "Blog" can also be used as a verb, meaning to maintain or add content to a blog.

[018] Certified Component-includes any piece of software that is a component of a total software solution that has been approved for use by an entity such as the USPTO.

[019] Certified Definition-includes the definition of a word or phrase as it relates to a class or subclass of patentable inventions that is approved by an central entity such as the USPTO.

[020] Certified Font-includes any font that is approved by a central entity such as the patent office for use in an invention disclosure or figures associated with such a disclosure.

[021] Certified Icon-includes any icon that can be used in a figure to be submitted with a patent application to identify a standard component of invention that is approved for use by a central entity.

[022] Certified Plug-in-includes any software module that can be inserted into a larger software program and used to perform a sub function of the total function of the total system that is approved by a certification party such as the USPTO.

[023] Certified Shape-shall include any visual shape that can be used to identify a component in a patent or other drawing that is approved by a central entity such as the patent office for use in a figure associated with an invention disclosure.

[024] Certified Template-shall include a group of certified shapes, certified Icons, and or certified fonts that can be used in a figure associated with an invention disclosure and that is approved by a central entity such as the patent office.

[025] Class, in the context of a patent application, includes a class of patents or other digital documents in an electronic database.
Click-through - includes the process of an end user selecting or otherwise activating a hyperlink.

Document Map or Map - includes a visual representation of a group of documents or other items or objects, such as patents that shows the relationship of those documents, objects or items to one another. For example, a map might be of a group of documents and their relevancy to each other. Or, a map might include a visual representation.

End User - includes any person or entity, real or virtual that makes use of or otherwise practices any part or all of the disclosed invention and/or any software application or tool disclosed herein or otherwise. End users include, for example, patent applicants, patent examiners, patent attorneys, patent examiner supervisors, document review specialists, diagram or figure design engineers, survey respondents, search tool users, and other persons. In certain embodiments, an end user may be an application, application program interface, reporting or other tool or automated process.

Genetic Algorithm - includes any software application or module that can improve results with use.

Hyperlink or link - includes a set of instructions or code, which may be embedded, or otherwise associated with or connected to, an element, word, object, icon, document, figure, map, file attachment, or other displayed area within a document which, when selected, clicked or otherwise activated by an end user, may cause a computer to perform one or more functions. Examples of functions that might be performed include, but are not limited to, displaying new or additional information, redirecting to a different area of the same or a new document, displaying an advertisement, soliciting and/or capturing information, opening a form that requires end user input, and/or displaying new information that is generally associated with and/or related to the hyperlinked element. New or additional information and/or webpage(s) may or may not be displayed using a separate or new web browser page or popup window or interstitial. Hyperlinks are commonly identified through the use of an underline and/or color coding, e.g., HYPERLINK, but this is not necessarily required or desired. Hyperlinks may be activated by any applicable means, including, but not limited to, left or right clicking on or near the link, placing a pointer on or near the link (briefly, temporarily or not), touching the area, e.g., via use of a touch screen or other pointing mechanism, and/or
automatically, e.g., based upon date or time, or other action or inaction of the end user. For example, in some situations, failure to respond within a given timeframe may cause execution or delay of execution of a hyperlink. A hyperlink may be associated with other hyperlinks, e.g., hyperlinks within hyperlinks, documents, programs, words, phrases, or other information or actions. For example, if an end user right clicks on a hyperlink, one or more options may appear, permitting the end user some degree of flexibility in the action or actions taken. The terms link and hyperlink shall have corollary meanings.

[031] Information Disclosure Statement (IDS)-includes the definition provided by the United States Patent and Trademark Office (USPTO).
[032] IDS Report-includes a document that references all prior art material associated with a patent application or invention disclosure
[033] Image-includes figures, pictures, drawings, document images, e.g., document snapshots, etc.
[034] Improvement Module-includes a sub module that is embedded in a total system that is used to improve upon the total system or other sub modules embedded in that system.
[035] Keyword - includes any word or words that are identified as being “of interest.” A keyword may be of interest because it is a word that generally helps to describe the content of the document in which it is used, or for other reasons.
[036] Lexicon-includes a group of words with corresponding definitions that is broken into classes and subclasses that are associated with the class and subclass of documents in a database such as the digital database of filed and or issued patents of the USPTO
[037] Mapping-includes the process of associating documents to one another and providing a visual representation of the relationships of those documents.
[038] Merchant - includes any person that desires to sell a good or service or desires to have one or more end users to review, select, or click a hyperlink in a document and/or receive other information and/or perform other tasks and/or receive information associated with one or more keywords selected by such merchant.
[039] Notes - includes any computer file or data or any free form or other text, graphics, figures and/or any files such as any audio, video, e.g., JPEG or MPEG, pictures, e.g., GIF, or other files, such as, PDF, XLS, XML, TXT, DOC, RTF, or any
other known files such as those described on the websites: http://filext.com/ and http://www.computeruser.com/resources/dictionary/filetypes.html, which are incorporated herein by reference. Notes may be attached or associated with any one or more of the following, any electronic element, word or words, phrase, document, figure, hyperlink, webpage, database, table, file, or any other electronic media. Notes may include any description, hyperlink, figure, document or file associated or attached to any of the forgoing and/or any combination of the forgoing. In certain embodiments, notes may contain or refer or reference other notes, e.g., notes within notes. Exemplary methods to provide attachment of notes into documents and/or associate notes with documents, or words, or other data are disclosed in US Patent Application Nos. 11/690,095 "Facilitating Certified Prior Art Note Taking and Method for Using Same," filed March 22, 2007; 11/697,480 entitled "Note Overlay System," filed April 6, 2007; and 11/697,486 entitled "Document Examiner Comment System," filed April 6, 2007; each of which is incorporated herein by reference.

[040] Patent Application-includes an invention disclosure that has been filed with a registration entity such as the USPTO

[041] Patent Application Drafting Tool-includes a web based software program that assists in the drafting and filing of patent applications with a registration entity such as the USPTO. An exemplary patent application drafting tool is described in U.S. Patent Application No. 11/627,263, which is hereby incorporated by reference.

[042] Patent Drafting Engine-includes a software module that can partially or completely draft and/or modify an existing draft patent application and/or file those applications with a registration entity such as the USPTO.

[043] Patent Figure-includes any figure or document attached to a patent application

[044] Patent Section-includes any section of a patent application or invention disclosure such as the background, summary, title, abstract and or claims.

[045] Patentability Score-includes a score assigned by one or more people, e.g., an end user, or computer programs to a patent application that relate to its strength of patentability in categories such as novelty, obviousness, and usefulness.

[046] Plug-in - includes any software application or module or one or more computer instructions, which may or may not be in communication with other software
applications or modules, and may include any file, image, graphic, icon, audio, video or any other attachment. Plug-ins may be comprised of any one or more set of computer instructions using any computer programming language.

[047] Relevancy-includes how relevant a word, phrase, patent section, patent figure or document is to another word, phrase, patent section, patent figure or document

[048] Rules - includes computer instructions that can provide application direction and/or decision making and includes both inference and reactive rules. Rules may include permissions, limitations, method steps, alert event conditions, alert contents, workflow instructions, security measures, business process management instructions, if/then/else instructions and/or any supporting data, variables, or computing instructions and/or logic.

[049] Rules Based - includes any system or application or module that uses or relies on one or more rules.

[050] Search Relevancy-includes how relevant sections of a document are to a word, phrase, patent section, patent figure, or document are when producing search results for a query. For example, the abstract of a patent document can have higher search relevancy than the background of a patent document when conducting prior art searches using a prior art search software tool.

[051] Search Weight-shall mean the score that one section of a document has to other sections of a document when conducting searches against a database of documents in which that document is included.

[052] Subclass-includes a subclass of patent documents as defined by the USPTO. Subclass can also include any sub classification of a database of electronic documents.

[053] Synonym - is any word or group of words that have the same or similar meaning of another word or group of words and/or that may be interchangeable. The opposite of synonym is antonym.

[054] Thesaurus-includes an electronic database of words that have been mapped to indicate similarities in word definitions. The thesaurus may be broken into classes and subclasses that relate to the classes and subclasses of documents stored in an electronic database and/or accessed via such database.
[055] Virtual - includes anything that is not real, in whole or in part, and/or anything real, in whole or in part; which may be simulated, represented, presented or depicted in a virtual environment, video game or displayed on a screen.

[056] Virtual Environment - any technology that permits one or more end users to interact with a real, imaginary or virtual computer simulated environment.

[057] Virtual World - includes a world created in an online game such as World of Warcraft, or a virtual community such as Second Life, Eve or There.com

[058] Video Game-shall mean any massive multi online player game such as World of Warcraft and any virtual world such as Second Life

[059] Web page - includes any resource, form, or any information that is accessible via the Internet and that is suitable or exists on the world wide web. A web page usually includes information in any applicable format, e.g., HTML or XHTML. Web pages may include hyperlinks or provide other means of navigation to other web pages. Web pages may be accessed by any applicable means, including, but not limited to: any computing or internet enabled devices, e.g., personal computers, laptops, PDAs, cell phones, video game controllers, or any other communications device, which may be local or remote to the computer or server where such web page(s) may exist or reside.

[060] Word - includes one or more groups of letters including titles, indices, text, headings, descriptions, diagrams, etc., and documents (in whole or in part), phrases (i.e., groups of two or more words), synonyms, antonyms, icons, graphics, drawings, schematics, blueprints, pictures, audio and/or video, and/or any combination of the forgoing. The words "Word" and "Words" shall have corollary meanings.

[061] Turning first to Fig. 1, a general system 100 is shown. System 100 is suitable for any of the below-described applications. As shown, the system includes one or more program modules 10, which are in electronic communication with one or more databases 20. Databases 20 may be hosted on the same server as program modules 20 (which themselves may or may not be hosted on the same server). Alternatively, some or all of databases 20 may be hosted on other or remote locations/servers.

[062] According to one or more embodiments, the present invention provides an automated web-based patent application preparation and submission tool. In one embodiment, an end user can draft a patent application using an online tool. Once the patent application or portion thereof is created, the document can be submitted to: (i) a
recommender for further research, (ii) a patent attorney for further drafting, or (iii) the patent office.

[063] The information submitted into the tool may be analyzed automatically and/or in real time by the system in order to perform various functions. For example, based on the information submitted, the system can recommend alternate language for sections or draft missing parts of the total patent application. For the purposes of the present disclosure, information is considered to be analyzed automatically any time it is analyzed by the system with the system having to receive additional input, such as a request or command, from the user. It will be appreciated, that computer implemented systems are subject to various operating constraints, such as server loads, processing speeds, and the like, with which those of skill in the art will be familiar and, accordingly, "real time" analysis may not necessarily be instantaneous, but is rather intended to mean that results are automatically provided to the user as soon as they are available, given the various system operating constraints.

[064] Recommendations for alternate language or missing portions may be based on patent applications or other non-copyright protected publications describing similar inventions. For example, the system may use a genetic algorithm to determine like patent applications as the end user is entering the description of his invention. Because patent practitioners often act as their own lexicographers and coin new terminology to describe inventions, such new terminology can be shared immediately and made available to other patent practitioners. In this manner, the system can act as an ever changing virtual dictionary of language for new patent applications. An example of a genetic algorithm that can perform this function is the Semetric program offered by Engenium.

[065] As another example, the system can perform real time prior art search based on the disclosure as the end user types words into the tool. The system could be configured to dynamically display the most relevant prior art choices based on the words and letters being typed. The prior art being displayed would then change in real time as the end user types in more words to describe the invention. It will be appreciated that such real time searching could be used for any type of searching and not just searching for prior art for inventions.
Suggestions for alternate language and missing portions or prior art or other searches need not necessarily be performed in real time, but may also or alternatively be performed after a disclosure is submitted by the end user, for example in order to receive an initial review prior to filing, or only upon the end user's request.

According to another embodiment, the system may utilize a genetic algorithm to specify a class and subclass for a patent application. The system may analyze an application in real time, or after it has been submitted, and determine the appropriate class and subclass. The genetic algorithm may or may not allow for the incorporation of classification data from previously submitted applications which are identified by the system or the end user as being similar to the current application.

According to another embodiment, the system may track and/or identify information that is missing from the patent application that is required for filing the patent application with the patent office. The end user can review missing parts for a particular patent application and fill them in as desired. The end user can also leave missing information fields open for subsequent completion, for example, by researchers and/or patent practitioners.

According to another embodiment, one or more notes could be submitted by an end user or other individual in connection with a document, including, for example, an application as it is being drafted, a submitted or filed application, a patent publication, an issued patent, a non-patent reference, an office action, a examiner or practitioner communication, a judicial or review-board decision, or the like. These notes may or may not be viewable to other users and may or may not be used by the system for any suitable purpose, including, for example, preparation or examination of the present application, preparation or examination of other applications, system maintenance, and the collection and dissemination of statistical information. Moreover, notes may or may not be submitted in response to additions, suggestions, or notes from the system or other individuals. Any suitable type of file, including, but not limited to a jpg, digital video, recording, voice message, or textual document could be added to or associated with a document as a note.

As a non-limiting example, an end user may add notes to the alternate language and missing portion suggestions provided to or by the system. These notes can be used by the genetic algorithm to generate improved alternate language and missing
portion suggestions for later invention submissions by the same and/or other end users. Moreover, these notes could be readable by subsequent end users and could be used to assist in the drafting of later patent applications.

[071] According to another embodiment, the present disclosure provides for a system in which a practitioner can elect from between multiple post-drafting processing options. The system may or may not require that the application have been drafted using a web-based drafting tool such as that described above. According to this embodiment, once an end user has completed drafting a patent application, the end-user can select whether he wants to:

1. Submit the patent application to a researcher
2. Submit the patent application to an attorney for further drafting
3. Submit the patent application to the Patent Office for filing

[072] In an alternate embodiment, the system can recommend one of the previous three choices to an end user based on the current status of an application. According to this embodiment, the system analyzes the patent application document and compares it to previously filed patent applications. The patent application is scored and the system determines whether the application should be sent to a researcher, an attorney, or to the patent office.

[073] If the end user elects to submit the patent application to a researcher, the system can select or suggest an optimal researcher from its database of researchers based on inventions researched by those researchers and the relevance of those inventions to the invention currently being submitted by the end user. Alternatively or additionally, the system could select or suggest a researcher based on whether a particular researcher has capacity to conduct research on the patent application. If the end user is allowed to select a researcher, a list of applicable researchers could be provided to the user by the system. The list could be sorted or sortable based on relevancy, expected timeframe for research completion, cost, location, or other factors.

[074] As a further embodiment, if the end user is allowed to select a researcher, researchers could bid on the opportunity to research the patent application. Bids could include any number of relevant factors including but not limited to, cost for research, type of fee rate (i.e. flat fee, hourly, etc.), type and extent of results provided, and timeframe for returning results.
Moreover, the system could be configured to provide to the end user contact information for each selected or suggested researcher. The end user could then contact the selected or suggested researcher via the system interface and submit the patent application to the researcher for review. A contract can be set up, i.e., drafted and executed automatically, between the end user and the patent researcher using the system.

According to an embodiment, the researcher receives the patent application, creates a research report, and submits the research report to the end user. The research report may be submitted to the end user via the central system. According to some embodiments, the end user can review the prior art cited in the research report and rate its relevance to the invention disclosed. The relevance rankings can be used to match that researcher to subsequent patent applications. The end user can also submit notes distinguishing the application over the prior art cited and/or alter the application, such as to include distinguishing language.

According to an embodiment, the system may be configured to facilitate fee transactions between the end user and the researcher. The system may or may not impose a surcharge for facilitating the fee transactions. For example, once an application has been submitted to a researcher, the system may charge the researcher with a finder's fee. The system could also charge the end user with a researcher finder fee, or, the two parties could split a single fee. Alternatively the system could charge the researcher, who, in turn could charge the end user some, or all, of the fee amount. Alternatively or additionally, once the report has been received by the end user, a research report fee can be charged to the end user and some or all of the fee can be remitted to the researcher.

Alternatively or additionally, the system may be configured to submit the application to an automated searching program configured to produce search results using, for example, a genetic algorithm search program. A genetic algorithm search program is described, for example, previously incorporated U.S. Patent Application Serial No. 11/462/621, and U.S. Provisional Patent Application Serial No. 60/727,191.

If the end user elects to submit the patent application to an attorney (or agent) for additional drafting, the system can determine an optimal attorney from its database of attorneys. The determination may be based on any number of factors including, for example, estimated fee, past applications filed by the attorney, attorney's capacity, estimated turn-around, etc. For example, the system may be configured to
identify past inventions/applications filed and prosecuted by attorneys in the database and further determine the relevance of those inventions to the invention currently being submitted by the end user.

Moreover, attorneys may be asked or required to provide the system with information regarding their fees for preparation including billing rates and fees for past applications, current availability, estimated turn-around time, contact information, etc. Accordingly, the system can select or suggest an attorney based on such information. For example, a given attorney may be selected or suggested based on whether or not the system determines that attorney has capacity to assist the inventor in enhancing the application. Once one or more attorneys are selected by the system or the end user, the system can provide the attorneys' contact information to the end user using any suitable method. According to one embodiment, the end user may receive an attorney's contact information via the web-based form.

Furthermore, the end user may be able to automatically submit the patent application to the attorney via the web-based service. The attorney may then review the application for further refinement. Changes, additions, and alterations made by the attorney may be tracked by the system. Once the attorney has completed the application, the end user may be able to log in or otherwise access the completed application via the system to order to review and approve changes made by the attorney to the application.

If the end-user is not completely satisfied with the changes made by the first attorney, the application, with or without the first attorney's changes, may be submitted to a second attorney and such process repeated until the end-user is satisfied with the application. Once final approval is received from the end-user, the patent application can be submitted to the patent office by the system.

The determination of an appropriate attorney may be made at the time the end user opts to submit the draft application to an attorney or while the end user is drafting the application. Moreover, rather than waiting until the end user believes he has "finished" the application, the end user may be able to contact the attorney via the system while drafting the application. For example, while the end user is entering the patent application data into the system, the system can determine an appropriate attorney and offer the opportunity to provide the end user with real time chat with the attorney. If the end user accepts, a chat window is opened between the end user and attorney via the
central system. The end user can provide patent application data and the attorney can add and edit the data. When the session is complete, the system can charge a fee to the end user and submit a portion of that fee to the attorney. The recorded chat session is attached to the patent application file.

[084] The system may be configured to facilitate fee transactions and contract formation between the attorney and the end-user. The system may or may not impose a surcharge for such facilitation. For example, when an end user contacts an attorney, a finder’s fee can be charged to both the attorney and the end user. Furthermore the system may facilitate with the drafting and execution of a contract between the end user and attorney specifying terms and conditions so that the attorney can complete the application. The system may or may not utilize a standard contract which may or may not be modifiable by the end user and/or the attorney. Once the attorney's changes are made, the system may be configured to charge the fee specified by the contract to the end user for enhancing the patent application and submit some or all of the fee to the attorney.

[085] Once the end user elects to submit the patent application to the patent office, the system may be configured to determine if all information fields have been completed. Once the system has determined that all information fields have been completed, the system generates the appropriate forms, and submits the patent application, along with the appropriate forms to the patent office. An electronic receipt confirmation is received from the patent office and stored by the central system as well as being transmitted to the end user. The central system charges a filing fee to the end user and remits a portion of that fee to the patent office. If all fields have not been completed, the system steps the applicant through each open field, providing examples and information about each field, its use, etc.

[086] According to a further embodiment, the system may be configured to time stamp the patent application file as additions are made by the various parties who can access it. Moreover, the system could time and date stamp and store all files that are entered into the system and so that a record of the invention is maintained.

[087] According to yet another embodiment, the end user may be allowed to determine whether or not an application filed with the system is to be treated as public or private data. If the filed application is be treated as public data, and thus useful as prior
art against other inventions, the end user may further be allowed to identify the application as an invention registration rather than as an application. Just like a filed patent application, an invention registration can be assigned a filing date and used as prior art against later filed applications, but may not be subjected to further examination.

[088] An end user preparing a patent application may desire to get into contact with other end users that are preparing or have prepared other similar patent applications. Accordingly, the system of the present disclosure may be configured to facilitate communication between end users who are or have worked on similar patent applications. According to this embodiment, when the system receives patent application data from an end user, the system may perform a search to find other end users that are working or have worked on similar patent applications and allow the end users to communicate with one another. Such communication may or may not be anonymous. According to one example, the system receives patent application data from an end user and then uses that patent application data to search against other end user profiles in the system. The system generates a list of end user profiles that are relevant to the patent application data and scores them based on relevance. The system then outputs the list of relevant end users to the end user submitting the patent application data. According to some embodiments, end users may be able to opt in to or out of being a member of this service.

[089] The system may require the use of a user ID and password associated with a specific log in profile or other mechanism to protect privacy and ensure that end users are accessing only the information they are entitled to access. For example, a given user may only be given access to or receive help from applications written by himself, other members of his firm or corporation, other applications for the same inventor or assignee, or other practitioners who have opted in to a program. In cases where an end user is an entity with multiple individuals who access the system, each individual may have the same or a separate log in profile.

[090] In addition to a formal web browser interface, the system may incorporate a smaller interface, like a toolbar on a browser or a freestanding toolbar / text field that floats, and/or is hidden but present as an icon (e.g., in the bottom right hand corner in Windows XP). For example, a text field may be ever present on the screen. A user may be able to type a patent number, application number, attorney docket number, etc (along
with any necessary password, confirmation number or the like), hit enter and be automatically directed to a search results screen, draft history screen, prosecution history screen, or some other desirable location.

[091] In a further embodiment, the system may be configured to make new matter added as part of a continuation in part (CIP) or other application easily identifiable. For example, new matter could be red-lined, highlighted, or otherwise identified by altering the font or in some other recognizable manner as the application is being prepared, or at the time of submission or filing.

[092] Furthermore, any of the processes described above, such as generation of suggested language, suggested researchers, and suggested attorneys could be performed for the new material. As a further embodiment, a new search request or automated research report could be automatically generated for the new subject matter in the CIP.

[093] According to yet another embodiment, the system may be configured to ensure that all submissions for filing comply with any formalities requirements. For example, the system may ensure that all submitted figures fall within the current guidelines for margins size, line thickness, font size, etc. Such compliance may be determined each time a submission is made, whether an initial filing, response to an office action, filing of a continuation, divisional, continuation-in-part of the like.

[094] According to yet another embodiment, the system could generate a clarity score for the patent application. An AI system could be trained to identify patent applications that clearly define an invention vs. applications that do not. End Users and patent examiners could provide a clarity rating for prior art. Based on the ratings assigned, an AI system can analyze newly filed patent applications and assign clarity scores to them.

[095] The system can be built using any suitable architectural method. Examples of suitable architectural methods include, but are not necessarily limited to: 1) a simple, table based method 2) a rules based system or 3) an artificial intelligence (AI) system such as Neural Net, or Bayesian Algorithm.

[096] Those having skill in the art will recognize that there is little distinction between hardware and software implementations. The use of hardware or software is generally a choice of convenience or design based on the relative importance of speed, accuracy, flexibility and predictability. There are therefore various vehicles by which
processes and/or systems described herein can be effected (e.g., hardware, software, and/or firmware) and that the preferred vehicle will vary with the context in which the technologies are deployed.

[097] At least a portion of the devices and/or processes described herein can be integrated into a data processing system with a reasonable amount of experimentation. Those having skill in the art will recognize that a typical data processing system generally includes one or more of a system unit housing, a video display device, memory, processors, operating systems, drivers, graphical user interfaces, and application programs, interaction devices such as a touch pad or screen, and/or control systems including feedback loops and control motors. A typical data processing system may be implemented utilizing any suitable commercially available components to create the gaming environment described herein.

[098] Accordingly, the presently described system may comprise a plurality of various hardware and/or software components. An exemplary system 100' is shown in Fig. 2 and described below. However, it will be understood that a nearly unlimited number of variations are possible and that such description is intended to provide a non-limiting example of an implementation that could be utilized but should not be used to define the entire scope of the invention.

[099] Accordingly, a system 100' configured to perform the various functions described above may incorporate a number of software modules configured to perform various tasks. Exemplary software modules useful for the presently-described system include:

1. User interface 102 - this program allows the end user to interface with system 100'.

2. Patent Words and Phrases Dictionary Program 104 - this program generates like words and word phrases based on patent application text entered by an end user. These words and phrases may then be stored in a database such as Patent Words and Phrases Database 124, described below.

3. Patent Application Text Enhancement Program 106 - this program identifies words and phrases in an end user's patent application and
associates these words and phrases with alternative words and phrases from the patent words and phrases dictionary program 104.

4. Web Based Filing Program 108 - this program allows patent applications to be created and electronically filed with the patent office.

5. Profile Score Generation Program 110 - this program scores the relevance of end users to one another and to patent applications and prior art.

[0100] System 100 may further include a number of databases configured to store and associate the various types of data that are used by the system to perform the functions described above. Exemplary databases useful for the presently-described system include:

[0101] End User Database 112, which may collect, store and associate data such as:

1. End User ID
2. End User Name
3. End User Address
4. End User Contact Info
5. End User Billing Info
6. Profile Score ID

[0102] Patent Application Database 114, which may collect, store and associate data such as:

1. Patent Application ID Number
2. End User ID
3. Patent Application Title
6. Patent Application Invention Class and Sub Class
7. Patent Application Inventor Name
8. Patent Application Inventor City
11. Patent Application Attorney or Agent
13. Patent Application Date of Invention
14. Patent Application Background of the invention
15. Patent Application Invention Figures
16. Patent Application Assignee Name
17. Patent Application Assignee City
23. Patent Application Filing Date
25. Profile Score ID
26. Published/Unpublished Flag

[0103] Patent Application Status Database 116, which may collect, store and associate data such as:

1. Patent Application Registered
2. Submitted to manual Search
3. Manual Search Received
4. Submitted to Attorney
5. Attorney Review Complete
6. Submitted to Formal Search
7. Formal Search Complete
8. Received Distinguishing Language Over Prior Art
9. Filed
11. Response to Examiner Review
13. Final Rejection
14. Patent Issued
Attorney Database

1. Attorney ID
2. Attorney Name
3. Attorney Address
4. Attorney Billing Info
5. Profile Score ID

Prior Art Database

1. Prior Art ID
2. Prior Art Title
3. Prior Art Abstract
4. Prior Art Description/Specification
5. Prior Art Invention Class and Sub Class
6. Prior Art Inventor Name
7. Prior Art Inventor City
8. Prior Art Inventor State
9. Prior Art Inventor Country
10. Prior Art Attorney or Agent
11. Prior Art PCT Information
12. Prior Art Date of Invention
13. Prior Art Background of the invention
14. Prior Art Invention Figures
15. Prior Art Assignee Name
16. Prior Art Assignee City
17. Prior Art Assignee State
18. Prior Art Assignee Country
19. Prior Art Claims
20. Profile Score ID
21. Related Prior Art Notes IDs 1-N
22. Prior Art Search Score
23. Published/Unpublished Flag
Prior Art Note Database 122, which may collect, store and associate data such as:

1. Note ID
2. End User ID(s)
4. Prior Art ID(s)
5. Note Title
6. Note Description
7. Note Class
8. Note Subclass
9. Note Keyword(s) 1-N
10. Profile Score ID

Patent Words and Phrases Dictionary Database 124, which may collect, store and associate data such as:

1. Word ID
2. Word
3. Like Words 1-N
4. Common phrases using word or like words 1-N
5. Used in Patents 1-N
6. Profile Score ID

Researcher Database 126, which may collect, store and associate data such as:

1. Researcher ID
2. Researcher Name
3. Researcher Address
4. Researcher Billing Info
5. Profile Score ID

Researcher Queue 128, which may collect, store and associate data such as:

1. Researcher ID
2. Patent Application ID
3. Patent Application Queue Number
[01 10] Certified Search Database 130, which may collect, store and associate data such as:

1. Search ID
2. Patent Application ID
3. Prior Art ID 1-N
4. Distinguishing Language Over Prior Art 1-N
5. Prior Art Score
6. Novelty Score
7. Usefulness Score
8. Non-obvious Score
9. Search Score
10. Clarity Score

[01 11] Profile Database 132, which may collect, store and associate data such as:

1. Profile Score ID
2. Profile Type
3. Patent Class 1-N
4. Patent Subclass 1-N

[01 12] End User Profile 134, which may collect, store and associate data such as:

1. Profile Score ID
2. Patent Application(s) Class 1-N
3. Patent Application(s) Sub Class 1-N
4. Invention Keywords 1-N

[01 13] Profile Type Database 136, which may collect, store and associate data such as:

1. End User
2. Attorney
3. Researcher
4. Word
5. Patent Application
6. Prior Art

[01 14] Transaction Database 138, which may collect, store and associate data such as:
Transaction Type and Fee Database 140, which may collect, store and associate data such as:

1. Transaction Type
2. Transaction Fee (1-N)
3. Fee Applied to Account Type (1-N)

Accordingly, a system such as that described herein will be configured to perform various functions, such as those described above, by performing various method steps in order to accomplish one or more given tasks. Non-limiting examples of methods that may be performed by a system and the steps that the system may execute in order to perform these methods are described below:

Draft initial patent application:

1. Receive patent application information
2. Receive request for alternate language and missing part suggestions
3. Determine similar patent applications and prior art
4. Determine alternate language and missing portion suggestions based on similar applications
5. Output alternate language and missing portion suggestions
6. Receive patent application modifications based on alternate language and missing portion suggestions

Specify class and subclass:

1. Receive patent application data
2. Determine patent class and subclass based on patent application data
3. Assign class and subclass to patent application based on data received.
Enhance alternate language and missing portion suggestions based on user input

1. Output alternate language and missing portion suggestions based on patent application information
2. Receive relevance score and/or notes on alternate language and missing portion suggestions
3. Store relevance score and/or notes with patent applications and prior art for subsequent use. (Note: the scores can take into account both the prior art and the current invention being submitted, so that the relevance can be determined for later patent applications that are similar to the current application being filed.)

Submit initial application to researcher

1. Receive patent application from end user
2. Receive request to send application to researcher
3. Determine researcher based on patent application, researcher history, and researcher availability
4. Output researcher contact information
5. Receive request to submit application to researcher
6. Submit application to researcher
7. Bill end user account a researcher finders fee
8. Bill researcher account a finder's fee
9. Receive a completed research report
10. Submit report to end user
11. Bill end user account for completed report
12. Remit payment to researcher for completed report.

Rate Researcher based on Research Report Feedback

1. Submit research report to end user
2. Receive feedback for prior art cited in research report
3. Store feedback with prior art cited for subsequent search matches
4. Receive feedback for researcher
5. Store feedback with researcher record for subsequent search matches

Submit initial application to attorney for completion
1. Receive patent application from end user
2. Receive request to send application to attorney
3. Determine attorney based on patent application, attorney history, and attorney availability
4. Output attorney contact information
5. Receive request to submit application to attorney
6. Submit application to attorney
7. Bill attorney account a finder's fee
8. Bill end user account an attorney finder's fee
9. Receive completed application
10. Notify end user application has been received

[0123] Submit application to patent office
1. Receive patent application
2. Determine if there are missing parts
3. Output list of missing parts
4. If there are no missing parts, generate appropriate filing forms
5. Submit application to patent office
6. Bill end user account a filing fee
7. Remit filing fee to patent office
8. Receive notice from patent office that application was received
9. Store notice and output notice to end user.

[0124] Submit application to central system for time and date stamp
1. Receive patent application data
2. Receive indication that patent application should be submitted for a disclosure date
3. Time and Date stamp patent application data
4. Receive request to make patent application data public or private
5. Store patent application data with time stamp and public or private flag.

[0125] Find like inventors
1. Receive Patent Application Data
2. Search Patent Application Data against End User Profiles
3. Determine relevant end user profiles
4. Score relevant end user profiles
5. Output end user profiles in order of their scores

According to various embodiments, the present disclosure also provides a patent figure drafting tool allows a figure to be drafted and/or modified and attached to one or more patent applications so that it can be electronically filed with the patent office. The system provides standard figures, diagrams, images, schematics, templates, fonts, shapes, and icons of components that may be certified by the patent office or other governing body to ensure that all images created with the tool are patent office compliant.

The disclosed system permits end users, for example, patent applicants, patent attorneys, draftspersons and/or authorized end users to create and/or maintain a list or database of figures, diagrams, images, schematics, templates, fonts, shapes and icons of components that are acceptable to the patent office or owner of the system, e.g., private company, e.g., design services firm or patent law firm.

In an embodiment, any end user may submit one or more or any part of one or more figures, templates, diagrams, images, schematics, fonts, shapes, icons, etc. for subsequent review and approval by any authorized person, e.g., patent office examiners or others that are assigned or dedicated to such purpose. In this fashion, over time, a large data repository of figures, graphics, diagrams, images, schematics, icons, audio, video or any other figures or attachments may be submitted and, once approved, made available for future use or modification.

When using a patent drafting system, which may be enhanced to permit the addition or use of plug-ins, end users may, while drafting or subsequently modifying an application, add one or more notes or diagram. Exemplary methods to provide attachment of notes into documents and/or associate notes with documents, or words, or other data are disclosed in US Patent Application Nos. 11/690,095 "Facilitating Certified Prior Art Note Taking and Method for Using Same," filed March 22, 2007; 11/697,480 entitled "Note Overlay System," filed April 6, 2007; and 11/697,486 entitled "Document Examiner Comment System," filed April 6, 2007; each of which is incorporated herein by reference, which are incorporated by reference. In various embodiments, notes may be used for any desired purposes, for example, adding explanations, background
materials, purpose, use information, features, restrictions or limitations, supplemental materials, hyperlinks to access any or all of the above, to provide one or more links between certain figures, diagrams, schematics, images, etc., to provide links between related materials, e.g., secondary or other points of view of the same materials, and/or to provide further details, e.g., levels of detail, commentary or review by examiners and/or applicant's and/or applicant's attorneys and/or draftsperson and/or third parties, or any other interested individuals. Furthermore, such notes may include advertisements for the sale of goods and services, e.g., drafting services by the person(s) or firm that created or modified the figures, diagrams, etc., and/or advertisements or offers to license the invention disclosed or depicted in such diagrams, figures, etc., and/or ads for legal services, or any other advertising, offers for sale or purchase or license or sub-license. Notes may further provide other general or specific commentary and/or other hyperlinks, e.g., to provide support to run an application that demonstrates the invention. For example, a diagram of a motor might have a hyperlink to a program that runs a visual simulation, cartoon, video or other virtual or actual demonstration of a prototype, mockup or actually device, which could prove useful to anyone that desires to understand how the disclosed invention works or how various components interact.

[0130] As an end user adds or otherwise associates one or more notes, diagrams, or figures to a patent application, disclosure, and/or other document(s), the system may permit the end user to determine the figure number(s) to associate with such notes, diagrams or figures. In certain embodiments, end users simply indicate the figure numbers they wish to use. Additionally or alternatively, the system may either recommend a figure number and/or automatically insert the next appropriate figure number(s), which may or may not be modifiable after insertion. The system may determine the next or appropriate figure number(s) using any applicable means, including, for example, incrementing the figure numbers with each subsequent use, starting at any number, e.g., one, or another starting point by examining the current figure number(s), if any, and adding one or some other increment to the last figure number as applicable and/or by retrieving a figure number from a database constructed for such purposes and incrementing such retrieved number by one or some other positive or negative whole or fractional number or multiplier. In this way, the system may recommend figure numbers and/or may insert such numbers automatically. In cases
where the system inserts such figure numbers, such numbers may or may not be modifiable. Whether or not such numbers are modifiable may be determined by any applicable means, including, for example, by the designer of the system or figure assignment numbering software application or plug-in and/or by the USPTO or other governing body, and/or by the end user or owner of the server or application, e.g., a company may establish a policy that such figures are to be modifiable or that they may not be modifiable or such modifications may have imposed limitations, or that they may only be modified by certain end users, e.g., a patent attorney or patent examiner, etc. This system may be implemented to both simplify figure numbering assignments and/or to ensure that figure numbers are unique to each figure.

[0131] In certain embodiments, end users may associate a short and/or long description with any note, diagram, figure or figure number. Such descriptions may be generic and/or end users may submit generic and/or specific entries. Attachment of such descriptions and/or notes may be accomplished via any applicable means. In certain embodiments, end users may submit generic or standard diagrams and/or descriptions. For example, the USPTO may provide a generic acceptable diagram and short and/or long descriptions for a CPU. Subsequently, end users may submit proposed changes or additions to such description and/or they may submit one or more alternative or substitution descriptions, diagrams, etc. Such proposed changes, alternatives and/or substitutions may be required to undergo a review by other end users, e.g. a peer or other review and/or the USPTO or other duly authorized body, prior to inclusion in the approved or appropriate database. In the case that such a system is a private system, e.g., owned and operated by IBM, then the system may be configured such rules and regulations may be imposed only by authorized IBM personnel. Regardless, once one or more diagrams, and their associated short and/or long descriptions or other notes are made available in the database, end users may then make use of any such diagrams, figures, notes and/or short or long descriptions. Such use may be with or without modifications by the end user, if permitted, and/or may require some level of review or approval, e.g., by a USPTO employee.

[0132] In cases where end users subsequently make changes to diagrams, notes, figure numbers, and/or short or long descriptions and/or to the figures themselves, such end users may or may not be required or have the option to include additional
information regarding such changes. For example, end users may indicate the importance, relevance or necessity of such changes. For example, a given modification or change may be cosmetic or it may be material. Changes may be optional or mandatory. End users may enter such absolute relevancy criteria, e.g., mandatory and/or end users may enter relative rankings, e.g., the end user might indicate a given change is, cosmetic, desirable, material, or mandatory, or may use any applicable or useful rankings, e.g., a numeric or other ranking or weighting scale.

[0133] In certain embodiments, relevancy may be determined, in whole or in part, based upon automated means. In addition to the novel relevancy ranking methods disclosed herein, other methods to determine relevancy between and among documents and/or websites are well known within the prior art, including, for example, the methods discussed in the book entitled "Text Databases and Document Management: Theory and Practice," by Amita Goyal Chin, which is incorporated by reference.

[0134] In another embodiment, relevancy may be determined by asking end users to respond to one or more survey questions.

[0135] In certain embodiments, any and/or all such changes, modifications and/or alternatives may be tracked using a change tracking program, which may further store before and after images of any such figures, diagrams, notes, figure numbers, etc., so that a record of such changes, and the end user(s) that made such changes are known and an audit trail may therefore be provided. Such audit trail may be stored in a database designed for such purposes, and/or the system may attach one or more notes in succession to provide such information / audit trail.

[0136] In another embodiment, when inserting or referencing a figure or figure number, the disclosed system may bring up a list of figures by number and/or short or long description to permit the end user to determine which figure should be inserted and/or referenced. In such cases, the system may insert the figure number and/or short and/or long description. In certain embodiments, if the end user or another person modifies the database of figures, and/or their descriptions, such modifications may be automatically updated throughout the end user's patent application. Automatic updates may be partially or fully restricted based upon any applicable set of rules or regulations provided by the system and/or, if available, the end user. For example, the system may be designed such that, once a patent application has been filed, subsequent updates to the
figures and/or numbers may not be automatically made in such application. In any case, when or if a change is made to the figure database end users that have previously referenced or used such figures or descriptions or other information may be notified. Such notice may be made only when or if the end user reopens an application for subsequent review or modification and/or such notice(s) may be made at any time using any applicable means. For example, end users may be sent an alert via email or other means. Exemplary methods to determine alert events and/or to send alerts are disclosed for example, in U.S. Patent Application Serial No. 11/676,848 "Virtual Environment with Alerts" filed February 20, 2007 which is incorporated herein by reference.

Regardless of the method of notification, when or if an end user reopens an application, the system may prompt the end user to determine if the end user wants to accept, modify and/or incorporate one or more of any or all such modifications, changes or updates to the figures, figure numbers and/or any short or long descriptions and/or notes. End users may be presented with a list of any such modifications, changes or updates and/or notes. End users may choose to apply any one or more or all of any such modifications, changes or updates. For example, end users may be presented with a list of any or all such changes. Such list may be sorted via any applicable means, including, for example, by relevancy or frequency of use and/or by the extent or date of the change. In certain embodiments, such listings may include additional information regarding the nature of the change and/or the importance of the change and/or may display other useful information. For example, in the cases where the end user that made such changes provided relevancy information, such information may be displayed. For example, if an end user indicated that such a change is mandatory and/or provided other information, e.g., via a note, such information may appear along with the listing, which additional information may assist an end user or system in determining whether or not to make use of part or all of any such changes and/or determine if such change(s) require further review or approval prior to any such application or use. Such information may also be used to determine the order such change listing are displayed or sorted. For example, changes that have been entered as "mandatory" may appear at the top of any such list, while those that were flagged as "cosmetic" may appear at the bottom of such listing. In another embodiment, certain changes, e.g., those flagged as mandatory, may be automatically updated, with or without the end users, knowledge or involvement or
acknowledgement. In yet another embodiment, changes flagged as mandatory may, for
eexample, receive priority review or approval.

[0138] In certain embodiments, if an end user modifies or submits notes, and/or
alternatives or other information regarding a figure, document or other information that
was created by or modified by other end users, such other end users may be notified of
any or all such modifications, proposed or pending or approved, and/or notes or
alternatives or other information. Such notification may be accomplished by any
applicable means, including, for example, using the alert system described above.

[0139] In another embodiment, as the end user inserts a note, diagram or figure
number, the system may also create a listing viewable by the end user and/or provide
another means to permit the end user to determine or review all instances or uses of the
same note, figure or diagram or figure number. In this way, end users can quickly
review a given document or patent to read descriptions or other information and/or
review the context of such use. Access to or tools to aid an end user in this regard can be
accomplished via any applicable means, for example, the end user may be permitted to
right click on a figure or figure number and the system might display a list of locations or
hyperlinks to all uses within the document, and/or other relevant documents of the end
user and/or to all known uses and/or citations/references. The end user may skip from
entry to entry, or select from a list of entries to be immediately redirected to such
selected entry. In certain embodiments, such information may be presented in a visual
form such as in a pictorial or other diagram, e.g., a map view. Such maps and/or visual
presentation may be accomplished via any applicable means, including methods
filed April 6, 2007

[0140] In certain embodiments, lists may be presented in the form of one or more
hyperlinks. For example, a list of referenced figures may be displayed sorted in order of
figure numbers or other preferences. End users may then view the figures and/or any
supporting materials, e.g., notes and/or other documents by clicking on or otherwise
indicating or requesting or activating such one or more hyperlinks. Methods to design
and create hypertext and/or hyperlinks are discussed and disclosed by the authors of the
following reference and other materials, including, for example: "Intelligent Hypertext:
Advanced Techniques for the World Wide Web (Lecture Notes in Computer Science),

[0141] In certain embodiments, the system can also analyze a figure created by an end user and create notes to indicate where the figure does not enable the specification of the application. The system can also indicate areas of a figure that are problematic or unclear.

[0142] In some embodiments, a lexicon of image components can be created. The image components can have corresponding definitions that link them to words in the patent application via the patent drafting tool and lexicon plug in. A particular word in the lexicon can have specific images stored with it that can be embedded into a patent figure. Inclusion or creation of such lexicon may be accomplished by any applicable means. Methods to create a lexicon and/or map are disclosed in U.S. Patent Application Nos. 11/668,586 "Targeted Advertising Based on Invention Disclosures," filed January 30, 2007; 11/668,596, "Keyword Advertising in Invention Disclosure Documents," filed January 30, 2007; 11/697,437 "Merchant Tool for Embedding Advertisement Hyperlinks to Words in a Database of Documents" filed April 6, 2007; and 1/697,443 "Self-Teaching Thesaurus," filed April 6, 2007; each of which is hereby incorporated by reference.

[0143] In certain embodiments the drafting tool can be a plug in or add on module to a popular drafting tool such as Microsoft Visio.

[0144] In certain embodiments, the tool can analyze a drafted document and identify areas of the document that are not compliant with patent office rules. An AI system can generate a list of issues with a figure. It can be trained by having examiners review figures and providing comments into the system. In yet another embodiment, such analysis may be provided, in whole or in part, by one or more end users, e.g., a patent examiner. For example, end users may include notes or use any other applicable
means to review and/or contest one or more figures, diagrams and/or documents or notes. Methods to provide end users with a means to contest such figures, diagrams and/or notes are disclosed in U.S. Patent Application Nos. 11/668,586 "Targeted Advertising Based on Invention Disclosures," filed January 30, 2007; 11/668,596, "Keyword Advertising in Invention Disclosure Documents," filed January 30, 2007; 11/697,437 "Merchant Tool for Embedding Advertisement Hyperlinks to Words in a Database of Documents" filed April 6, 2007; and 11/697,443 "Self Teaching Thesaurus" filed April 6, 2007; each of which is incorporated by reference above.

[0145] In another embodiment, the system can generate patent text based on the figure(s) that is/are loaded into a patent application drafting template where it can be modified by one or more end users and/or authorized end users. For example, an end user may create a patent application but refrain from creating a section referring to the diagrams used within the document. Such end user might add figures or figure numbers and/or hyperlinks, which refer to a database of existing, perhaps approved or standardized figures and their associated numbers, diagrams, images, and/or descriptions. At any time, and/or continuously, the system might add a "reference to the diagrams" section, and/or add the diagrams and figure numbers and/or an index or table of contents and/or list of one or more hyperlinks to said diagrams, figures, indices and/or table of contents, automatically. In such cases, the system could retrieve any or all of the relevant information via any applicable means, for example, by retrieving the figures, figure numbers and descriptions and inserting such information wherever appropriate within the document, e.g., patent application. Such insertions may be done with or without end user knowledge, action or acknowledgement. In certain cases, such insertions of information may be done with or without using a method to highlight and/or track such changes, e.g., underlining or redlining such document changes, e.g., using a change tracking system or method, such as the change tracking feature offered by Microsoft's Word Processing application. In the cases where such changes are tracked, in whole or in part, the end user may then be permitted to review and either accept or reject such changes in whole or in part, which may be accomplished by accepting or rejecting individual changes and/or classes of changes, or types of changes, e.g., by priority type, and/or accept them and then subsequently modify the automated entries to suit their purpose.
In certain embodiments, the disclosed invention may be used by private entities, such as individual inventors, patent law firms, and/or private companies. In other embodiments, the disclosed invention may be a system provided by a third party as a service to one or more end users, including one or more private firms and/or may be provided by the USPTO or other governing body. In any such cases, the system may be designed to permit the creation and use of private figures, graphics, icons, and/or descriptions (i.e., short or long), and permit the use of notes to be attached to any of the foregoing. Such "private" information may be accessible only to those who have created such information and/or have been granted authorization to access such information. Such authorization may or may not permit such end user to submit new or changes to such information.

[0147] In another embodiment, the system may permit the use of any of the above-mentioned information by any end user and/or authorized end users. For example, a database of shared information may exist instead of or in addition to a private database of information. In the event a shared database is provided, such database or databases may be shared by any end user, and/or all or certain databases may have one or more restrictions on their use and/or they may require certain access authorizations. In certain embodiments, all or classes of users may submit new and/or modified graphics, icons, figures, descriptions, etc., which submissions may or may not require review prior to such submissions being made generally available, e.g., a patent examiner or other authorized person may need to review and approve any such submissions. In certain embodiments, once such information is made available in a shared database, those end users granted access to such database, which may include all or a subset of all end users, may then be permitted to use such information, for example, by incorporating such shared information within their patent application.

[0148] In certain embodiments, end users may then submit proposed changes to such shared information. Changes may be permitted directly by any or only certain classes or specific end users, and/or changes may not be made directly to any existing information, but rather such changes may be added by creating a new entry, or version of the initial entry. In this fashion, the system could maintain a historical record of any or all such changes, which may prove useful in controlling the use or application of any such changes in any existing or future draft or application and/or to prove the existence
and/or timing of any such changes to any shared or public database or repository of such graphics, images, figures, diagrams, descriptions, etc.

[0149] In another embodiment, end users may opt to "undo" the acceptance of any changes to any figures, figure numbers, diagrams, notes, and/or descriptions. Such undo feature may permit an end user or authorized end user to undo changes submitted by the end user or by other end users to the shared or private database(s) or repositories and/or to any one or more patent applications that may have been manually or automatically updated to incorporate any such changes. By keeping track of changes made to the database, the type of change and/or the date, and/or purpose or relevancy of any such changes, end users may be afforded a great deal of flexibility when deciding which changes to accept, apply and/or undo. For example, if the system is implemented to automatically incorporate "mandatory" changes to any applications making use of a particular or group or all figures that have been modified or incorporated into any one or more documents or patent applications, and, subsequently, an error is found in a previously submitted, accepted and approved change, the system and or an end user or authorized end user, may then opt to undo such change from either the database or repository and/or "roll back" or undo such changes from any or all affected documents or applications. When such undo feature is utilized, owners of documents may be notified via an alert. Such changes may be automatically accomplished by changing the document back to reflect the information or descriptions in place just prior to such changes. In certain embodiments, such changes when inserted into one or more documents, may or may not require end user approval or knowledge or action or acknowledgment and/or such changes may or may not be made using change tracking features that permit the end user to review any such changes and/or accept or reject any such changes in whole or in part.

[0150] In yet another embodiment, end users may be required or may optionally view one or more advertisements before, during or after using the disclosed invention. Such action may cause the system to charge a lower or different or no fee for using the patent drafting tool or one or more of the disclosed inventions. Implementation of such advertising may be accomplished via any applicable means. For example, advertisers may rent, license, and/or pay a fee to insert a hyperlink or otherwise display one or more advertisements, before, during or after such application usage.
In certain embodiments, before displaying an advertisement and/or before presenting a list of words and/or documents, e.g., from a lexicon of words, and/or before or during or after use of any of the disclosed features or inventions herein, it may be desirable to ascertain certain additional information about such advertisement and/or request for information and/or use. In such cases, the system may determine that it is necessary, desirable or generally useful to present one or more survey questions to aid in determining which words, documents, or other information should be presented, and/or to determine which features of the disclosed invention should or should not be enabled and/or to determine which advertisement might yield generally better results, and/or which word or synonym is generally more relevant given the information known about the end user and/or collected by using and/or displaying and/or gathering results from one or more such survey questions. Based upon the end user's response the system might either provide limited or no access to the system, and/or the system may also provide an advertisement. Based upon the response to one or more questions, the system may present additional qualifying questions, i.e., additional questions to further narrow the search results and/or the sort display results, and/or provide access and/or limited access for free and/or for a fee or a reduced fee or reduced or extended period of time. Exemplary methods to provide for survey questions and gathering of data are disclosed by applicants in U.S. Patent Application Nos. 60/774,177, entitled "Survey Based Qualification of Keyword Searches," 11/278,123, also entitled "Survey Based Qualification of Keyword Searches" 11/562,738 "Survey Based Qualification of Keyword Searches" and 11/608,150, entitled "Map and Inventory Based On-Line Purchases" which applications are incorporated herein by this reference.

It will be understood that all embodiments herein which refer to a patent are equally applicable to a patent application, and vice versa, unless explicitly stated otherwise with respect to a particular embodiment. The references to a patent (or to a patent application) are for reasons of brevity only.

Those having skill in the art will recognize that there is little distinction between hardware and software implementations. The use of hardware or software is generally a choice of convenience or design based on the relative importance of speed, accuracy, flexibility and predictability. There are therefore various vehicles by which processes and/or systems described herein can be effected (e.g., hardware, software,
and/or firmware) and that the preferred vehicle will vary with the context in which the technologies are deployed.

[0154] At least a portion of the devices and/or processes described herein can be integrated into a data processing system with a reasonable amount of experimentation. Those having skill in the art will recognize that a typical data processing system generally includes one or more of a system unit housing, a video display device, memory, processors, operating systems, drivers, graphical user interfaces, and application programs, interaction devices such as a touch pad or screen, and/or control systems including feedback loops and control motors. A typical data processing system may be implemented utilizing any suitable commercially available components to create the gaming environment described herein.

[0155] Accordingly, as shown in Fig. 3, a system 300 may comprise a plurality of various hardware and/or software components such as those described below. It will be appreciated that for ease of description, the variously described hardware and software components are described and named according to various functions that it is contemplated may be performed by one or more software or hardware components within the system. However, it will be understood that the system may incorporate any number of programs configured to perform any number of functions including, but in no way limited to those described below. Furthermore, it should be understood that while, for ease of description, multiple programs and multiple databases are described, the various functions and/or databases may, in fact, be part of a single program or multiple programs running in one or more locations.

[0156] Exemplary programs include:

1. Drafting Program 311
2. Document Filing Program 312
3. Certification Program 313
4. Billing Program 314
5. Alert Program 315
6. Figure Compliance Program 316
7. Advertising Program 317
8. Authorization Program 318
9. Change Tracking Program 319
10. Mapping Program 320

11. Contest Tracking Program 321

Exemplary database architectures include:

[0157] Figure Database 322, which may collect, store and associate data such as:

1. Figure ID
2. Figure Description
3. Figure or Attachment
4. Submitted By ID
5. Source ID
6. Editor Application ID
   a. Hyperlinks 1-N
8. Notes 1-N

[0159] Document Database 323, which may collect, store and associate data such as:

1. Document ID
2. Document Description
3. Document Owner ID
4. Hyperlinks (e.g., document locations) 1-N
5. Class 1-N
6. Subclass 1-N
7. Type 1-N
8. Subtype 1-N
9. Date / Time Stamps
   1. Submitted / Found / Indexed On
   2. Submitted / Found / Indexed By ID or Hyperlink
   3. Revised On 1-N
   4. Revised By 1-N
   5. Before Image 1-N
   6. After Image 1-N
   i. Notes 1-N
[0160] Template Database 324, which may collect, store and associate data such as:

1. Template ID #
2. Narrative / Descriptions
   a. Short Description
   b. Long Description
3. Template Type
4. Template Class
5. Template Sub-class
6. Uses Rules 1 - N
7. Limitation Rules 1 - N
8. Template Contents
   a. Free Form Text
   b. Figures 1 - N
   c. Notes 1 - N
9. Fees for Use Rules
   a. Rule ID 1 - N
10.Fee sharing rules
    a. Rule ID 1 - N
11. Origen Information
    a. Submitted by ID
    b. Submitted on date / time
    c. Notes 1 - N
12. Change Tacking ID - I - N
13. Transaction Database ID 1 - N
14. Review Information
    a. Reviewed By ID 1 - N
    b. Reviewed On Date / Time 1 - N
    c. Results Notes 1 - N
    d. Rejected By ID 1 - N
    e. Rejected On Date / Time 1 - N
    f. Rejected Notes 1 - N
Font Database 325, which may collect, store and associate data such as:

1. Font ID #
2. Narrative / Descriptions
   a. Short Description
   b. Long Description
3. Font Type
4. Font Class
5. Font Sub-class
6. Uses Rules 1 - N
7. Limitation Rules 1 - N
8. Font Contents
   a. Free Form Text
   b. Figures 1 - N
   c. Notes 1 - N
9. Fees for Use Rules
   a. Rule ID 1 - N
10. Fee sharing rules
    a. Rule ID 1 - N
11. Origen Information
    a. Submitted by ID
    b. Submitted on date / time
c. Notes 1 - N
12. Change Tacking ID - 1 - N
13. Transaction Database ID 1 - N
14. Review Information
   a. Reviewed By ID 1 - N
   b. Reviewed On Date / Time 1 - N
   c. Results Notes 1 - N
   d. Rejected By ID 1 - N
   e. Rejected On Date / Time 1 - N
   f. Rejected Notes 1 - N
   g. Accepted By ID 1 - N
   h. Accepted On Date / Time 1 - N
   i. Accepted Notes 1 - N
15. Relevant / Alternative / Substitute Fonts
   a. Alternative Template ID 1 - N
   b. Relevancy or Rank or Score 1 - N
   c. Notes - 1 - N
16. Dispute / Contest Tracking
   a. Contest Case ID # 1 - N
   b. Notes 1 - N
17. Security / Authorized Users ID 1 - N (or class of users)

Shape Database 326, which may collect, store and associate data such as:
1. Shape ID #
2. Narrative / Descriptions
   a. Short Description
   b. Long Description
3. Shape Type
4. Shape Class
5. Shape Sub-class
6. Uses Rules 1 - N
7. Limitation Rules 1 - N
8. Shape Contents
a. Free Form Text
b. Figures 1 - N
c. Notes 1 - N
9. Fees for Use Rules
   a. Rule ID 1 - N
10. Fee sharing rules
    a. Rule ID 1 - N
11. Origen Information
    a. Submitted by ID
    b. Submitted on date / time
    c. Notes 1 - N
12. Change Tacking ID - I - N
13. Transaction Database ID 1 - N
14. Review Information
    a. Reviewed By ID 1 - N
    b. Reviewed On Date / Time 1 - N
    c. Results Notes 1 - N
d. Rejected By ID 1 - N
e. Rejected On Date / Time 1 - N
f. Rejected Notes 1 - N
g. Accepted By ID 1- N
h. Accepted On Date / Time 1 - N
i. Accepted Notes 1 - N
15. Relevant / Alternative / Substitute Shapes
    a. Alternative Template ID 1 - N
    b. Relevancy or Rank or Score 1 - N
c. Notes - 1 - N
16. Dispute / Contest Tracking
    a. Contest Case ID # 1 - N
    b. Notes 1 - N
17. Security / Authorized Users ID 1 - N (or class of users)

[0163] Icon Database 327, which may collect, store and associate data such as:
1. Icon ID #
2. Narrative / Descriptions
   a. Short Description
   b. Long Description
3. Icon Type
4. Icon Class
5. Icon Sub-class
6. Uses Rules 1 - N
7. Limitation Rules 1 - N
8. Icon Contents
   a. Free Form Text
   b. Figures 1 - N
   c. Notes 1 - N
9. Fees for Use Rules
   a. Rule ID 1 - N
10. Fee sharing rules
    a. Rule ID 1 - N
11. Origen Information
    a. Submitted by ID
    b. Submitted on date / time
    c. Notes 1 - N
12. Change Tacking ID - 1 - N
13. Transaction Database ID 1 - N
14. Review Information
    a. Reviewed By ID 1 - N
    b. Reviewed On Date / Time 1 - N
    c. Results Notes 1 - N
    d. Rejected By ID 1 - N
    e. Rejected On Date / Time 1 - N
    f. Rejected Notes 1 - N
    g. Accepted By ID 1 - N
    h. Accepted On Date / Time 1 - N
i. Accepted Notes 1 - N
15. Relevant / Alternative / Substitute Icons
   a. Alternative Template ID 1 - N
   b. Relevancy or Rank or Score 1 - N
   c. Notes 1 - N
16. Dispute / Contest Tracking
   a. Contest Case ID # 1 - N
   b. Notes 1 - N
17. Security / Authorized Users ID 1 - N (or class of users)

[0164] Image Database 328, which may collect, store and associate data such as:

1. Image ID #
2. Narrative / Descriptions
   a. Short Description
   b. Long Description
3. Image Type
4. Image Class
5. Image Sub-class
6. Uses Rules 1 - N
7. Limitation Rules 1 - N
8. Image Contents
   a. Free Form Text
   b. Figures 1 - N
   c. Notes 1 - N
9. Fees for Use Rules
   a. Rule ID 1 - N
10. Fee sharing rules
    a. Rule ID 1 - N
11. Origen Information
    a. Submitted by ID
    b. Submitted on date / time
    c. Notes 1 - N
12. Change Tacking ID 1 - N
13. Transaction Database ID 1 - N

14. Review Information
   a. Reviewed By ID 1 - N
   b. Reviewed On Date / Time 1 - N
   c. Results Notes 1 - N
   d. Rejected By ID 1 - N
   e. Rejected On Date / Time 1 - N
   f. Rejected Notes 1 - N
   g. Accepted By ID 1 - N
   h. Accepted On Date / Time 1 - N
   i. Accepted Notes 1 - N

15. Relevant / Alternative / Substitute Images
   a. Alternative Template ID 1 - N
   b. Relevancy or Rank or Score 1 - N
   c. Notes 1 - N

16. Dispute / Contest Tracking
   a. Contest Case ID # 1 - N
   b. Notes 1 - N

17. Security / Authorized Users ID 1 - N (or class of users)

Component Database 329, which may collect, store and associate data such as:

1. Component ID #
2. Narrative / Descriptions
   a. Short Description
   b. Long Description
3. Component Type
4. Component Class
5. Component Sub-class
6. Uses Rules 1 - N
7. Limitation Rules 1 - N
8. Template Contents
   a. Free Form Text
b. Figures 1 - N

c. Notes 1 - N

9. Fees for Use Rules
   a. Rule ID 1 - N

10. Fee sharing rules
    a. Rule ID 1 - N

11. Origin Information
    a. Submitted by ID
    b. Submitted on date / time
    c. Notes 1 - N

12. Change Tacking ID - I - N

13. Transaction Database ID 1 - N

14. Review Information
    a. Reviewed By ID 1 - N
    b. Reviewed On Date / Time 1 - N
    c. Results Notes 1 - N
    d. Rejected By ID 1 - N
    e. Rejected On Date / Time 1 - N
    f. Rejected Notes 1 - N
    g. Accepted By ID 1 - N
    h. Accepted On Date / Time 1 - N
    i. Accepted Notes 1 - N

15. Relevant / Alternative / Substitute Components
    a. Alternative Template ID 1 - N
    b. Relevancy or Rank or Score 1 - N
    c. Notes 1 - N

16. Dispute / Contest Tracking
    a. Contest Case ID # 1 - N
    b. Notes 1 - N

17. Security / Authorized Users ID 1 - N (or class of users)

[0166] Type Database Definitions 330, which may collect, store and associate
data such as:
1. Type ID
2. Description
3. Includes Classes ID 1 - N
4. Rules 1 - N
5. Notes 1 - N
6. Type ID
7. Description
8. Rules 1 - N
9. Notes 1 - N

Class Database Definitions 331, which may collect, store and associate data such as:
1. Class ID
2. Description
3. Includes Sub-Classes ID 1 - N
4. Rules 1 - N
5. Notes 1 - N

Sub-class Database Definitions 332, which may collect, store and associate data such as:
1. Sub-Class ID
2. Description
3. Rules 1 - N
4. Notes 1 - N

Filed Document Lexicon 333, which may collect, store and associate data such as:
1. Lexicon Database ID / Name / Location
2. Lexicon (e.g., Figure, Word, Document or Image) ID # 1 - N
3. Submitted by ID # 1 - N
4. Examiner ID # 1 - N
5. Attorney ID # 1 - N
6. Description
7. Notes 1 - N
8. Lexicon Image 1 - N
9. Date / Time Submitted
10. Notes 1 - N

[0170] Contest Definition Queue 334, which may collect, store and associate data such as:

1. Contest Case ID #
2. Queue ID #
3. Queue Position #
4. Submitted by ID # 1 - N
5. Examiner ID # 1 - N
6. Attorney ID # 1 - N
7. Description
8. Figure, Word, Notes or Documents ID # 1 - N
9. Reasons for case
10. Proposed solutions
11. Notes 1 - N
12. Date / Time Stamps
   a. Submitted on date / time
   b. Expected next review date / time

[0171] Compliance Rules Database 335, which may collect, store and associate data such as:

1. Rule ID
2. Description
3. Rules 1 - N

[0172] Change Tracking Database 336, which may collect, store and associate data such as:

1. Change Tracking ID
2. Figure, Document, Note ID
3. Change Type (e.g., Add, change, delete)
4. Change Description
5. Date / Time
6. User ID
7. Before Image
8. After image
9. Relevancy or score
10. Notes 1 - N

Advertiser or Notes Owner Database 337, which may collect, store and associate data such as:

1. Advertiser / Owner ID
2. Advertiser / Owner Name
3. Security Profile
4. Classes of Trade 1 - N
5. Advertiser / Owner Financial Information
   a. Billing Method ID
   b. Credit Card Information
      1. Preferred Card Number
      2. Preferred Card Holder
      3. Preferred Card Type
      4. Name
      5. Expiration Date
   c. Additional Cards 1 - N
      1. Card Number
      2. Card Holder (e.g., Bank Name)
      3. Card Type (e.g., Visa)
      4. Name
      5. Expiration Date
6. Advertiser / Note Owner Mailing Address
7. Advertiser / Note Owner Rules Database
   a. Rule ID 1 - N
      1. Word(s) / Documents Applied To 1 - N
         a. Rule Description
         b. Rules 1 - N
         c. Billing Terms and Conditions ID 1 - N
8. Advertiser / Note Owner Attorney of Record
   a. Attorney ID 1 - N
9. Advertiser / Note Owner Qualifications 1 - N
10. Notes 1 - N

[0174] Advertiser / Note Owner Qualifications Database 338, which may collect, store and associate data such as:
   1. Qualification ID
   2. Description
   3. Qualification Type
   4. Years Experience
   5. Fields of Use Applicable 1 - N
   6. Notes 1 - N

[0175] Attorney Database 339, which may collect, store and associate data such as:
   1. Attorney ID
   2. Name
   3. Security Profile
   4. Address
   5. Description
   6. Qualifications 1 - N
   7. Notes 1 - N

[0176] Billing Terms and Conditions Database 340, which may collect, store and associate data such as:
   1. Billing Method ID
   2. Billing Type
   3. Description
   4. Billing Frequency
   5. Due by # days
   6. Late by # days
   7. Interest Rate Fixed
   8. Interest Rate Variable
   9. Interest Accrues after days
10. Notes 1 - N

[0177] Accounts Receivable Database 341, which may collect, store and associate data such as:

1. Advertiser / Note Owner ID
   Total Amount Owed

2. Transaction Detail Records 1 - N
   a. Date of Transaction
   b. Type
   c. Advertisement ID
   d. Word ID
   e. Hyperlinks 1 - N
   f. Amount per impression or click through

3. Notes 1 - N

[0178] Search Database 342, which may collect, store and associate data such as:

1. Document ID

2. Document Location / Hyperlink

3. Notes 1 - N

[0179] Transaction Database 343, which may collect, store and associate data such as:

1. Transaction ID

2. Description

3. Date / Time

4. Type

5. Advertiser / Note Owner ID

6. Advertisement / Note Owner Rules Used 1 - N

7. Billing T&C's 1 - N

8. Billing Method ID

9. Transaction Amount

10. Results 1 - N
   a. Note Added, Changed, Deleted, and/or Accessed
   b. Hyperlink Clicked
   c. Sub-Hyperlinks Clicked 1 - N
1. Advertisement / Note and/or Webpage) Displayed 1 - N
2. Click Through y/n
3. Duration of view
4. Conversion y / n
5. Conversion dollar amount

[0180] Advertisement Database 344, which may collect, store and associate data such as:
1. Advertisement ID
2. Advertiser ID
3. Description
4. Words 1 - N
5. Documents 1 - N
6. Hyperlinks 1 - N
7. Advertising Content File 1 - N
8. Notes ID 1 - N

[0181] Document Class Database 345, which may collect, store and associate data such as:
1. Class ID
2. Description
3. Notes 1 - N

[0182] Document Sub Class Database 346, which may collect, store and associate data such as:
1. Subclass ID
2. Description
3. Notes 1 - N

[0183] Document Type Database 347, which may collect, store and associate data such as:
1. Type ID
2. Description
3. Notes 1 - N
Document Sub Type Database 348, which may collect, store and associate data such as:
1. Subtype ID
2. Description
3. Notes 1 - N

Group Database 349, which may collect, store and associate data such as:
1. Group ID
2. Description
3. Notes 1 - N

Advertisement Type Database 350, which may collect, store and associate data such as:
1. Type ID
2. Description
3. Notes 1 - N

Word Count Database 351, which may collect, store and associate data such as:
1. Word ID
2. Number of Occurrences
3. Hyperlinks 1 - N
4. Notes 1 - N

Survey Database 352, which may collect, store and associate data such as:
1. Survey ID
2. Survey Description
3. Advertiser ID
4. Survey Question ID 1 - N
   a. Question
   b. Answer Options 1 - N
5. Notes 1 - N

Results Database 353, which may collect, store and associate data such as:
1. Result ID
2. End User ID
3. Survey Questions 1 - N
4. Survey Answers 1 - N
5. Date / Time Stamp
6. Narrative or Text Responses 1 - N
7. Notes 1 - N

[0190] Rules Database 354, which may collect, store and associate data such as:
1. Rule ID
2. Rule Description
3. Rules 1 - N

[0191] Notes Database 355, which may collect, store and associate data such as:
1. Note ID
   a. Hyperlinks 1 - N
   b. Note Description Short
   c. Note Description Long
   d. Note Group ID
   e. Note Class ID
   f. Note Subclass ID
   g. Note and/or Note Attachments 1 - N
      1. Owner / Submitted By ID
      2. Original Submission Date / Time
2. Modifications 1 - N
   a. Owner / Submitted By ID
   b. Modification Submission Date
   c. Short Description
   d. Long Description
      1. Owner / Submitted By ID
      2. Original Submission Date / Time
      3. Hyperlinks 1 - N
      4. Change Image 1 - N
         a. Before Change
         b. After Change

[0192] Hyperlink Database 356, which may collect, store and associate data such as:
1. Hyperlink ID
2. Hyperlink
3. Description
4. Owner ID
5. Advertiser ID
6. Notes 1 - N

[0193] User Database 357, which may collect, store and associate data such as:
1. User ID
2. Name
3. Security Profile
4. Account Type
5. Description
6. Terms and Conditions ID
7. Text
8. Notes 1 - N

[0194] Document Group Database 358, which may collect, store and associate data such as:
1. Group ID
2. Description
3. Includes Sub-Groups / Sub-Class IDs 1 - n
4. Notes 1 - N

[0195] Document Class 359, which may collect, store and associate data such as:
1. Class ID
2. Description
3. Includes Sub-Class IDs 1 - N
4. Notes 1 - N

[0196] Document Sub Class 360, which may collect, store and associate data such as:
1. Subclass ID
2. Description
3. Notes 1 - N

[0197] Note Class 361, which may collect, store and associate data such as:
1. Note Class ID
2. Description
3. Includes Sub-Class IDs 1 - N
4. Notes 1 - N

[0198] Note Subclass 362, which may collect, store and associate data such as:
1. Note Subclass ID
2. Description
3. Notes 1 - N

[0199] Nick Name Database 363, which may collect, store and associate data such as:
1. Nick Name ID
2. Nick Name (Short Description)
3. Nick Name (Long Description)
4. Patent or Document Number
5. Notes 1 - N

[0200] Patent Application or Document ID Database 364, which may collect, store and associate data such as:
1. Patent or Document ID #
2. Hyperlinks 1 - N (e.g., Link to that patent on different websites)
3. Notes 1 - N

[0201] Alert Event Rules Database 365, which may collect, store and associate data such as:
1. Alert Event Rule ID
2. Alert Event Description
3. Alert Event Rules 1 - N
   a. Event Condition
   b. Alert Recipient ID 1 - N
      1. Alert Method 1 - N
   c. Alert Database ID 1 - N
4. Notes 1 - N

[0202] Alert Database 366, which may collect, store and associate data such as:
1. Alert Database ID
2. Alert Contents, one or more of:
   a. Text
   b. Variable Data
   c. Executable
3. Notes 1 - N

[0203] Alert Methods Database 367, which may collect, store and associate data such as:
1. Alert Method ID
2. Method Type
3. Delivery Method (cell phone, pager, e-mail, PDA, database, executable, etc.)
4. Notes 1 - N

[0204] Alert Recipient Database 368, which may collect, store and associate data such as:
1. Alert Recipient ID (e.g., end user ID)
2. Description
3. Alert Method Preferences ID 1 - N
4. Notes 1 - N

[0205] It will be appreciated that the various software and hardware components described above will be configured to perform a variety of functions and methods. Listed below are some exemplary methods that might be performed by the systems as described herein:

[0206] Create figure
   1. Receive a request to create a figure including class and subclass
   2. Retrieve and Output figure templates
   3. Receive figure data

[0207] Analyze figure and generate omission suggestions
   1. Retrieve figure data
   2. Analyze data and determine if omissions exist
   3. Create omission suggestions
   4. Output omission suggestions

[0208] Create lexicon of image components
1. Receive request to create image component
2. Output image component form
3. Receive image data
4. Create image component from image data
5. Store image component in lexicon

Draft Figure
1. Receive patent data
2. Determine figure description data from patent data
3. Generate image from figure description data
4. Output image

Attach Figure to Document
1. Receive figure data
2. Receive request to attach figure data to lexicon or patent data
3. Output lexicon form or patent data
4. Receive indication of attachment
5. Attach figure data to lexicon or patent data

File Document
1. Receive patent data
2. Receive/Generate figure data
3. Attach figure data to patent data
4. Output combined data for approval
5. Receive approval for combined data
6. File combined data

Submit figure, template or component for certification
1. Receive a request to submit figure data as a lexicon component
2. Output lexicon component form
3. Receive figure data
4. Store data and mark record as "uncertified"

Certify figure or component
1. Receive certifier login
2. Retrieve and output figure data
3. Receive figure data certification
4. Store figure data in lexicon
5. Mark figure data record as "certified"

[0214] Create Figure Numbers
1. Receive figure data
2. Generate numbers for figure data
3. Store figure data with numbers

[0215] Include Figure Numbers in Application
1. Retrieve patent application data
2. Retrieve figure data including numbers
3. Generate numbers for patent application data based on figure data including numbers

[0216] Make Changes to Figures and Provide Notes
1. Receive a request to alter figure data
2. Output figure for alteration
3. Receive figure alteration data
4. Store figure alteration data with figure

[0217] Alert User When Figure is Updated
1. Receive figure alterations
2. Determine users to alert
3. Alert users that figure has been altered

[0218] Link Figures/Components to Lexicon Definitions
1. Receive figure data, including class, subclass and definition
2. Determine like definitions in lexicon
3. Link figure to lexicon definition

[0219] Determine if Figure is Compliant
1. Receive figure data
2. Apply compliance rules to figure data
3. Determine if figure data complies to rules
4. Mark figure data record as "compliant" or "not compliant"

[0220] Notify User if Figure is Not Compliant
1. Retrieve non compliant records
2. Determine appropriate users
3. Alert users that figure is not compliant

[0221] Generate Patent Text Based on Figures
1. Receive figure data
2. Generate patent text based on figure data
3. Store patent text with figure data

[0222] Initial Database Loading
1. Create / Load Database(s)
2. Import Figures, Words, Definitions, Synonyms and Antonyms, hyperlinks, etc. from existing database sources (as appropriate / e.g., one time, and/or from time-to-time)
3. Update Database(s)

[0223] Primary Figure Drafting Tool / Application
1. Load Database(s)
2. Display primary GUI
3. Receive activity indication / request from end user
4. Determine if one or more subroutines should be executed
5. Execute one or more of the following subroutines as applicable / necessary / desired
6. Update database(s)

[0224] End User Preferences Application
1. Load Databases
2. Present Preferences GUI if required
3. Receive End User Preferences / Feedback / Usage Tracking Information, including:
   a. Filter Criteria or Rules
   b. Sort Criteria or Rules
   c. Relevancy Information
   d. Weighting Factors, Criteria or Rules
   e. Security Preferences
   f. Feedback / Tracking Preferences
   g. Notes
   h. Usage habits / patterns
i. Display preferences

Security Application

1. Load Database(s)
2. Determine if requested action and/or end user is permitted
3. If not, notify application and/or end user
4. If yes, permit requested step and/or loading of application or other authorized action(s)
5. Update Database(s)

Opt In / Sign Up Application

1. Load Databases
2. Receiving Indication of new user sign up
3. Record any and all or available information regarding one or more patent applicant's, end users, examiners, attorneys and/or third parties
4. Update databases

End User Preferences Application

1. Load Databases
2. Present Preferences GUI if required
3. Receive End User Preferences / Feedback / Usage Tracking Information, including:
   a. Filter Criteria or Rules
   b. Sort Criteria or Rules
   c. Relevancy Information
   d. Weighting Factors, Criteria or Rules
   e. Security Preferences
   f. Feedback / Tracking Preferences
   g. Notes
   h. Usage habits / patterns
   i. Display preferences

Figure Creation / Modification Application

1. Load Database(s)
2. Display Figure Drafting / Revision GUI
3. If requested, display one or more of:
a. Templates
b. Icons
c. Fonts
d. Shapes
e. Images
f. Components
g. Drawing Tools
h. Import Options
i. Documents
j. Words
k. And/or maps

4. Capture "Before Images" of all figures, images, data, etc., and optionally encrypt and date stamp such image(s)

5. Receive input from user to add/modify/delete figure

6. Create Figures, Hyperlinks, Indices, Table of Contents, Notes, etc.

7. If applicable
   a. Create / Suggest Figure Number(s)
   b. Insert or associate Figure Number(s) with Figures
c. Review Figures, etc. for errors and/or omissions
d. Notify end user of errors and/or omissions
e. Receive corrections to errors and/or omissions
f. Repeat process until no more errors or omissions, and
g. If applicable
   1. Submit Figures etc. into one or more authorization and/or review queues
   2. If Figures, etc., fail or pass such review process, notify end user
   3. End user makes corrections as applicable / necessary and resubmits to authorization / review
4. Receive authorization / certifications as applicable and/or required to accept such add/modify/delete any one or more of:
   a. Figures
   b. Templates
   c. Icons
   d. Fonts
   e. Shapes
   f. Images
   g. Components
   h. Drawing Tools
   i. Import Options
   j. Documents
   k. Words
   l. And/or maps

5. Receive relevancy score(s) and/or mapping information and/or contested information

6. Upon receipt of authorization / certification or other approval processes, update as necessary:
   a. Figures, etc.
   b. Lexicon Definitions / Database
   c. Documents

7. Generate Patent Text, Documents, Figures, Hyperlinks, Advertisements

8. Capture "After Images" of all figures, images, data, etc., and optionally encrypt and date stamp such image(s).

9. File Applications / Documents / Patents / Figures, etc.

[0229]

8. Update Database(s)

1. Load Database(s)

2. Receive one or more requests to search or display one or more:
   1. Figures
2. Templates
3. Icons
4. Fonts
5. Shapes
6. Images
7. Components
8. Drawing Tools
9. Import Options
10. Documents
11. Words
12. And/or maps

3. Retrieve relevant
   1. Figures
   2. Templates
   3. Icons
   4. Fonts
   5. Shapes
   6. Images
   7. Components
   8. Drawing Tools
   9. Import Options
  10. Documents
  11. Words
  12. And/or maps

4. Display results and, if applicable, other relevant materials

5. Permit user to copy / paste or insert or otherwise associate any one or more such
   1. Figures
   2. Templates
   3. Icons
   4. Fonts
   5. Shapes
6. Images
7. Components
8. Drawing Tools
9. Import Options
10. Documents
11. Words
12. And/or maps
13. into one or more patent applications or other document(s)

6. Permit end user to submit additions / changes or modifications to such
   1. Figure(s)
   2. Templates
   3. Icons
   4. Fonts
   5. Shapes
   6. Images
   7. Components
   8. Maps
   9. as applicable

7. Update Database(s)

[0230] Advertisement Creation Application
1. Load Database(s)
2. Display advertising creation / modification GUI
3. Receive request to add / change / delete one or more advertisements
4. Receive advertisement hyperlink contents and associate with one or more
   1. Patents (disclosures, applications, publications, issued)
   2. Figure(s)
   3. Templates
   4. Icons
   5. Fonts
   6. Shapes
7. Images
8. Components
9. Maps

5. Determine if such
   1. Patents (disclosures, applications, publications, issued)
   2. Figure(s)
   3. Templates
   4. Icons
   5. Fonts
   6. Shapes
   7. Images
   8. Components
   9. Maps

b. have pre-existing hyperlinks by current or third party end user or otherwise

6. If not, determine price to associate hyperlink as applicable

7. If one or more similar hyperlinks already exist, execute hyperlink bid pricing application

8. If approved and priced, insert or otherwise associate said hyperlink with said one or more
   1. Patents (disclosures, applications, publications, issued)
   2. Figure(s)
   3. Templates
   4. Icons
   5. Fonts
   6. Shapes
   7. Images
   8. Components
   9. Maps

9. Update Database(s)

Hyperlink Pricing Program

1. Load Database(s)
2. Receive pricing request
3. Determine if more than one user wishes a hyperlink to the same or similar
   1. Patents
   2. Figure(s)
   3. Templates
   4. Icons
   5. Fonts
   6. Shapes
   7. Images
   8. Components
   9. Maps
4. Determine pricing and/or auction hyperlink, or, if applicable, position in list of two or more hyperlinks
5. Notify affected parties, e.g., via an alert
6. Receive indication from one or more users as to willingness to pay and price points
7. Continue process until pricing is determined
8. Receive authorizing for final pricing from affected parties, including end users
9. Update Database(s)

[0232] Advertisement Viewing/Use Application
1. Load Database(s)
2. Receive request to display or access advertisement, e.g., user clicks hyperlink or right clicks word
3. Determine if additional browser page or popup or other display method is to be used
4. Display Advertisement, e.g., load and display attached movie file
5. Determine if survey should be presented
6. Present survey
7. Determine if secondary or different advertisement is to be displayed
8. Display advertisement
Collect usage information, e.g., impressions for billing purposes

Update Database(s)

Load Database(s)

Receive request from drafting or third party display tool for

- Patents (disclosures, applications, publications, issued)
- Figure(s)
- Templates
- Icons
- Fonts
- Shapes
- Images
- Components
- Maps
- Documents
- Notes

b. (and/or any one or any combination or all of the forgoing)

Determine relevancy information

Retrieve requested information, using relevancy information if applicable / available

Determine if additional browser page or popup or other display method is to be used (e.g., interstitial popup window)

Determine if application and/or end user has requested filter and/or sort and/or relevancy options

Display Requested Information (using filter, sort and/or relevancy information and/or filter criteria if applicable// available)

Update Database(s)

Receive request to submit document or figures, with figure numbers, words, synonyms, antonyms, notes and/or related documents to database, repository or processing agency, e.g., USPTO
3. Capture image of all relevant materials, including current figures, definitions, along with Time / Date stamp information
4. If desired, encrypt any or all output materials, e.g., patent application, figures, definitions, words, synonyms, antonyms, and/or related documents, notes and/or supporting materials to prevent or otherwise control subsequent access and/or modifications
5. Update Database(s)

[0235] Mapping Program
1. Load Databases
2. Receive indication that one or more
   1. Patents (disclosures, applications, publications, issued)
   2. Figure(s)
   3. Templates
   4. Icons
   5. Fonts
   6. Shapes
   7. Images
   8. Components
   9. Maps
   10. Documents
   11. Notes
   12. have been added or changed or removed from one or more databases
3. Receive or determine relevancy information
4. Determine mapping relationships among any one or more of the forgoing
5. Monitor usage and feedback of/ on any one or more of the following, including:
   1. Patents (disclosures, applications, publications, issued)
   2. Figure(s)
   3. Templates
   4. Icons
5. Fonts
6. Shapes
7. Images
8. Components
9. Maps
10. Documents
11. Notes
12. and/or mapping usage

6. Receive feedback from end users and/or determine change in mapping relationships and/or relevancy

7. If desired or required, submit any such changes for review / approval

8. If approved, update mapping relationship data accordingly

9. Update Databases

End User Contest Application

1. Load Database(s)
2. Receive Indication that one or more end users and/or third parties, e.g., patent examiner, contests one or more figures, documents, patents, word definitions, words, synonyms, antonyms, notes, and/or other documents and/or supporting materials
3. Determine relevancy / validity of the contest by any one or all of the following if desired / applicable
   a. Solicit other end user / third party votes / scores / ranking
   b. Use GA
   c. Submission to authorized end user or third party
   d. Preponderance of feedback
4. If contest is determined valid, accept requested changes
5. Otherwise reject requested changes
6. Update Database(s)

Billing Program

1. Load Database(s)
2. Receive indication that billing activity has occurred
3. Determine affected parties, e.g., payer and payee
4. Determine billing rules, terms and conditions
5. Determine billing amounts due
6. Create Invoice and A/P or A/R notices / entries
7. Send Invoices and notices
8. Update Databases
9. Await Payment
10. Receive payment indication
11. Apply payments
12. Notify A/P or A/R systems / and/or affected parties
13. Determine if payments are timely / sufficient
14. If not, execute collections program
15. Update Database(s)

Collections Program
1. Receive indication payments are late and/or insufficient
2. Load Database(s)
3. If applicable, execute one or more of the following steps:
   a. Send late notice
   b. Send insufficient payment or funds notice
   c. Limit or prevent further use until payment terms are partially or fully satisfied, each according to billing terms and conditions and/or rules
   d. Collect funds due from primary and/or secondary credit cards on file.
   e. Notify affected parties
4. Update Database(s)

Alerts Program
1. Load Database(s)
2. Determine if Alert Event has occurred
3. Determine Alert Contents based upon alert rules
4. Determine Alert Recipients and Contents and Delivery Method(s)
5. Send Alert(s)
6. Update
[001] According to various embodiments, the present disclosure provides methods and systems to provide a living lexicon for document drafting. In one embodiment, a database of words with definitions and associated images is provided in a lexicon tool for drafting documents, such as, for example, patent applications. In some embodiments, word definition may be associated with one or more patent classes, subclasses, or general areas of interest, so that a definition that is appropriate for the subject matter in the document being drafted could more readily be presented to the user.

[002] According to various embodiments, additional definitions for existing words can also be added to a word record. In some embodiments, some or all additions and changes to the lexicon are placed in one or more queues for approval. When a word addition or change has been approved, the word may be made available in a patent application drafting tool for use. Definitions may also be imported from or otherwise provided by and/or linked to or with one or more existing dictionaries and other resources, such as Webster's Dictionary, Wikipedia or Google's online dictionaries.

[003] According to some embodiments, definitions of words and/or the association of definitions with classes, subclasses, or general areas of interest can be entered into the database by end users, who may or may not be required to have been authorized to perform such functions. In this manner, definitions can be updated in real time as words and language evolve and as patent drafters act as lexicographers to more precisely define disclosed inventions.

[004] In some embodiments, the lexicon tool described herein may be used in conjunction with a Patent Drafting Tool (PDT) such as that described above. A PDT may further provide for mechanisms for performing prior art searches or other patent drafting and examination-related activities.

[005] According to some embodiments, applicants, attorneys, examiners, or other entities, (collectively, "end users"), who may or may not have to be authorized, may prepare or access a patent application via the PDT and indicate the class and subclass of the (intended) subject matter in the application. Alternatively, the end user may simply indicate a general area of interest, such as by entering one or more keywords, sample paragraphs, sample claims, etc. The lexicon tool can then identify those worlds in its database that provide definitions that are associated with the indicated class, subclass, or
general area of interest. A lexicon of words with corresponding definitions may then be presented. Accordingly, end users can use the words provided by the lexicon tool in drafting, or subsequently modifying, an application.

[0240] For example, the word "shaft" may have a first definition of "a long, comparatively straight handle serving as an important or balancing part of an implement or device" and a second definition of "A long, narrow, often vertical passage sunk into the earth, as for mining ore; a tunnel." The first definition might be associated with class 463 (amusement devices: games) and the second definition might be associated with class 175 (boring or penetrating the earth). Accordingly, a practitioner preparing a patent application for a golf club might preferentially be shown the first definition over the second definition, since a golf club would be more readily classified as an amusement device than as something that penetrates the earth.

[0241] In certain embodiments, the lexicon tool may not be limited to providing definitions, synonyms, and antonyms to single words. In this embodiment, the lexicon tool may also include phrases, sentences, complete or partial paragraphs, documents etc. as entries. In such a case, the lexicon tool may be able to offer clarifying language, and alternatives for the phrases, sentences, complete or partial documents, etc. For example, the phrase "in spite of everything else in this document" might be given a "synonym" or alternative entry of "notwithstanding anything herein to the contrary." Alternatively, an end user who wishes to cite a particular article or book as supporting evidence for a particular statement may be provided, by the lexicon tool, with the latest version of the article or book, or a shepardized list of alternative articles/books.

[0242] In a further embodiment, end users can also suggest maps for subsequent approval and/or directly map new words to existing words in the lexicon provided by the patent drafting tool. These words, if or once approved (if necessary) can be mapped to words in the lexicon as synonyms and antonyms. Submitted or proposed map(s) may be approved by any suitable means, including, for example, by: peers of the person(s) submitting such proposed mapping; one or more end users authorized or otherwise tasked with such responsibilities; a formal review process; all or some end users voting or ranking the relevancy or accuracy of such submitted maps. Maps and relevancy scores may be determined by any applicable means, including methods disclosed in US
In some embodiments, definitions, including synonyms and/or antonyms, may be imported into the lexicon tool. Importation may be performed by (authorized) end users or automatically. When importing definitions and other information, new information may be immediately mapped and/or made available for use. Alternatively, the new material may require review and/or approval before being mapped and/or made available. Any suitable approval method, including those discussed above may be employed.

According to various embodiments, a review/approval method may include, for example, determining if the word, definition, map, synonym and/or antonym are relevant given the source document and/or related document(s) in question, the section or intent or meaning where such information is to be applied or mapped, the source or trustworthiness of the information, definition, synonym, antonym and/or map and/or any other applicable information or determining means. Accordingly, a manual or automated review processes permits applications and/or (authorized) end users to determine if a proposed definition, synonym, and/or antonym is applicable, relevant, accurate, complete, or otherwise generally useful as imported, submitted and/or mapped.

According to an embodiment, the lexicon tool will associate one or more definitions with each word in a document at the time the document is filed, captured, or recorded. In this fashion, the document is stored along with associated definitions, synonyms, antonyms, and/or other information. The document may then be stored so that it is un-modifiable, modifiable only with authorization, or modifiable only with change tracking. This can speed application development and simultaneously encourage use of commonly defined or accepted terms, which would also simplify the review process and communications by and between all affected or interested parties, such as a patent examiner and a patent attorney or inventor.

According to an embodiment, (authorized) end users can contest the definition of a word, synonym, antonym and/or document and/or map by submitting a request to reexamine a definition, word, antonym, synonym, document or map to the system or the duly authorized individual or parties responsible for mediating such disputes. The request may include the word, synonym, antonym, map, document and/or...
the problem with the definition or any of the forgoing, and/or the reason for the problem, and suggestions for improving or modifying the definition and/or resolving the problem. For example, the end user may submit a (proposed) revised definition or map.

[0247] In another embodiment, (authorized) end users may submit specific definitions, the use of which is to be limited to a particular document. Such one-time or limited use definitions or other information may apply only to the identified use in a particular document and generally may or may not be accepted, mapped, or generally made available to other users of the lexicon tool.

[0248] In some embodiments, some or all of the entries in a lexicon tool may have a certified definition, meaning that the definition has been approved by an authoritative agent. It will be understood that many words will have more than one certified definition. For example, one definition for "case" might be "a legal dispute between two or more opposing parties" while another may be "an object that can hold or contain items, such as a suitcase." In the event that a word having more than one certified definition is used in a particular document, the author or other authorized individual or entity may provide an indication as to which definition is the desired, most desired, applicable, generally applicable, or preferred entry. Such preference may be indicated using any applicable means, including, for example, selection of the preferred word from a list of words provided by the lexicon tool, and/or by ranking each definition in the event that more than one definition may apply, but where multiple definitions may have different applicability. Furthermore, preference may be indicated using percentages or a "slider bar" to indicate weighting and/or by responding to a survey or other questions, and/or by ranking them from most to least applicable, for example, by ranking each from 1 to 10 with 10 being highest.

[0249] According to another embodiment, entries in the lexicon could be associated with advertisements. Advertisers may or may not have to pay a fee for this service. For example, the term "CPU" could be associated with an advertisement from Intel for its latest processor. Alternatively, or additionally, the word could be associated with or act as a hyperlink to a wholesale or retailer that sells the latest Intel processor. Each component part of a particular advertiser's products could be advertised in this manner. Accordingly, different manufacturers of similar goods could compete for the right to associate their advertisements with particular words in the lexicon.
In certain embodiments, links to definitions, words, documents, synonyms, antonyms, other information, or data elements may be provided by permitting an end user to click on the definitions, words, documents, synonyms, antonyms, other information, or data elements. Such definitions, words, documents, synonyms, antonyms, other information, or data elements may or may not be imbued with identifying characteristics or marks. For example, an underline or change in font style, color, and/or other unique identifying mark, logo or icon. For example, such word or words may be underlined with the "squiggly" lines generally used in Microsoft Office Word to note misspellings, but such squiggly line may be in blue or another color so as to indicate a meaning other than a misspelling. In addition or in the alternate, such definitions, words, documents, synonyms, antonyms, other information, or data elements may not have any observable identifier until or unless an end user performs some action or step. For example, such identifying marks, fonts, colors, underlining, or other identification means may not be visible until the user: 1) places a cursor or pointer near or over such definitions, words, documents, synonyms, antonyms, other information, or data elements; 2) clicks or right clicks on any such definitions, words, documents, synonyms, antonyms, other information, or data elements; 3) selects an option in a menu that may turn on or off the display of some or all such identifying means, e.g., the user selects from a menu: view, then selects "definitions" or "enable optional hyperlinks" or "enable definitions" etc.; 4) while right clicking on one or more words, selects from a menu of choices that permits the end user to display definitions, synonyms, antonyms or other information, including, optional notes. According to some embodiments, a selection may activate any option or all options that are present and/or enabled (if required).

In certain embodiments, the system may permit an (authorized) end user to establish filters on such definitions, words, documents, synonyms, antonyms, other information, or data elements. For example, an end user may opt to view only those definitions submitted by a known or trusted source, and/or only those that have been reviewed or officially authorized.

In another embodiment, the system may permit hyperlinks, documents and/or notes to be attached to a document and/or any definitions, words, documents, synonyms, antonyms, other information, or data elements, associated with the document.
For example, the hyperlinks, documents and/or notes may provide information regarding results of any court cases or other proceedings and/or other reviews wherein such definitions, words, documents, notes, synonyms, antonyms, other information, or data elements have been reviewed or otherwise contested and/or reviewed or discussed by one or more parties and, optionally, the outcome of such cases. Alternatively, the document may include hyperlinks to other data, documents and records or resources, and/or notes relating to such case or proceeding or reviews, e.g., a hyperlink may be provided that is connected to the public records and/or a hyperlink to any news or magazine or journal review articles, e.g., Harvard Business Law Review articles, and/or a link or note regarding one or more of the participants to such a review or case, e.g., the plaintiff and/or the defendant and/or their attorneys, etc. Where multiple documents or hyperlinks exist or are provided, such documents or hyperlinks may be sorted in any applicable order, including, but not limited to: date or relevancy of such cases, documents or notes, and/or based upon a willingness of one of the interested parties to pay for higher priority or to place an advertisement, such as a patent attorney that may be willing or is otherwise seeking additional clients that may or may not be related to or may or may not have an interest in such case or review and/or may have a similar case.

[0253] In certain embodiments, definitions and/or such hyperlinks, documents and/or notes and/or advertisements may be submitted and/or attached and/or mapped by using notes or hyperlinks. Exemplary methods to provide attachment of notes into documents and/or associate notes with documents, or words, or other data are disclosed in US Patent Application Nos. 11/690,095 "Facilitating Certified Prior Art Note Taking and Method for Using Same," filed March 22, 2007; 11/697,480 entitled "Note Overlay System," filed April 6, 2007; and 11/697,486 entitled "Document Examiner Comment System," filed April 6, 2007; each of which is incorporated herein by reference.

[0254] In yet other embodiments, relevancy scores may be determined, in whole or in part, through the use of automated means. In addition to the novel relevancy ranking methods disclosed herein, other methods to determine relevancy between and among documents and/or websites are well known within the prior art, including, for example, the methods discussed in the book entitled "Text Databases and Document Management: Theory and Practice, by Amita Goyal Chin, which is incorporated by reference.
Methods to create web pages, hyperlinks and hypertext are well known in the prior art and any person with ordinary skill in the art can design and create such hyperlinks. Methods to design and create hypertext and/or hyperlinks are discussed and disclosed by the authors of the following reference and other materials, including, for example: "Intelligent Hypertext: Advanced Techniques for the World Wide Web (Lecture Notes in Computer Science), by Charles Nicholas and James Mayfield," "Information Architecture for the World Wide Web: Designing Large-Scale Web Sites [ILLUSTRATED], by Louis Rosenfeld (Author), Peter Morville," Creating Web Pages with HTML Simplified, by Sherry Willard Kinkoph (Author)," "Master Visually Web Design (With CD-ROM) by Carrie F. Gatlin and Michael S. Toot," and "Creating Internet Intelligence: Wild Computing, Distributed Digital Consciousness, and the Emerging Global Brain (IFSR International Series on Systems Science and Engineering), by Ben Goertzel." Each of the above-referenced materials is hereby incorporated by reference.

According to another embodiment, images, audio, video and/or notes can be stored with the lexicon definitions. The images, audio, video and/or notes can be embedded in document, e.g., patent figures that are submitted with the document, e.g., a patent application. By linking the image, audio, video and/or notes to a word, it may not be necessary to number the image (or other data, e.g., a note) as a component in the figure. In addition or in the alternate, when linking such information to a word, a number to the image or other data, may be required and/or may be automatically generated. In the case that a number is required or is generated, the next number may be retrieved or determined by any suitable means, for example, by keeping track of each number in a database designed for such purpose and/or by examining the document to find all previous numbers and incrementing such number by one or some other amount.

In certain embodiments, if an end user modifies or submits notes, and/or other information regarding a figure, document or other information that was created by or modified by other end users, such other end users may be notified of any or all such modifications, proposed or pending or approved, and/or notes or alternatives or other information. Such notification may be accomplished by any applicable means, including, for example, using alerts. Exemplary methods to determine alert events and/or to send alerts are disclosed for example, in U.S. Patent Application Serial No.
11/676,848 "Virtual Environment with Alerts" filed February 20, 2007 which is incorporated herein by reference.

[0258] According to another embodiment, the lexicon tool can include standard legal language or boilerplate entries. These entries may also be divided into categories that might aid to provide the correct or a more suitable entry for a given document, based on subject matter, document section, etc. Accordingly, rather than inserting the boilerplate or definitions directly into the patent application, the patent application can be simply linked to the boilerplate and/or definitions in the lexicon. The lexicon tool may be configured to store the linked language and, when a hyperlink is clicked in the patent application, retrieve those pieces of data as they existed at the time the patent application was drafted, filed, modified, etc. The lexicon can also refer to figures in the same manner.

[0259] In certain embodiments, end users may choose to periodically update one or more definitions. A system to facilitate such updates may be provided. For example, a patent practitioner may develop an initial and numerous subsequent versions of any given patent disclosure or application. When the initial draft is composed, the practitioner may choose to include one or more words or definitions in the draft document. Then, over time, the practitioner may opt to modify the draft and, when making any updates or additions, check to determine if any one or more such words or definitions might have changed in the interim period. If any one or more changes to such words or definitions have occurred, e.g., new synonyms or antonyms have been added, and/or a definition has been modified or expanded, the practitioner may then be presented with an option to either retain the original definition or accept the new definition. In certain embodiments, such choices may be presented to end users via any applicable means, including, but not limited to; 1) a "search and replace" function, where the system may permit the end user to scan through a document to find any such definitions, documents, notes, images, etc., 2) automatically or upon receipt of a request or instruction, highlighting of such definitions, documents, notes, images, etc., 3) automated updating, which may automatically import all revisions to any such words, documents, notes, images, etc., and/or only update those as indicated by an end user and/or any combination of the above. In this fashion, end users can quickly identify where such links or definitions,
etc. exist or are used within a given document or documents, and, optionally, update any one or more of such words, documents, notes and images, etc.

[0260] In yet another embodiment, the system permits such updating to occur within multiple documents at one time. For example, an end user may be alerted that a change has occurred or has been submitted to one or more words in the lexicon. The end user may be alerted via any applicable means, for example, via email message or popup instant message. In certain embodiments, definitions may be submitted and/or attached and/or mapped by using notes or hyperlinks. In the event that an alert is received or an end user otherwise determines that a change to one or more documents or definitions, etc., has occurred, the end user may first review the change then determine if the change is appropriate or is otherwise desirable. If the change is appropriate or otherwise desirable, the end user may decide to incorporate such modifications into any one or more or all of the end user's existing documents.

[0261] In certain cases, such as with a patent application, changes may only be permitted at certain times, steps, phases or other points during the lifecycle of the patent application. For example, the end user or patent applicant or other authorized person may be permitted to freely incorporate any updates or revisions at any time up to the point that the application publishes or is first examined. Thereafter, for example, there may be rules to govern any subsequent updates or changes. For example, prior to incorporating a change after the document has been published, the applicant or other authorized third party, e.g., applicant's patent attorney, may be required to notify, e.g., send an alert, and/or insert the change using "change tracking" features, so that a patent examiner or other third party will be able to trace the history and timing of any such updates or changes.

[0262] In certain embodiments, all entries and revisions shall carry a time and date stamp. Time and date stamping and change tracking may be encrypted to prevent unauthorized or fraudulent modifications. In such cases, time and date stamping and change tracking would permit (authorized) end users to determine the various states of any such definitions, notes, images, video, audio, documents, or text, etc., at the time of each such change, update or modification. In this fashion, the priority of ideas, e.g., within a patent application, may be determined. In addition or in the alternate, a copy of the data before and after any such change or update may be stored.
According to another embodiment, the patent lexicon can also compile all the definitions of a word in other patents and allow the end user to select which definition(s) or definition fragments he wants to compile.

The lexicon and drafting tool may include a graphical user interface to simplify interaction with such lexicon database and/or drafting tool, which interface or GUI might permit an (authorized) end users easy access to any one or more of the features disclosed herein.

Methods to design easy to use graphical user interfaces (GUIs) are well known in the prior art. For example, the books entitled "The Essential Guide to User Interface Design," by Wilbert O. Galitz and "Interface Design: Effective Design of Graphical User Interfaces for the Web and Multimedia Pages," by Alistair Dabbs both describe how to design and construct a useful GUI, which books are hereby incorporated by reference.

In certain embodiments, end users may desire to search notes, words, documents or databases, for example, a patent database to find relevant notes, words, documents, e.g., patents and/or prior art that may require lexicon updates and/or definitions, synonyms and/or antonyms. Exemplary methods for providing patent and prior art searches are disclosed in U.S. Patent Application Nos. 11/671,380, "Automated Patent Searches" filed February 5, 2007; 11/693,555 "Providing Certified Patent Searches Conducted by Third Party Researchers" filed March 29, 2007; and 11/697,447 entitled "Enhanced Patent Prior Art Search Engine," filed April 6, 2007; each of which is hereby incorporated by reference.

In other embodiments, end users may desire to prioritize the processing of their submissions, documents, notes, reviews, commentary or other tasks or items submitted to a queue. In such cases, methods to provide for document prioritization are desirable. Exemplary methods for priority queuing documents are disclosed for example in U.S. Patent Application Nos. 11/462,621 11/462,621, "Fee-Based Priority Queuing for Insurance Claim Processing," filed August 4, 2006; 11/61 1,024 "System and Method for Prioritizing Items in a Queue" filed December 14, 2006; and PCT Application No. PCT/US06/340347, "Insurance Form Priority Queuing;" each of which are incorporated herein by reference.
In certain embodiments, the disclosed invention may be practiced in the real or virtual world. For example, a video game may include a virtual patent office. Exemplary methods and systems for providing protection of intellectual property in a virtual environment are disclosed, for example, in U.S. Patent Application Nos. 11/428,263, "Video Game Environment" filed June 30, 2006; 11/620,563 "Copyright of Digital Works in a Virtual Environment," filed January 5, 2007; 11/689,977, "Digital Rights Management in a Virtual Environment," filed March 22, 2007; 11/671,373 "Video Game with Control of Quantities of Raw Materials" filed February 5, 2007; 11/680,960 "System for the Creation and Registration of Ideas and Concepts in a Virtual Environment," filed March 1, 2007; each of which is incorporated herein by reference.

The disclosed invention may be applied to a virtual environment, world or video game(s) or any combination of the above. For example, advertisements, such as those disclosed herein may be delivered in the virtual world. In such cases, methods to ensure that agreements are enforceable and that advertising fees are collected in such virtual environments are desirable. Exemplary methods for providing such contract enforcement and collection of fees are disclosed, for example, in U.S. Patent Application Nos. 11/279,991 "Securing Virtual Contracts with Credit," filed April 17, 2006; 11/624,662 "Securing Contracts in a Virtual World," filed January 18, 2007; 11/559158 "Financing Options in a Virtual World" filed November 13, 2006; 11620,542 "Satisfaction of Financial Obligations in a Virtual Environment Via Virtual and Real World Currency," filed January 5, 2007; 11/421,025 "Financial Institutions and Instruments in a Virtual Environment," filed May 30, 2006, and 11/380,489 "Multiple Purchase Options for Virtual Purchases," filed April 27, 2006; each of which are hereby incorporated herein by reference.

In certain embodiments, before displaying an advertisement and/or before presenting a list of words and/or documents, e.g., from a lexicon of words, it may be desirable to ascertain certain additional information about such advertisement and/or request for information. In such cases, the system may determine that it is necessary, desirable or generally useful to present one or more survey questions to aid in determining which words, documents, or other information should be presented, e.g., to help determine which advertisement might yield generally better results, and/or which word or synonym is generally more relevant given the information known about the end

83
user and/or collected by using and/or displaying and/or gathering results from one or more such survey questions. For example, when an end user enters the word "case" into a search tool designed to retrieve a definition of such word or words, the system might ask the end user the following question or questions: e.g., are you an attorney, are you interested in travel, or are you seeking legal advice. Based upon the end user's response, e.g., if the end user responded in the affirmative to the last question, the system might either provide a definition of case to include legal cases, and/or the system may also provide an advertisement for one or more attorneys seeking clients. Based upon the response to one or more questions, the system may present additional qualifying questions, i.e., additional questions to further narrow the search results and or the sort display results. Exemplary methods to provide for survey questions and gathering of data are disclosed by applicants in U.S. Patent Application Nos. 60/774,177, entitled "Survey Based Qualification of Keyword Searches," 11/278,123, also entitled "Survey Based Qualification of Keyword Searches" 11/562,738 "Survey Based Qualification of Keyword Searches" and 11/608,150, entitled "Map and Inventory Based On-Line Purchases" which applications are incorporated herein by this reference.

All embodiments herein which refer to a patent are equally applicable to a patent application, and vice versa, unless explicitly stated otherwise with respect to a particular embodiment. Any reference to a patent (or to a patent application) is solely for reasons of brevity.

Those having skill in the art will recognize that there is little distinction between hardware and software implementations. The use of hardware or software is generally a choice of convenience or design based on the relative importance of speed, accuracy, flexibility and predictability. There are therefore various vehicles by which processes and/or systems described herein can be effected (e.g., hardware, software, and/or firmware) and that the preferred vehicle will vary with the context in which the technologies are deployed.

At least a portion of the devices and/or processes described herein can be integrated into a data processing system with a reasonable amount of experimentation. Those having skill in the art will recognize that a typical data processing system generally includes one or more of a system unit housing, a video display device, memory, processors, operating systems, drivers, graphical user interfaces, and
application programs, interaction devices such as a touch pad or screen, and/or control systems including feedback loops and control motors. A typical data processing system may be implemented utilizing any suitable commercially available components to create the gaming environment described herein.

Accordingly, as shown in Fig. 4 a system 400 may comprise a plurality of various hardware and/or software components such as those described below. It will be appreciated that for ease of description, the variously described hardware and software components are described and named according to various functions that it is contemplated may be performed by one or more software or hardware components within the system. However, it will be understood that the system may incorporate any number of programs configured to perform any number of functions including, but in no way limited to those described below. Furthermore, it should be understood that while, for ease of description, multiple programs and multiple databases are described, the various functions and/or databases may, in fact, be part of a single program or multiple programs running in one or more locations.

Exemplary programs include:

1. Lexicon Program 411
2. Patent Drafting Program 412
3. Billing Program 413
4. Mapping Program 414
5. Contest Definition Program 415

Exemplary database architecture includes:

Word Database 421, which may collect, store and associate data such as:

(words may be primary words and/or alternative definitions and/or synonyms and/or antonyms each as applicable, which can contain further references as seen below)

1. Word ID
   a. Word Count ID
   b. Word
   c. Word Map ID # 1 - N
   d. Document Map ID # 1 - N
   e. Document ID - 1 - N
   f. Word Group ID
1. Word Class ID
   a. Word Sub-Class ID

2. Primary Definition

2. Hyperlinks 1 - N (e.g., sources / locations of use)
   1. Alternative Definitions 1 - N
      a. Definition
      b. Supplied By - ID
      c. Hyperlinks 1 - N

3. Synonym ID - 1 - N

4. Synonym

5. Word ID

6. Relevancy Scores 1 - N

7. Primary Score %

8. Alternative Score %'s 1 - N
   1. Antonym ID - 1 - N
      a. Antonym
      b. Word ID

9. Relevancy Scores 1 - N

10. Primary Score %

11. Alternative Score %'s 1 - N
   1. Notes 1 - N
      a. Note ID
      b. Note Short Description
      c. Note Long Description
      d. Narrative Text
      e. Attachment Hyperlinks 1 - N
      f. Where Used Hyperlinks 1 - N

2. Figure IDs 1 - N

3. Approval Tracking Data 1 - N
   a. Definition ID
   b. Submission Date
   c. Submitted By
d. Reviewed By
e. Accepted / Rejection Date
4. Change Tracking ID 1 - N
   a. Change tracking notes 1 - N
5. Notes 1 - N

[0278] Change Tracking Database 422, which may collect, store and associate data such as:
1. Change Tracking ID
2. Word or Document ID 1 - N
3. Word or Document Map ID 1 - N
4. Change Type (e.g., Add, change, delete)
5. Change Description
6. Date / Time
7. User ID
8. Before Image
9. After Image
10. Relevancy, ranking or score
11. Change tracking notes 1 - N

[0279] Figure Database 423, which may collect, store and associate data such as:
1. Figure ID
2. Figure Description
3. Figure or Attachment
4. Submitted By ID
5. Source ID
6. Editor Application ID
   a. Hyperlinks 1 - N
8. Notes 1 - N

[0280] Document Database 424, which may collect, store and associate data such as:
1. Document ID
2. Document Description
3. Document Owner ID
4. Document Map ID # 1 - N
5. Hyperlinks (e.g., document locations) 1 - N
6. Class 1 - N
7. Subclass 1 - N
8. Type 1 - N
9. Subtype 1 - N
10. Date / Time Stamps
   a. Submitted / Found / Indexed On
   b. Submitted / Found / Indexed By ID or Hyperlink
   c. Revised On 1 - N
   d. Revised By 1 - N
   e. Before Image 1 - N
   f. After Image 1 - N
11. Attached Notes 1 - N

[0281] User Database 425, which may collect, store and associate data such as:
1. User ID
2. Name
3. Security Profile
4. Field of Use 1 - N
5. Financial Information
   a. Billing Method ID
   b. Credit Card Information
      1. Preferred Card Number
      2. Preferred Card Holder
      3. Preferred Card Type
      4. Name
      5. Expiration Date
6. Additional Cards 1 - N
   a. Card Number
   b. Card Holder (e.g., Bank Name)
c. Card Type (e.g., Visa)
d. Name
e. Expiration Date
f. Security Code

7. User Mailing / Billing Address

[0282] User Rules Database 426, which may collect, store and associate data such as:
1. Rule ID 1 - N
   a. Word(s) / Documents Applied To 1 - N
2. Rule Description
   a. Rules 1 - N
   b. Billing Terms and Conditions ID 1 - N
3. User Attorney of Record
4. Attorney ID 1 - N
5. User Qualifications 1 - N
6. Attached Notes 1 - N

[0283] User Qualifications Database 427, which may collect, store and associate data such as:
1. Qualification ID
2. Description
3. Qualification Type
4. Years Experience
5. Fields of Use Applicable 1 - N
6. Notes 1 - N

[0284] Attorney Database 428, which may collect, store and associate data such as:
1. Attorney ID
2. Name
3. Security Profile
4. Address
5. Description
6. Qualifications ID 1 - N
7. Notes 1 - N

Billing Terms and Conditions Database 429, which may collect, store and associate data such as:

1. Billing Method ID
2. Billing Type
3. Description
4. Billing Frequency
5. Due by # days
6. Late by # days
7. Interest Rate Fixed
8. Interest Rate Variable
9. Interest Accrues after days
10. Notes 1-N

Accounts Receivable Database 430, which may collect, store and associate data such as:

1. User ID
2. Total Amount Owed
3. Transaction Detail Records 1 - N
4. Date of Transaction
5. Type
6. Document ID
7. Word ID
8. Hyperlinks 1 - N
9. Amount
10. Notes 1 - N

Search Database 431, which may collect, store and associate data such as:

1. Document ID
2. Document Location / Hyperlink
3. Notes 1 - N

Transaction Database 432, which may collect, store and associate data such as:

1. Transaction ID
2. Description
3. Date / Time
4. Type
5. User ID
6. User Rules Used 1 - N
7. Billing T&C's 1 - N
8. Billing Method ID
9. Transaction Amount
10. Results 1 - N
   a. Note Added, Changed, Deleted, and/or Accessed
11. Hyperlink Clicked
12. Sub-Hyperlinks Clicked 1 - N
   a. Advertisement / Note and/or Webpage) Displayed 1 - N
13. Click Through y/n
14. Duration of view
   a. Conversion y / n
   b. Conversion dollar amount
      1. Notes 1 - N
15. Notes 1 - N

[0289] Advertisement Database 433, which may collect, store and associate data such as:

1. Advertisement ID
2. Advertiser ID
3. Description
4. Words 1 - N
5. Documents 1 - N
6. Hyperlinks 1 - N
7. Advertising Content File 1 - N
8. Notes ID 1 - N

[0290] Document Class Database 434, which may collect, store and associate data such as:

1. Class ID
2. Description
3. Notes 1 - N

[0291] Document Sub Class Database 435, which may collect, store and associate data such as:
   1. Subclass ID
   2. Description
   3. Notes 1 - N

[0292] Document Type Database 436, which may collect, store and associate data such as:
   1. Type ID
   2. Description
   3. Notes 1 - N

[0293] Document Sub Type Database 437, which may collect, store and associate data such as:
   1. Subtype ID
   2. Description
   3. Notes 1 - N

[0294] Group Database 438, which may collect, store and associate data such as:
   1. Group ID
   2. Description
   3. Notes 1 - N

[0295] Advertisement Type Database 439, which may collect, store and associate data such as:
   1. Type ID
   2. Description
   3. Notes 1 - N

[0296] Word Count Database 440, which may collect, store and associate data such as:
   1. Word ID
   2. Number of Occurrences
   3. Hyperlinks 1 - N
   4. Notes 1 - N
Survey Database 441, which may collect, store and associate data such as:
1. Survey ID
2. Survey Description
3. Advertiser ID
4. Survey Question ID 1 - N
5. Question
6. Answer Options 1 - N
7. Notes 1 - N

Results Database 442, which may collect, store and associate data such as:
1. Result ID
2. End User ID
3. Survey Questions 1 - N
4. Survey Answers 1 - N
5. Date / Time Stamp
6. Narrative or Text Responses 1 - N
7. Attached Notes 1 - N
8. Notes 1 - N

Rules Database 443, which may collect, store and associate data such as:
1. Rule ID
2. Rule Description
3. Rules 1 - N
4. Notes 1 - N

Search and Survey Database 444

Word Descriptor Database 445

Notes Database 446, which may collect, store and associate data such as:
1. Note ID
2. Hyperlinks 1 - N
3. Note Description Short
4. Note Description Long
5. Note Group ID
6. Note Class ID
7. Note Subclass ID
8. Note and/or Note Attachments 1 - N
9. Owner / Submitted By ID
10. Original Submission Date / Time
   a. Notes 1 - N
11. Modifications 1 - N
12. Owner / Submitted By ID
13. Modification Submission Date
14. Short Description
15. Long Description
16. Owner / Submitted By ID
17. Original Submission Date / Time
18. Hyperlinks 1 - N
19. Change Image 1 - N
   a. Before Change
   b. After Change
   c. Notes 1 - N

[0303] Suppression Rules Database 447
[0304] Hyperlink Database 448, which may collect, store and associate data such as:
   1. Hyperlink ID
   2. Hyperlink
   3. Description
   4. Owner ID
   5. Advertiser ID
   6. Notes 1 - N

[0305] User Database 449, which may collect, store and associate data such as:
   1. User ID
   2. Name
   3. Account Type
   4. Description
   5. Terms and Conditions ID
   6. Text
7. Notes 1 - N

Document Group Database 450, which may collect, store and associate data such as:

1. Group ID
2. Description
3. Includes Sub-Groups / Sub-Class IDs 1 - n
4. Notes 1 - N

Document Class 451, which may collect, store and associate data such as:

1. Class ID
2. Description
3. Includes Sub-Class IDs 1 - N
4. Notes 1 - N

Document Sub Class 452, which may collect, store and associate data such as:

1. Subclass ID
2. Description
3. Notes 1 - N

Note Class 453, which may collect, store and associate data such as:

1. Note Class ID
2. Description
3. Includes Sub-Class IDs 1 - N
4. Notes 1 - N

Note Subclass 454, which may collect, store and associate data such as:

1. Note Subclass ID
2. Description
3. Notes 1 - N

Nick Name Database 455, which may collect, store and associate data such as:

1. Nick Name ID
2. Nick Name (Short Description)
3. Nick Name (Long Description)
4. Patent or Document Number
5. Notes 1 - N

[03 12] Patent Application or Document ID Database 456, which may collect, store and associate data such as:
   1. Patent or Document ID #
   2. Hyperlinks 1 - N (e.g., Link to that patent on different websites)
   3. Notes 1 - N

[03 13] Alert Event Rules Database 457, which may collect, store and associate data such as:
   1. Alert Event Rule ID
   2. Alert Event Description
   3. Alert Event Rules 1 - N
      a. Event Condition
      b. Alert Recipient ID 1 - N
         1. Alert Method 1 - N
      c. Alert Database ID 1 - N
   4. Notes 1 - N

[03 14] Alert Database 458, which may collect, store and associate data such as:
   1. Alert Database ID
   2. Alert Contents, one or more of:
      a. Text
      b. Variable Data
      c. Executable
   3. Notes 1 - N

[03 15] Alert Methods Database 459, which may collect, store and associate data such as:
   a. Alert Method ID
   b. Method Type
   2. Delivery Method (cell phone, pager, e-mail, PDA, database, executable, etc.)
   3. Notes 1 - N

[03 16] Alert Recipient Database 460, which may collect, store and associate data such as:
1. Alert Recipient ID (e.g., end user ID)
2. Description
3. Alert Method Preferences ID 1 - N
4. Notes 1 - N

[0317] Word Queue Database 461, which may collect, store and associate data such as:

1. Queue ID #
2. Queue Position #
3. Word ID
4. Submitted By ID 1 - N
5. Examiner ID
6. Attorney ID
7. Date / Time Stamps
   a. Submitted On Date / Time
   b. Expected Review Date
8. Notes 1 - N

[0318] Examiner Database 462, which may collect, store and associate data such as:

1. Examiner ID
2. Name
3. Security Profile
4. Areas of practice / Fields of Use 1 - N
5. Contact Information
6. Qualifications 1 - N
   a. Current Cases ID 1 - N
   b. Prior Cases ID 1 - N
7. Notes 1 - N

[0319] Map Database 463, which may collect, store and associate data such as:

1. Map ID #
2. Description
3. Notes 1 - N
4. Source Document ID #
Filed Document Database 464, which may collect, store and associate data such as:

- Document Database ID / Name / Location
- Document ID # 1 - N
- Submitted by ID # 1 - N
- Examiner ID # 1 - N
- Attorney ID # 1 - N
- Description
- Notes 1 - N
- Document Image 1 - N
- Date / Time Submitted
- Lexicon Entries Used Database

2. Lexicon Entries Used ID 1 - N
3. Lexicon Images 1 - N
4. Filed Document Lexicon
   - Lexicon Database ID / Name / Location
   - Lexicon (e.g., Word or Document or Image) ID # 1 - N
   - Submitted by ID # 1 - N
   - Examiner ID # 1 - N
It will be appreciated that the various software and hardware components described above will be configured to perform a variety of functions and methods. Listed below are some exemplary methods that might be performed by the systems as described herein:

[0321] Create a word and its definition

1. Receive a request to create a word
2. Output word creation form
3. Receive word, including definition and document class and subclass
4. Store word in lexicon

[0322] Refine the definition of a word

1. Receive a request to refine the definition of a word
2. Output definition refinement form
3. Receive definition refinement
4. Store refinement with word and definition

[0324] Use a word in the lexicon in a patent application
1. Receive patent application data
2. Receive a request to use the lexicon
3. Output appropriate entries in lexicon based on application data
4. Receive a request to use a word in the lexicon
5. Output word definition
6. Receive refinement/limitation of definition
7. Insert word in application data
8. Hyperlink word to refined/limited definition

[0325] Create an advertisement in the Lexicon
1. Receive a request to link an advertisement to a word in the lexicon
2. Output advertisement form
3. Receive advertisement
4. Link advertisement to word in definition

[0326] View an advertisement in the Lexicon
1. Output Lexicon records based on end user request
2. Determine if there are relevant advertisements associated with output records
3. Link advertisements to records
4. Display advertisements based on system rules

[0327] Retrieve the definition of a word in a patent application from a hyperlink
1. Receive a click on a word in the lexicon
2. Retrieve and Output associated definition of word

[0328] Receive Word and Definition and Place in Queue
1. Receive a request to create a word
2. Output word creation form
3. Receive word, including definition and document class and subclass
4. Place word in approval queue

[0329] Approve/Certify Word in Queue
1. Receive certifier log in
2. Retrieve and Output word in approval queue
3. Receive approval
4. Place word in lexicon
5. Alert word submitter that word has been accepted

[0330] Reject Word In Queue
1. Receive certifier log in
2. Retrieve and Output word in approval queue
3. Receive rejection
4. Notify submitter that word has been rejected

[0331] Use Lexicon to assist in drafting new document
1. Receive request to create document
2. Output lexicon
3. Receive document data
4. Receive requests to insert words from lexicon into document
5. Insert words from lexicon into document as requested

[0332] Store Lexicon with Filed Application on file Date
1. Receive document filing request
2. Determine words in document associated with lexicon
3. Determine lexicon definitions for words in document associated with lexicon
4. Store definitions for words with document
5. File document

[0333] Contest Definition
1. Receive a request to contest a definition of a word
2. Store request
3. Suspend use of definition

[0334] Override Contest of Definition
1. Receive administrator log in
2. Output request to contest a definition
3. Decline request
4. Notify requester that contest was declined
5. Allow use of definition

[0335] Approve Contest of Definition

[0336] Receive administrator log in

[0337] Output request to contest a definition

[0338] Approve request

[0339] Notify requester and submitter that contest was approved

[0340] Disallow use of definition

[0341] Output request for a new definition

[0342] Or - Event Driven Method Steps:

[0343] Initial Database Loading

1. Create / Load Database(s)

2. Import Words, Definitions, Synonyms and Antonyms from existing database sources (as appropriate / e.g., one time, and/or from time-to-time)

3. Update Database(s)

[0344] Primary Patent Drafting Tool / Application

1. Load Database(s)

2. Display primary GUI

3. Receive activity indication / request from end user

4. Determine if one or more subroutines should be executed

5. Execute one or more of the following subroutines as applicable / necessary / desired

6. Update database(s)

[0345] Security Application

1. Load Database(s)

2. Determine if requested action and/or end user is permitted

3. If not, notify application and/or end user

4. If yes, permit requested step and/or loading of application or other authorized action(s)

5. Update Database(s)

[0346] End User Preferences Application

1. Load Databases
2. Present Preferences GUI if required
3. Receive End User Preferences / Feedback / Usage Tracking Information, including:
   a. Filter Criteria or Rules
   b. Sort Criteria or Rules
   c. Relevancy Information
   d. Weighting Factors, Criteria or Rules
   e. Security Preferences
   f. Feedback / Tracking Preferences
   g. Notes
   h. Usage habits / patterns
   i. Display preferences

[0347] Opt In / Sign Up Application
1. Load Databases
2. Receiving Indication of new user sign up
3. Record any and all or available information regarding one or more patent applicants and/or applications, end users, examiners, attorneys and/or third parties
4. Update databases

[0348] Word Creation / Modification Application
1. Load Database(s)
2. Display Word Entry / Revision GUI
3. Receive input from user to add/modify/delete word and/or associated synonym, antonym and/or primary / alternative definition(s)
4. If applicable
   a. Place word in one or more authorization queues
   b. Receive authorization / certifications as applicable and/or required to accept such add/modify/delete word and/or associated synonym, antonym and/or primary / alternative definition(s)

   1. If applicable, receive relevancy score(s) and/or mapping information
5. Update Database(s)

[0349] Word Use / Insertion

1. Load Database(s)

2. Receive one or more requests to search or display one or more words, synonyms, antonyms and/or figures and/or maps

3. Retrieve relevant words, synonyms, antonyms and/or figures or maps

4. Display search / lookup results and, if applicable, other relevant materials

5. Permit user to copy / paste or insert any one or more such words, synonyms, antonyms and/or figures into one or more patent applications or other document(s)

6. Permit end user to submit additions / changes or modifications to such words, synonyms, antonyms and/or figures as applicable

7. Update Database(s)

[0350] Advertisement Creation Application

1. Load Database(s)

2. Display advertising creation / modification GUI

3. Receive request to add / change / delete one or more advertisements

4. Receive advertisement hyperlink contents and associate with one or more words, synonyms, antonyms and/or figures and/or documents

5. Determine if such one or more words, synonyms, antonyms, figures and/or documents have pre-existing hyperlinks by current or third party end user or otherwise

6. If not, determine price to associate hyperlink as applicable

7. If one or more similar hyperlinks already exist, execute hyperlink bid pricing application

8. If approved and priced, insert or otherwise associate said hyperlink with said one or more words, synonyms, antonyms, figures and/or documents.

9. Update Database(s)

[0351] Hyperlink Pricing Program

1. Load Database(s)
2. Receive pricing request
3. Determine if more than one user wishes a hyperlink to the same or similar word(s), synonym(s), antonym(s), figure(s) and/or documents
4. Determine pricing and/or auction hyperlink, or, if applicable, position in list of two or more hyperlinks
5. Notify affected parties, e.g., via an alert
6. Receive indication from one or more users as to willingness to pay and price points
7. Continue process until pricing is determined
8. Receive authorizing for final pricing from affected parties, including end users
9. Update Database(s)

[0352] Advertisement Viewing/Use Application
1. Load Database(s)
2. Receive request to display or access advertisement, e.g., user clicks hyperlink or right clicks word
3. Determine if additional browser page or popup or other display method is to be used
4. Display Advertisement, e.g., load and display attached movie file
5. Determine if survey should be presented
6. Present survey
7. Determine if secondary or different advertisement is to be displayed
8. Display advertisement
9. Collect usage information, e.g., impressions for billing purposes
10. Update Database(s)

[0353] Word Definition / Synonym / Antonym / Figure / Document Lookup Tool
1. Load Database(s)
2. Receive request from drafting or third party display tool for word, definition, synonym, antonym, figure and/or document display (any one or any combination or all of the forgoing)
3. Determine relevancy information
4. Retrieve requested information, using relevancy information if applicable / available
5. Determine if additional browser page or popup or other display method is to be used (e.g., interstitial popup window)
6. Determine if application and/or end user has requested filter and/or sort and/or relevancy options
7. Display Requested Information (using filter, sort and/or relevancy information and/or filter criteria if applicable// available)
8. Update Database(s)

[0354] Document Submission / Filing Application
1. Load Database(s)
2. Receive request to submit document with words, synonyms, antonyms, figures and/or related documents to database, repository or processing agency, e.g., USPTO
3. Capture image of all relevant materials, including then current definitions, along with Time / Date stamp information
4. If desired, encrypt any or all output materials, e.g., patent application, definitions, words, synonyms, antonyms, figures and/or related documents and/or supporting materials to prevent or otherwise control subsequent access and/or modifications
5. Update Database(s)

[0355] Mapping Program
1. Load Databases
2. Receive indication that one or more words, synonyms, antonyms and/or documents have been added or changed or removed from one or more databases
3. Receive or determine relevancy information
4. Determine mapping relationships among the forgoing
5. Monitor word, synonym, antonym, document and/or mapping usage
6. Receive feedback from end users and/or determine change in mapping relationships and/or relevancy
7. If desired or required, submit any such changes for review / approval
8. If approved, update mapping relationship data accordingly
9. Update Databases

End User Contest Application

1. Load Database(s)
2. Receive Indication that one or more end users and/or third parties, e.g., patent examiner, contests one or more word definitions, words, synonyms, antonyms, figures and/or other documents and/or supporting materials
3. Determine relevancy / validity of the contest by any one or all of the following if desired / applicable
4. Solicit other end user / third party votes / scores / ranking
5. Use GA
6. Submission to authorized end user or third party
7. Preponderance of feedback
8. If contest is determined valid, accept requested changes
9. Otherwise reject requested changes
10. Update Database(s)

Billing Program

1. Load Database(s)
2. Receive indication that billing activity has occurred
3. Determine affected parties, e.g., payer and payee
4. Determine billing rules, terms and conditions
5. Determine billing amounts due
6. Create Invoice and A/P or A/R notices / entries
7. Send Invoices and notices
8. Update Databases
9. Await Payment
10. Receive payment indication
11. Apply payments
12. Notify A/P or A/R systems / and/or affected parties
13. Determine if payments are timely / sufficient
14. If not, execute collections program
15. Update Database(s)

[0358] Collections Program
1. Receive indication payments are late and/or insufficient
2. Load Database(s)
3. If applicable, execute one or more of the following steps:
4. Send late notice
5. Send insufficient payment or funds notice
6. Limit or prevent further use until payment terms are partially or fully satisfied, each according to billing terms and conditions and/or rules
7. Collect funds due from primary and/or secondary credit cards on file.
8. Notify affected parties
9. Update Database(s)

[0359] Alerts Program
1. Load Database(s)
2. Determine if Alert Event has occurred
3. Determine Alert Contents based upon alert rules
4. Determine Alert Recipients and Contents and Delivery Method(s)
5. Send Alert(s)

[0360] In various embodiments, the present disclosure further provides a system or framework that allows third parties to develop improvement plug-ins or software modules for a patent drafting/search/examination engine. The source code and/or application program interfaces (API's) for the system and/or framework may be made available, in whole or in part, to third party developers, who can create improvements to any one or more of the existing framework, applications or modules and/or create new or improved software, plug-ins or modules (collectively "modules") and submit them to the central system for review/approval. The improvements may be tested by a central or other authorized body and/or by other end users, and implemented if the modules or improvements prove themselves as both useful and error free.

[0361] The design and creation of the modules and/or APIs may be accomplished by any suitable means. Numerous methods to devise such modules and/or API's are well known and documented within the prior art. For example, methods to provide for and designs of various application program interfaces or APIs and other inter-application

[0362] Generally, a patent application drafting, submission, and examination tool (PDT) as contemplated by the present disclosure is a web-based software module that enables an end user to submit a patent application with a registration entity such as the United States Patent and Trademark Office (USPTO). The PDT may further aid in the initially preparation of the application, for example, by using automated or semi-automated suggestions and/or prior art searching. The PDT may additionally aid with fully or partially automated examination of the application once it has been submitted. An exemplary tool for preparing submitting documents via the Internet is disclosed for example, in U.S. Patent Application No. 11/627,263 "Automated Web-Based Application Preparation and Submission" filed January 25, 2007, which is incorporated herein by reference.

[0363] According to an embodiment, the modules developed using the systems and methods can be utilized to improve a patent application drafting, submission, and examination tool.

[0364] According to various embodiments, end users may or may not have to pay one or more fees to access and/or use the PDT and/or added modules. For example, the owner of the PDT (which may be for example, the USPTO, a private third party, or some other entity) may determine a fixed or variable fee to use the patent drafting tool. Furthermore, developers that submit modules to be used with the PDT may require an additional fee for using such additional modules. There may be a combination of fee
types, for example, the USPTO might charge a flat rate for the creation and submission of a patent application using the PDT, while some modules may charge a per use fee, some modules charge an hourly rate, and some modules are free. Alternatively, use of the PDT may be free, while some or all of the modules may be fee-based. Furthermore, the owner(s), operator(s), or host(s) of the system or servers on which the PDT and/or one or more modules reside, may also charge a fee, instead of or in addition to any other fee.

[0365] Fees, whether for the servers, system, framework, or modules, may be established by any applicable means, including, but not limited to: negotiations among the affected or controlling parties, free market forces, bidding or auctions, or by a regulatory body or entity, e.g., by one or more USPTO rules or regulations, and/or by US and/or other laws or regulations passed by any duly authorized governing body, e.g., a foreign country, or agency, or group of end users or other committee established for such purposes, or by a court of competent jurisdiction, and/or via a vote or other democratic processes and/or any combination of the forgoing.

[0366] Fees may be shared between any one or more entities. For example, developers that submit modules and charge a fee for use of their module may optionally or may be required to share a percentage of a fixed or variable amount of the fees they collect with the USPTO or other developers and/or other third parties, services providers or any other entity, as deemed appropriate.

[0367] According to some embodiments, developers that submit modules that are subsequently approved and/or otherwise used, may be permitted to use the system, framework and/or other developer's modules, in whole or in part, for free or for a reduced free structure. For example, if Developer A submits a spell checking tool and Developer B submits a lexicon creation tool, either Developer A and/or Developer B may be granted certain benefits, which may be temporary or permanent, including, for example, reduced fees for using the entire system and/or reduce fees for using each other's modules. Such fee structures and arrangements may be determined by any applicable means, including negotiations among the affected or interested parties, the USPTO, or any other duly authorized governing party, and/or by free market forces, etc.

[0368] In certain embodiments, all modules and software including the PDT may be entirely or partially open source code. In such instances, the developers of new or
improved modules may not be permitted to apply for patent protection. Alternatively, developers may be permitted to apply for patent protection, but the owners or assignees of patents stemming from work associated with the PDT may or may not be permitted to charge a royalty when or if such inventions are practiced within the PDT.

According to some embodiments, the PDT can serve as a marketplace for modules to be discussed, developed, reviewed, approved and/or inserted or used by end users that are drafting and/or reviewing and/or examining patent applications.

In some embodiments, the modules, or software, may act or be implemented as plug-ins that can be installed into or linked with or to the system and/or framework and used for patent drafting.

In certain embodiments, only approved plug-ins can be used to create certified patent applications. Such approval may be conducted by any applicable means including, but not limited to: a peer review process, a formal certification process conducted by authorized professionals, a virtual review process, i.e., tested by players or player characters within a video game environment, alpha and/or beta testing, e.g., testing of the application within a limited scope and/or with only a limited number of end users or for a limited period and/or any combination or order of the foregoing. For example, to obtain approval a given module might first be required to pass a peer review or other inspection and, if it passes such inspection, may then be required to undergo a formal review. Alternatively, after passing a peer review, a module may be approved to move directly into alpha or beta testing and/or may be then inserted directly or otherwise linked into the PDT framework or made available for immediate use by end users.

Numerous commercial applications exist that can be used to complete the automated testing and/or other review processes, including, for example, the following: TestComplete5 by Automated QA of Las Vegas, NV, and/or TestMaker by Pushtotest.com, and/or any one or more of the testing tools cited at: http://www.softwareqatest.com/qatwebl.html, etc., which tools, and resources are incorporated by reference.

In certain embodiments, end users and other third parties may provide feedback of any nature or type or as desired. For example, feedback may relate to the usefulness and/or quality and/or additional desired features and/or undesirable features of functions and/or bugs or errors contained within or relating to one or more modules. Such feedback may be provided by any applicable means, including manual reporting or, preferably, automated means. Methods to provide feedback include the use of Internet blogs, messages boards and/or by attaching notes to the module, system or framework or to any one or more related documents. Exemplary methods to provide attachment of notes into documents and/or associate notes with documents, or words, or other data are disclosed in US Patent Application Nos. 11/690,095 "Facilitating Certified Prior Art Note Taking and Method for Using Same," filed March 22, 2007; 11/697,480 entitled "Note Overlay System," filed April 6, 2007; and 11/697,486 "Document Examiner Comment System," filed April 6, 2007; each of which is incorporated herein by reference.

The central PDT or an integrated or associated module may act as a billing engine to charge end users or other third parties for the use of plug-ins and may share or pay developers for the use of those plug-ins.

Examples of modules or plug-ins could include, but are not limited to, any one or more of a/an:

1. Lexicon drafting tool
2. Word Processor
3. Spreadsheet
4. Presentation tool
5. Figure drafting tool
6. Image processing tool
7. Audio processing tool
8. Product demonstration or testing tool, e.g., a virtual environment
9. Prior art search engine
10. Blog tool or system for submitting prior art, notes, documents, commentary, etc.
11. Voting system for office actions or for raking anything, e.g., notes
12. Notes creation and insertion tool
13. Search tool
14. License exchange or marketplace

[0377] In certain embodiments, access to or use of one or more plug-ins may be accomplish using hyperlinks. Hyperlinks may also be used to direct developers and/or end users or examiners to applications or plug-ins that permit user feedback, scoring, ranking and other information, such as adding notes, or logging errors, error messages, and/or requesting or suggesting new features or other design changes. Methods to create WebPages, hyperlinks and hypertext are well known in the prior art and any person with ordinary skill in the art can design and create such hyperlinks. Methods to design and create hypertext and/or hyperlinks are discussed and disclosed by the authors of the following reference and other materials, including, for example: "Intelligent Hypertext: Advanced Techniques for the World Wide Web (Lecture Notes in Computer Science), by Charles Nicholas and James Mayfield," "Information Architecture for the World Wide Web: Designing Large-Scale Web Sites [ILLUSTRATED], by Louis Rosenfeld (Author), Peter Morville," Creating Web Pages with HTML Simplified, by Sherry Willard Kinkoph (Author)," "Master Visually Web Design (With CD-ROM) by Carrie F. Gatlin and Michael S. Toot," and "Creating Internet Intelligence: Wild Computing, Distributed Digital Consciousness, and the Emerging Global Brain (IFSR International Series on Systems Science and Engineering), by Ben Goertzel." Each of which are hereby incorporated by reference.

[0378] As stated above, use of any Modules or Plug-ins can be subject to a fee. For example, end users may be billed on a per usage basis, or for a fixed one-time fee and/or based upon the amount of time used. Rates may vary based upon or determined by any applicable means, including, for example, any one or more discriminating attributes, including: a) the type of document or application, b) the size of the document, c) the age of the application, d) the results of one or more reviews by an end user or third
party, e.g., a patent examiner, e) the class or subclass or other categorization of a
document, e.g., a patent class and subclass, f) whether or not the end user has submitted
or developed other modules for use within the system or framework and/or if such end
user has provided review or other services, e.g., peer review of one or more modules, h)
or any other factors such as need or social or economic class of the end user, or other
status or discriminating factors known or established by the system, or any law,
committee or other governing body or agency, e.g., the USPTO, or other laws passed by
the United States of America or, if applicable any foreign country and/or any court of
competent jurisdiction and/or any combination of the forgoing.

[0379] In some embodiments, prior to, and/or during and/or following use of one
or more plug-ins, end users may or may be required to view one or more advertisements
in exchange for free or reduced fees for using said one or more plug-ins. In such cases,
the end user may be required to complete viewing of an advertisement, and/or click on a
link to display or run such advertisements and/or such advertisements may automatically
run at the desired time. In other embodiments, end users may optionally and/or may be
required to respond to one or more survey questions. Such questions may be presented
before during or after viewing of an advertisement. Exemplary systems and methods
related to keyword-based advertising in a document database are described in U.S. Patent
Application Nos. 11/668,586 "Targeted Advertising Based on Invention Disclosures,"
filed January 30, 2007; 11/668,596, "Keyword Advertising in Invention Disclosure
Documents," filed January 30, 2007; 11/697,437 "Merchant Tool for Embedding
Advertisement Hyperlinks to Words in a Database of Documents" filed April 6, 2007;
and 11/697,443 "Self Teaching Thesaurus," filed April 6, 2007; each of which is hereby
incorporated by reference.

[0380] In certain embodiments, the system, framework, module, plug-in or other
application may track the usage of any part or all of the system, framework, plug-in or
module for any desired purposes, including, but not limited to: billing end users, tracking
system or module performance, determining popular vs. unpopular modules, which may
or may not provide the similar functionality, in which case, unpopular modules may be
deleted or barred from use, or to provide feedback to the owner, server hosts, developers
or any other interested or otherwise authorized third party. For example, by tracking
which features are used most often within a given module, one or more developers might
use such information to help guide them in improving the existing module. Alternatively or additionally, developers may use such information to help improve the design of new modules, whether or not such modules provide similar or dissimilar functionality. In another example, by tracking which applications, features, modules or plug-ins receive the most favorable and/or unfavorable comments, feedback or notes, developers or any person or system responsible for monitoring performance or quality may be alerted to which features, functions, modules or plug-ins should be reviewed or more closely examined. For example, if module A receives ten times the number of unfavorable comments or notes as compared with other modules, the developer of module A may be notified to review or revise the application. Such notification may be provided via an alert. Exemplary methods to determine alert events and/or to send alerts are disclosed for example, in U.S. Patent Application Serial No. 11/676,848 "Virtual Environment with Alerts" filed February 20, 2007 which is incorporated herein by reference.

In another embodiment, individuals or corporations may be able to plug in their own search engine algorithms, GUIs, electronic wallet applications or any other plug-in or module, which may interface with or reside within or otherwise interact or communicate with the system, framework and/or patent database or other application or modules. Such individuals or corporations may charge others to use their interfaces, algorithms and/or modules.

In certain embodiments, the various inventions of the present disclosure may be practiced in the real or virtual world. For example, a video game may permit the inclusion of modules or plug-ins, which provide additional features or other improvements relating to the virtual environment, video game or improves game play. For example, a video game may include a virtual patent office. Exemplary methods and systems for providing protection of intellectual property in a virtual environment are disclosed, for example, in U.S. Patent Application Nos. 11/428,263, "Video Game Environment" filed June 30, 2006; 11/620,563 "Copyright of Digital Works in a Virtual Environment," filed January 5, 2007; 11/689,977, "Digital Rights Management in a Virtual Environment," filed March 22, 2007; 11/671,373 "Video Game with Control of Quantities of Raw Materials" filed February 5, 2007; 11/680,960 "System for the Creation and Registration of Ideas and Concepts in a Virtual Environment," filed March 1, 2007; each of which is incorporated herein by reference. Accordingly, the systems
described herein may be applied to a virtual environment, world or video game(s). For example, use of modules or plug-ins, such as those disclosed herein may be delivered and/or used within the virtual world.

[0383] In the event an agreement between two or more parties may be desired or required to insert any module or plug-in and/or to make use of any such plug-in, a contract between such parties may be required. In such cases, methods to ensure that agreements are enforceable and that advertising fees are collected in such virtual environments are desirable. Exemplary methods for providing such contract enforcement and collection of fees are disclosed, for example, in U.S. Patent Application Nos. 11/279,991 "Securing Virtual Contracts with Credit," filed April 17, 2006; 11/624,662 "Securing Contracts in a Virtual World," filed January 18, 2007; 11/559158 "Financing Options in a Virtual World" filed November 13, 2006; 11620,542 "Satisfaction of Financial Obligations in a Virtual Environment Via Virtual and Real World Currency," filed January 5, 2007; 11/421,025 "Financial Institutions and Instruments in a Virtual Environment," filed May 30, 2006, and 11/380,489 "Multiple Purchase Options for Virtual Purchases," filed April 27, 2006; each of which are hereby incorporated herein by reference.

[0384] Those having skill in the art will recognize that there is little distinction between hardware and software implementations. The use of hardware or software is generally a choice of convenience or design based on the relative importance of speed, accuracy, flexibility and predictability. There are therefore various vehicles by which processes and/or systems described herein can be effected (e.g., hardware, software, and/or firmware) and that the preferred vehicle will vary with the context in which the technologies are deployed.

[0385] At least a portion of the devices and/or processes described herein can be integrated into a data processing system with a reasonable amount of experimentation. Those having skill in the art will recognize that a typical data processing system generally includes one or more of a system unit housing, a video display device, memory, processors, operating systems, drivers, graphical user interfaces, and application programs, interaction devices such as a touch pad or screen, and/or control systems including feedback loops and control motors. A typical data processing system
may be implemented utilizing any suitable commercially available components to create the gaming environment described herein.

[0386] Accordingly, the presently described system may comprise a plurality of various hardware and/or software components such as those described below. It will be appreciated that for ease of description, the variously described hardware and software components are described and named according to various functions that it is contemplated may be performed by one or more software or hardware components within the system. However, it will be understood that the system may incorporate any number of programs configured to perform any number of functions including, but in no way limited to those described below. Furthermore, it should be understood that while, for ease of description, multiple programs and multiple databases are described, the various functions and/or databases may, in fact, be part of a single program or multiple programs running in one or more locations.

[0387] Exemplary programs include:
1. Plug in Certification Program 511
2. Billing Program 512
3. Marketplace Program 513
4. Use Plug in Program 514
5. File Patent Program 515

[0388] Exemplary database architectures include:

[0389] Plug In Database 521, which may collect, store and associate data such as:
1. Plug-in ID
2. Short Description
3. Long Description
4. Purpose
5. Developer ID 1 - N
6. Features 1 - N
7. Limitations 1 - N
8. Authorized Users 1 - N
9. Terms and Conditions for Use 1 - N
   a. Fees for Use
   b. Fee sharing rules (if any), e.g., share with USPTO
c. Limitations on Use

d. License / Sublicense / Modification Rights / Limitations

10. Known Errors 1 - N
11. Workarounds for known errors 1 - N
12. Proposed Enhancements 1 - N
13. Status / Project Plan / Timing for Enhancements 1 - N
14. API Standard's ID 1 - n
15. Date / Time Stamps
   a. Submitted On
   b. Expected Next Review Date
   c. Reviewed On - I - N
   d. Reviewed by Examiner ID 1 - N
   e. Rejected / Accepted On
   f. Rejected Reasons ID 1 - N
   g. Supervisor ID 1 - N
   h. Notes 1 - N

16. Plug-In (i.e., attachment, e.g., file and/or source and/or object code)
17. End User Or Examiner Review Notes ID 1 - N
18. Notes 1 - N

[0390] Notes Database 522, which may collect, store and associate data such as:

1. Note ID
   a. Hyperlinks 1 - N
   b. Note Description Short
   c. Note Description Long
   d. Note Group ID
   e. Note Class ID
   f. Note Subclass ID
   g. Note and/or Note Attachments 1 - N
      1. Submitted By ID
      2. Submission Date / Time

2. Notes 1 - N
[0391] Rejection Reasons Database 523, which may collect, store and associate data such as:

1. ID
2. Description
3. Long Description
4. Possible or Recommendation to correct notes ID 1 - N
5. Notes 1 - N

[0392] Acceptance Reasons Database 524, which may collect, store and associate data such as:

1. ID
2. Description
3. Long Description
4. Notes ID 1 - N

[0393] Examiner Database 525, which may collect, store and associate data such as:

1. ID
2. Name
3. Security Profile
4. Address
5. Security Profile
6. Qualifications 1 - N
7. Skills 1 - N
8. Previous Plug-Ins Reviewed IDs 1 - N
9. Notes ID 1 - N

[0394] User Database 526, which may collect, store and associate data such as:

1. User ID
2. Name
3. Security Profile
4. Account Type
5. Description
6. Security Profile
7. Terms and Conditions ID
8. Qualifications ID 1 - N
9. Skills ID 1 - N
10. Notes ID 1 - N
11. Plug-in Usage IDs 1 - N
12. Previous Plug-In Review IDs 1 - N
13. Field of Use 1 - N
14. Financial Information
   a. Billing Method ID
   b. Credit Card Information
      1. Preferred Card Number
      2. Preferred Card Holder
      3. Preferred Card Type
      4. Name
      5. Expiration Date
   c. Additional Cards 1 - N
      1. Card Number
      2. Card Holder (e.g., Bank Name)
      3. Card Type (e.g., Visa)
      4. Name
      5. Expiration Date
15. User Mailing / Billing Address
16. Notes 1 - N

[0395] Qualifications Database 527, which may collect, store and associate data such as:

1. Qualification ID
2. Description
3. Qualification Type
4. Years Experience
5. Fields of Use Applicable 1 - N
6. Notes ID 1 - N
Skills Database 528, which may collect, store and associate data such as:
1. Skill ID
2. Description
3. Type
4. Years Experience
5. Fields of Use Applicable 1 - N
6. Notes ID 1 - N

Billing Terms and Conditions Database 529, which may collect, store and associate data such as:
1. Billing Method ID
2. Billing Type
3. Description
4. Billing Frequency
5. Due by # days
6. Late by # days
7. Interest Rate Fixed
8. Interest Rate Variable
9. Interest Accrues after days
10. Notes 1 - N

Accounts Receivable Database 530, which may collect, store and associate data such as:
1. User ID
   Total Amount Owed
2. Transaction Detail Records 1 - N
   a. Date of Transaction
   b. Type
   c. Document ID
   d. Word ID
   e. Hyperlinks 1 - N
   f. Amount
3. Notes 1 - N
Transaction Database 531, which may collect, store and associate data such as:

1. Transaction ID
2. Description
3. Date / Time
4. Type
5. User ID
6. Plug-in ID 1 - N
7. Billing T&C's 1 - N
8. Billing Method ID
9. Transaction Amount
10. Results 1 - N
    a. Plug-in Used
       1. Start / End Date / Time
       2. Total Duration
    b. Note Added, Changed, Deleted, and/or Accessed
    c. Hyperlink Clicked
    d. Sub-Hyperlinks Clicked 1 - N
       1. Advertisement / Note and/or Webpage) Displayed 1 - N
       2. Click Through y/n
       3. Duration of view
       4. Conversion y / n
11. Notes 1 - N

Developer Database 532, which may collect, store and associate data such as:

1. Developer ID
2. Name
3. Address
4. Qualification IDs 1 - N
5. Skill IDs 1 - N
6. Plug-Ins Submitted ID - I - N
7. Notes ID 1 - N
Change Tracking Database 533, which may collect, store and associate data such as:

1. Change Tracking ID
2. Plug-In ID
3. Change Type (e.g., Add, change, delete)
4. Purpose (new feature, error correction, etc.)
5. Change Description
6. Date / Time
7. Developer ID
8. Before Image
9. After Image
10. Quality Ranking or Score
11. Notes ID 1 - N

Alert Event Rules Database 534, which may collect, store and associate data such as:

1. Alert Event Rule ID
2. Alert Event Description
3. Alert Event Rules 1 - N
   a. Event Condition
   b. Alert Recipient ID 1 - N
      1. Alert Method 1 - N
   c. Alert Database ID 1 - N
4. Notes 1 - N

Alert Database 535, which may collect, store and associate data such as:

1. Alert Database ID
2. Alert Contents, one or more of:
   a. Text
   b. Variable Data
   c. Executable
3. Notes 1 - N

Alert Methods Database 536, which may collect, store and associate data such as:
1. Alert Method ID
2. Method Type
3. Delivery Method (cell phone, pager, e-mail, PDA, database, executable, etc.)
4. Notes 1 - N

[0405] Alert Recipient Database 537, which may collect, store and associate data such as:

1. Alert Recipient ID (e.g., end user ID)
2. Description
3. Alert Method Preferences ID 1 - N
4. Notes 1 - N

[0406] Accounts Receivable Database 538, which may collect, store and associate data such as:

1. Advertiser / Note Owner ID
2. Total Amount Owed
3. Transaction Detail Records 1 - N
   a. Date of Transaction
   b. Type
   c. Advertisement ID
   d. Word ID
   e. Hyperlinks 1 - N
4. Amount per impression or click through
5. Notes 1 - N

[0407] Plug In Type Database 539, which may collect, store and associate data such as:

1. Plug-in Type ID
2. Description
3. APIs allowed 1 - N
4. APIs prohibited 1 - N
5. Languages allowed 1 - N
6. Languages permitted 1 - N
7. Notes 1 - N
[0408] Marketplace Database 540

[0409] Document Database 541, which may collect, store and associate data such as:

1. Document ID
   a. Document Description
   b. Document Owner ID
   c. Hyperlinks (e.g., document locations) 1 - N
   d. Class 1 - N
   e. Subclass 1 - N
   f. Type 1 - N
   g. Subtype 1 - N
   h. Date / Time Stamps
      1. Submitted / Found / Indexed On
      2. Submitted / Found / Indexed By ID or Hyperlink
      3. Revised On 1 - N
      4. Revised By 1 - N
      5. Before Image 1 - N
      6. After Image 1 - N
   i. Notes 1 - N

[0410] Hyperlink Database 542, which may collect, store and associate data such as:

1. Hyperlink ID
2. Hyperlink
3. Description
4. Owner ID
5. Advertiser ID
6. Notes 1 - N

[0411] It will be appreciated that the various software and hardware components described above will be configured to perform a variety of functions and methods. Listed below are some exemplary methods that might be performed by the systems as described herein:

[0412] Creating and Submitting the plug-in

125
1. A developer creates a plug-in via any applicable means, for example, using an software development tool or editor.

2. Developer submits plug-in to review application / group.

3. Review determines usefulness and quality of plug-in if useful and of acceptable apparent quality, plug-in moves to formal testing phase.

[0413] Testing or Certifying the plug-in

1. Review application or group tests plug-in via any applicable means, for example:
   a. Initial testing is outside production system
   b. Secondary testing is inside production system but on limited basis with few users
   c. If the plug-in passes these tests, it is inserted or otherwise linked via the API
   d. Otherwise the system creates error / bug lists
   e. Either case, the system notifies the affected party, via alerts

[0414] Using the plug-in

1. End users may request to see a list of available plug-ins and/or may select them from within various applications.

2. End users may make use of the Plug-in as necessary or desired.

3. System tracks usage, frequency, duration, errors.

[0415] Providing feedback

1. End users may provide feedback (formal or informal).

2. End users may provide usability, relevancy or other rankings and/or scores.

[0416] Billing for the use of the plug-in

1. System determines end users access, use and duration.

2. System determines fees due.

3. System determines credits for developer and/or end user contributions and deducts such credits from fees due.

4. System sends invoices for the balance due to end users and notifications to plug-in owners.

[0417] Fix Bugs for Certification
1. If testing fails, developer receives notice and list of errors and/or desired features
2. Developer either withdraws the plug-in from further consideration or corrects errors and/or adds requested features and resubmits for review

[0418] File Document program
1. Receive a request to file a document using a file document plug in
2. Output plug in with document filing forms
3. Receive document
4. File document
5. Bill document filer
6. Pay plug in provider for use of plug in to file document

[0419] Or Event Driven Model

[0420] Initial Database Loading
1. Create / Load Initial Database(s)
2. Update Database(s)

[0421] Primary Plug-In System
1. Load Database(s)
2. Display primary GUI
3. Receive activity indication / request from end user
4. Determine if one or more subroutines should be executed
5. Execute one or more of the following subroutines as applicable / necessary / desired
6. Update database(s)

[0422] Security Application
1. Load Database(s)
2. Determine if requested action and/or end user is permitted
3. If not, notify application and/or end user
4. If yes, permit requested step and/or loading of application or other authorized action(s)
5. Update Database(s)

[0423] End User Preferences Application
1. Load Databases
2. Present Preferences GUI if required
3. Receive End User Preferences / Feedback / Usage Tracking Information, including:
   a. Filter Criteria or Rules
   b. Sort Criteria or Rules
   c. Relevancy Information
   d. Weighting Factors, Criteria or Rules
   e. Security Preferences
   f. Feedback / Tracking Preferences
   g. Notes
   h. Usage habits / patterns
   i. Display preferences

[0424] Opt In / Sign Up Application
1. Load Databases
2. Receiving Indication of new user sign up
3. Record any and all or available information regarding end users and/or one or more submitted or proposed plug-ins and/or modifications thereto
4. Update databases

[0425] Plug in Submission / Certification Program
5. Load Database(s)
6. Receive indication of end user or application submission of new or modified plug-in
7. Determine plug-in type, category and purpose and end user's qualifications
8. Determine if plug-in type, category or purpose requires review, testing, approval, based upon type, purpose and/or end user qualifications / history
9. If required, submit for review, testing, approval
10. Receive indication that plug-in qualifies and/or is tested and/or approved
11. If approved, insert plug-in, or activate API and/or include hyperlink where and as indicted

12. Update Databases

[0426] Plug-in Testing Program

1. Load Database(s)
2. Receive plug-in for testing
3. Test plug-in as required using any one or more of:
   a. Manual testing / quality assurance reviews
   b. Automated Testing tools
   c. Virtual Reality Testing / Prototyping
   d. Peer Review
4. Determine errors, shortcomings, ease of use, usefulness ratings
5. Notify end user of any / all issues, e.g., via an alert
6. Await revised plug-in and repeat process until plug-in passes all or generally all, or all critical testing phases
7. Approve plug-in
8. Update database(s)

[0427] Billing Program

9. Load Database(s)
10. Receive indication that billing activity has occurred
11. Determine affected parties, e.g., payer and payee
12. Determine billing rules, terms and conditions
13. Determine billing amounts due
14. Create Invoice and A/P or A/R notices / entries
15. Send Invoices and notices
16. Update Databases
17. Await Payment
18. Receive payment indication
19. Apply payments
20. Notify A/P or A/R systems / and/or affected parties
21. Determine if payments are timely / sufficient
22. If not, execute collections program
23. Update Database(s)

Collections Program
1. Receive indication payments are late and/or insufficient
2. Load Database(s)
3. If applicable, execute one or more of the following steps:
   a. Send late notice
   b. Send insufficient payment or funds notice
   c. Limit or prevent further use until payment terms are partially or fully satisfied, each according to billing terms and conditions and/or rules
   d. Collect funds due from primary and/or secondary credit cards on file.
   e. Notify affected parties
4. Update Database(s)

Alerts Program
1. Load Database(s)
2. Determine if Alert Event has occurred
3. Determine Alert Contents based upon alert rules
4. Determine Alert Recipients and Contents and Delivery Method(s)
5. Send Alert(s)
6. Update Database(s)

Use Plug in Program
1. Load Database(s)
2. Execute Security Application
3. Run Host or Primary Application (e.g., Patent Drafting Tool)
4. Permit use of one or more plug-ins - activation via, e.g., Hyperlinks or use of features via Host application's API or GUI
5. Track usage data
6. Gather feedback / relevancy information - e.g., execute relevancy program
7. Update Database(s)

Plug-in Feedback / Relevance Program
1. Load Database(s)
2. Receive Feedback and/or Relevancy Input from End Users
3. Or use automated application to determine relevancy, e.g., via GA
4. Associate Feedback and/or Relevancy with Notes
5. Provide feedback and/or relevancy (detail or summary) to end user's
6. Update Database(s)

Of course it will be appreciated that the systems methods described herein are provided for the purposes of example only and that none of the above systems methods should be interpreted as necessarily requiring any of the disclosed components or steps nor should they be interpreted as necessarily excluding any additional components or steps. Furthermore, it will be understood that while various embodiments are described, such embodiments should not be interpreted as being exclusive of the inclusion of other embodiments or parts of other embodiments.

The invention is described with reference to several embodiments. However, the invention is not limited to the embodiments disclosed, and those of ordinary skill in the art will recognize that the invention is readily applicable to many other diverse embodiments and applications as are reflected in the range of real world financial institutions, instruments and activities. Accordingly, the subject matter of the present disclosure includes all novel and nonobvious combinations and subcombinations of the various systems, methods configurations, embodiments, features, functions, and/or properties disclosed herein.

A reference to "another embodiment" in describing an embodiment does not necessarily imply that the referenced embodiment is mutually exclusive with another embodiment (e.g., an embodiment described before the referenced embodiment), unless expressly specified otherwise.

The terms "include", "includes", "including", "comprising" and variations thereof mean "including but not limited to", unless expressly specified otherwise.

The term "consisting of" and variations thereof includes "including and limited to", unless expressly specified otherwise. The terms "a", "an" and "the" mean "one or more", unless expressly specified otherwise.

The term "plurality" means "two or more", unless expressly specified otherwise.
The term "herein" means "in this patent application, including anything which may be incorporated by reference", unless expressly specified otherwise.

The phrase "at least one of, when such phrase modifies a plurality of things (such as an enumerated list of things) means any combination of one or more of those things, unless expressly specified otherwise. For example, the phrase "at least one of a widget, a car and a wheel" means either (i) a widget, (ii) a car, (iii) a wheel, (iv) a widget and a car, (v) a widget and a wheel, (vi) a car and a wheel, or (vii) a widget, a car and a wheel.

The phrase "based on" does not mean "based only on", unless expressly specified otherwise. In other words, the phrase "based on" describes both "based only on" and "based at least on".

The term "represent" and like terms are not exclusive, unless expressly specified otherwise. For example, the term "represents" does not mean "represents only", unless expressly specified otherwise. In other words, the phrase "the data represents a credit card number" describes both "the data represents only a credit card number" and "the data represents a credit card number and the data also represents something else".

The term "whereby" is used herein only to precede a clause or other set of words that express only the intended result, objective or consequence of something that is previously and explicitly recited. Thus, when the term "whereby" is used in a claim, the clause or other words that the term "whereby" modifies do not establish specific further limitations of the claim or otherwise restricts the meaning or scope of the claim.

The terms "such as", "e.g." and like terms means "for example", and thus does not limit the term or phrase it explains. For example, in the sentence "the computer sends data (e.g., instructions, a data structure) over the Internet", the term "e.g." explains that "instructions" are an example of "data" that the computer may send over the Internet, and also explains that "a data structure" is an example of "data" that the computer may send over the Internet. However, both "instructions" and "a data structure" are merely examples of "data", and other things besides "instructions" and "a data structure" can be "data".

The term "determining" and grammatical variants thereof (e.g., to determine a price, determining a value, determine an object which meets a certain
criterion) is used in an extremely broad sense. The term "determining" encompasses a wide variety of actions and therefore "determining" can include calculating, computing, processing, deriving, investigating, looking up (e.g., looking up in a table, a database or another data structure), ascertaining and the like. Also, "determining" can include receiving (e.g., receiving information), accessing (e.g., accessing data in a memory) and the like. Also, "determining" can include resolving, selecting, choosing, establishing, and the like. It does not imply certainty or absolute precision, and does not imply that mathematical processing, numerical methods or an algorithm process be used. Therefore "determining" can include estimating, predicting, guessing and the like.

[0445] It will be readily apparent to one of ordinary skill in the art that the various processes described herein may be implemented by, e.g., appropriately programmed general purpose computers and computing devices. Typically a processor (e.g., one or more microprocessors, one or more microcontrollers, one or more digital signal processors) will receive instructions (e.g., from a memory or like device), and execute those instructions, thereby performing one or more processes defined by those instructions.

[0446] A "processor" may include one or more microprocessors, central processing units (CPUs), computing devices, microcontrollers, digital signal processors, or like devices or any combination thereof. Thus a description of a process is likewise a description of an apparatus for performing the process. The apparatus can include, e.g., a processor and those input devices and output devices that are appropriate to perform the method. Further, programs that implement such methods (as well as other types of data) may be stored and transmitted using a variety of media (e.g., computer readable media) in a number of manners. In some embodiments, hard-wired circuitry or custom hardware may be used in place of, or in combination with, some or all of the software instructions that can implement the processes of various embodiments. Thus, various combinations of hardware and software may be used instead of software only.

[0447] The term "computer-readable medium" includes any medium that participates in providing data (e.g., instructions, data structures) which may be read by a computer, a processor or a like device. Such a medium may take many forms, including but not limited to, non-volatile media, volatile media, and transmission media. Non-volatile media include, for example, optical or magnetic disks and other persistent
memory. Volatile media include dynamic random access memory (DRAM), which typically constitutes the main memory. Transmission media include coaxial cables, copper wire and fiber optics, including the wires that comprise a system bus coupled to the processor. Transmission media may include or convey acoustic waves, light waves and electromagnetic emissions, such as those generated during radio frequency (RF) and infrared (IR) data communications. Common forms of computer-readable media include, for example, a floppy disk, a flexible disk, hard disk, magnetic tape, any other magnetic medium, a CD-ROM, DVD, any other optical medium, punch cards, paper tape, any other physical medium with patterns of holes, a RAM, a PROM, an EPROM, a FLASH-EEPROM, any other memory chip or cartridge, a carrier wave as described hereinafter, or any other medium from which a computer can read.

Various forms of computer readable media may be involved in carrying data (e.g. sequences of instructions) to a processor. For example, data may be (i) delivered from RAM to a processor; (ii) carried over a wireless transmission medium; (iii) formatted and / or transmitted according to numerous formats, standards or protocols, such as Ethernet (or IEEE 802.3), SAP, ATP, Bluetooth™, and TCP/IP, TDMA, CDMA, and 3G; and / or (iv) encrypted to ensure privacy or prevent fraud in any of a variety of ways well known in the art.

Thus a description of a process is likewise a description of a computer-readable medium storing a program for performing the process. The computer-readable medium can store (in any appropriate format) those program elements which are appropriate to perform the method.

Just as the description of various steps in a process does not indicate that all the described steps are required, embodiments of an apparatus include a computer / computing device operable to perform some (but not necessarily all) of the described process.

Likewise, just as the description of various steps in a process does not indicate that all the described steps are required, embodiments of a computer-readable medium storing a program or data structure include a computer-readable medium storing a program that, when executed, can cause a processor to perform some (but not necessarily all) of the described process.
Where databases are described, it will be understood by one of ordinary skill in the art that (i) alternative database structures to those described may be readily employed, and (ii) other memory structures besides databases may be readily employed. Any illustrations or descriptions of any sample databases presented herein are illustrative arrangements for stored representations of information. Any number of other arrangements may be employed besides those suggested by, e.g., tables illustrated in drawings or elsewhere. Similarly, any illustrated entries of the databases represent exemplary information only; one of ordinary skill in the art will understand that the number and content of the entries can be different from those described herein. Further, despite any depiction of the databases as tables, other formats (including relational databases, object-based models and/or distributed databases) are well known and could be used to store and manipulate the data types described herein. Likewise, object methods or behaviors of a database can be used to implement various processes, such as the described herein. In addition, the databases may, in a known manner, be stored locally or remotely from any device(s) which access data in the database.

Various embodiments can be configured to work in a network environment including a computer that is in communication (e.g., via a communications network) with one or more devices. The computer may communicate with the devices directly or indirectly, via any wired or wireless medium (e.g. the Internet, LAN, WAN or Ethernet, Token Ring, a telephone line, a cable line, a radio channel, an optical communications line, commercial on-line service providers, bulletin board systems, a satellite communications link, or a combination of any of the above). Each of the devices may themselves comprise computers or other computing devices, such as those based on the Intel® Pentium® or Centrino™ processor, that are adapted to communicate with the computer. Any number and type of devices may be in communication with the computer.

In an embodiment, a server computer or centralized authority may not be necessary or desirable. For example, the present invention may, in an embodiment, be practiced on one or more devices without a central authority. In such an embodiment, any functions described herein as performed by the server computer or data described as stored on the server computer may instead be performed by or stored on one or more such devices.
Those having skill in the art will recognize that there is little distinction between hardware and software implementations. The use of hardware or software is generally a choice of convenience or design based on the relative importance of speed, accuracy, flexibility and predictability. There are therefore various vehicles by which processes and/or systems described herein can be effected (e.g., hardware, software, and/or firmware) and that the preferred vehicle will vary with the context in which the technologies are deployed.

At least a portion of the devices and/or processes described herein can be integrated into a data processing system with a reasonable amount of experimentation. Those having skill in the art will recognize that a typical data processing system generally includes one or more of a system unit housing, a video display device, memory, processors, operating systems, drivers, graphical user interfaces, and application programs, interaction devices such as a touch pad or screen, and/or control systems including feedback loops and control motors. A typical data processing system may be implemented utilizing any suitable commercially available components to create the environment described herein.

Where a limitation of a first claim would cover one of a feature as well as more than one of a feature (e.g., a limitation such as "at least one widget" covers one widget as well as more than one widget), and where in a second claim that depends on the first claim, the second claim uses a definite article "the" to refer to the limitation (e.g., "the widget"), this does not imply that the first claim covers only one of the feature, and this does not imply that the second claim covers only one of the feature (e.g., "the widget" can cover both one widget and more than one widget).

Each claim in a set of claims has a different scope. Therefore, for example, where a limitation is explicitly recited in a dependent claim, but not explicitly recited in any claim from which the dependent claim depends (directly or indirectly), that limitation is not to be read into any claim from which the dependent claim depends.

When an ordinal number (such as "first", "second", "third" and so on) is used as an adjective before a term, that ordinal number is used (unless expressly specified otherwise) merely to indicate a particular feature, such as to distinguish that particular feature from another feature that is described by the same term or by a similar term. For example, a "first widget" may be so named merely to distinguish it from, e.g.,
a "second widget". Thus, the mere usage of the ordinal numbers "first" and "second" before the term "widget" does not indicate any other relationship between the two widgets, and likewise does not indicate any other characteristics of either or both widgets. For example, the mere usage of the ordinal numbers "first" and "second" before the term "widget" (1) does not indicate that either widget comes before or after any other in order or location; (2) does not indicate that either widget occurs or acts before or after any other in time; and (3) does not indicate that either widget ranks above or below any other, as in importance or quality. In addition, the mere usage of ordinal numbers does not define a numerical limit to the features identified with the ordinal numbers. For example, the mere usage of the ordinal numbers "first" and "second" before the term "widget" does not indicate that there must be no more than two widgets.

When a single device or article is described herein, more than one device / article (whether or not they cooperate) may alternatively be used in place of the single device / article that is described. Accordingly, the functionality that is described as being possessed by a device may alternatively be possessed by more than one device / article (whether or not they cooperate).

Similarly, where more than one device or article is described herein (whether or not they cooperate), a single device / article may alternatively be used in place of the more than one device or article that is described. For example, a plurality of computer-based devices may be substituted with a single computer-based device. Accordingly, the various functionality that is described as being possessed by more than one device or article may alternatively be possessed by a single device / article.

The functionality and / or the features of a single device that is described may be alternatively embodied by one or more other devices which are described but are not explicitly described as having such functionality / features. Thus, other embodiments need not include the described device itself, but rather can include the one or more other devices which would, in those other embodiments, have such functionality / features.

Numerous embodiments are described in this patent application, and are presented for illustrative purposes only. The described embodiments are not, and are not intended to be, limiting in any sense. The presently disclosed invention(s) are widely applicable to numerous embodiments, as is readily apparent from the disclosure. One of ordinary skill in the art will recognize that the disclosed invention(s) may be practiced
with various modifications and alterations, such as structural, logical, software, and electrical modifications. Although particular features of the disclosed invention(s) may be described with reference to one or more particular embodiments and / or drawings, it should be understood that such features are not limited to usage in the one or more particular embodiments or drawings with reference to which they are described, unless expressly specified otherwise.

The present disclosure is neither a literal description of all embodiments of the invention nor a listing of features of the invention which must be present in all embodiments.

Neither the Title (set forth at the beginning of the first page of this patent application) nor the Abstract (set forth at the end of this patent application) is to be taken as limiting in any way as the scope of the disclosed invention(s). An Abstract has been included in this application merely because an Abstract of not more than 150 words is required under 37 C.F.R. § 1.72(b).

The title of this patent application and headings of sections provided in this patent application are for convenience only, and are not to be taken as limiting the disclosure in any way.

Devices that are described as in communication with each other need not be in continuous communication with each other, unless expressly specified otherwise. On the contrary, such devices need only transmit to each other as necessary or desirable, and may actually refrain from exchanging data most of the time. For example, a machine in communication with another machine via the Internet may not transmit data to the other machine for long period of time (e.g. weeks at a time). In addition, devices that are in communication with each other may communicate directly or indirectly through one or more intermediaries.

A description of an embodiment with several components or features does not imply that all or even any of such components / features are required. On the contrary, a variety of optional components are described to illustrate the wide variety of possible embodiments of the present invention(s). Unless otherwise specified explicitly, no component / feature is essential or required.

Although process steps, algorithms or the like may be described in a sequential order, such processes may be configured to work in different orders. In other
words, any sequence or order of steps that may be explicitly described does not necessarily indicate a requirement that the steps be performed in that order. On the contrary, the steps of processes described herein may be performed in any order practical. Further, some steps may be performed simultaneously despite being described or implied as occurring non-simultaneously (e.g., because one step is described after the other step). Moreover, the illustration of a process by its depiction in a drawing does not imply that the illustrated process is exclusive of other variations and modifications thereto, does not imply that the illustrated process or any of its steps are necessary to the invention, and does not imply that the illustrated process is preferred.

Although a process may be described as including a plurality of steps, that does not imply that all or any of the steps are essential or required. Various other embodiments within the scope of the described invention(s) include other processes that omit some or all of the described steps. Unless otherwise specified explicitly, no step is essential or required.

Although a product may be described as including a plurality of components, aspects, qualities, characteristics and / or features, that does not indicate that all of the plurality are essential or required. Various other embodiments within the scope of the described invention(s) include other products that omit some or all of the described plurality.

Unless expressly specified otherwise, an enumerated list of items (which may or may not be numbered) does not imply that any or all of the items are mutually exclusive. Therefore it is possible, but not necessarily true, that something can be considered to be, or fit the definition of, two or more of the items in an enumerated list. Also, an item in the enumerated list can be a subset (a specific type of) of another item in the enumerated list. For example, the enumerated list "a computer, a laptop, a PDA" does not imply that any or all of the three items of that list are mutually exclusive - e.g., an item can be both a laptop and a computer, and a "laptop" can be a subset of (a specific type of) a "computer".

Likewise, unless expressly specified otherwise, an enumerated list of items (which may or may not be numbered) does not imply that any or all of the items are collectively exhaustive or otherwise comprehensive of any category. For example,
the enumerated list "a computer, a laptop, a PDA" does not imply that any or all of the
three items of that list are comprehensive of any category.

Further, an enumerated listing of items does not imply that the items are
ordered in any manner according to the order in which they are enumerated.

In a claim, a limitation of the claim which includes the phrase "means for"
or the phrase "step for" means that 35 U.S.C. § 112, paragraph 6, applies to that
limitation.

In a claim, a limitation of the claim which does not include the phrase
"means for" or the phrase "step for" means that 35 U.S.C. § 112, paragraph 6 does not
apply to that limitation, regardless of whether that limitation recites a function without
recitation of structure, material or acts for performing that function. For example, in a
claim, the mere use of the phrase "step of" or the phrase "steps of" in referring to one or
more steps of the claim or of another claim does not mean that 35 U.S.C. § 112,
paragraph 6, applies to that step(s).

With respect to a means or a step for performing a specified function in
accordance with 35 U.S.C. § 112, paragraph 6, the corresponding structure, material or
acts described in the specification, and equivalents thereof, may perform additional
functions as well as the specified function.

Computers, processors, computing devices and like products are
structures that can perform a wide variety of functions. Such products can be operable to
perform a specified function by executing one or more programs, such as a program
stored in a memory device of that product or in a memory device which that product
accesses. Unless expressly specified otherwise, such a program need not be based on
any particular algorithm, such as any particular algorithm that might be disclosed in this
patent application. It is well known to one of ordinary skill in the art that a specified
function may be implemented via different algorithms, and any of a number of different
algorithms would be a mere design choice for carrying out the specified function.

Therefore, with respect to a means or a step for performing a specified
function in accordance with 35 U.S.C. § 112, paragraph 6, structure corresponding to a
specified function includes any product programmed to perform the specified function.
Such structure includes programmed products which perform the function, regardless of
whether such product is programmed with (i) a disclosed algorithm for performing the
function, (ii) an algorithm that is similar to a disclosed algorithm, or (iii) a different algorithm for performing the function.

[0480] The present disclosure provides, to one of ordinary skill in the art, an enabling description of several embodiments and / or inventions. Some of these embodiments and / or inventions may not be claimed in this patent application, but may nevertheless be claimed in one or more continuing applications that claim the benefit of priority of this patent application. Applicants intend to file additional applications to pursue patents for subject matter that has been disclosed and enabled but not claimed in this patent application.
What is claimed is:

1. A method comprising:
   - providing a user interface through which an end user may draft a patent application in real time and enter data related to the draft patent application, the user interface being in electronic communication with a patent application submission office such that, when completed, the draft application can be submitted to the patent application submission office via the user interface;
   - receiving a draft patent application in real time from an end user; and
   - providing real time feedback to the end user as the patent application is being drafted.

2. The method of claim 1 further comprising providing a patent word database including words and phrases used in submitted patent applications;
   - comparing words and phrases in the draft application with words and phrases in the patent word database; and
   - suggesting words or phrases to the end user based on the comparison.

3. The method of claim 2 wherein comparing words and phrases in the draft application is performed automatically.

4. The method of claim 3 wherein automatically comparing words and phrases is performed in real time.

5. The method of claim 2 wherein suggestion words or phrases to the end user based on the comparison is performed automatically.

6. The method of claim 5 wherein automatically suggesting words or phrases is performed in real time.

7. The method of claim 1 further comprising:
   - identifying words and phrases coined in the draft application that are not in a patent word database; and
   - updating the patent words database with the identified words and phrases.

8. The method of claim 7 wherein identifying words and phrases in the application is performed automatically.

9. The method of claim 8 wherein updating the patent words database with the identified words and phrases is performed in real time.

10. The method of claim 7 further comprising:
receiving a draft patent application in real time from a second end user; comparing the words and phrases in the draft patent application from the second end user with the words and phrases in the updated patent words database; and suggesting to the second end user a word or phrase that was coined by the first end user.

11. The method of claim 1 further comparing words and phrases in the draft patent application with words and phrases in a prior art database comprising prior art references.

12. The method of claim 11 further comprising identifying to the end user prior art references from the prior art database that include words and phrases that are similar to those in the draft patent application.

13. The method of claim 12 wherein the steps of comparing words and phrases in the draft patent application and identifying to the end user prior art references from the prior art database are performed automatically.

14. The method of claim 13 wherein the steps of automatically comparing words and phrases in the draft patent application and automatically identifying to the end user prior art references from the prior art database are performed in real time.

15. A system comprising:

    a user interface through which an end user can draft a patent application in real time, the user interface being in electronic communication with a patent application submission office such that, when completed, the draft application can be submitted to the patent application submission office via the user interface;

    a patent application analysis module configured to analyze the patent application as it is being drafted and provide the end user with real time feedback.

16. The system of claim 15 further wherein the patent application analysis module comprises a word and phrase recognition module configured to compare words and phrases used in the patent application with words and phrases in a patent word and phrase database.

17. The system of claim 16 further comprising a word and phrase suggestion module configured to identify words and phrases that might be useful to the end user based on the analysis performed in claim 16 and provide those words and phrases to the end user.
18. The system of claim 15 further comprising a patent words and phrases dictionary update module configured to identify words or phrases in the patent application that are not in the patent words and phrases database or which are used differently from the uses described in the patent word and phrase database and update the database accordingly.

19. The system of claim 17 wherein the patent words and phrases dictionary is updated in real time and accessible to a plurality of end users such that a word or phrase that is coined in a first application by a first user may be suggested to a second user drafting a second application.

20. The system of claim 19 wherein the plurality of end users is a subset of all the end users able to access the patent words and phrases dictionary.

21. A patent figure drafting tool comprising:
   a database comprising:
   a plurality of drawings; and
   metadata associated with each drawing, wherein the metadata identifies:
   a source document for the drawing;
   commentary regarding the drawing;
   alternate versions of the drawing;
   a user interface configured to allow users to:
   browse the database;
   select one or more drawings in the database; and
   construct a patent figure using the one or more selected drawings; and
   a numbering module configured to insert number identifiers in the drawings.

22. The patent figure drafting tool of claim 21 wherein the source document is a previously submitted patent application.

23. The patent figure drafting tool of claim 21 wherein the numbering module is configured to automatically insert number identifiers in the drawing.

24. The patent figure drafting tool of claim 21 wherein the metadata further comprises a description of the drawing sufficient for use in a patent application.

25. The patent figure drafting tool of claim 24 wherein the user interface is further configured to add the description of the drawing to a draft patent application.
26. The patent figure drafting tool of claim 25 wherein the numbering module is further configured to automatically insert number identifiers in the figure and insert appropriate numbers into the description.

27. The patent figure drafting tool of claim 26 wherein the number identifiers are selected by the numbering module based on previous number identifiers that have already been included in the draft patent application.

28. The patent figure drafting tool of claim 27 wherein the numbering module ensures that number identifiers are not inappropriately duplicated in the draft patent application.

29. A method comprising:

   providing a patent figure drafting tool, wherein the patent figure drafting tool comprises:

   a database comprising:
   - a plurality of drawings; and
   - metadata associated with each drawing, wherein the metadata identifies:
     - a source document for the drawing;
     - commentary regarding the drawing;
     - alternate versions of the drawing;

   a user interface configured to allow users to:
   - browse the database;
   - select one or more drawings in the database; and
   - construct a patent figure using the one or more selected drawings;

   and

   a numbering module configured to insert number identifiers in the drawings; and

   determining a drawing to be inserted into a draft patent application;

   determining which number identifiers are currently being used in the draft patent application; and

   automatically numbering the drawing based on the determined number identifiers.

30. The method of claim 29 wherein automatically number the drawing comprises:
identifying the highest number previously used in the draft patent application; and
incrementing the highest number by a given number.

31. The method of claim 29 wherein the source document is a previously submitted patent application.

32. The method of claim 29 wherein the metadata further comprises a description of the drawing sufficient for use in a patent application.

33. The method of claim 32 further comprising automatically inserting the description of the determined drawing into the draft patent application.

34. The method of claim 33 further comprising automatically inserting the appropriate number identifiers in the description.

35. A method comprising:

accessing a patent figure drafting tool, wherein the patent figure drafting tool comprises:

- a database comprising:
  - a plurality of drawings; and
  - metadata associated with each drawing, wherein the metadata identifies:
    - a source document for the drawing;
    - commentary regarding the drawing;
    - alternate versions of the drawing;

- a user interface configured to allow users to:
  - browse the database;
  - select one or more drawings in the database; and
  - construct a patent figure using the one or more selected drawings;

and

- a numbering module configured to insert number identifiers in the drawings; and

providing a draft patent application; and

identifying a drawing to be inserted into a draft patent application;
36. The method of claim 35 wherein the source document is a previously submitted patent application.

37. The method of claim 35 wherein the number module is further configured to:
determine which number identifiers are currently being used in the draft patent application; and
automatically number the identified drawing based on the determined number identifiers.

38. The method of claim 37 further comprising:
reviewing the drawing after it has been inserted into the draft patent application; and
approving the number identifiers that were inserted into the drawing.

39. The method of claim 35 wherein the metadata further comprises a description of the drawing sufficient for use in a patent application.

40. The method of claim 39 wherein the user interface is further configured to automatically insert the description into the draft patent application; the method further comprising:
reviewing the inserted description; and
approving the inserting description.

41. A method comprising:
receiving an electronic version of a document drafted by an author;
identifying a term in the document;
presenting the author with a list of possible definitions for the term;
receiving a definition selection for the term from the author;
associating the selected definition with the term; and
storing the approved definition for the term with the document.

42. The method of claim 41 wherein the document is a patent application.

43. The method of claim 41 wherein receiving a definition selection from the term from the author comprises providing a user interface configured to present a user-selectable list of suggested definitions for the term.
44. The method of claim 43 wherein the user interface is further configured to enable the author to submit his or her own definition for the term.

45. The method of claim 44 wherein the term is a word.

46. The method of claim 44 wherein the term is a phrase.

47. A method comprising:
   providing a lexicon tool including:
   a database comprising:
   a plurality of words;
   at least one definition for each of the words; and
   a subject matter identifier associated with each definition;
   a user interface configured to display term definitions to an end user receiving a document from an end user;
   determining the subject matter of the document;
   identifying a term in the document;
   identifying possible definitions for the term by:
   identifying the term in the database; and
   comparing the subject matter identifiers for each definition for the term with the subject matter of the document; and
   providing to the user a list of possible definitions for the term, wherein presentation of definitions is affected by the subject matter of the document and the subject matter identifiers associated with the definitions.

48. The method of claim 47 wherein the document is a patent application.

49. The method of claim 48 wherein the subject matter identifiers are classes as defined by a patent examining authority.

50. The method of claim 47 wherein a definition is only presented to the end user if the subject matter of the document matches the subject matter identifier of the definition.

51. The method of claim 47 wherein all the definitions in the database for a term are presented to the user.

52. The method of claim 51 wherein the definitions are presented in a given order.

53. The method of claim 52 wherein the order is determined by which definition subject matter identifier most closely matches the subject matter of the document.
54. The method of claim 47 wherein the term is a word.

55. The method of claim 47 wherein the term is a phrase.

56. A lexicon tool comprising:
   a database comprising:
      a plurality of words;
      at least one definition for each word;
      a subject matter identifier for each definition, wherein the subject matter
      identifier determines the order in which multiple definitions for the same word will
      be presented to an end user based on comparing the subject matter of a document identified
      by the end user with the subject matter identifier; and
      a user interface; wherein the user interface is configured to provide to an end
      user definitions for words that are used in a document.

57. The lexicon tool of claim 56 wherein the user interface is further configured to
    receive definitions from the end user for words that appear in the document identified by
    the end user.

58. The lexicon tool of claim 57 further comprising a definition certification module
    configured to obtain approval for the definition received from the end user.

59. The lexicon tool of claim 58 wherein approval is obtained from an entity other
    than the end user.

60. The lexicon tool of claim 58 wherein upon receiving approval, the definition
    received from the end user is added to the database.

61. A method comprising:
    providing a web-based patent application drafting tool (PDT) to a plurality of
    end users;
    receiving a software module from a third party software developer, wherein the
    software module is intended to be used with the PDT;
    determining if the software module meets initial quality criteria;
    allowing a subset of the plurality of end users to use the software module;
    receiving feedback from the subset of end users regarding the software module;
    providing the feedback to the software developers;
    receiving an updated version of the software module; and
providing the software module to the plurality of end users.

62. The method of claim 61 further comprising:
   receiving a fee from the end users for using the PDT; and
   providing a fee discount to the software developer.

63. The method of claim 61 further comprising monitoring usage of the software module by the plurality of end users.

64. The method of claim 63 further comprising setting a fee schedule for the software module based on the monitored usage.

65. The method of claim 62 further comprising monitoring usage of the software module by the plurality of end users.

66. The method of claim 65 further comprising determining the amount of the fee discount based on the monitored usage.

67. A method comprising:

   submitting a software module to an entity that provides a patent application drafting tool (PDT) to a plurality of end users for a fee, wherein the software module is intended to be used in association with the PDT;

   receiving feedback from the entity regarding the software module;

   receiving a fee reduction from the entity for use of the PDT if the entity agrees to provide the software module to the plurality of end users.
Fig. 4A

- WORD DB (421)
- CHANGE TRACKING DB (422)
- FIGURE DB (423)
- DOCUMENT DB (424)
- USER DB (425)
- USER RULES DB (426)
- USER QUALIFICATIONS DB (427)
- ATTORNEY DB (428)
- BILLING T's & C's DB (429)
- ACCOUNTS RECEIVABLE DB (430)
- SEARCH DB (431)
- TRANSACTION DB (432)
- ADVERTISEMENT DB (433)
- DOCUMENT CLASS DB (434)
- DOCUMENT SUBCLASS DB (435)
- DOCUMENT TYPE DB (436)

- PATENT APPLICATION/DOCUMENT ID DB (456)
- DOCUMENT SUBTYPE DB (437)

SERVER (400)
- LEXICON MODULE (411)
- PATENT DRAFTING MODULE (412)
- BILLING MODULE (413)
- MAPPING MODULE (414)
- CONTEST DEFINITION MODULE (415)
INTERNATIONAL SEARCH REPORT

International application No
PCT/IS/07/66713

A CLASSIFICATION OF SUBJECT MATTER
IPC(8)- G06F 7/00, 15/00, 17/00, 17/30 (2007.01)
USPC - 707/7; 715/530

According to International Patent Classification (IPC) or to both national classification and IPC

B FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - G06F 7/00, 15/00, 17/00, 17/30 (2007.01)
USPC - 707/7; 715/530

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC - 700/87, 706/45, 46, 59, 707/1-10, 101-104 1, 709/224, 715/507, 530, 717/110

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PubWEST (USPT, PGPB, EPAB, JPAB), Wiley Interscience, CrossRII, Google, Google Scholar

Search Terms - intellectual property patent drafting application web based drawings figures metadata software developer feedback

C DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No</th>
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<tr>
<td>X Y</td>
<td>US 2006/0190807 A1 (TRAN) 24 August 2006 (24 08 2006), entire document, especially para [0035], [0042]-[0050], [0133]</td>
<td>1, 15 2-14, 16-55, 57-67</td>
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<td>X Y</td>
<td>US 2006/0294130 A1 (SOO et al ) 28 December 2006 (28 12 2006) entire document, especially para [0060], [0088], [0100], [0122], [0152], [0159], Fig 5</td>
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<td>Y</td>
<td>US 2004/0019889 A1 (MELCHIONE et al ) 29 January 2004 (29 01 2004) entire document, especially para [0056], [0061], [01 11], [01 17]</td>
<td>2-14, 16-20, 41-55, 57-60</td>
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<tr>
<td>Y</td>
<td>US 2006/0059413 A1 (TRAN) 16 March 2006 (16 03 2006) entire document, especially para [0005], [0022], [0037], [0048]</td>
<td>61-67</td>
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[Box C continued]

I I Further documents are listed in the continuation of Box C

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