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(54) Title: EMAIL INFORMATION AND ACTIVITY MANAGER

(57) Abstract: A package of computer tools useable to generate a plurality of nested packages of computer tools comprising at least one package which nests in another, the package comprising: at least one tool for producing and/or receiving information; at least one nesting tool operable to generate at least one additional package of computer tools that nests in the package so that information produced or received using a tool in the additional package is available to the package in which it nests; and at least one transmission tool operable to electronically transmit the at least one additional package to a recipient; wherein the package is operable to provide an additional package of the at least one additional package with similar nesting and transmission tools.

EMAIL INFORMATION AND ACTIVITY MANAGER

FIELD OF THE DISCLOSURE

The invention relates to methods of managing information and activities generated and/or communicated by electronic communications, and in particular by email.

BACKGROUND

Various computerized information and activity management tools are used by organizations and individuals for managing a wide variety of projects. These management tools may for example, support projects such as product development, manufacturing and even coordination of social events.

Conventional project management tools for managing related information and activities can generally assist in managing several aspects of projects. For instance, these tools may enable "breaking up" of large projects into smaller tasks doable by individual people. In addition, they often support management of budgets for projects, and commonly provide monitoring of timelines and progress of projects.

US patent 7,089,287 describes a message based system having embedded information management capabilities.

SUMMARY OF THE DISCLOSURE

An aspect of some embodiments of the invention, relates to providing an activity management system that provides tools for transmitting and managing information, and generating and configuring a communication network that connects senders and receivers of the information.

According to an aspect of some embodiments of the invention, the tools provide the communication network at least by nesting transmitted information.

The information may be transmitted using any convenient information transmission protocol such as by way of example, soap/http, FTP and/or email.

An aspect of some embodiments of the invention, relates to providing an activity management system for generating, delegating, integrating and monitoring a plurality of related tasks. For convenience of presentation, "activity" as used hereinafter includes and may refer not only to an action to be undertaken but also to receiving and processing information.

An aspect of some embodiments of the invention, relates to providing an activity package for generating, delegating, integrating and monitoring tasks that nests delegated tasks within other tasks.

According to an aspect of some embodiments of the invention a first activity package defining a first task is operable to generate a second activity package defining a second task related to the first task. The second activity package is electronically transmittable to an assignee of the second task and remains as an activity package nested in the first activity package. The first nesting activity package comprises the second nested package, and, in accordance with an embodiment of the invention, all the information in the second nested activity package is available via the first nesting package.

In accordance with an embodiment of the invention, an activity package comprises a bundle of tools operable to configure the activity package to define a task and perform functions related to the task, such as defining and enabling a plurality of related tasks, delegating tasks of the related tasks and monitoring delegated tasks.

In an embodiment of the invention, the bundle comprises "defining tools" for providing a task with, for example, a title, due dates, documents and/or contacts that can be accessed to support performance of the task and a person or entity responsible for performing the task. Optionally, the bundle comprises "operating tools", that can be operated and manipulated to support performance of the task, such as a budget, scratch pad for recording and generating notes and documents related to the tasks, and a content management tool for, by way of example, importing, storing task related data, for example documents or other electronic files. Optionally the content management tool is used to support collaboration in generating and processing documents and/or other electronic files. In an embodiment of the invention, the bundle comprises "monitoring tools" used for monitoring performance and progress of a task, for example, a task do-list, an hour-log and a milestone time line function.

According to an aspect of some embodiments of the invention, the bundle of a given activity package comprises, a "nesting tool" (NT), operable to generate, configure and display an activity package that nests in the given activity package. Optionally, a nested package comprises a same bundle of tools as the nesting activity package in which it nests.

In accordance with an embodiment of the invention, a delegated task is generated by operating a first activity package NT to generate a "new" second activity package

that nests in the first activity package. Tools in the bundles of tools comprised in the first and/or second activity package(s) are used to configure the second package to define and enable the delegated task. The nested and configured second package is then transmitted to an appropriate assignee for performance of the delegated task.

An activity package may be configured, in accordance with an embodiment of the invention, to be transmitted to an assignee using any convenient communication method. For example, an activity package may be transmitted as an attachment to an email, as a soap/http transmission or as a file using a file transfer protocol.

According to an aspect of some embodiments of the invention, an activity package is itself a type of email that may be sent to an addressee similarly to the way in which a conventional email is communicated.

For example, when the NT of a first activity package is used to generate a second nested activity package, the second package, after optionally being configured as desired, is emailed to the assignee, optionally, by simply pressing on a "send" button in the first activity package. The second package propagates to the assignee as an email comprising, for example, a configured task and tool bundle for performance of the task and use by the assignee. A hierarchy of nested activity packages in some embodiments of the invention may therefore be considered a hierarchy of nested emails. An assignee of a task defined by a given activity package may also be referred to as an "operator" of the activity package and the task it defines.

It is noted that a nested package can itself also be a nesting package if, when it is configured, it is enabled to generate nested packages and it has been used to generate a delegated task. For convenience of presentation, a nested activity package may also be referred to as a "delegated activity package".

A task residing in an activity package that was not delegated from the package is referred to as a "resident task" with respect to the package in which it is resident. A resident task in a first package may also be a delegated task with respect to a second activity package, if it was generated by operation of the NT in the second package. A "first" activity package that is not generated by operation of a NT of another activity package, and from which at least one task-package "descends" is referred to as a "progenitor" activity package.

Activity packages generated directly from the progenitor activity package are referred to as "first generation" activity packages, which in turn may be operated to create second generation packages, which in turn generate third generation activity

packages, and so on. A task configured in a progenitor activity package but not in an activity package nested in the progenitor activity package may be referred to as a "progenitor task" and similarly, a delegated task may be referred to as an "N^{th} generation task" if it is configured in an N^{th} generation activity package. A set of nested activity packages comprising at least one progenitor activity package and a nested activity package is referred to as a project".

According to an aspect of some embodiments of the invention, the bundle comprised in an activity package comprises at least one communication tool, which enables and defines communication channels that are available for use by the operator of the activity package for communicating with other activity packages and their operators and accessing information in other activity packages. The communication channels established and/or enabled by the communication tools comprised in activity packages of a project define a project communication network.

In an embodiment of the invention, the at least one communication tool of a given activity package comprises messaging tools for transmitting messages between the activity package and other activity packages and a "periscope". The periscope, in accordance with an embodiment of the invention, defines how much and what type of information is available to the given activity package from other activity packages. The periscope, optionally, by default, enables an operator of the given package to access all information in activity packages that nest in the given activity package or nest in an activity package nested in a package that nests in the given activity package. The periscope thereby enables the operator for the given activity package to monitor and supervise tasks he or she delegates to others.

In accordance with an aspect of some embodiments of the invention, a periscope in a given package may be configured to selectively permit access to information in other activity packages.

For example, the periscope of a given package may provide an operator of the package with access to information only in activity packages the operator generates from the given activity package. Optionally, the periscope may be configured to provide access to information in all or only some activity packages, in its own activity package generation and/or in all activity package generations after its own generation, and/or in previous generations. The periscope may be provided with a "filter", which selects types of information available to the given package from another package. For example, a filter may block access to task monitors in another package. Various

examples of ways in which an activity package periscope may be configured are provided in the description below.

In some embodiments of the invention, an activity package transmits information but, optionally, does not define an explicit task. As in the case of activity packages that define tasks as described above, a project comprising a plurality of such nested activity packages may have communication channels configured by their communication tools so that different operators of the packages have access to different amounts and types of data generated and transmitted in the project. For example, a progenitor in the project may, optionally, view all activity packages in the project and thereby view all the ways in which communication "threads" are generated and used by operators of the project. On the other hand, an operator of a given delegated activity package may only be able to observe communication threads that are generated between activity packages that nest in his or her own activity package.

There is therefore provided in accordance with an embodiment of the invention, a package of computer tools useable to generate a plurality of nested packages of computer tools comprising at least one package which nests in another, the package comprising: at least one tool for producing and/or receiving information; at least one nesting tool operable to generate at least one additional package of computer tools that nests in the package so that information produced or received using a tool in the additional package is available to the package in which it nests; and at least one transmission tool operable to electronically transmit the at least one additional package to a recipient; wherein the package is operable to provide an additional package of the at least one additional package with similar nesting and transmission tools.

Optionally, the at least one additional package is configured as an email. Additionally or alternatively, the at least one tool operable to electronically transmit the at least one additional package comprises a tool operable to transmit the additional package to a recipient as an email. Optionally, the transmission tool is operable to transmit the at least one additional package using a soap/http protocol. Optionally, the transmission tool is operable to transmit the at least one additional package using an FTP protocol.

In some embodiments of the invention, the package comprises at least one communication tool operable to configure and/or enable communication between packages of the plurality of nested packages. Optionally, the at least one communication tool is operable to provide a package with a public chat board that

provides access to any information generated using the chat board to all packages comprising the chat board. Additionally or alternatively, the at least one communication tool is optionally operable to provide a package with a private chat board that provides access to information generated using the chat board only to a selected packages of the plurality of packages. Additionally or alternatively the at least one communication tool is optionally operable to provide a package with a messaging tool operable to send private messages to and receive private messages from any other of the packages of the plurality of packages.

In some embodiments of the invention, the at least one communication tool is operable to selectively block or enable access of a first suit of the plurality of packages to information in a second package of the plurality of packages. Optionally, the at least one communication tool is operable to enable the first package access only to information in packages that nest in the first package directly, or indirectly by being nested in a package that directly nests in the first package. Additionally or alternatively, the at least one communication tool is optionally operable to enable the first package to access information in a package in which the first package nests directly or indirectly.

In some embodiments of the invention, the at least one communication tool is operable to enable the fist package access to information in at least one package in at least one generation of nested packages different from its own generation. Optionally, the packages in the at least one different generation comprise all the packages in a generation of the least one different generation. Additionally or alternatively, the at least one different generation optionally comprises a generation earlier than the generation of the first package. In some embodiments of the invention, the at least one different generation comprises a generation later than the generation of the first package. In some embodiments of the invention, the at least one communication tool is operable to enable the fist package access to information in at least one other package in a same generation as that of the first package. Optionally, the packages in the at least one same generation comprise all the packages in the same generation.

In some embodiments of the invention, the at least one communication tool is operable to determine what types of information a first package of the plurality of packages can access from a second package of the plurality of packages. In some embodiments of the invention, the at least one communication tool is operable to determine how much information a first package of the plurality of packages can

access from a second package of the plurality of packages. In some embodiments of the invention, the at least one communication tool is operable to determine when a first package of the plurality of packages can access information from a second package of the plurality of packages.

In some embodiments of the invention, the package comprises a graphical user interface tool operable to provide a graphical display of relationships between packages of the plurality of packages. Optionally, the relationships are nesting relationships. Additionally or alternatively, the relationships are optionally communication relationships.

In some embodiments of the invention, the package comprises a defining tool operable to define a task associated with an additional package of the at least one additional package to be performed by a recipient of the additional package. Optionally, the package comprises at least one tool operable to monitor performance of the task.

There is further provided in accordance with an embodiment of the invention, a computer readable storage medium comprising a set of instructions for a general purpose computer having a user interface comprising a visual display and user operable accessory for interacting with the display, the set of instruction comprising: a set of instructions that implement a package of computer tools in accordance with the invention; a set of instructions for providing an interface on the screen for accessing the package; a set of instruction for providing icons selectable by operation of the accessory to enable a user to selectively choose and operate tools comprised in the package; and a set of instructions for executing choices and manipulations indicated by user operation of the accessory.

There is further provided in accordance with an embodiment of the invention, a method of managing a plurality of related tasks comprising: using a package of computer tools according to claim 25 or 26 to generate an additional package of tools; using the defining tool to define a task of the related tasks and associate the defined task with the additional package; and using the transmission tool to transmit the additional package to a recipient to be responsible for accomplishing the task associated with the additional package.

There is further provided in accordance with an embodiment of the invention, a method of managing information, the method comprising: using a package of computer tools according to an embodiment of the invention to generate an additional

package of tools; using the transmission tool to transmit the additional package to a recipient; and accessing information in the additional package that is produced or received using a tool comprised in the additional package of tools.

BRIEF DESCRIPTION OF THE FIGURES

Examples illustrative of embodiments of the invention are described below with reference to figures attached hereto. In the figures, identical structures, elements or parts that appear in more than one figure are generally labeled with a same numeral in all the figures in which they appear. Dimensions of components and features shown in the figures are generally chosen for convenience and clarity of presentation and are not necessarily shown to scale. The figures are listed below.

Fig. 1 schematically shows an activity package comprising a bundle of task management functions and tools in accordance with an embodiment of the invention;

Fig. 2 schematically shows a nesting tool ("NT") being used by a task owner to generate and delegate tasks in a project, in accordance with an embodiment of the invention; and

Fig. 3 schematically shows activity packages being used to manage a project in accordance with an embodiment of the invention.

DETAILED DESCRIPTION OF EMBODIMENTS

Fig. 1 shows a schematic graphical illustration of an exemplary activity package **100** provided by an activity management system, in accordance with an embodiment of the invention. Package **100** is usable for generating, delegating and/or monitoring related tasks.

Package **100** optionally includes a bundle **102** of tools **106** and/or tools **136** for defining and enabling a plurality of related tasks, delegating tasks of the related tasks and/or monitoring tasks of the related tasks. Tools **106** optionally include defining tools **108**, operating tools **114**, and/or monitoring tools **124**, while tools **136** optionally include a nesting tool ("NT") **138** and/or communication tools **142**.

Defining tools **108** comprise by way of example tools usable for defining a resident task, such as by giving it a title **110**, and/or due dates **112** and/or assigning a task an operator **113** responsible for the task. Optionally, defining tools comprise tools for defining a task venues and/or dependence of a task on performance of other tasks. Operating tools **114** comprise, by way of example, tools usable for providing,

generating and/or coupling the task with various types of auxiliary information useful for performing the task. For example, operating tools **114** optionally include a content management tool **116** operable by way of example, for importing, storing, managing and supporting collaboration in generating and processing task related data such as enabling embedding of one or more computer files to the task, and/or one or more references to hard-copy documents, and/or embedding a content placeholder indicating a requirement of content to be provided by the package operator. Operating tools **114** optionally further include a contact tool **118**, allowing for attachment of contact information comprising a list of at least one person and/or entity that can advantageously be accessed to aid in performing the task. In addition, operating tools **114** optionally include a budget **120** and/or a scratch pad **122** for recording notes related to the task.

Monitoring tools **124** are usable for monitoring the progress of the task. For example, monitoring tools **124** optionally include a "do list" **126** for listing assignments related to the task and indicating completion of the assignments, an hour log **128** for logging time spent on performance of the task, and/or a milestone timeline **130** for defining and tracking milestones of the task. Optionally, at least one graphical user interface (GUI) (not shown) receives data from one or more monitoring functions **124** and is operable to display the data visually. For example, the GUI may receive time data from hour log **128** and display various graphs, graphic indicators and/or textual indicators responsive to the hours spent on performance of the task.

In an embodiment of the invention, NT **138** is operable to generate, configure and/or display activity packages that nest in activity package 100. Activity packages **140** comprise tasks, *i.e.* delegated task, defined by an operator (not shown) of activity package **100** that are delegated by the operator to various assignees (not shown) and nest in activity package **100**. In **Fig. 1**, NT **138** is schematically shown having been used to produce four different nested and "delegated" activity packages **140**. Optionally, each nested activity package **140** comprises a same bundle of tools that is comprised in activity package **100**, but which the operator of activity package **100** configured to define and enable the delegated tasks that nested packages **140** comprise. Activity package **100** and activity packages **140** define related tasks that are comprised in a "project". Optionally, activity package **100** is a progenitor activity package and packages **140** are first generation descendent activity packages. Projects, their creation and features are illustrated in **Figs. 2** and **3** and are discussed below.

Communication tools **142** optionally comprise messaging tools **152** and a periscope **144** that establishes, enables and/or defines communication channels between activity packages, such as for example between activity package **100** and nested activity packages **140** and/or between one activity package **140** and another activity package **140**. Messaging tools **152** optionally comprise a public chat board **154**, a private chat board **156** and/or a messaging "transceiver" **158** for sending and receiving private, optionally, task related messages between operators of activity packages. Optionally, public chat board **154** is "visible" to all the operators of activity packages **100** and **140** **having the chat board**. Private chat board **158** is configured to be commonly available and visible only to selected packages of activity packages **100** and **140**. Private messaging tool **158** in a given activity package **100** or **140** is operable by an operator of the activity package to communicate selectively with any other operator of an activity package **100** and **140**. Periscope **144** in a given activity package of activity packages **100** and **140** optionally defines what information from other activity packages is accessible to the given activity package. Optionally, by default, the operator of activity package **100** has access to all information in its nested activity packages **140**.

It is noted that tools **102** are not limited to the tools shown in **Fig. 1** and discussed above and the tools may comprise more or less than the tools noted and tools different from those noted.

Fig. 2 schematically illustrates use of activity packages, such as activity packages described above, to manage, by way of example a new product release "PR Event" of a firm, in accordance with an embodiment of the invention. The PR Event is assumed an initiative of the firm's sales manager represented by an ellipse label "**I**" who has decided that an appropriate way to introduce the firm's new product line is to hold a PR Event that includes dinner and entertainment.

To manage the event, sales manager I accesses an activity management system operable to generate activity packages, in accordance with an embodiment of the invention. Sales manager I operates the system to create a progenitor activity package **200**, optionally similar to package **100** shown in **Fig. 1.** Manager **I** uses tools in activity package **200** to configure the package and define parameters of the PR Event. For example sales manager I may operate tools to provide the PR Event with a project title, a time frame and basic requirements such as, by way of example, requirements for providing a venue, lodging dinner and/or, entertainment.

The PR Event project is relatively complicated and **I** cannot organize it by himself. **I** therefore operates NT **138** of package **200** to generate different nested activity packages **201, 202, 203,** and **204** configured to comprise tasks related to the PR Event and delegate the tasks to be accomplished by other people in the firm. Circles labeled for convenience of presentation by identifying indices **J1 - J4**, indicate the other people. For brevity of presentation, a task may be referred to by a same numeral that labels the activity package **201, 202, 203,** or **204** that comprises the task. By way of example, **I** optionally defines package tasks entitled "New Product Management" (NPM), "Guest Liaison" (GL), "Event Services" (ES) and "Observer" (OBS) respectively in activity packages **201, 202, 203,** and **204**, and assigns delegate the activity packages respectively to **J1, J2, J3 and J4**.

In accordance with an embodiment of the invention, nested activity packages **201, 202, 203**, and **204** are automatically formatted as emails. A task that a nested activity package **201, 202, 203**, or **204** is configured to contain is delegated to its intended assignee **J1, J2, J3** or **J4** by emailing the activity package as an email to the assignee. Any method known in the art to send emails to addressees may be used to send an activity package to its assignee. For example, an activity package **201, 202, 203**, and **204** email may be delegated to an assignee by using a mouse to operate a "send" icon comprised in the activity package or by depressing "control" and "enter" keys on a keyboard.

In **Fig. 2**, a dashed line between an icon representing a nested package **201, 202, 203** or **204** in activity package **200** operated by **I** and the nested package in the circle representing its assignee **J1, J2, J3** or **J4** respectively, represents, optionally emailing, the activity package to its delegated operator. Each dashed line is labeled with the letters "**NT**" subscripted with the letter representing the "source", operator **I,** of the delegated activity package the letter **J1, J2, J3** or **J4** representing its destination assignee.

New Product Management task comprised in activity package **201** may for example require that **J1** prepare samples of new products and associated presentation material for the PR event. Operating tools **118** of activity package **201** may be used (by **I**) to provide **J1** with a list of key R&D people in the firm responsible for development of the new products, past PR documents and a budget operating tool for forecasting and monitoring expenses for preparing and presenting product samples and presentation material. Monitoring tools **124** are optionally configured to provide a

milestone tool for indicating completion of various components of the New Product Management task. Such components may comprise for example ordering printed PR material and completing new product display samples.

Defining tools **108** in package **202** may be operated to define that the Guest Liaison task defined in package **202** and delegated to **J2** require performing a survey of prospective clients of the firm to determine a convenient date and venue for the PR event and generating a guest list of invitees. Operating tools **114** may provide relevant documents provided in the past for similar PR events.

Defining tools **108** in delegated activity package **203** are optionally used to define Event Services instructing **J3** to provide for a venue for the PR Event, food and beverages and guest accommodations and entertainment.

The Observer task comprised in delegated activity platorm **204** is assigned by way of example to the CEO. The observer task optionally does not require the CEO to perform any task related to the PR event but allows him to access and view all information and monitor progress in progenitor task **200** and delegated tasks **201, 202, 203** nested in the progenitor task.

It is noted that an observer status for a particular task such as the New Product Management task in activity package 201 can readily be assigned to any person by simply "cc-ing" a copy of the package to the other person. The other person who becomes an "operator" of the copied package optionally has access to information in the package and changes therein. In general, it is expected that a cc-d operator of an activity package will not be responsible for execution of the task in the package and will not be enabled to use tools in the package to interfere with processing of the task. However, in accordance with an embodiment of the invention, different levels of "interference" may be permitted a cc-d operator.

Communication tools **142** in progenitor activity package **200** and its "offspring" delegated activity packages **201, 202, 203** and **204** are configured to provide a project communication network for operators **(I, J1, J2, J3** and **J4)** of the packages characterized by desired communication channels.

For example, all activity packages **200** - **204** optionally have a public chat board **154** enabled by operator **I** of progenitor package **200** so that every operator **I, J1, J2, J3** and **J4,** can use his or her public chat board to provide and record messages relevant to the PR Event project that are viewable by all the other operators. In

addition, **I** has configured nested activity package **204** delegated to **J4**, the CEO, to enable private chat board **156** for private chats between him and the CEO.

Periscope **144**, in accordance with an embodiment of the invention, in each activity package **200 - 204** defines what information the operator of the package may access in other packages. By default, optionally, an operator of a given activity package, such as operator **I** of package **200** has access to all information in nested activity packages that the operator generates from his or her package or that are nested in the nested packages. With respect to the nested tasks that the operator generates and their nested progeny, the operator may be said to have, optionally, by default, an "all seeing" periscope.

In accordance with an embodiment of the invention, with respect to nested activity packages that an operator generates from a given activity package, the operator can configure periscopes with "selective" vision. For example, the operator can optionally enable a given periscope in a nested activity package to view all or selective information in other nested packages generated by the operator. The operator can optionally configure a periscope of a particular nested activity package to be only "forward looking" and be able to view only information in activity packages generated from the particular nested activity package. The operator can, if desired, endow a nested package periscope with "backward vision", which enables the operator of the nested package to view information in the activity package from which the nested package was generated. And, as noted above, a given periscope may have a filter, so that even if the periscope provides access to information in another activity package, the filter may enable only certain types of information comprised in the other package to be viewed. Various ways of configuring an activity package periscope, in accordance with an embodiment of the invention, to provide an operator of an activity package with selective information from other activity packages will readily occur to a person of the art.

By way of example, it is assumed that in **Fig 2** the CEOs (**J4**) periscope **144** and **I's** periscope **144** have been configured by **I** to enable **I** and the CEO to access and view all information comprised in any of activity package **200, 201, 202, 203** and **204**. As a result, as the PR Event project develops, **I** and **J4** can monitor performance of all the delegated tasks, identify problems and new project needs as they develop and participate in responding to the problems and needs.

With respect to periscopes **144** of other activity packages, optionally, none have been configured to be able to access information in either **I's** progenitor activity package **200** or **J4's** package **204**. **J3**, who is the operator of activity package **203** and is responsible for providing the Event Services defined in the package has periscope **144** of activity package **203** configured for "short range" viewing and has access to information only in **J2's** package. The periscope of activity package **203** is also filtered so that only guest information comprised in package **202** is available to operator **J3**. Periscopes **144** and private messaging functions of activity package **201** and **202** are optionally similarly configured by **I** using progenitor activity package **200** according to various information needs of the operators of the packages that I considers relevant or desirable.

Following creation and delegation of nested activity packages **201-204,** some of operators **J1-J4** have decided that they need assistance in carrying out their assigned tasks and have in turn operated their task nesting tools NT **138** to generate and delegate portions of their assigned tasks as delegated tasks. If the delegated nested packages **201, 202, 203** and **204** generated by **I** using progenitor activity package **200** are referred to as "first generation" nested activity packages, the activity packages generated by operators **J1-J4** are referred to as "second generation" nested packages. Second generation nested packages nest in the respective first generation nested packages **201, 202, 203** and **204** that created them and indirectly, through the second generation packages, in progenitor package **200.**

It is noted that in **Fig. 2,** none of first generation activity packages **201, 202, 203** and **204** are shown having nested package, because for the status of the PR Event project corresponding to **Fig. 2,** it is assumed that no second generation activity packages and their tasks had yet been created.

Fig. 3 schematically represents a possible branching out of tasks **201-204** that results from operators **J1-J4** using their respective packages to delegate tasks related to their own tasks resident in their respective activity packages and generate second generation packages.

For example, operator **J1**, who is responsible for New Product Management defined in activity package **201**, operates **NT 138 (Fig. 2)** comprised in activity package **201** to generate a second generation nested activity package **301** emailed to an R&D employee **K1** that delegates a task of providing New Product Samples to **K1. J1** also delegates to an employee **K2**, a task of Providing PR material for the new

products by emailing an activity package **302**, to **K2**. **J2** configures periscopes **144** of activity packages **301** and **302** so that all data in both activity packages is available to both **K1** and **K2**.

K2 in turn operates activity package **NT 138** (**Fig. 2**) in his activity package **302** to email third generation activity packages **401** and **402** to **L1** an **L2** respectively. Activity package **401** delegates a task of assembling and drafting written PR material to **L1**. Activity package **402** delegates a task of providing photos of new products for the PR material to **L2**. For security reasons, **L2**'s activity package does not enable **L2** to access any information in other activity packages. Periscope **144** in the package is configured to be "blind". However, **L2** does require relatively frequent access to information that can be provided by **K1** and package **402** is equipped with a private chat board **156** (**Fig. 1**) that enables relatively quick and easy real time communication with **K1**. **J3**, who is responsible for providing Event Services operates **NT 138** of package **203** to delegate by email a task of providing food and beverages for the event to person **K3**. **K3** is a relatively high ranking and trusted employee and the job of providing food and beverages can be made easier if **K3** can easily access information in **J3**'s and **J2**'s activity packages **203** and **202**. **J3** therefore configures periscope **144** of package **303** to provide **K3** with "backward and lateral vision" to enable K3 to see what's going on in activity packages **202** and **203**.

In accordance with an embodiment of the invention, a task operator in a project may operate his or her activity package to provide various methods and formats for viewing other related activity package in the project to which the activity package is connected. Optionally, the various methods and formats are available through a GUI function (not shown) comprised in Communication Tools **142** (**Fig. 1**). In some embodiments of the invention, a task operator may call up different maps of activity packages in the project to which his or her activity package has access for information according to the types of information and access available to his or her activity package.

For example, the task operator may operate his or her activity package to display a map of activity packages to which the periscope provide access. Optionally, the map provides graphical indications as to what type of information is available from each package connected to the operator's activity package. Optionally, a task operator may call up a map of activity packages to which he or she has access via the public chat board or various private chat boards. Once a map is displayed, optionally the operator

may click on an icon in the map representing a given activity package of the project to display a relatively detailed image of the given activity package and information therein to which the operator has access. Optionally, the operator may simply click on an icon representing available information to access the information.

In the description and claims of the present application, each of the verbs, "comprise" "include" and "have", and conjugates thereof, are used to indicate that the object or objects of the verb are not necessarily an exhaustive listing of members, components, elements or parts of the subject or subjects of the verb.

The invention has been described with reference to embodiments thereof that are provided by way of example and are not intended to limit the scope of the invention. For example, whereas the above examples describe nesting tasks in accordance with an embodiment of the invention, activity packages are optionally used to establish projects that are used substantially only for communicating and observing information and not for delegating and managing tasks. Activity packages in such "information projects" optionally comprise configured periscopes and messaging tools, but not such tools as do-lists, hour logs and budgets. By way of another example, periscopes comprised in progenitor packages may be configured to couple the progenitor packages with any type of communication channels available to nested activity packages.

The described embodiments comprise different features, not all of which are required in all embodiments of the invention. Some embodiments of the invention utilize only some of the features or possible combinations of the features. Variations of embodiments of the described invention and embodiments of the invention comprising different combinations of features than those noted in the described embodiments will occur to persons of the art. The scope of the invention is limited only by the following claims

CLAIMS

1. A package of computer tools useable to generate a plurality of nested packages of computer tools comprising at least one package which nests in another, the package comprising:

at least one tool for producing and/or receiving information;

at least one nesting tool operable to generate at least one additional package of computer tools that nests in the package so that information produced or received using a tool in the additional package is available to the package in which it nests; and

at least one transmission tool operable to electronically transmit the at least one additional package to a recipient; wherein

the package is operable to provide an additional package of the at least one additional package with similar nesting and transmission tools.

2. A package according to claim 1 wherein the at least one additional package is configured as an email.

3. A package according to claim 1 or claim 2 wherein the at least one tool operable to electronically transmit the at least one additional package comprises a tool operable to transmit the additional package to a recipient as an email.

4. A package according to claim 1 wherein the transmission tool is operable to transmit the at least one additional package using a soap/http protocol.

5. A package according to claim 1 wherein the transmission tool is operable to transmit the at least one additional package using an FTP protocol.

6. A package according to any of claims 1-5 and comprising at least one communication tool operable to configure and/or enable communication between packages of the plurality of nested packages.

7. A package according to claim 6 wherein the at least one communication tool is operable to provide a package with a public chat board that provides access to any information generated using the chat board to all packages comprising the chat board.

8. A package according to claim 6 or claim 7 wherein the at least one communication tool is operable to provide a package with a private chat board that provides access to information generated using the chat board only to a selected packages of the plurality of packages.

9. A package according to any of claims 6-8 wherein the at least one communication tool is operable to provide a package with a messaging tool operable to send private messages to and receive private messages from any other of the packages of the plurality of packages.

10. A package according to any of claims 6-9 wherein the at least one communication tool is operable to selectively block or enable access of a first suit of the plurality of packages to information in a second package of the plurality of packages.

11. A package according to claim 10 wherein the at least one communication tool is operable to enable the first package access only to information in packages that nest in the first package directly, or indirectly by being nested in a package that directly nests in the first package.

12. A package according to claim 10 or claim 11 wherein the at least one communication tool is operable to enable the first package to access information in a package in which the first package nests directly or indirectly.

13. A package according to any of claims 10-12 wherein the at least one communication tool is operable to enable the fist package access to information in at least one package in at least one generation of nested packages different from its own generation.

14. A package according to claim 13 wherein the packages in the at least one different generation comprise all the packages in a generation of the least one different generation.

15. A package according to claim 13 or 14 wherein the at least one different generation comprises a generation earlier than the generation of the first package.

16. A package according to any of claims 13-15 wherein the at least one different generation comprises a generation later than the generation of the first package.

17. A package according to any of claims 13-16 wherein the at least one communication tool is operable to enable the fist package access to information in at least one other package in a same generation as that of the first package.

18. A package according to claim 17 wherein the packages in the at least one same generation comprise all the packages in the same generation.

19. A package according to any of claims 6-18 wherein the at least one communication tool is operable to determine what types of information a first package of the plurality of packages can access from a second package of the plurality of packages.

20. A package according to any of claims 6-19 wherein the at least one communication tool is operable to determine how much information a first package of the plurality of packages can access from a second package of the plurality of packages.

21. A package according to any of claims 6-20 wherein the at least one communication tool is operable to determine when a first package of the plurality of packages can access information from a second package of the plurality of packages.

22. A package according to any of the preceding claims and comprising a graphical user interface tool operable to provide a graphical display of relationships between packages of the plurality of packages.

23. A package according to claim 22 wherein the relationships are nesting relationships.

24. A package according to claim 22 or claim 23 wherein the relationships are communication relationships.

25. A package according to any of the preceding claims and comprising a defining tool operable to define a task associated with an additional package of the at least one additional package to be performed by a recipient of the additional package.

26. A package according to claim 25 and comprising at least one tool operable to monitor performance of the task.

27. A computer readable storage medium comprising a set of instructions for a general purpose computer having a user interface comprising a visual display and user operable accessory for interacting with the display, the set of instruction comprising:

a set of instructions that implement a package of computer tools in accordance with any of claims 1-26;

a set of instructions for providing an interface on the screen for accessing the package;

a set of instructions for providing icons selectable by operation of the accessory to enable a user to selectively choose and operate tools comprised in the package; and

a set of instructions for executing choices and manipulations indicated by user operation of the accessory.

28. A method of managing a plurality of related tasks comprising:

using a package of computer tools according to claim 25 or 26 to generate an additional package of tools;

using the defining tool to define a task of the related tasks and associate the defined task with the additional package; and

using the transmission tool to transmit the additional package to a recipient to be responsible for accomplishing the task associated with the additional package.

29. A method of managing information, the method comprising:

using a package of computer tools according to any of claims 1-26 to generate an additional package of tools;

using the transmission tool to transmit the additional package to a recipient; and

accessing information in the additional package that is produced or received using a tool comprised in the additional package of tools.

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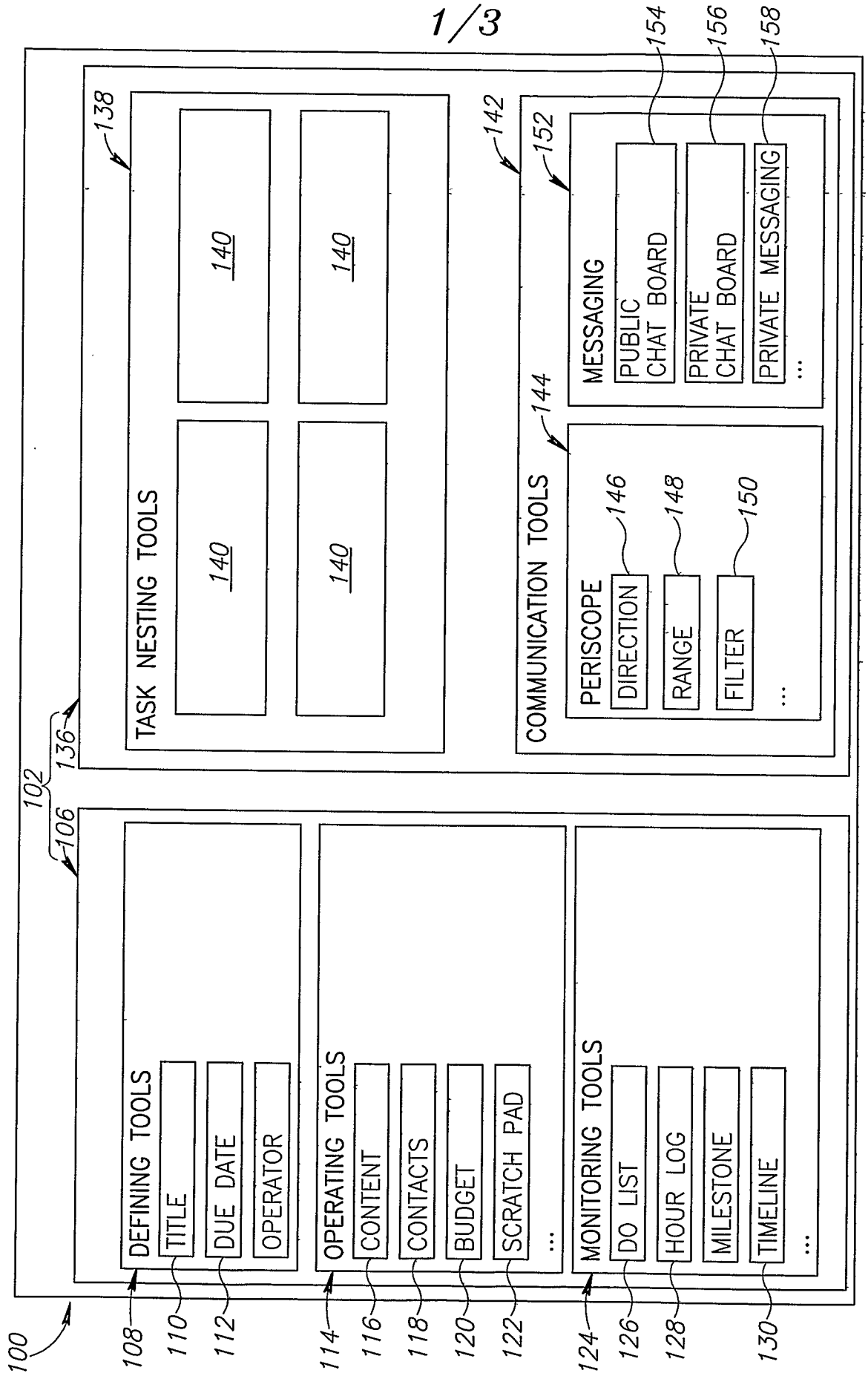
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102
106
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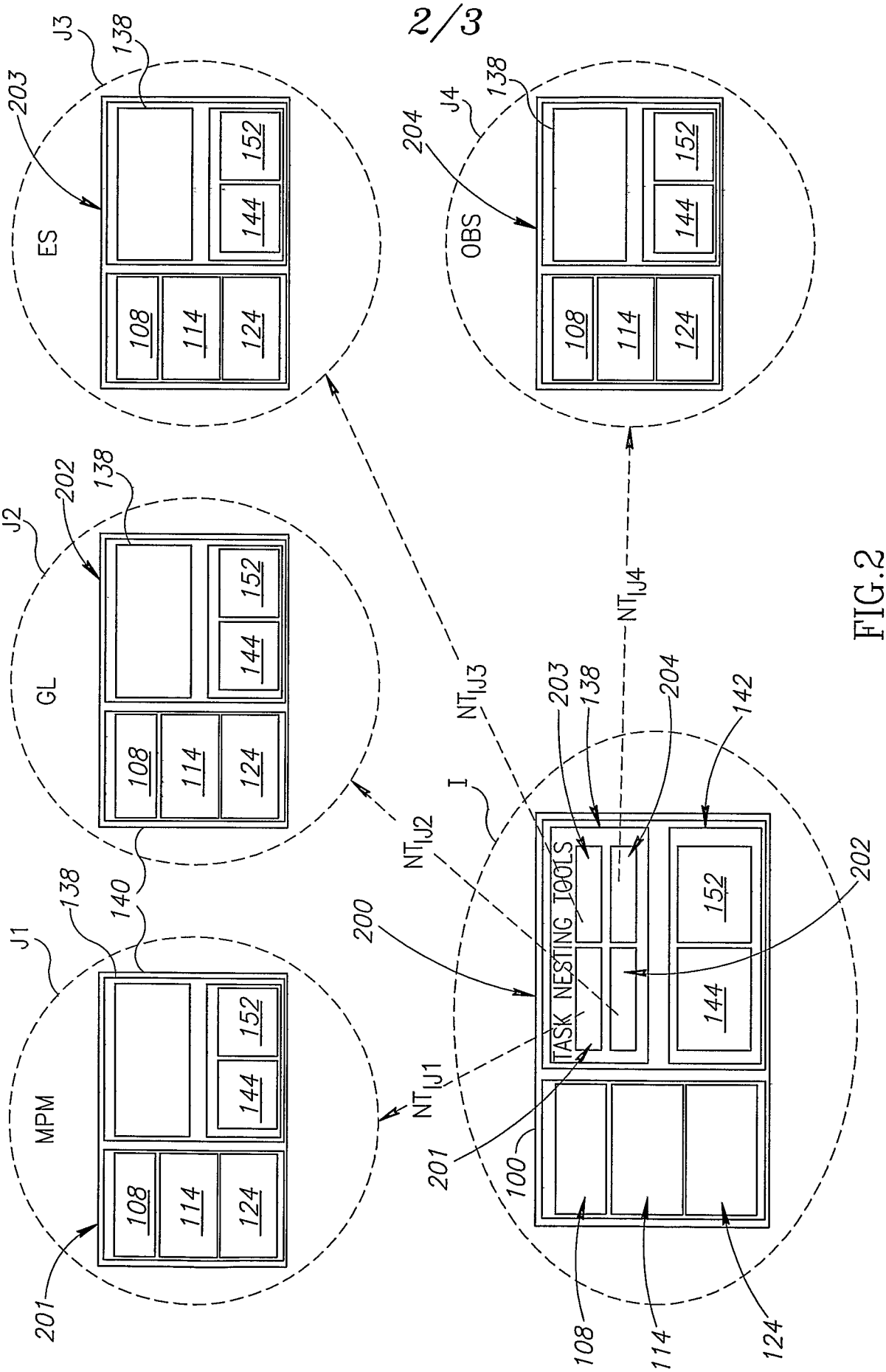
TITLE
DUE DATE
OPERATOR
OPERATING TOOLS
CONTENT
CONTACTS
BUDGET
SCRATCH PAD
...
MONITORING TOOLS
DO LIST
HOUR LOG
MILESTONE
TIMELINE
...
108
110
112
114
116
118
120
122
124
126
128
130
136
138
TASK NESTING TOOLS
140
140
140
140
142
COMMUNICATION TOOLS
144
PERISCOPE
DIRECTION
RANGE
FILTER
...
146
148
150
152
MESSAGING
PUBLIC CHAT BOARD
PRIVATE CHAT BOARD
PRIVATE MESSAGING
...
154
156
158

FIG.1


J3
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203
ES
152
144
108
114
124
J4
138
204
OBS
152
144
108
114
124
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138
GL
152
144
108
114
124
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J1
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MPM
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144
108
114
124
201
200
I
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NT_{IJ3}
NT_{IJ4}
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152
144
201
100
108
114
124

FIG.2

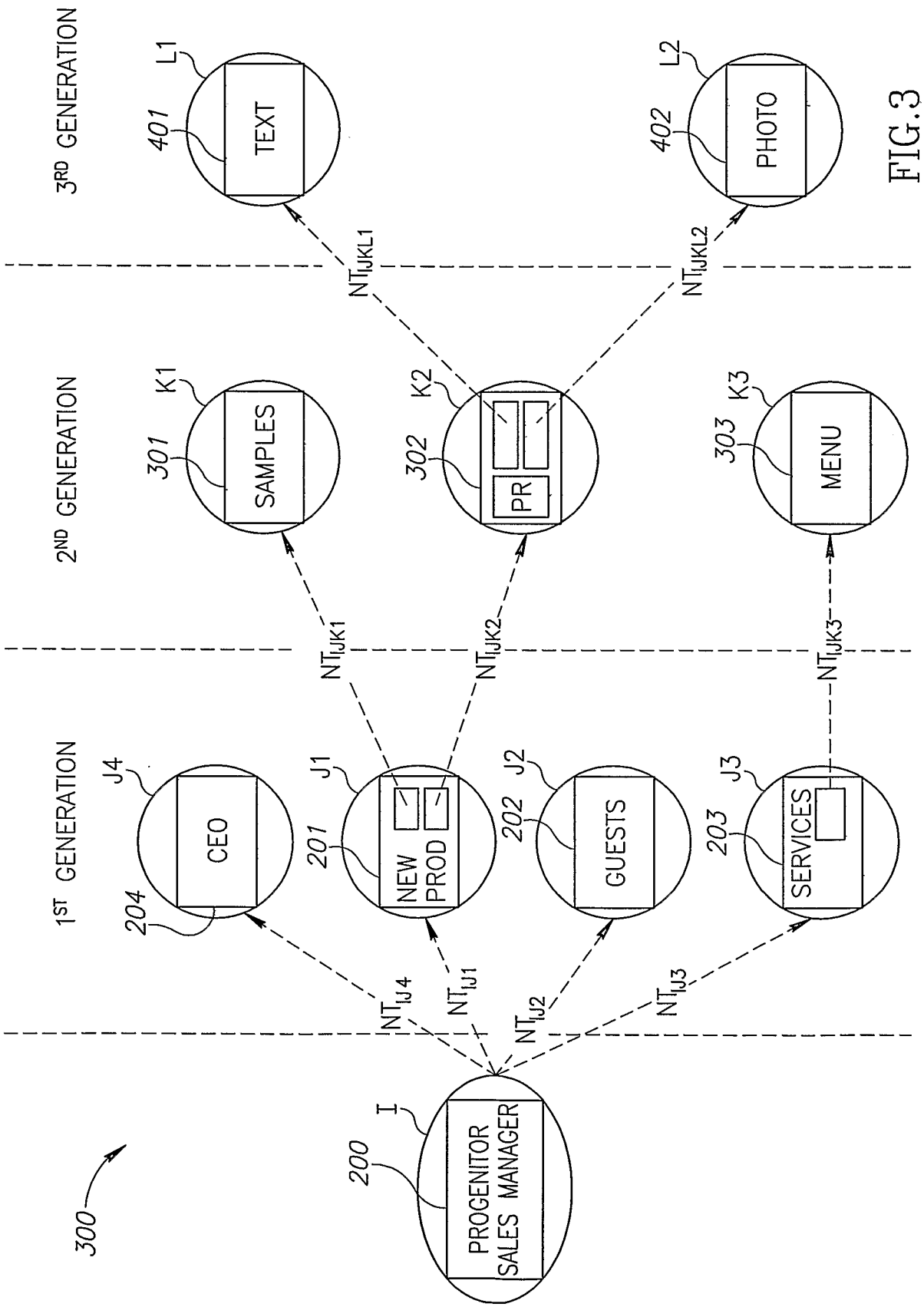
3RD GENERATION
2ND GENERATION
1ST GENERATION
L1
401
TEXT
L2
402
PHOTO
K1
301
SAMPLES
K2
302
PR
K3
303
MENU
J4
204
CEO
J1
201
NEW PROD
J2
202
GUESTS
J3
203
SERVICES
I
200
PROGENITOR SALES MANAGER
300
NTIJKL1
NTIJKL2
NTIJK1
NTIJK2
NTIJK3
NTIJ4
NTIJ1
NTIJ2
NTIJ3

FIG.3