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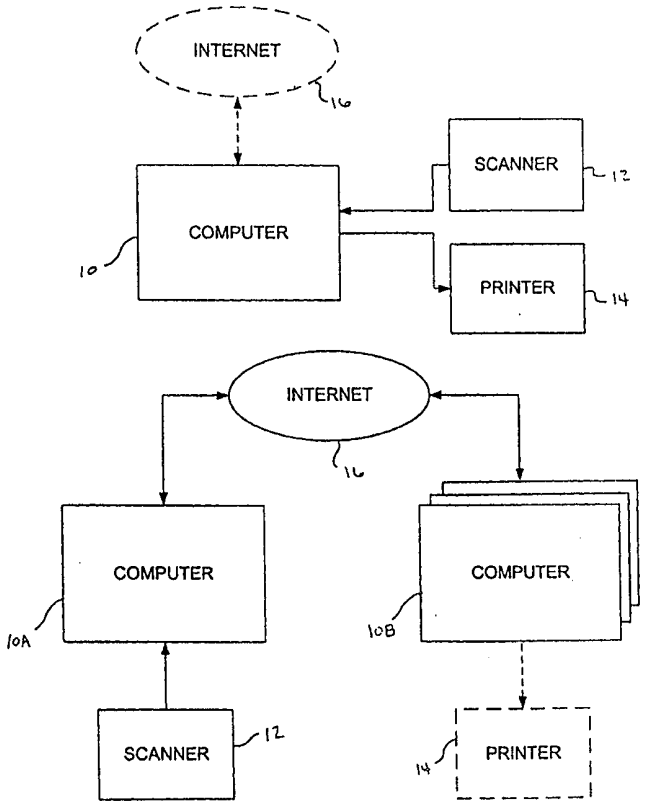
(57) Abstract

A method for specifying upgrade options for a new building, e.g., a home, includes the steps of scanning (12) a floor plan of the new building into a computer (10), displaying a plurality of icons representative of a corresponding plurality of different upgrade options upon the monitor of the computer (12) while simultaneously displaying the scanned floor plan, selecting a plurality of desired upgrade options and designating where the upgrade options are to be placed in the building by placing the icons at corresponding locations upon the displayed floor plan.



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SYSTEM FOR SPECIFYING BUILDING UPGRADE OPTIONS AND DETERMINING BUILDING COST

FIELD OF THE INVENTION

The present invention relates generally to computer shopping systems and relates more particularly to a method for specifying upgrade options for a building, e.g., a new home, and determining building cost, wherein the upgrade options are selected and their desired place in the building is designated by dragging and dropping icons onto a floor plan of the home which is displayed upon a screen of a computer.

BACKGROUND OF THE INVENTION

Frequently real estate developers and commercial or home builders, particularly in planned communities, allow customization by buyers by providing a variety of different upgrade options. Usually, the upgrade options are selected from a list of those upgrade options which are provided by the real estate developer or builder for the particular home or other building being purchased. These upgrade options provide the buyer with an opportunity to personalize and customize their design, so as to accommodate the buyer's own particular needs or taste. At the same time, such upgrade options provide the builder with an opportunity to realize substantial additional revenue.

Because the practice of offering home upgrade options to home buyers has resulted in a substantial revenue increase for home builders, the number and type of upgrade options which are presently being offered has increased significantly. Due to this increase in the availability of such home upgrade options, the builders' sales managers must spend an undesirably large amount of time administering the sales of upgrade options to home purchasers. Such administration includes defining the home options selection, verifying the desired placement of upgrade options in the home and calculating the cost of the upgrade options, as well as ordering the upgrade options and verifying that the upgrade options are properly installed by the desired deadline. Of course, spending time administering the sales of upgrade options undesirably detracts from the time available to the sales managers for selling homes, which is the primary responsibility of the sales force.

Typically, the purchaser of a new home will designate where upgrade options are to be added by indicating the desired location upon the illustration of a floor plan in a book or brochure which is provided by the home builder. Usually, the sales manager reads a list of available upgrade options to the buyer and the floor plan is marked up accordingly.

However, the floor plans illustrated in such books and brochures are typically very small, e.g., usually only a few inches on each side. Even if enlarged, it is extremely difficult to indicate with any accuracy precisely where such upgrade options are to be located when using such a floor plan. This inability to accurately indicate where the upgrade options are to be located frequently results in the options being installed at incorrect or other than the desired locations.

For example, it will be appreciated that it is difficult to indicate precisely where along a particular wall an electrical outlet is to be placed by marking the desired location upon a floor plan which depicts one entire level of the home within a 3-inch by 5-inch square, or even in an enlarged version of several times this size. It is equally difficult for the subcontractors to accurately interpret such a marked-up floor plan. As mentioned above, these difficulties in marking and interpreting such relatively small floor plans frequently result in the installation of home upgrade options at locations other than those desired by the home purchaser. Indeed, when using such marked-up floor plans, it is possible to overlook one or more upgrade options altogether, and difficult to relate the options to standard features.

In an attempt to mitigate the problems associated with the use of such reduced scale floor plans, a purchaser may have a floor plan enlarged. Although it is considerably easier to indicate where upgrade options are to be placed when using an enlarged floor plan, the use of an enlarged floor plan still suffers from inherent deficiencies which detract from its desirability.

Another problem of an enlarged floor plan is that it is subject to becoming cluttered and difficult to read, particularly when many upgrade options are to be indicated and/or the desired location of one or more of the upgrade options is changed. Changing the location of upgrade options on such a paper floor plan is typically accomplished by crossing out the original indication of the location of the upgrade option on the proper floor plan and then re-marking the floor plan, so as to indicate the new desired location of the upgrade option. Of course, such re-marking of floor plans is undesirably subject to error and misinterpretation and it is difficult to make and indicate changes clearly. Further, the reduced quality, i.e., resolution, of such enlarged floor plans contributes to the difficulty of properly marking and interpreting them, which may add cost to the builder, subcontractor and purchaser.

Blueprints may alternatively be used for indicating where upgrade options are to be located in a new home. However, this requires a home seller to provide a blueprint so that the blueprint may be marked up in order to indicate the location of the desired home upgrade options. It is not always easy or convenient to provide blueprints. Further, such blueprints are typically large and difficult to manage. That is, carrying and handling a blueprint is undesirably cumbersome due to its size. Typically, blueprints must be rolled up or refolded as they are moved from room to room, thereby further contributing to the inconvenience associated with their use by prospective buyers and sales personnel.

Further, there are typically few sufficiently large surfaces to lay blueprints out for convenient marking thereupon. Thus, it is frequently necessary to hold the blueprint up against a wall or to spread it upon the floor in order to mark the desired location of upgrade options thereon. This difficulty in handling blueprints increases the likelihood of error.

The desired location of upgrade options or accessories may also be indicated on hand drawn sketches. However, the usefulness of such practice depends substantially upon the accuracy with which the hand drawn sketches are made. Further, the ability to properly interpret

such hand drawn sketch depends substantially upon the amount of care taken in drawing them in the first place. Substantial skill and time are required to hand draw adequate sketches. Poorly drawn sketches provide little help in accurately defining the nature and desired location of upgrade options.

Although it is possible to indicate the desired location of upgrade options without using any type of floor plan, blueprint or hand drawn sketch, it is generally undesirable to do so. For example, the locations of upgrade options may be indicated upon a note pad by using textual notes such as: Additional duplex wall outlet for master bedroom on north wall, 10 inches above the floor and 4 feet from the east wall. However, as those skilled in the art will appreciate, the use of such textual notes provides the inherent possibility that the notes will be incorrectly written down or incorrectly interpreted later on, or even lost or misplaced. Further, many people simply prefer to work with a graphical representation, i.e., a floor plan, rather than merely utilizing textual descriptions.

In any case, as mentioned, such paper records as floor plans, blueprints, hand drawn sketches and textual notes are subject to being misfiled or lost.

The foregoing describes some of the major difficulties associated with the communication process between a consumer and a developer when the consumer decides to customize the living space. In addition to the implications described above, the upgrade/customization decision also informs not a few business consequences for a builder/developer which flow from that decision. For example, one of the business evens which flow from this decision is generation of confirmations and change orders which serve to replace or modify existing structure or items with upgrades. Purchase orders must be prepared in order to purchase certain necessary items to fulfill an option request and the upgrade or option request must be communicated to, for example, a production or building supervisor.

Further business processes which are affected by a consumer's decision to purchase options or upgrade certain services or equipment include the mortgage application process of which typically must be based on the full purchase price of a structure, including all upgrades, options, enhancements, and the like. Since mortgage applications typically must be made and approved prior to an optional build-out, there should be some easy methodology available for a consumer to evaluate different upgrade options prior to making a final decision in preparing a mortgage application based thereon.

Further, given the large number of products available for upgrade and the large number of manufacturers that produce such products, a builder should have a relatively efficient means available to perform analyses to determine which upgrade products and which manufacturers offer the highest degree of profitability.

In view of the foregoing, it is desirable to provide a convenient, easy to use graphical method for indicating particular upgrade options of interest and for indicating where upgrade options are to be provided; and such that the information is generated easily, presented clearly,

easily changed and is not subject to being lost or misfiled and which enables a buyer to design the building within a budget.

It is further desirable to provide a methodology and a platform by which all of the business processes associated with upgrade options can be managed. Such a methodology and a platform should be able to not only manage the upgrade option selection, but also be able to manage the business events which flow from such a decision. The methodology and platform should be able to accept information from all participants in the process, be able to render that information into forms which are particularly useable by each of the participants and deliver synthesized output, in the form of analysis results and/or data that can be ported to peripheral participants, such as banks, mortgage/title companies, escrow companies, a contract sales force, and the like.

SUMMARY OF THE INVENTION

The present invention specifically addresses and alleviates the above-mentioned deficiencies associated with contemporary methods for indicating desired upgrade options and where upgrade options are to be placed. In accordance with one embodiment, the present invention provides a method for specifying upgrade options for a new building and for calculating the cost of the upgrade options and of the building, if desired.

More particularly, the method comprises the steps of scanning a floor plan of a building into a computer to form a digitized or scanned floor plan, displaying the scanned floor plan upon a monitor of a computer, displaying a plurality of icons representative of a corresponding plurality of different upgrade options upon the monitor along with the scanned floor plan, selecting desired upgrade options from those being displayed as icons and designating where the upgrade options are to be placed in the building by dragging the icons and dropping the icons at desired locations upon the displayed floor plan. Optionally, a paper copy ("hard copy") of the floor plan, showing the desired locations of the selected upgrade options, may be printed.

In one embodiment of the present invention, the same computer is used to both scan the floor plans and display the scanned floor plans along with the icons, so as to facilitate selection of the desired upgrade options. In another aspect of the present invention, one computer is used to scan the floor plans, and may be used as a server as well. One or more other computers can be used to display the floor plans along with the icons, so as to facilitate selection of the desired upgrade options. In either instance, the computer(s) may optionally be connected to a network such as the Internet, so as to facilitate the downloading of floor plans and the inputting of buyer information, as well as any other desired information.

In a preferred embodiment, a list of the upgrade options which were selected, along with their prices and a total price, is compiled, preferably simultaneously. The list facilitates verification of the selections by the buyer and also facilitates ordering of the upgrade options by the builder.

Optionally, a database of purchaser information, particularly in the case of homes, is

compiled. The database provides information which is useful to the home builder for facilitating the home purchase, as well as for facilitating the compilation of statistical information which may aid the home seller in making business decisions, such as which upgrade options to offer in the future.

Thus, the present invention provides a convenient, easy to use graphical method for indicating where upgrade options are to be provided, and for tracking the cost of the options and of the building. Because the information is stored in a computer memory, lost paper printouts of the floor plan may easily be replaced.

DESCRIPTION OF THE DRAWINGS

The foregoing and other features, aspects and advantages of the present invention will be more fully understood when considered with respect to the following detailed description, appended claims and accompanying drawings wherein:

FIG. 1 is a block diagram of the system for specifying building, e.g., home, upgrade options of the present invention, wherein a single computer is used to scan floor plans and specify desired upgrade options;

FIG. 2 is a block diagram of the system for specifying upgrade options of the present invention, wherein a first computer is used to scan floor plans and a second computer is used to specify the location of desired home upgrade options;

FIG. 3 is a flow chart showing generally the procedures associated with the practice of the present invention;

FIG. 4 is a screen presentation of a buyer information entry and display page according to the present invention;

FIG. 5 is a screen presentation of a comments entry and display page according to the present invention;

FIG. 6A is a screen presentation of a floor plan and upgrade options page according to the present invention;

FIG. 6B is a screen presentation of a site selection page according to the present invention;

FIG. 7 is a screen presentation of an pricing screen page according to the present invention;

FIG. 8 is a diagram of the data structure of the database information according to the present invention;

FIG. 9 is a flow chart of the operation of the present invention; and

FIG. 10 is a flow chart of the system administration of the present invention.

FIG. 11A is a semi-schematic illustration of a first portion of a nested operational flow of the display windows of the invention;

FIG. 11B is a semi-schematic illustration of a second portion of a nested operational flow of the display windows of the invention;

FIG. 11C is a semi-schematic illustration of a third portion of a nested operational flow of the display windows of the invention;

FIG. 11D is a semi-schematic illustration of a fourth portion of a nested operational flow of the display windows of the invention; and

FIG. 11E is a semi-schematic illustration of a fifth portion of a nested operational flow of the display windows of the invention.

DETAILED DESCRIPTION

The detailed description and drawings are as an example only. It is intended as a description of the presently preferred embodiment of the invention and is not intended to represent the only form in which the present invention may be constructed or utilized. The description sets forth the sequence of steps for constructing and operating the invention in connection with the illustrated embodiment. It is to be understood, however, that the same or equivalent functions and sequences may be accomplished by different embodiments that are also intended to be encompassed within the spirit and scope of the invention.

The present invention provides a convenient, easy to use method for indicating where upgrade options are to be provided in a new building, e.g., home, which is being purchased and also provides building cost calculations. A clear indication of what upgrade options were selected and where the upgrade options are to be installed is provided. According to one embodiment of the present invention, the purchaser selects desired upgrade options from a tool box or the like being displayed upon a computer monitor. The desired upgrade options are then placed, preferably by dragging, via a mouse, touch pad, pen or other pointing device, from the tool box to the desired location within the building, as shown upon a digitized or scanned floor plan which is displayed upon the computer monitor along with the tool box. Alternatively, the icons can be also placed by voice or movement recognition, etc.

Referring now to FIG. 1, the present invention generally comprises a computer 10 (which includes a monitor) in communication with a scanner 12 and an optional printer 14. Optionally, the computer 10 is also in communication with a network, such as the Internet 16.

Only a single computer 10 is required to practice the present invention, although it will likely be desirable to utilize a plurality of computers, as discussed in detail below. Paper floor plans may be scanned via scanner, 12, thus providing digitized or scanned floor plans for display by the monitor of the computer, 10. Alternatively, the floor plans may be loaded into the computer 10 by computer usable media such as a removable hard drive, CD-ROM, DVD, tape, etc. Floor plans may also be communicated to the computer 10 via a network such as the Internet, 16, if desired.

After the scanned floor plans have been displayed upon the monitor of the computer 10 and the desired upgrade options specified, e.g., by dragging and dropping the corresponding icons, then the floor plan, showing the locations of the desired upgrade options, may optionally

be printed via printer, 14. Specification of the desired upgrade options is discussed in detail below.

Optional connection of the computer 10 to a network such as the Internet, 16, may further be used to facilitate the convenient communication of floor plans, buyer information, software updates, upgrade option, costs, inventories and any other desired information to the computer 10 or from the computer 10 to a desired location.

Referring to FIG. 2, the scanner 12 may alternatively be in communication with a first computer 10A, while the optional printer, 14, is connected to one or more other computers 10B, which may be disposed at various locations remote from the first computer 10A, if desired. Both the first computer 10A and the second computers 10B are in communication with one another via a network, such as the Internet 16.

The first computer 10A and the scanner, 12, are utilized for scanning floor plans so as to provide digitized or scanned floor plans. The scanned floor plans are then communicated from the first computer 10A to the Internet 16.

A desired one of the computers 10B receives the scanned floor plans from the Internet 16. The specification of the desired upgrade options is then performed utilizing one of the second computers 10B, as discussed in detail below. Optional printer 14 may then be used to print out copies of the floor plans which show the desired locations of the upgrade options, if desired.

The use of a plurality of computers, e.g., a first computer 10A and at least one second computer 10B facilitates the scanning of floor plans at a central location, such as at an administrative office, and facilitates the selection of upgrade options at a different location, such as a development site. A plurality of such second computers 10B, each at a different development site, may be utilized to facilitate upgrade option selection at a plurality of different locations. Generally, only one first computer 10A is required, although a plurality of first computers 10A may alternatively be utilized, if desired, so as to facilitate the scanning of floor plans at different locations.

Indeed, by using a web page or the like, any computer may be used from any desired location to perform the scanning and/or upgrade selection tasks, as long as the user has authorized access.

Either the computer 10 of FIG. 1 or the first computer 10A and second computers 10B of FIG. 2 may be in communication with a web page which is served from a computer of a network, such as a local area network (LAN), a wide area network (WAN), an intranet or the Internet 16. Optionally, the web page may then be utilized to facilitate the entry of buyer information into a database (which may form a part of the web page), the entry of comments, as well as display of the floor plan and the upgrade option tool box, so as to facilitate specification of the desired upgrade options. Thus, a buyer information entry and display window (FIG. 4), a comments entry and display window (FIG. 5), a floor plan and upgrade options window (FIG. 6), and a pricing window for displaying and calculating costs (FIG. 7) may all be embodied, viewed and

utilized as web pages, if desired.

Each of the second computers 10B is preferably a lap top computer having a color display. Alternatively, the second computers 10B may comprise palm top computers, so as to facilitate convenient carrying thereof about the home being purchased while upgrade options are selected, if desired. However, those skilled in the art will appreciate that various other types and configurations of computers are likewise suitable. For example, the second computers 10B may alternatively comprise desk top computers, or any wireless network computer, if desired. Any desired combination of different types of computers may be utilized.

Referring now to FIG. 3, the preferred method for specifying upgrade options for a new building according to the present invention comprises scanning, 20, a floor plan, optionally entering, 22, buyer information, and dragging and dropping icons, 24, to desired positions upon the displayed floor plan. Optionally, the floor plan may be printed, 26, and/or reports may be printed, 28.

Entering floor plans into the system might be done by means of a variety of different methods, the details of which are of no particular concern and need not be discussed in great detail herein. It should be sufficient to mention that floor plans might be entered into the system by scanning a paper floor plan with a scanner (20 of FIG. 3) or by developing floor plans in a computer aided drafting (CAD) system and reading a generated file into a computer in conventional fashion. However entered, any particular floor plan might be identified by a simple file name and stored in a memory area allocated thereto in a computer system (10 of FIG. 1 or 10A of FIG. 2, for example). It need also be mentioned that floor plans need not be entered into the system as a unitary construct. Indeed, floor plans might relate to the floor plan of an entire structure, such as a dwelling, or a floor plan might be related to a bifurcated portion of a structure and might represent a single room, an area grouping of rooms, and the like. Specifically, a floor plan might be represented as a higher article structure that begins with the floor plan of an entire dwelling but might also include individual plans of particular spaces defined by that floor plan. A home might be entered into the system as a top level plan with individual rooms being selectable for viewing and modification by invoking the top level floor plan and clicking on a room with a mouse, for example. Alternatively, the floor plan might be divided into subsections by way of a menu, with a top level menu indicating the home floor plan as a whole, and with nested menus identifying individual rooms within that floor plan. In this particular case, selections might also be made by clicking on an individual item with a mouse, for example.

Thus, however entered and however configured for viewing, various floor plans of various structures may be entered into a master data base of the system in a manner so as to be available for viewing and for modification/option placement.

Buyer information, 22, is optionally entered so as to facilitate the use of such information in any desired manner. For example, the buyer information may be utilized to facilitate the printing and recording of orders, invoices, confirmation letters, etc.

Further, by forming a database comprising buyer information from a plurality of different buyers, information regarding buying habits may be generated. For example, such a database may be utilized to provide statistics regarding the percentage of buyers desiring particular upgrade options. Such statistics may be used to determine which upgrade options should be offered in the future.

Desired upgrade options are selected and their position within the building is designated by dragging and dropping icons, 24, which are representative of the desired upgrade options from the tool box, 101, (FIG. 6) to the corresponding location upon the floor plan, 100, (FIG. 6) as described in detail below. In this manner, either the buyer or the seller may use a pointing device to indicate upon the displayed floor plan, 100, what upgrade options are to be included in the home purchase and where the upgrade options will be in the home.

If desired, the floor plan, 100, having the location of desired upgrade options indicated thereon, is printed, 26, (FIG. 3)and may be provided to the buyer and/or seller, as desired, and to subcontractors.

Further, reports may be printed, 28, (FIG. 3) so as to provide any desired information from the database. Typically, an inventory of the selected upgrade options, including the itemized prices and a total price therefor, is printed and provided to the buyer and/or seller.

Optionally, a copy of the floor plan, 100, and/or a copy of the pricing may be attached to the sales agreement.

Referring now to FIG. 4, an example of a screen display of a web page which facilitates the entry and display of buyer information is shown. Buyer information, such as the buyer's name, address, telephone number, and mortgage company may optionally be entered on this page and added to the database. Once entered, such information may be read from the same web page or extracted from the database and used as desired.

Alternatively, the buyer information may be filled out by providing each buyer with a questionnaire via e-mail. The buyer then e-mails the completed questionnaire back to the computer, 10, 10A, or 10B where the responses are either automatically entered into the buyer information database or may be entered manually by a system administrator.

After the buyer information has been provided by a buyer, then a buyer identification number and a password may be assigned to the buyer. The buyer identification and password allow the user to have access to their floor plan and option upgrade web page files (FIG. 6). The buyer may be also provided access to the pricing web page (FIG. 7).

Referring now to FIG. 5, a screen display illustrates the comments web page which facilitates the typing of written comments regarding the upgrade options to be purchased, or any other desired information. The typed comments may be read from the comments web page or printed as desired.

FIG. 6 is an example of a screen display showing the floor plan and upgrade option web page. A tool box, 101, comprises a plurality of icons, 102, which are representative of various

different upgrade options. According to the preferred embodiment of the present invention, the tool box, 101, is builder defined. The tool box, 101, may be configured so as to contain only those icons which are representative of upgrade options which are available for the particular floor plan, 100, being displayed. Preferably, the floor plan, 100, and the tool box, 101, are linked to one another, such that the selection of a particular floor plan automatically results in the display of a corresponding tool box, 101, having only those icons, 102, which are representative of the upgrade options which are actually available for that particular floor plan, 100.

Upgrade options are selected from those represented by icons, 102, in the tool box, 101, by clicking the left key of a mouse, for example. While holding down the left key of the mouse, the selected icon, 102, is then dragged to the desired position upon the floor plan, 100. When the icon, 102, is positioned as desired with respect to the floor plan, 100, the left mouse key is released, thereby dropping the icon, 102, at that location. Dropping the icon, 102, at any location upon the floor plan, 100, results in that icon, 102, being displayed at the position upon the floor plan, 100, where it has been dropped, thereby indicating that the desired upgrade is to be positioned correspondingly. Those skilled in the art will appreciate the various other pointing devices, such as touch pads, cursor control keys, etc., may similarly be used to select and move the desired icons, 102.

Optionally, upgrade options which must have particular locations within a room are made to snap, i.e., go automatically, to the nearest permitted location when dropped. Thus, a wall outlet dropped into a room near a wall will snap into place at the nearest location permitted upon the wall.

Alternatively, upgrade options may be particularly located by use of a programmed two-dimensional grid which overlays the floor plan. Thus, when an upgrade option is dropped. It is positioned upon the floor plan at the nearest grid point.

Similarly, an attempt to drop an icon at a forbidden, undesirable or nonsensical location optionally results in a visual and/or audible notification of the error. Thus, the user would be alerted if an attempt was made to place a ceiling fan in a closet, for example. Optionally, this feature may be overridden, if desired. Thus, if a buyer truly wants to have a ceiling fan in a closet, then the buyer could choose to place an icon there after being warned that it is a non-standard choice.

Optionally, comments can be associated with each dropped icon. Thus, for example, by clicking on a dropped icon, a window opens, into which comments may be typed. Subsequently clicking on the same icon causes the comments window to be redisplayed. The icon can change color or otherwise indicate that comments are associated therewith. Alternatively, the typed comments may be displayed along with the dropped icon.

If the floor plan, 100, is too large to be displayed on the CRT all at once, then scroll bars at the bottom and right of the floor plan, 100, may be used to scroll up and down or sideways, so as to cause desired portions of the floor plan, 100, to be shown. This particular case obtains

when the floor plan called from the database is an overall master floor plan. It should be noted that individual room floor plans might be called up from the database by accessing the particular room floor plan from a set of nested menu options. This particular approach will allow for greater granularity and precision in the placement of desired options.

Clicking on the binoculars or search button, 103, facilitates searching for desired files, such as files associated with a particular lot or buyer by entering either the lot number or buyer name when requested to do so. Selection window, 104, facilitates the selection of either the buyer information web page of FIG. 4, the floor plan web page of FIG. 6 or the pricing web page of FIG. 7.

Preferably, each user is automatically provided with the appropriate floor plan 100 for the building, e.g., home, that the particular user is purchasing. Alternatively, the user may be allowed to select from a variety of different floor plans. Typically, the buyer first selects the floor plan before the buyer is set up as an authorized user in the system.

The buyer may define several different sets of upgrade options, so as to analyze the viability of each set of options. Thus, if the total cost for a particular set of upgrade options is not within a buyer's budget, then the buyer can select a different set of upgrade options by resetting the floor plan screen.

Referring now to FIG. 7, the pricing web page comprises a column for the item or upgrade option being purchased, the quantity of each upgrade option being purchased, the price of the upgrade option being purchased, and the total price when a plurality of the same upgrade option is being purchased, i.e., when two ceiling fans are being purchased for $99 a piece, then the total price for ceiling fans is $198. Preferably, the total price for all upgrade options is also listed on the inventory web page. Further, the total price for all upgrade options plus the purchase price for the building is preferably listed either on the pricing web page or on a separate web page and may optionally be printed as a report or extracted from the database and used as desired. Such a separate web page may also include information regarding financing, such as the total finance charge, interest rate, etc.

Referring now to FIG. 8, the presently preferred interrelationships of the database record tables with one another is shown. The items within each record are defined as follows:

TERM	DEFINITION
Password	A customized alpha-numeric code that allows authorized users to access the software application and the designated files.
Area ID	A unique alpha-numeric code that indicates a specified area in the floor plan of the house.

TERM	DEFINITION
Area Name	A unique name to the Area ID.
Banner ID	A unique alpha-numeric code that identifies the banner image.
Banner Image	The image assigned to a specific entity for the purpose of advertising the entity's service or product.
URL	The URL address linked to the Banner Image.
Buyer ID	A unique alpha-numeric code that associates and assigns all applicable files to the Buyer. This association limits the Buyer access to ONLY the files that are assigned to the Buyer ID.
First Name	The first name of the buyer.
Last Name	The surname of the buyer.
Dear	The salutation used in all menu-driven correspondence generated by the application.
Address	The street in the mailing address of the Buyer.
City	The city in the mailing address of the Buyer.
State	The state in the mailing address of the Buyer.
Zip	The zip code in the mailing address of the Buyer.
Work Phone	The phone number identified by the Buyer as the phone number at his/her work site.
Home Phone	The phone number identified by the Buyer as the phone number at his/her home.
Mobile Phone	The phone number identified by the Buyer as the phone number of his/her mobile phone.
Fax Number	The phone number identified by the Buyer as the phone number of his/her fax machine.
Email Name	The email address to use to contact the Buyer.
Birth Date	The Birth Date of the Buyer.
Spouse Name	The name of the Buyer's Spouse.
Mortgage Company	The name of the Mortgage Company identified by the Buyer.
Mortgage Contact	The name of the Contact Person/Mortgage Broker at the Mortgage Company that is administering the home purchase transaction.
Mortgage Contact Phone	The phone number of the Contact Person/Mortgage Broker at the Mortgage Company.
Pre-Qualified	This field contains "Y" for Yes, or "N" for No, to identify if the Buyer is pre-qualified for a home mortgage by the mortgage company named in the Buyers file.
Contingency Sale	This field contains "Y" or "N" to identify if the Buyer has to sell his current home to buy the proposed house.
Escrow Company	The name of the Escrow Company identified by the Buyer that will be used in the home purchase transaction.
Comments	This field is open to comments added by Buyer and/or Sales Manger.
User ID	A unique alpha-numeric code that enables the user to access and use the software application.

TERM	DEFINITION
Security Level	A defined user status assigned to each user that details the access and rights to specific functions of the software application.
Status	A numeric label attached to each Buyer that identifies the current activity status. The status levels are: 1) Active – a file that is in the currently participating in the home design activity and home purchase process; 2) Inactive - a file that is not currently participating in the home design activity and home purchase process. A home purchase transaction was not completed. ; 3) Closed – a file that is not currently participating in the home design activity and home purchase process. A home purchase transaction was completed.
State	The standard US Post Office abbreviation of the state indicated in the address.
Status ID	A numeric label attached to each Buyer that identifies the current activity status. The status levels are: 1) Active – a file that is in the currently participating in the home design activity and home purchase process; 2) Inactive - a file that is not currently participating in the home design activity and home purchase process. A home purchase transaction was not completed. ;3) Closed – a file that is not currently participating in the home design activity and home purchase process. A home purchase transaction was completed.
Categories/Category ID	A unique alpha code that identifies the category of home upgrade options offered for sale by the builder. The categories are coded as: 1) Standard Options – options that are included by builder and selected by buyer in the home construction and base price, and 2) Custom Options – options that are included by builder at buyers request and specification at an additional cost to the base price of the home.
Lot ID	Each builder partitions the entire home-building property into smaller pieces of land identified as lots. The Lot ID is a unique alpha-numeric code that identifies the specific lot and/or property in the entire plan of lots in the named home-building community.
Lot ID	Each builder partitions the entire home-building property into smaller pieces of land identified as lots. The Lot ID is a unique alpha-numeric code that identifies the specific lot and/or property in the entire plan of lots in the named home-building community.

TERM	DEFINITION
Phase ID	Each builder partitions the entire home-building property into lots. After the lots are assigned a Lot ID, the builder then divides the lots into groups called phases. The phases identify a group of lots. The phases are usually assigned a numeric sequence identification code. Usually, the builder proceeds with the construction of the homes in an ascending numeric order of the phases. The Phase ID groups a series of lots to the appropriate phase of building as identified by the Builder.
Order Detail ID	A unique number assigned to the sales transaction which is automatically assigned by the application. This is used as a system tracking number and is not displayed to the user. The number is considered to be a unique transaction identifier.
Lot ID	Each builder partitions the entire home-building property into smaller pieces of land identified as lots. The Lot ID is a unique alpha-numeric code that identifies the specific lot and/or property in the entire plan of lots in the named home-building community.
Product ID	A unique alpha-numeric code that identifies the specific home upgrade options offered by the builder in the purchase of the home.
Section ID	A unique alpha-numeric code that defines the location of a specific section of the house floor plan image.
X	The horizontal axis of the image. One of two coordinates used to identify the location of the selected product icon.
Y	The vertical axis of the image. One of two coordinates used to identify the location of the selected product icon.
W	The unit of measurement used to identify the width of a Tool Box icon/object.
H	The unit of measurement used to identify the height of a Tool Box icon/object.
Comment	This identifies the field where the user can add an "Annotation" when placing a Tool Box icon/object on the home floor plan image.
Lot ID	Each builder partitions the entire home-building property into smaller pieces of land identified as lots. The Lot ID is a unique alpha-numeric code that identifies the specific lot and/or property in the entire plan of lots in the named home-building community.
Buyer ID	A unique alpha-numeric code that associates and assigns all applicable files to the Buyer. This association limits the Buyer access to ONLY the files that are assigned to the Buyer ID.
Order Date	This field identifies the date of the preliminary sales transaction.

TERM	DEFINITION
Required-by Date	This date indicates the date requested by buyer to finalize the sales transaction, i.e. closing date.
Completed-by Date	This date reflects the date the builder will have the home completed.
Phase ID	Each builder partitions the entire home-building property into lots. After the lots are assigned a Lot ID, the builder then divides the lots into groups called phases. The phases identify a group of lots and the phases are usually assigned a numeric sequence identification code. Usually, the builder proceeds with the construction of the homes in an ascending numeric order of the phases. The Phase ID groups a series of lots to the appropriate phase of building as identified by the Builder.
Phase Name	A unique alpha-numeric code that associates the name of phase with the Phase ID.
Status ID	A numeric label attached to each Buyer that identifies the current activity status. The status levels are: 1) Active – a file that is in the currently participating in the home design activity and home purchase process; 2) Inactive - a file that is not currently participating in the home design activity and home purchase process. A home purchase transaction was not completed. ;3) Closed – a file that is not currently participating in the home design activity and home purchase process. A home purchase transaction was completed.
Start Date	The date on which the construction of the identified phase of lots/homes will begin.
End Date	The date on which the construction of the identified phase of lots/homes will end.
Plan ID	A unique alpha-numeric code that identifies the home floor plan designs offered for sale by the builder.
Plan Base Price	The cost in U.S. dollars of the base price of the identified house plan.
Plan Name	A unique alpha-numeric code that associates the name of the home floor plan design with the Plan ID.
Product ID	A unique alpha-numeric code that identifies the home upgrade options offered for sale by the builder.
Prod_Type_Code	The name of the specific group of home upgrade options offered for sale by the builder, i.e. Electrical, Plumbing, Flooring, Appliances etc.
Product Name	The name of the specific item of home upgrade options offered for sale by the builder, i.e. recessed light, Moen Crystal Bathroom Faucets, Ceramic Tile, Whisper Quiet Dishwasher, etc.
Image Name	The name assigned to home upgrade product icons contained in the Tool Box.

TERM	DEFINITION
Category ID	A unique alpha code that identifies the category of home upgrade options offered for sale by the builder. The categories are coded as: 1) Standard Options – options that are included by builder and selected by buyer in the home construction and base price, and 2) Custom Options – options that are included by builder at buyers request and specification at an additional cost to the base price of the home.
Lead Time	Number of days after purchase order date that the builder will receive the home upgrade option commodity that the builder ordered from a vendor.
Unit Price	A numeric value expressed in US dollars that identifies the unit cost of a home upgrade option commodity.
Prod_Type_Code	The name of the specific group of home upgrade options offered for sale by the builder, i.e. Electrical, Plumbing, Flooring, Appliances etc.
Prod_Type_Name	The name of the specific item of home upgrade options offered for sale by the builder, i.e. recessed light, Moen Crystal Bathroom Faucets, Ceramic Tile, Whisper Quiet Dishwasher, etc.
Section ID	A unique alpha-numeric code that defines the location of a specific section of the house floor plan image.
Plan ID	A unique alpha-numeric code that identifies the home floor plan designs offered for sale by the builder.
Section Desc	The name of the location related to Section ID, i.e. bedroom, garage, first floor.
Section Image	The image of the location designated by the Section Desc.
Line Item	A unit used to measure each home upgrade option selected. Every product is considered to be 1 line item, even though it may be a duplicate product.
State	The standard US Post Office abbreviation of the state indicated in the address.
State_Name	The complete spelling of the state indicated in the address.
Status ID	A unique alpha-numeric code that identifies a status level.
Status/Name	A label selection assigned to a data element. The label selections are: 1) Active, 2) Inactive, or 3) Closed.

TERM	DEFINITION
Section ID	A unique alpha-numeric code that defines the location of a specific section of the house floor plan image.
Plan ID	A unique alpha-numeric code that identifies the home floor plan designs offered for sale by the builder.
Line Item	A unit used to measure each home upgrade option selected. Every unit of a product is considered to be 1 line item, even though it may be a duplicate product.
Product ID	A unique alpha-numeric code that identifies the home upgrade options offered for sale by the builder
X	The horizontal axis of the image. One of two coordinates used to identify the location of the selected product image.
Y	The vertical axis of the image. One of two coordinates used to identify the location of the selected product image.

The name of each table in FIG. 8 is underlined and the key element(s) (1) of each table are shown in bold. The symbols 1 or ∞ are used to indicate whether the relationship between tables is one to one or one to many. Thus, the line connecting the Lot T table with the Order T table has a 1 on the Lot T end and a 1 on the Order T end, thus indicating that there is a one-to-one relationship between the Lot T table and the Order T table. Each Lot T table entry corresponds to a single Order T table entry. By way of contrast, the line connecting the Lot T table to the Phase T table has an ∞ symbol on the Lot T end and a 1 on the Phase T end, thus indicating a many to one relationship between the Lot T table and Phase T table. Many Lot T table entries correspond to a single Phase T table entry.

The way the database is arranged, according to the invention, allows for the collection and processing of data for every aspect of a real estate transaction from phase and lot/cite selection through the construction and option selection process, all the way to total pricing and the acquisition and collection of data in a form suitable for linking to a mortgage application engine. Various aspects and portions of the database are accessible to a user or consumer by accessing those portions through an appropriate set of concatenated windows, menus and the like. Data for various aspects of the database contents is provided by those persons or organizations most closely associated with that portion.

For example, data regarding the phase, cite or lot plan portion would be data that was generated by an organization which was developing a specific location and which had defined the various development phases, lot locations and sizes, and home cites occupying those lots. Likewise, information relating to the internal construction and floor planning of a particular dwelling would be provided by a home builder or contractor in suitable form for display to a user. The home builder or contractor might also be the organization which provides information relating to specific upgrades and/or options available for each floor plan, and list them by type and/or manufacturer for ease of reference.

A sales staff might well be the entity responsible for acquiring and entering individual

personal data relating to a buyer whether prospective or actual. The type and extent of the data entered with respect to any particular buyer would depend on the particular requirements of a particular sales forces and would necessarily change depending on the type and amount of information that the sales force desire to acquire.

With regard to option and home pricing information, particularly when combined with a prospective buyers' personal information, it will be understood that the database contains sufficient information of the type typically required for mortgage applications, for example. In the case where a particular mortgage application format has been preestablished, this information may be easily acquired and rendered into the necessary formal for transmission and entry into an electronic mortgage application engine of the type which generates a mortgage application at a remote cite. The system according to the invention contains sufficient memory and processing power to enable various mortgage application formats to be stored in an associated database for easy access through the novel platform once all of the necessary phase, cite, lot, floor plan and upgrade decisions have been made by a particular buyer.

It will be further understood that each of the individual database portions, whether alone or linked to other portions, are able to provide a substantial amount of information suitable for analysis by the generating organization or entity. In the case of the sales force, buyer information, contained in a relational database can provide a significant amount of demographic data and information that can be rendered and analyzed in accordance with any one of a number of metrics that are well understood by those skilled in the field of demographic analysis. Likewise, the particular desirability of certain options and upgrades, or the particular placement of optionally positioned items, such as wall sockets, light switches, light fixtures, and the like, particularly when analyzed in position to a number of available home floor plans, can alert a builder or contractor to the particular desirability of a specific set of features and placements in particular model, that is repeated over-and-over. This might allow a builder or contractor to offer that particular feature or placement as a standard configuration in order to further reduce costs.

Particular characteristics of such a database, and the characteristics of a menu-driven graphical user interface are depicted in the operational step diagrams of FIGs. 11A through 11E. The exemplary embodiments shown in FIGs. 11A-E establish a particular roadmap through the database and provide for the inclusion of mapping rules, hierarchical structure definition and the logical allocation of particular forms of information (i.e., buyer information or site plans, floor plans and upgrade selections) to functional groups of invocation menus.

As will be well understood by one having skill in the art, such a relational database containing the various forms of information, in accordance with the invention, can be accessed and the information contained therein displayed in any form desired by a system developer. Information records contained within the relational database can be displayed in anyone of a number of concatenated or nested windows and be arranged into a form most suitable for access by a user. Display windows are generally constructed in accordance with a graphical user

interface (GUI) and might be linked or related on a one-to-many many-to-one or many-to-many relationship.

It should also be understood that statistical processing may be performed on the contents of the database in order to generate statistical reports on various linked relationships that are highly useful to the various different entities that must cooperatively participate in any real estate transaction. For example, statistical processing is able to develop relationships between a base home cost, a buyers income or education level and the types and amounts of upgrade options those buyers typically choose. Statistical information relating to financial transactions such as mortgage approval rates, and purely subjective criteria such as site desirability or water faucet color may now be acquired and analyzed.

Referring now to FIG. 9, is a flow chart showing an example of the operation of the present invention. The program is initialized or started, 100, and a user logs on 102. Logging on comprises having a user enter a user ID and, preferably, a password. If, 103, the user ID and/or password, indicate that the user has an administrative security level, then the user may proceed to a home page query screen which facilitates searching, 104, of the entire database with access to all records thereof.

If, 103, the user ID and/or password, indicate that the user does not have an administrative security level, then the user is taken to a home page query screen where the user can search, 105, the entire database with access only to the user's own files.

Whether the user has an administrative security level or not, the user may proceed to either the floor plan image design screen, 106, i.e., the floor plan and upgrade options web page of FIG. 6, or to the buyer information screen, 113, (FIG. 4).

If the user goes to the floor plan image design screen, 106, then the user may next select, 107, one or more tool box, 101, icons, 102, (FIG. 6) and then drag and drop the selected icon(s), 102, to the desired location on the floor plan, 100.

Each time a user drags and drops a selected icon, 102, the computer updates the image, 109, so as to show the icon, 102, at the desired location on the floor plan, 100, and also updates the pricing web page (FIG. 7) to indicate the item selected and its price, as well as the price of the building (home).

After all of the upgrade options have been selected, the file containing the locations of the dragged and dropped icons, 102, upon the floor plan, 100, is saved, 110, and pricing is calculated, 111, preferably simultaneously. The calculation, 111, of pricing typically involves the multiplication of the selected number of each upgrade option times the price of each upgrade option. Calculation, 111, also preferably includes the determination of a total, so that the purchaser knows the total cost for all upgrades. Alternatively, all pricing calculations may be updated each time a new upgrade option is selected.

The floor plan, 100, having the locations of desired home upgrades indicated thereon, may be viewed or printed, 112. Similarly, the inventory of FIG. 7 may likewise be viewed or printed,

112.

The process of displaying the floor plan image design screen, 106, and selecting, 107, home upgrade options, as well as the associated image updating, 109, file saving, 110, price calculating, 111, and image printing, 112, may be repeated as necessary, so as to provide a plurality of alternative design schemes for a given home purchaser.

When the buyer information screen, 113, (FIG.) is displayed, then the user is given an opportunity to enter data to update, 114, the purchaser's buyer information record. After saving, 115, the file, the user may then view or print, 116, the buyer information, as desired.

FIG. 10 shows an example of a flow chart of the system administration. After the system is started, 200, then a user logs on, 201. If the user does not have security level administrative access, 202, then the user is required to exit, 235, and the program stops, 237.

However, if the user does have security level administrative access, 202, then the user ID and/or password are checked to see whether the user has Admin Level #1 or Admin Level #2 access, 203. If the user has both Admin Level #1 and Admin Level #2 access, then the user may select Security Level Admin #1 and Admin Level #2, 203. After selecting Security Level Admin #1 and Admin #2, then the user is provided access to the pricing table, 204, where the user may update, 206, the pricing table and save, 207, the updated pricing table data. The pricing table may be viewed and/or printed, 208, as desired. The pricing table contains the unit cost for each available upgrade option.

Having both the Level Admin #1 and Level Admin #2 also provides access to the customer information table, 209, from which the user may update, 210, the customer information table, save the updated customer information table, 211, and view and/or print, 212, the customer information table.

If the user has both Level Admin #1 and Level Admin #2, then the user may also access the report menu option, 213, select, 214, a report to printed, and print, 216, the selected report. The reports are preferably pre-defined and may contain any desired information from the database.

If, the user has Security Level Admin #2 (Master Security), then the user is provided access to the lot maintenance table, 219, tool box icon maintenance table, 224, and the security table 228.

Accessing the lot maintenance table, 219, allows a user to update, 220, the lot maintenance table via scanning of floor plans. The user may also delete any floor plans which are no longer required.

The user may assign, 221, a desired image to a lot ID and/or update or modify any previously assigned images. The updates may be saved, 222, and also may be viewed or printed, 223, as desired.

After entering the tool box icon maintenance table, 224, a user may add or delete tool box icons and assign, 225, product names to each icon, as desired. Updates to the tool box icon

maintenance table are saved, 226, and may then be viewed or printed 227, as desired.

After entering the security table, 228, a user may add or delete, 229, names to a table and assign security levels to each name. The updates are then saved, 231, and may be viewed or printed, 232, as desired.

According to the present invention, a convenient, easy to use graphical method is provided for indicating which upgrade options are selected and where upgrade options are to be located, as well as the cost of the upgrade options selection and cost of the building. Copies of a floor plan showing the desired locations of the upgrade options and/or an inventory of the upgrade options may be printed, as desired. The present invention allows a buyer to define a custom design, i.e., a selection of upgrade options, which is within the purchaser's budget. The use of a web page to perform the selection of home upgrade options allows a user to perform this task from any desired location, and to communicate with other locations via an intranet or via the Internet.

The present invention mitigates the need for a sales person to participate in the upgrade option selection process. The clarity provided by the graphical representation of the icons, 102, on the floor plan, 100, (FIG. 6) result in less rework, which, of course, is costly for the seller. Less supervision is necessary for subcontractors who install the desired upgrades, since the desired locations of the upgrades are clearly indicated upon the floor plan, 110.

The present invention finds particular application in planned communities and housing developments, particularly where builders provide a limited number of home designs, e.g., typically approximately 3 to 10 different floor plans, from which a buyer may choose. The limited number of home designs tends to enhance the desire of home purchasers to customize their homes.

It is understood that the exemplary system for specifying home upgrade options described herein and shown in the drawings represents only a presently preferred embodiment of the invention. Indeed, various modifications and additions may be made without departing from the spirit and scope of the invention. For example, various different methods for data entry and/or positioning the selected icons upon the floor plan are contemplated. Thus, the user may use voice recognition for data entry and/or to position the icons on the floor plan as desired. Alternatively, the user may select from a plurality of different standard positions for each upgrade option utilizing a menu. These and other modifications and additions may be obvious to those skilled in the art and may be implemented to adapt the present invention for a variety of different of uses and the scope of the invention should be limited by the appended claims, wherein

what is claimed is:

1. A method for specifying upgrade options for a new building comprising the steps of:

scanning a floor plan of the building into a first computer to form a scanned floor plan;

displaying the scanned floor plan upon the monitor of a second computer while simultaneously displaying a plurality of icons representative of a corresponding plurality of different upgrade options upon the monitor of the second computer; and

selecting at least one of the available upgrade options and designating where the upgrade option is to be placed in the building by placing the icons at corresponding locations upon the displayed floor plan.

2. The method as recited in Claim 1, wherein the first computer and the second computer are the same computer.

3. The method as recited in Claim 1, wherein the second computer comprises at least one of a laptop computer, a palm computer, a pen base computer, a desk top computer and any wireless network computer.

4. The method as recited in Claim 1, wherein the step of displaying a plurality of icons comprises displaying a plurality of icons in a toolbox and the icons are placed by voice recognition and/or by dragging and dropping icons.

5. The method as recited in Claim 1, further comprising the step of adding a text comment to a dropped icon.

6. The method as recited in Claim 1, further comprising the step of compiling a list of selected upgrade options.

7. The method as recited in Claim 1, further comprising the step of compiling a list of selected upgrade options and prices for the selected upgrade options.

8. The method as recited in Claim 1, further comprising the step of calculating a total price for the selected upgrade options.

9. The method as recited in Claim 1, further comprising the step of calculating a total price for the building, including the upgrade options.

10. The method as recited in Claim 1, further comprising the step of forming a database of purchaser information.

11. The method as recited in Claim 1, further comprising the step of forming a database of purchaser information, the database comprising the name of the purchaser and the upgrade options purchased by the purchaser.

12. The method as recited in Claim 1, wherein the step of displaying a plurality of icons comprises displaying only those icons which are representative of upgrade options that are available for the displayed floor plan.

13. The method as recited in Claim 1, wherein the floor plan and the icons are displayed as part of a web page.

14. The method as recited in claim 1, wherein the building comprises a home.

15. A system for specifying upgrade options for a building, the system comprising:
a scanner for scanning floor plans;
a computer in communication with the scanner, the computer having a monitor; and
wherein the computer is configured to display a plurality of icons representative of upgrade options while simultaneously displaying a scanned floor plan, the computer being further configured to allow selected icons to be placed at desired locations upon the displayed floor plan.

16. The system for specifying upgrade options for a new building as recited in Claim 15, further comprising a plurality of digitized floor plans stored for use by the computer.

17. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer comprises at least one of a laptop computer, a palm computer, a pen base computer, a desk top computer and any wireless network computer.

18. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to display the icons in a toolbox, and to place the icons by voice recognition and/or by dragging and dropping icons.

19. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to facilitate adding a text comment to an icon.

20. The system for specifying upgrade options for a new building as recited in Claim

15 wherein the computer is configured to facilitate compiling of a list of selected upgrade options.

21. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to facilitate compiling a list of selected upgrade options and prices for the selected upgrade options.

22. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to calculate a total price for the selected upgrade options.

23. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to calculate a total price for the building, including the upgrade options.

24. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to form a database of purchaser information.

25. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to form a database of purchaser information, the database comprising the name of the purchaser and the upgrade options purchased by the purchaser.

26. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to display only those icons which are representative of upgrade options that are available for the displayed floor plan.

27. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to display the floor plan and the icons as part of a web page.

28. The system for specifying upgrade options for a new building as recited in claim 15, wherein the new building comprises a home.

29. A system for specifying upgrade options for a new building, the system comprising:

a plurality of digitized floor plans;

a computer having a monitor for displaying the floor plans; and

wherein the computer is configured to display a plurality of icons representative of upgrade options while simultaneously displaying a selected one of the digitized floor plans, the

computer being further configured to allow selected icons to be placed at desired locations upon the scanned floor plan, such as by voice recognition and/or by dragging and dropping icons.

30. The system for specifying upgrade options for a new building as recited in Claim 29, wherein the digitized floor plans comprise scanned floor plans.

31. The system for specifying upgrade options as recited in claim 29, wherein the computer is configured to display only those icons which represent upgrades that are available for a floor plan which is currently being displayed.

32. The system for specifying upgrade option as recited in claim 29, further comprising a toolbox within which the icons are displayed upon the monitor.

33. The system for specifying upgrade options as recited in claim 29, wherein the computer comprises at least one of a laptop computer, a palm computer, a desk top computer and any wireless network computer.

34. The system for specifying upgrade options as recited in claim 29, wherein the computer is configured to facilitate adding a text comment to an icon.

35. The system for specifying upgrade options as recited in claim 29, wherein the computer is configured to compile a list of selected upgrade options.

36. The system for specifying upgrade options as recited in claim 29, wherein the computer is configured to compile a list of selected upgrade options and prices for the selected upgrade options.

37. The system for specifying upgrade options as recited in claim 29, wherein the computer is configured to calculate a total price for the selected upgrade options.

38. The system for specifying upgrade options as recited in claim 29, wherein the computer is configured to calculate a total price for the building, including the upgrade options.

39. The system for specifying upgrade options as recited in claim 29, wherein the computer is configured to form a database of purchaser information.

40. The system for specifying upgrade options as recited in claim 29, wherein the

computer is configured to form a database of purchaser information, the database comprising the name of the purchaser and the upgrade options purchased by the purchaser.

41. The system for specifying upgrade options as recited in claim 29, wherein the floor plan and the icons are displayed as part of a web page.

42. The system for specifying upgrade options as recited in claim 29, wherein the new building comprises a home.

43. A computer usable medium having computer readable program code embodied therein, the computer readable program code being executable to perform the steps of:

displaying a floor plan upon a monitor;

displaying a plurality of icons representative of a corresponding plurality of upgrade options upon the monitor, the icons being displayed simultaneously with the floor plan; and

facilitating selection of desired upgrade options and facilitating designation of where the selected upgrade options are to be placed in a building by placing the icons at corresponding locations upon the displayed floor plan, such as by voice recognition and/or by dragging and dropping icons.

44. The computer usable media as recited in Claim 43, wherein the step of displaying a floor plan comprises displaying a scanned image of a floor plan.

45. The computer usable media as recited in Claim 43, wherein the computer readable program code is further executable to facilitating scanning of a floor plan.

46. The computer usable media as recited in Claim 43, wherein the step of displaying a plurality of icons comprises displaying a plurality of icons in a toolbox.

47. The computer usable media as recited in Claim 43, wherein the computer readable program code is further executable to add a text comment to an icon.

48. The computer usable media as recited in Claim 43, wherein the computer readable program code is further executable to compile a list of selected upgrade options.

49. The computer usable media as recited in Claim 43, wherein the computer readable program code is further executable to compile a list of selected upgrade options prices for the selected upgrade options.

50. The computer usable media as recited in Claim 43, wherein the computer readable program code is further executable to calculate a total price for the selected upgrade options.

51. The computer usable media as recited in Claim 43, wherein the computer readable program code is further executable to calculate a total price for the building, including selected upgrade options.

52. The computer usable media as recited in Claim 43, wherein the computer readable program code is further executable to form a database of purchaser information.

53. The computer usable media as recited in Claim 43, wherein the computer readable program code is further executable to form a database of purchaser information, the database comprising the name of the purchaser and the upgrade options purchased by the purchaser.

54. The computer usable media as recited in Claim 43, wherein the step of displaying a plurality of options comprises displaying only those options which are available for the displayed floor plan.

55. The computer usable media as recited in Claim 43, wherein the steps of displaying the floor plan and displaying the icons comprise displaying a web page.

56. The computer usable media as recited in claim 43, wherein the building comprises a home.

56. A information management method, performed by a computer hosted application program, which facilitates a plurality of business processes associated with a real estate transaction, comprising the steps of:

providing information relating to at least a graphical definition of a real estate entity in a database;

providing information relating to demographic indicia of a buyer in said database;

providing information relating to a plurality of customization options available for said real estate entity, in said database;

linking the graphical definition information with the buyer demographic indicia and the customization options;

displaying the graphical definition;

choosing customization options from the database; and

associating the customization options with locations defined within the graphical definition to thereby define a customized graphical definition.

57. The information management method according to claim 56, further comprising:

associating a cost index with a base version of the real estate entity;

associating a cost index with each respective one of the plurality of customization options; and

summing the cost indexes of the customization options chosen from the database with the cost index of the real estate entity.

58. The information management method according to claim 57, further comprising:

formatting the summed cost indices in accordance with a financial transaction software overlay; and

providing the formatted summed cost indices to a financial institution.

59. The information management method according to claim 57, wherein the database is a relational database and wherein the displaying the graphical definition step and the choosing customization options step is performed by a user through a graphical user interface.

60. The information management method according to claim 59, further comprising:

storing the customized graphical definition;

forwarding a copy of the stored graphical definition to a construction entity to thereby provide a customized construction plan containing customization options selected and located by a user.

61. The information management method according to claim 59, further comprising:

providing a set of statistical analysis software overlay applications;

performing statistical analysis on database elements in accordance with the set of statistical software overlay applications; and

generating a set of statistical analysis reports linking at least demographic indicia with customized graphical definitions and cost indicia.

62. An information management system, of the type including a computer hosted application program, which facilitates a plurality of business processes associated with a real estate transaction, the system comprising:

at least a computer, having a graphical display and a memory storage area;

an application program including a relational database;

a first database portion including at least a graphical definition of a real estate entity;

a second database portion including demographic indicia related to individual ones of a plurality of buyers;

a third database portion including information relating to a plurality of customization options available for said real estate entity;

a relation definition linking graphical definition information with the buyer demographic indicia and the customization options;

a graphical user interface including a graphical display capability; and

wherein a user chooses customization options from the database and associates the customization options with locations defined within the graphical definition to thereby define a customized graphical definition.

63. The information management system according to claim 62, further comprising:

a first cost index associated with a base version of the real estate entity;

a multiplicity of cost indexes, each associated with a respective one of the plurality of customization options; and

a summing subroutine for summing the cost indexes of the customization options chosen from the database with the cost index of the real estate entity.

64. The information management system according to claim 63, further comprising:

a financial transaction software overlay, defined by a financial institution; and

a formatting engine, the engine formatting the summed cost indices in accordance with the financial transaction software overlay, wherein the formatted summed cost indices are transmitted to the financial institution defining the software overlay.

65. The information management system according to claim 63, further comprising a set of statistical analysis software overlay applications, the applications, wherein the applications generate a set of statistical analysis reports linking at least demographic indicia with customized graphical definitions and cost indicia.

AMENDED CLAIMS

[received by the International Bureau on 24 August 2000 (24.08.00);
original claims 1,15,29 and 43 amended; remaining claims unchanged (5 pages)]

1. A method for specifying upgrade options for a new building comprising the steps of:

scanning a floor plan of the building into a first computer to form a scanned floor plan;

displaying the scanned floor plan upon the monitor of a second computer while simultaneously displaying a plurality of icons representative of a corresponding plurality of different upgrade options upon the monitor of the second computer; and

selecting at least one of the available upgrade options and designating where the upgrade option is to be placed in the building by placing the icons at corresponding locations upon the displayed floor plan, and wherein the floor plan is automatically updated to incorporate the selected upgrade options..

2. The method as recited in Claim 1, wherein the first computer and the second computer are the same computer.

3. The method as recited in Claim 1, wherein the second computer comprises at least one of a laptop computer, a palm computer, a pen base computer, a desk top computer and any wireless network computer.

4. The method as recited in Claim 1, wherein the step of displaying a plurality of icons comprises displaying a plurality of icons in a toolbox and the icons are placed by voice recognition and/or by dragging and dropping icons.

5. The method as recited in Claim 1, further comprising the step of adding a text comment to a dropped icon.

6. The method as recited in Claim 1, further comprising the step of compiling a list of selected upgrade options.

7. The method as recited in Claim 1, further comprising the step of compiling a list of selected upgrade options and prices for the selected upgrade options.

8. The method as recited in Claim 1, further comprising the step of calculating a total price for the selected upgrade options.

9. The method as recited in Claim 1, further comprising the step of calculating a total price for the building, including the upgrade options.

10. The method as recited in Claim 1, further comprising the step of forming a database of purchaser information.

11. The method as recited in Claim 1, further comprising the step of forming a database of purchaser information, the database comprising the name of the purchaser and the upgrade options purchased by the purchaser.

12. The method as recited in Claim 1, wherein the step of displaying a plurality of icons comprises displaying only those icons which are representative of upgrade options that are available for the displayed floor plan.

13. The method as recited in Claim 1, wherein the floor plan and the icons are displayed as part of a web page.

14. The method as recited in claim 1, wherein the building comprises a home.

15. A system for specifying upgrade options for a building, the system comprising:

a scanner for scanning floor plans;

a computer in communication with the scanner, the computer having a monitor; and

wherein the computer is configured to display a plurality of icons representative of upgrade options while simultaneously displaying a scanned floor plan, the computer being further configured to allow selected icons to be placed at desired locations upon the displayed floor plan, and wherein the floor plan is automatically updated to incorporate the upgrade options represented by the selected icons.

16. The system for specifying upgrade options for a new building as recited in Claim 15, further comprising a plurality of digitized floor plans stored for use by the computer.

17. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer comprises at least one of a laptop computer, a palm computer, a pen base computer, a desk top computer and any wireless network computer.

18. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to display the icons in a toolbox, and to place the icons by voice recognition and/or by dragging and dropping icons.

19. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to facilitate adding a text comment to an icon.

20. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to facilitate compiling of a list of selected upgrade options.

21. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to facilitate compiling of a list of selected upgrade options and prices for the selected upgrade options.

22. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to calculate a total price for the selected upgrade options.

23. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to calculate a total price for the building, including the upgrade options.

24. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to form a database of purchaser information.

25. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to form a database of purchaser information, the database comprising the name of the purchaser and the upgrade options purchased by the purchaser.

26. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to display only those icons which are representative of upgrade options that are available for the displayed floor plan.

27. The system for specifying upgrade options for a new building as recited in Claim 15, wherein the computer is configured to display the floor plan and the icons as part of a web page.

28. A system for specifying upgrade options for a new building as recited in claim 15, wherein the new building comprises a home.

29. A system for specifying upgrade options for a new building, the system comprising:

a plurality of digitized floor plans;

a computer having a monitor for displaying the floor plans; and

wherein the computer is configured to display a plurality of icons representative of upgrade options while simultaneously displaying a selected one of the digitized floor plans, the

computer being further configured to allow selected icons to be placed at desired locations upon the scanned floor plan, such as by voice recognition and/or by dragging and dropping icons, and wherein the selected one of the digitized floor plans is automatically updated to incorporate upgrade options represented by the selected icons.

30. The system for specifying upgrade options for a new building as recited in Claim 29, wherein the digitized floor plans comprise scanned floor plans.

31. The system for specifying upgrade options as recited in claim 29, wherein the computer is configured to display only those icons which represent upgrades that are available for a floor plan which is currently being displayed.

32. The system for specifying upgrade option as recited in claim 29, further comprising a toolbox within which the icons are displayed upon the monitor.

33. The system for specifying upgrade options as recited in claim 29, wherein the computer comprises at least one of a laptop computer, a palm computer, a desk top computer and any wireless network computer.

34. The system for specifying upgrade options as recited in claim 29, wherein the computer is configured to facilitate adding a text comment to an icon.

35. The system for specifying upgrade options as recited in claim 29, wherein the computer is configured to compile a list of selected upgrade options.

36. The system for specifying upgrade options as recited in claim 29, wherein the computer is configured to compile a list of selected upgrade options and prices for the selected upgrade options.

37. The system for specifying upgrade options as recited in claim 29, wherein the computer is configured to calculate a total price for the selected upgrade options.

38. The system for specifying upgrade options as recited in claim 29, wherein the computer is configured to calculate a total price for the building, including the upgrade options.

39. The system for specifying upgrade options as recited in claim 29, wherein the computer is configured to form a database of purchaser information.

40. The system for specifying upgrade options as recited in claim 29, wherein the computer is configured to form a database of purchaser information, the database comprising the name of the purchaser and the upgrade options purchased by the purchaser.

41. The system for specifying upgrade options as recited in claim 29, wherein the floor plan and the icons are displayed as part of a web page.

42. The system for specifying upgrade options as recited in claim 29, wherein the new building comprises a home.

43. A computer usable medium having computer readable program code embodied therein, the computer readable program code being executable to perform the steps of:

displaying a floor plan upon a monitor;

displaying a plurality of icons representative of a corresponding plurality of upgrade options upon the monitor, the icons being displayed simultaneously with the floor plan; and

facilitating selection of desired upgrade options and facilitating designation of where the selected upgrade options are to be placed in a building by placing the icons at corresponding locations upon the displayed floor plan, such as by voice recognition and/or by dragging and dropping icons, wherein the floor plan is automatically updated to incorporate the desired upgrade options.

44. The computer usable media as recited in Claim 43, wherein the step of displaying a floor plan comprises displaying a scanned image of a floor plan.

45. The computer usable media as recited in Claim 43, wherein the computer readable program code is further executable to facilitating scanning of a floor plan.

46. The computer usable media as recited in Claim 43, wherein the step of displaying a plurality of icons comprises displaying a plurality of icons in a toolbox.

47. The computer usable media as recited in Claim 43, wherein the computer readable program code is further executable to add a text comment to an icon.

48. The computer usable media as recited in Claim 43, wherein the computer readable program code is further executable to compile a list of selected upgrade options.

49. The computer usable media as recited in Claim 43, wherein the computer readable program code is further executable to compile a list of selected upgrade options prices for the selected upgrade options.

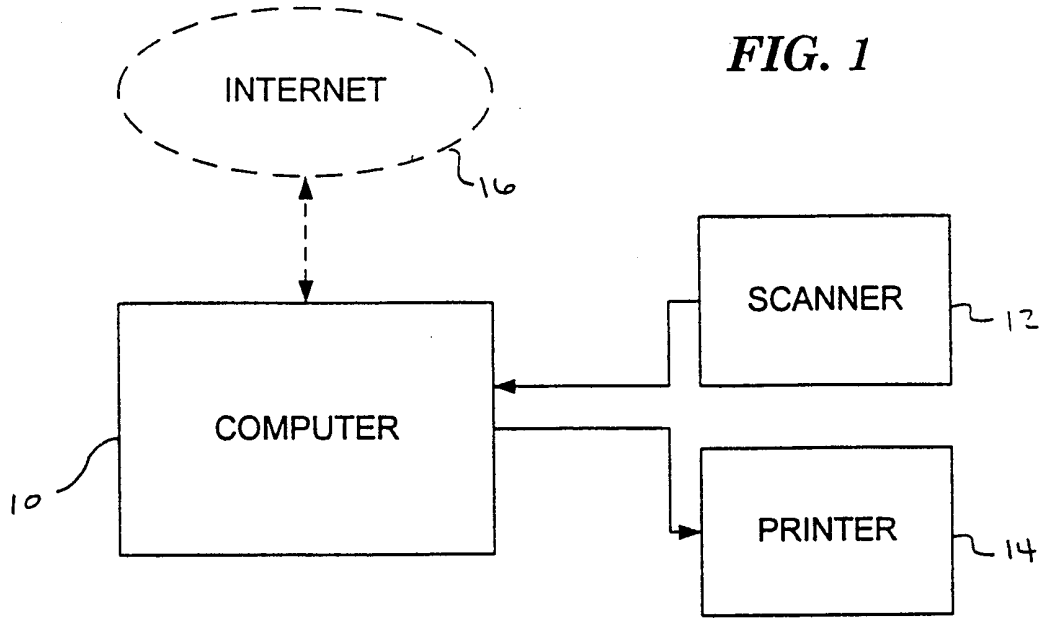

INTERNET
16
SCANNER
12
COMPUTER
10
PRINTER
14

FIG. 1

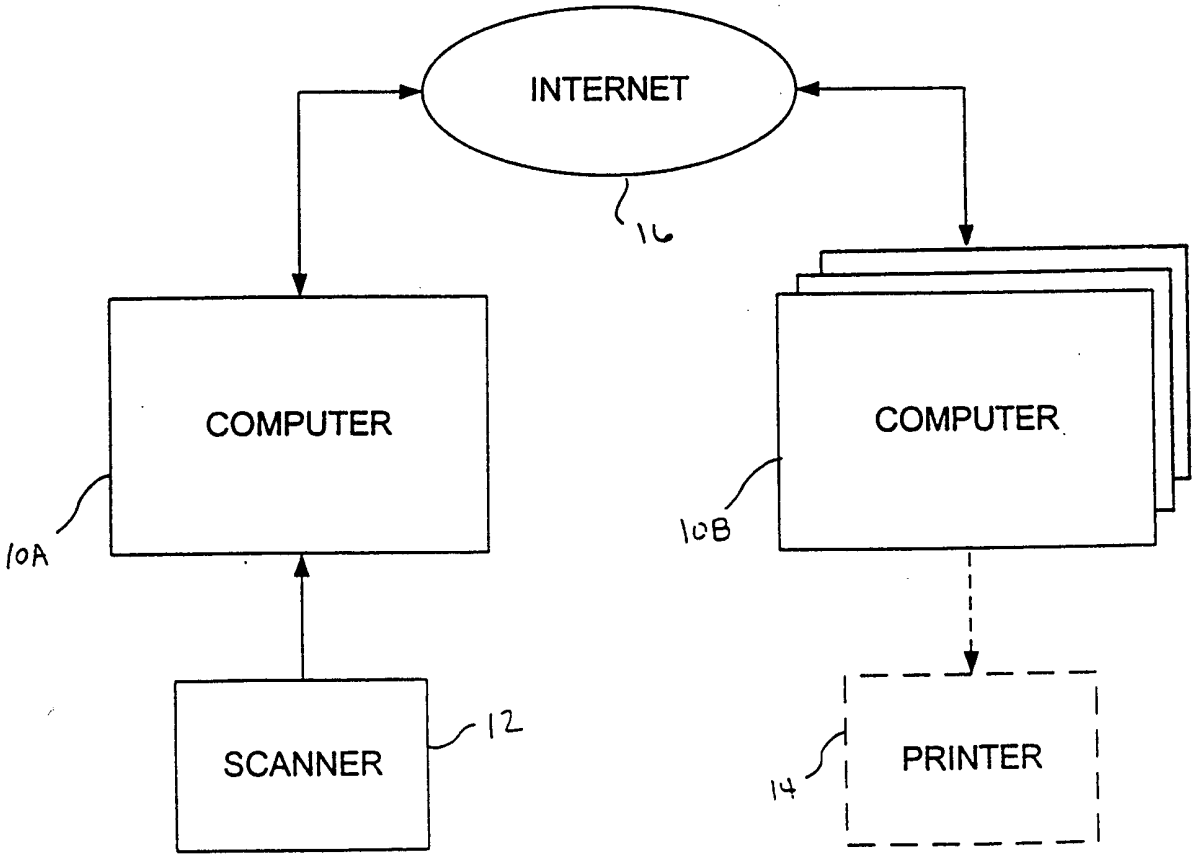

INTERNET
16
COMPUTER
10A
COMPUTER
10B
SCANNER
12
PRINTER
14

FIG. 2

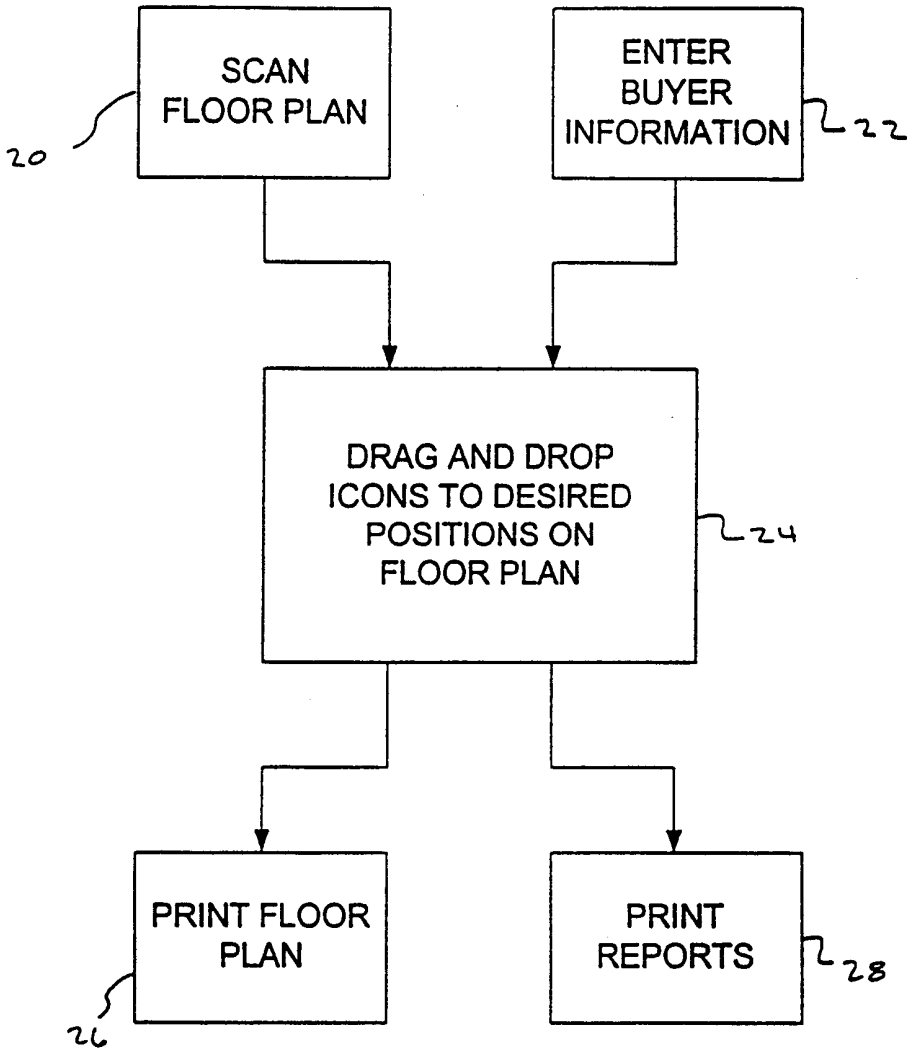

SCAN FLOOR PLAN
20
ENTER BUYER INFORMATION
22
DRAG AND DROP ICONS TO DESIRED POSITIONS ON FLOOR PLAN
24
PRINT FLOOR PLAN
26
PRINT REPORTS
28

FIG. 3

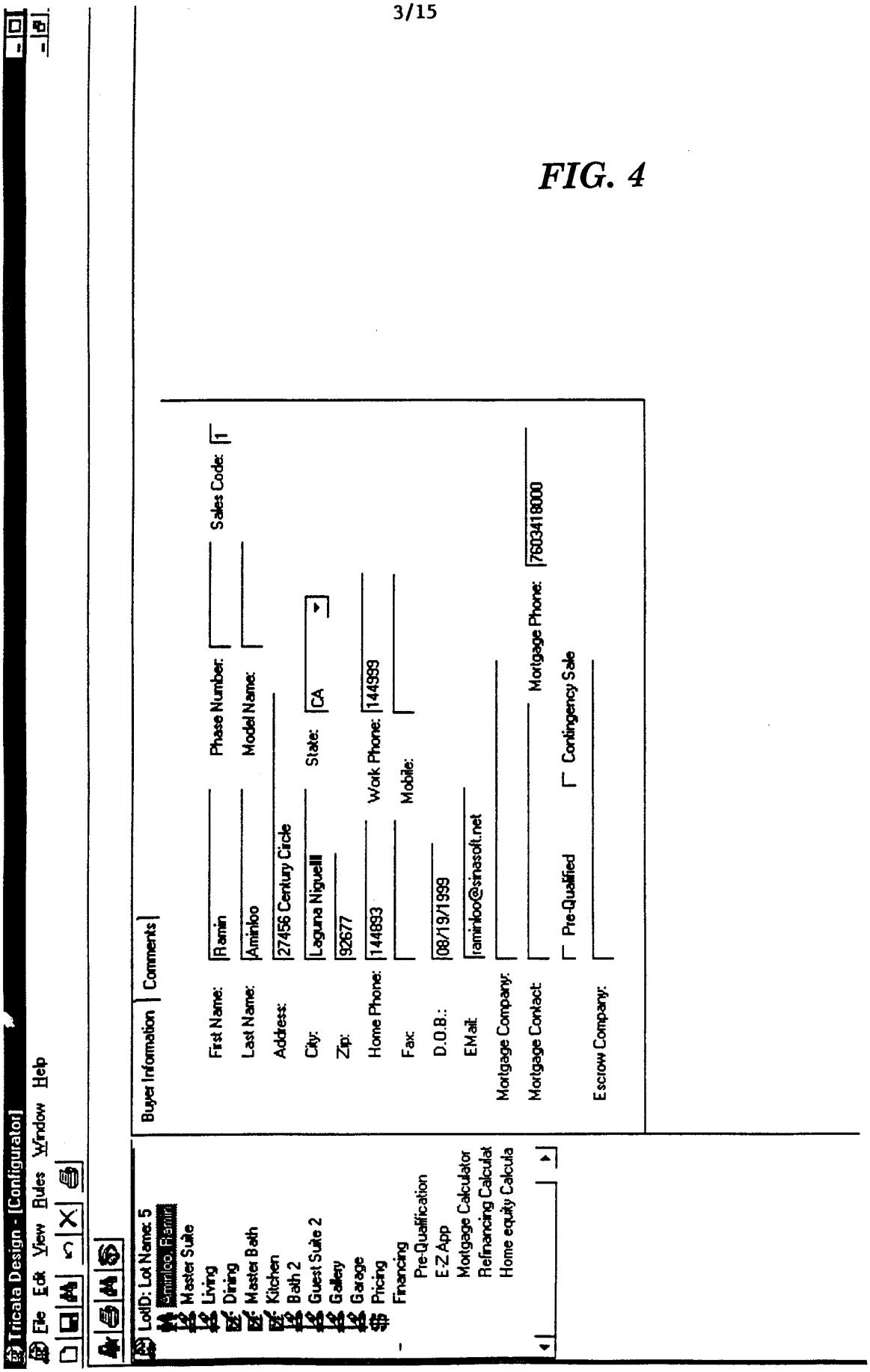

Tricata Design - [Configurator]
File Edit View Rules Window Help
LotID: Lot Name: 5
Aminloo, Ramin
Master Suite
Living
Dining
Master Bath
Kitchen
Bath 2
Guest Suite 2
Gallery
Garage
Pricing
Financing
Pre-Qualification
E-Z App
Mortgage Calculator
Refinancing Calculat
Home equity Calcula
Buyer Information
Comments
First Name: Ramin
Phase Number:
Sales Code:
Last Name: Aminloo
Model Name:
Address: 27456 Century Circle
City: Laguna Niguelll
State: CA
Zip: 92677
Home Phone: 144893
Work Phone: 144893
Fax:
Mobile:
D.O.B.: 08/19/1999
EMail: raminloo@sinasoft.net
Mortgage Company:
Mortgage Contact:
Mortgage Phone: 7603418000
Pre-Qualified
Contingency Sale
Escrow Company:

FIG. 4

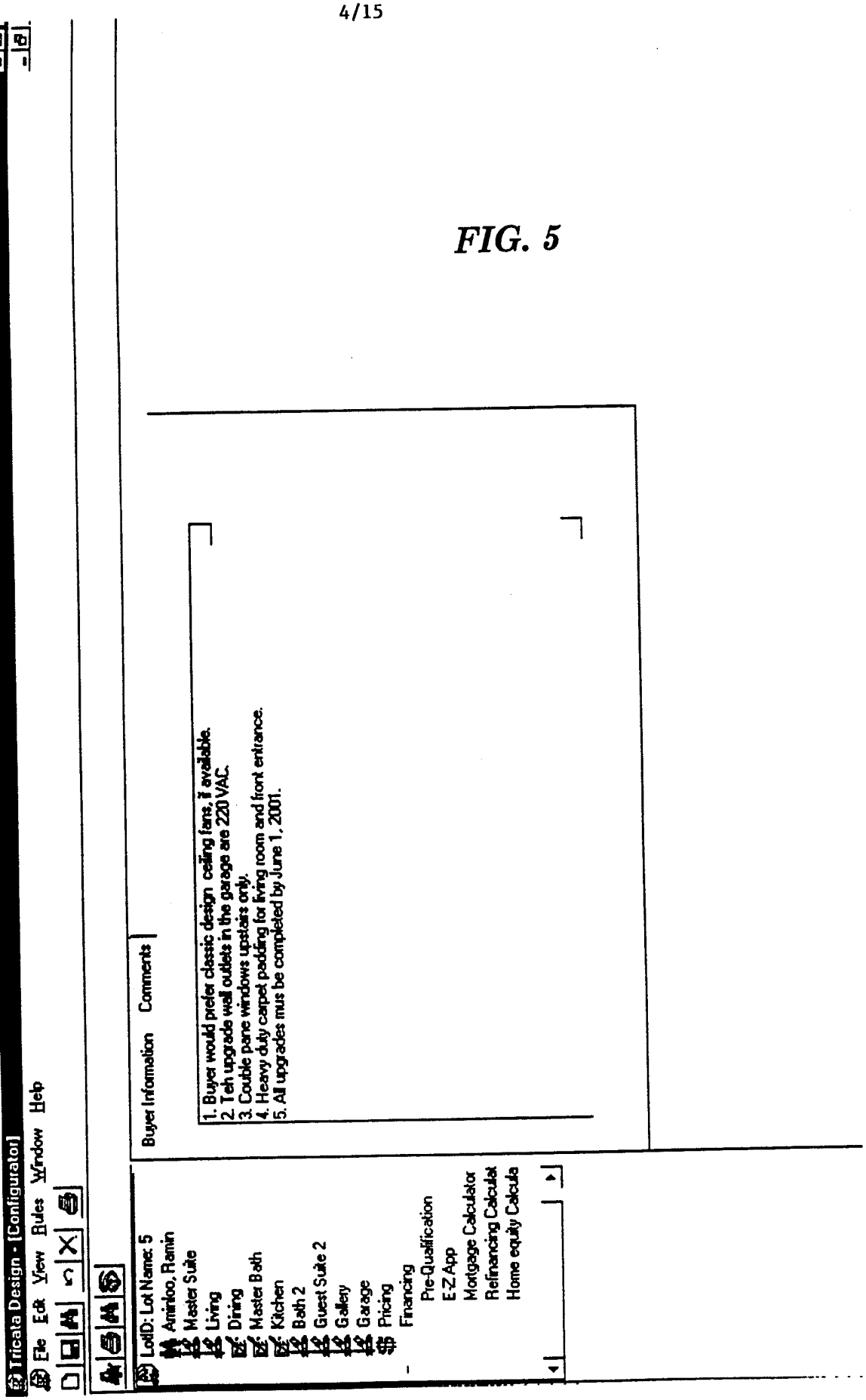

Tricata Design - [Configurator]
File Edit View Rules Window Help
LotID: Lot Name: 5
Aminloo, Ramin
Master Suite
Living
Dining
Master Bath
Kitchen
Bath 2
Guest Suite 2
Galley
Garage
Pricing
Financing
Pre-Qualification
E-Z App
Mortgage Calculator
Refinancing Calculat
Home equity Calcula
Buyer Information
Comments
1. Buyer would prefer classic design ceiling fans, if available.
2. Teh upgrade wal outlets in the garage are 220 VAC.
3. Couble pane windows upstairs only.
4. Heavy duty carpet padding for living room and front entrance.
5. All upgrades mus be completed by June 1, 2001.

FIG. 5

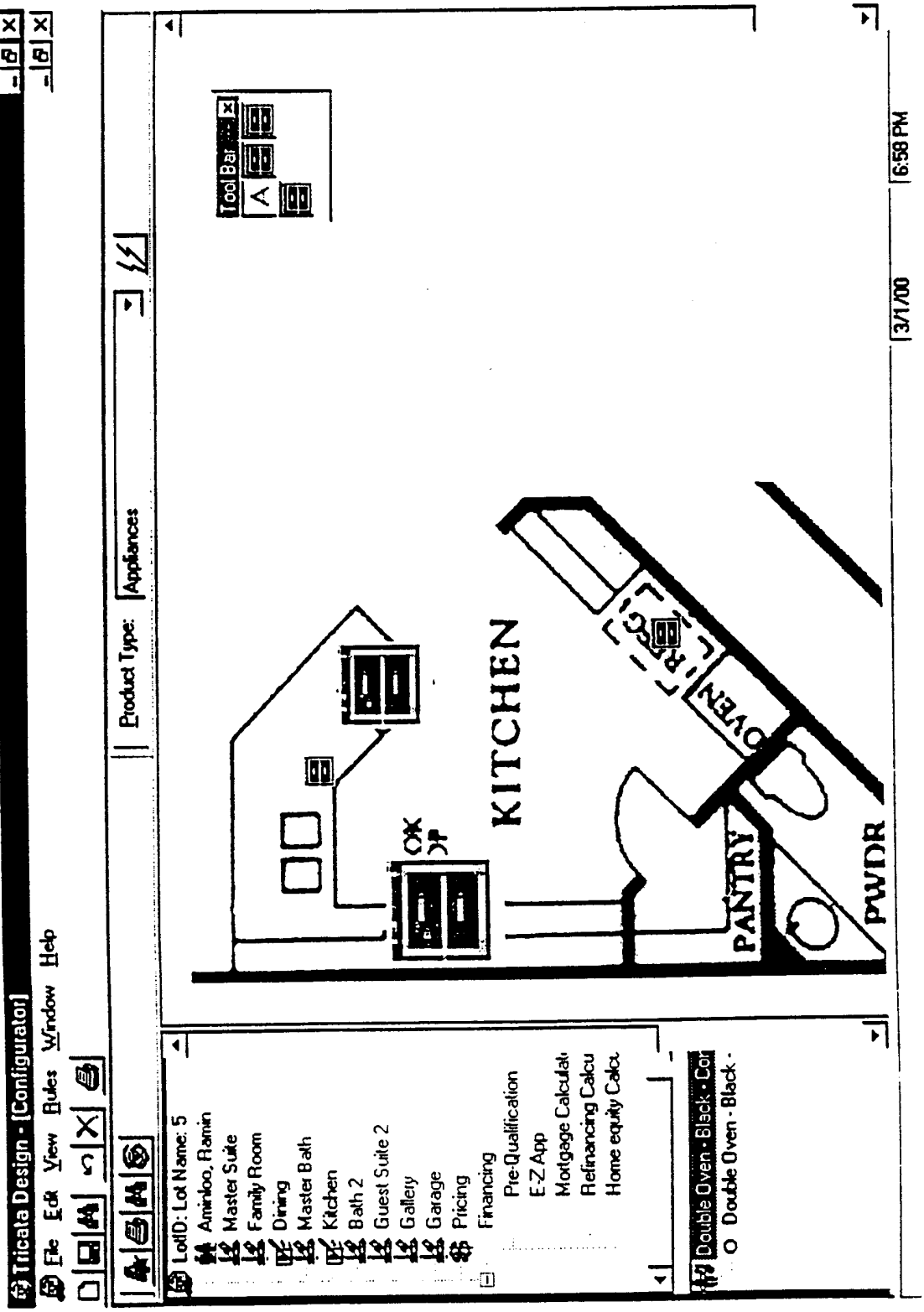

Tricata Design - [Configurator]
File Edit View Rules Window Help
Product Type: Appliances
Tool Bar
LotID: Lot Name: 5
Aminoo, Ramin
Master Suite
Family Room
Dining
Master Bath
Kitchen
Bath 2
Guest Suite 2
Galley
Garage
Pricing
Financing
Pre-Qualification
E-Z App
Mortgage Calculat
Refinancing Calcu
Home equity Calcu
Double Oven - Black - Cor
Double Oven - Black -
KITCHEN
OVEN
REFG
PANTRY
PWDR
3/1/00
6:58 PM

FIG. 6A

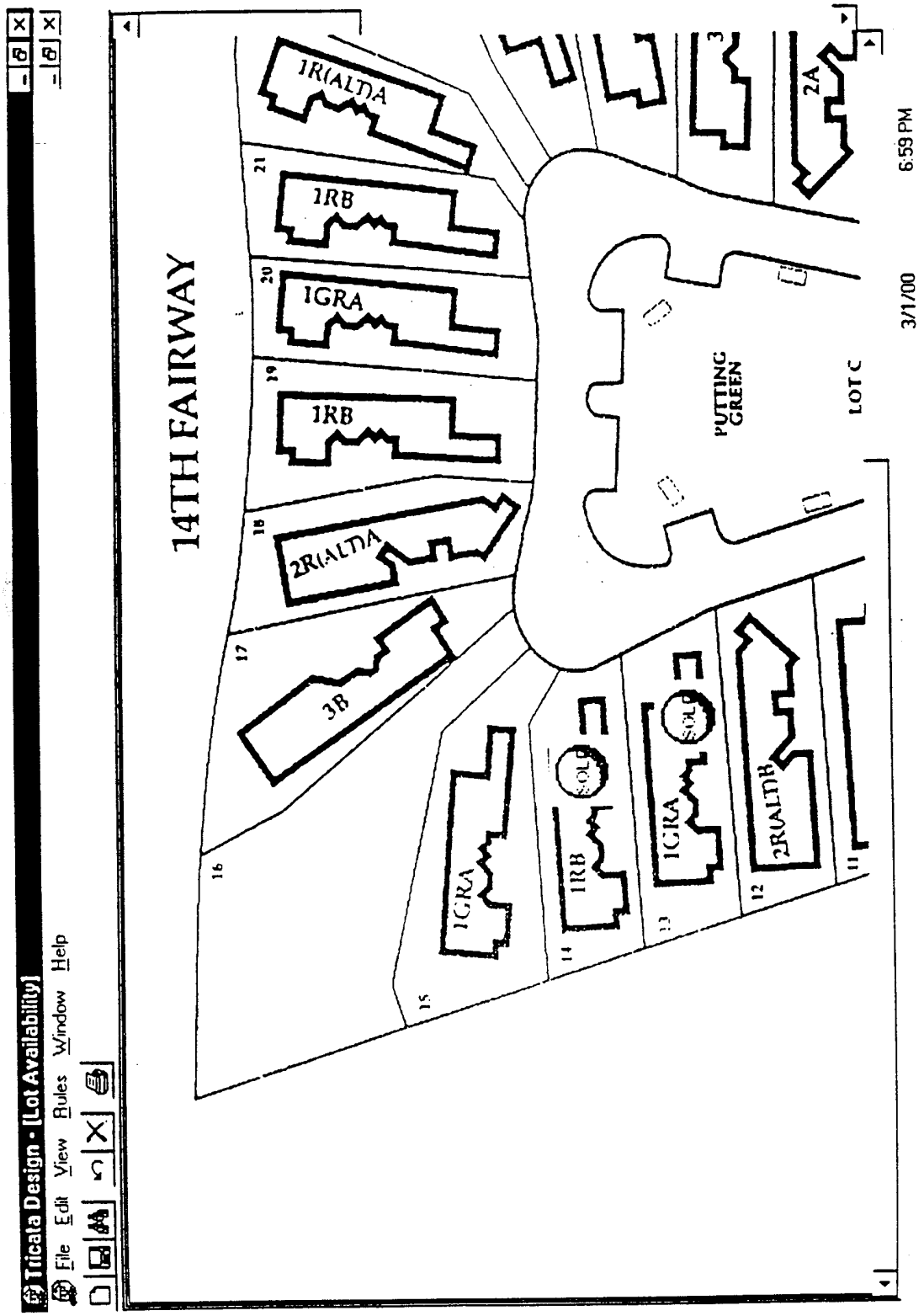
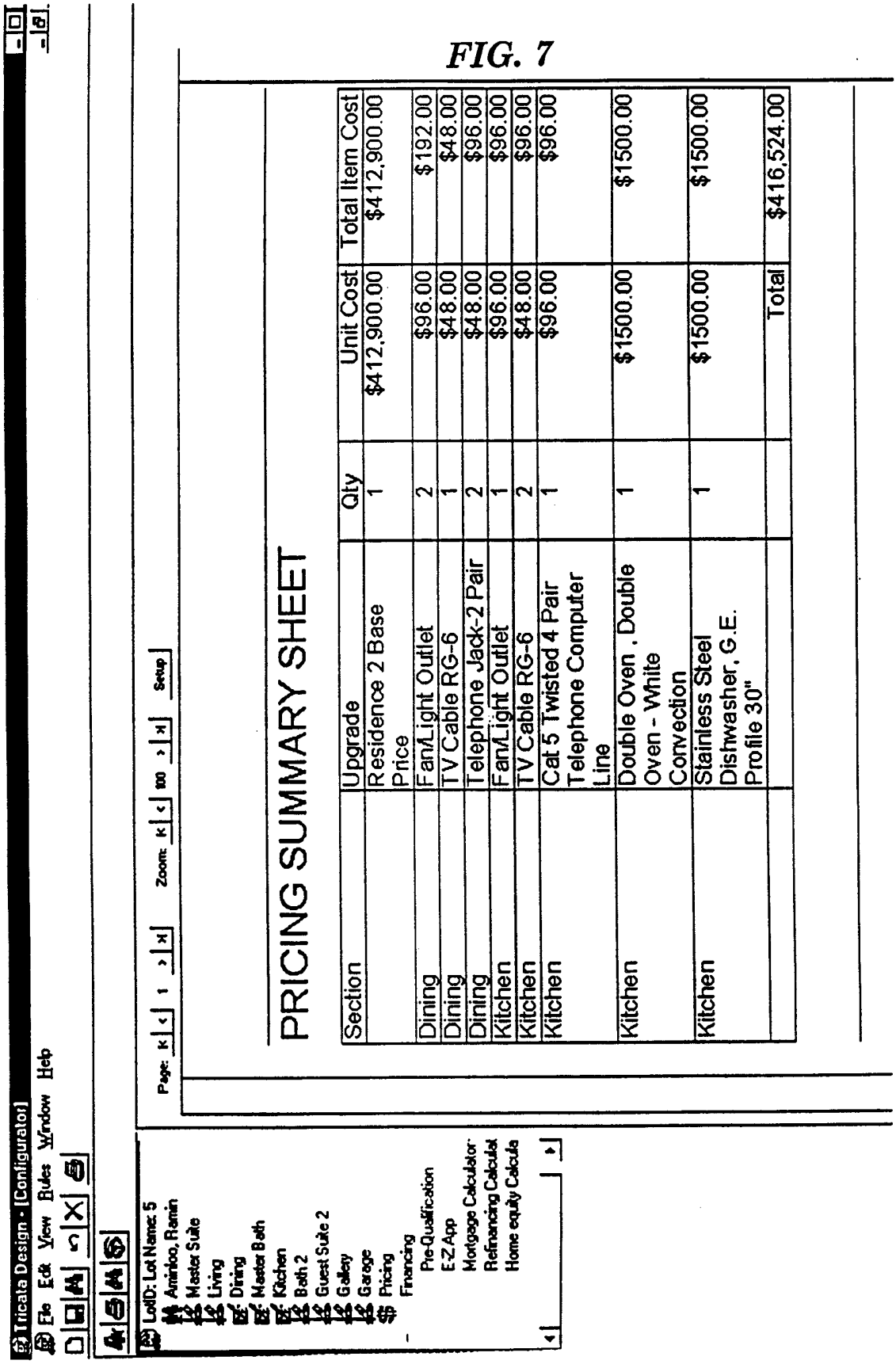

Tricata Design - [Lot Availability]
File Edit View Rules Window Help
14TH FAIRWAY
1R(ALT)A
1RB
1GRA
1RB
2R(ALT)A
3B
1GRA
1RB
1GRA
2R(ALT)B
2A
3
PUTTING GREEN
LOT C
6:59 PM
3/1/00
21
20
19
18
17
16
15
14
13
12
11

FIG. 6B

FIG. 7


Tricata Design - [Configurator]
File Edit View Rules Window Help
LotID: Lot Name: 5
Aminoo, Ramin
Master Suite
Living
Dining
Master Bath
Kitchen
Bath 2
Guest Suite 2
Galley
Garage
Pricing
Financing
Pre-Qualification
E-Z App
Mortgage Calculator
Refinancing Calculat
Home equity Calcula
Page: 1
Zoom: 100
Setup
PRICING SUMMARY SHEET
Section | Upgrade | Qty | Unit Cost | Total Item Cost
Residence 2 Base Price | 1 | $412,900.00 | $412,900.00
Dining | Fan/Light Outlet | 2 | $96.00 | $192.00
Dining | TV Cable RG-6 | 1 | $48.00 | $48.00
Dining | Telephone Jack-2 Pair | 2 | $48.00 | $96.00
Kitchen | Fan/Light Outlet | 1 | $96.00 | $96.00
Kitchen | TV Cable RG-6 | 2 | $48.00 | $96.00
Kitchen | Cat 5 Twisted 4 Pair Telephone Computer Line | 1 | $96.00 | $96.00
Kitchen | Double Oven , Double Oven - White Convection | 1 | $1500.00 | $1500.00
Kitchen | Stainless Steel Dishwasher, G.E. Profile 30" | 1 | $1500.00 | $1500.00
Total | $416,524.00

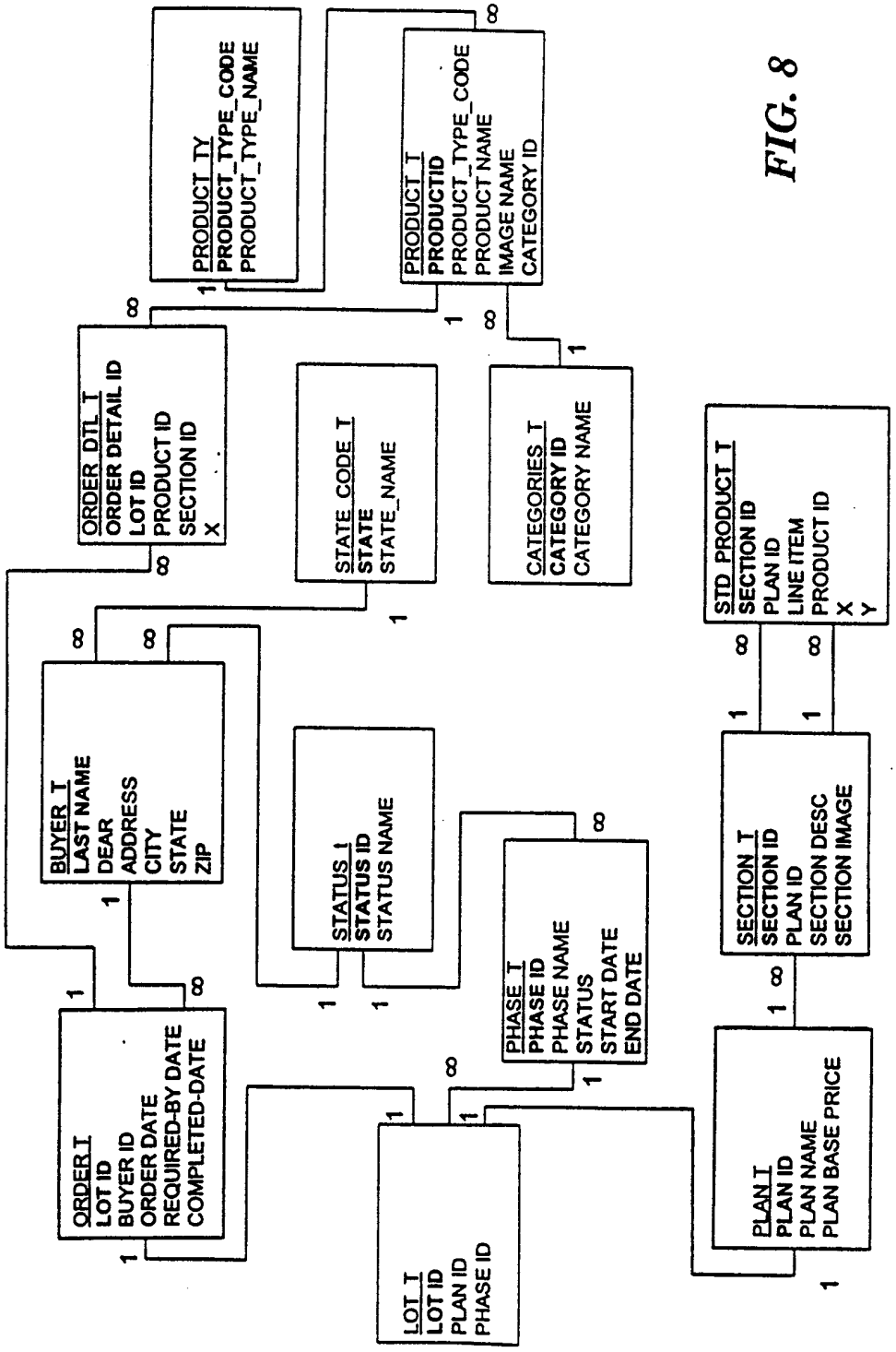

PRODUCT TY
PRODUCT_TYPE_CODE
PRODUCT_TYPE_NAME
PRODUCT_T
PRODUCTID
PRODUCT_TYPE_CODE
PRODUCT NAME
IMAGE NAME
CATEGORY ID
ORDER_DTL_T
ORDER DETAIL ID
LOT ID
PRODUCT ID
SECTION ID
X
STATE_CODE_T
STATE
STATE_NAME
CATEGORIES_T
CATEGORY ID
CATEGORY NAME
STD_PRODUCT_T
SECTION ID
PLAN ID
LINE ITEM
PRODUCT ID
X
Y
BUYER_T
LAST NAME
DEAR
ADDRESS
CITY
STATE
ZIP
STATUS_I
STATUS ID
STATUS NAME
PHASE_T
PHASE ID
PHASE NAME
STATUS
START DATE
END DATE
SECTION_T
SECTION ID
PLAN ID
SECTION DESC
SECTION IMAGE
ORDER_T
LOT ID
BUYER ID
ORDER DATE
REQUIRED-BY DATE
COMPLETED-DATE
LOT_T
LOT ID
PLAN ID
PHASE ID
PLAN_T
PLAN ID
PLAN NAME
PLAN BASE PRICE

FIG. 8

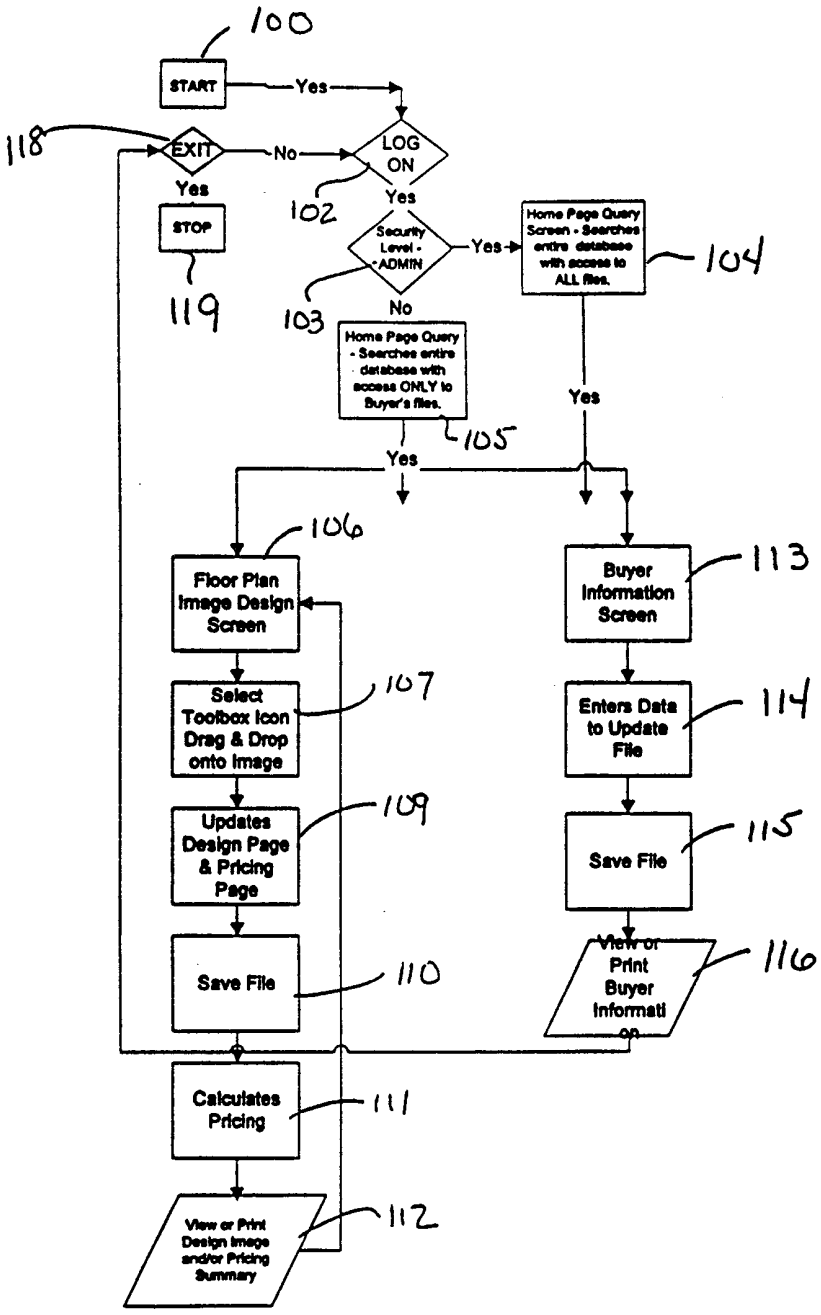
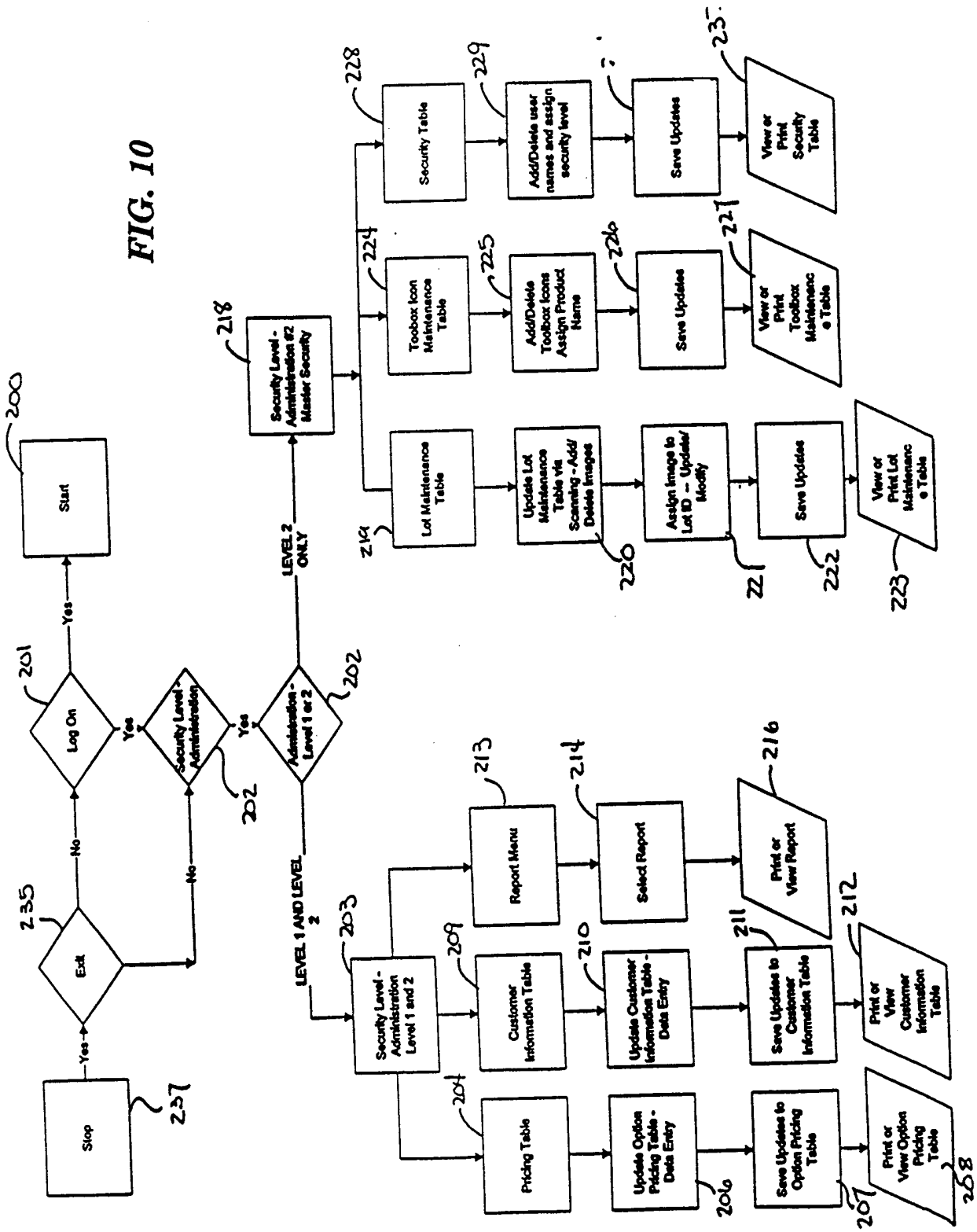

100
START
Yes
118
EXIT
No
LOG ON
Yes
102
Yes
STOP
119
Security Level - ADMIN
Yes
Home Page Query Screen - Searches entire database with access to ALL files.
104
103
No
Home Page Query - Searches entire database with access ONLY to Buyer's files.
105
Yes
Yes
106
Floor Plan Image Design Screen
Select Toolbox Icon Drag & Drop onto Image
107
Updates Design Page & Pricing Page
109
Save File
110
Calculates Pricing
111
View or Print Design Image and/or Pricing Summary
112
Buyer Information Screen
113
Enters Data to Update File
114
Save File
115
View or Print Buyer Informati on
116

FIG. 9

FIG. 10


Start
Log On
Yes
No
Security Level - Administration
Administration - Level 1 or 2
LEVEL 2 ONLY
LEVEL 1 AND LEVEL 2
Exit
Stop
Security Level - Administration #2 Master Security
Security Level - Administration Level 1 and 2
Security Table
Add/Delete user names and assign security level
Save Updates
View or Print Security Table
Toolbox Icon Maintenance Table
Add/Delete Toolbox Icons Assign Product Name
Save Updates
View or Print Toolbox Maintenance Table
Lot Maintenance Table
Update Lot Maintenance Table via Scanning - Add/ Delete Images
Assign Image to Lot ID -- Update/ Modify
Save Updates
View or Print Lot Maintenance Table
Report Menu
Select Report
Print or View Report
Customer Information Table
Update Customer Information Table - Data Entry
Save Updates to Customer Information Table
Print or View Customer Information Table
Pricing Table
Update Option Pricing Table - Data Entry
Save Updates to Option Pricing Table
Print or View Option Pricing Table

MENU: FILE EDIT VIEW RULES WINDOWS HELP

Open - Selects an electronic document or file to open and use in the application.
Close - Selects an electronic document or file to close in the application.
Save - Saves selected changes/modifications to an electronic file or document.
Save All - Saves ALL changes/modifications to an electronic file or document.
Properties - Identifies the general properties (file type, location, size etc.), statistics (number of words, paragraphs, edit time, etc.), and contents of the or file.
Page Setup - Selects the document's margin size, paper size and orientation, paper source and layout.
Print Preview - Permits user to preview document format and layout before printing.
Print - Sends print command of document or file to printer for printing.
Send - Sends the document or file to an e-mail recipient, a routing recipient, a folder or a fax recipient.
Exit - Closes the application on the computer.

Clear-New - Clears all the data fields and prepares template for new data entry.
Save - Saves selected changes/modifications to an electronic file or document.
Find - Searchs the document or file for specific data elements.
Undo - Reverses and nullifies the last command/action invoked on the document.
Delete - Identifies data element(s) and delete them from the document or file.
Cut - Identifies data elements(s) and deletes them from the current document or file.
Copy - Identifies data element(s) to be duplicated.
Paste - Inserts the identified data elements into a new document.

FIG. 11A

SUBSTITUTE SHEET (RULE 26)

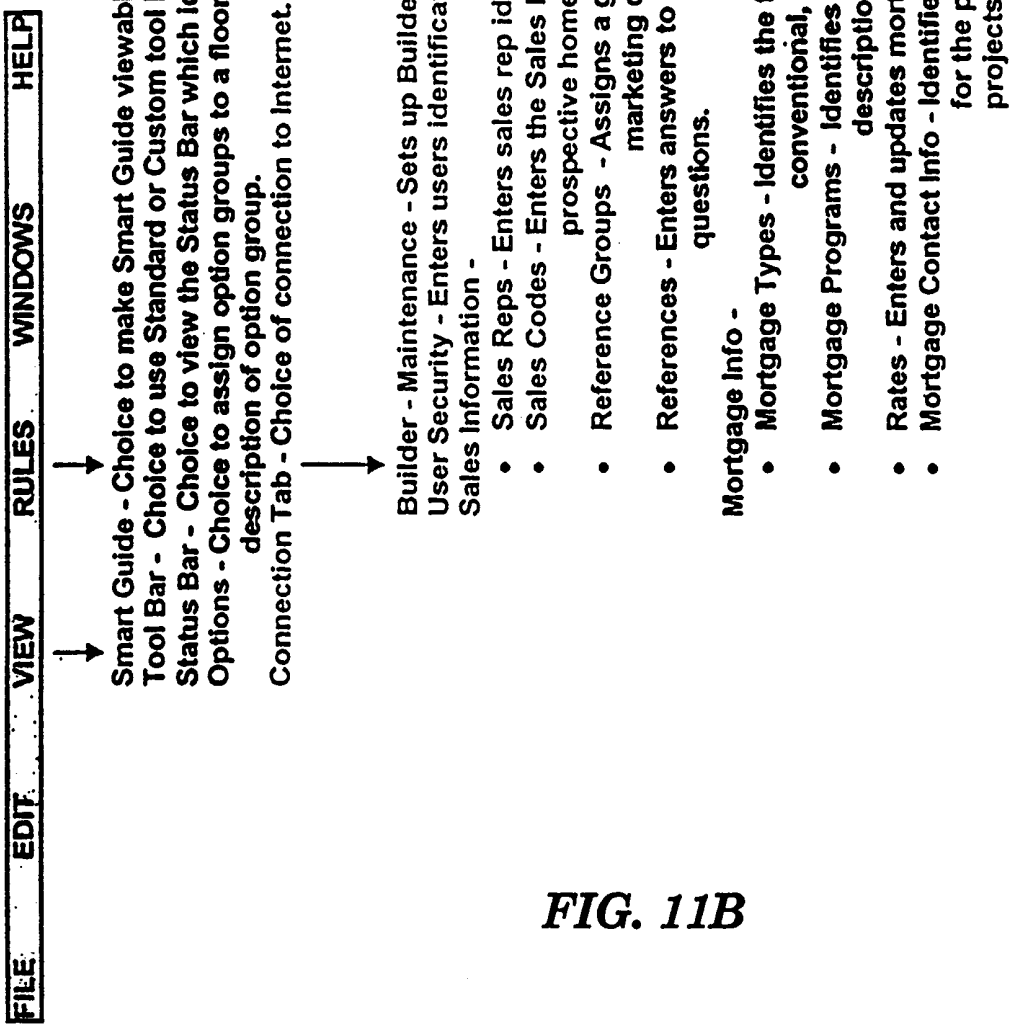

MENU:
FILE
EDIT
VIEW
RULES
WINDOWS
HELP
Smart Guide - Choice to make Smart Guide viewable or not to user.
Tool Bar - Choice to use Standard or Custom tool bar.
Status Bar - Choice to view the Status Bar which identifies the status of the file.
Options - Choice to assign option groups to a floorplan type and provide a description of option group.
Connection Tab - Choice of connection to Internet.
Builder - Maintenance - Sets up Builder data description in database.
User Security - Enters users identification and password.
Sales Information -
• Sales Reps - Enters sales rep identification and contact data.
• Sales Codes - Enters the Sales Probability codes assigned to prospective homeowners.
• Reference Groups - Assigns a group type to each sales and marketing questions.
• References - Enters answers to sales and marketing questions.
Mortgage Info -
• Mortgage Types - Identifies the top level of type of loan, i.e. conventional, balloon, variable, etc.
• Mortgage Programs - Identifies the mortgage program description and data elements.
• Rates - Enters and updates mortgage program rates.
• Mortgage Contact Info - Identifies the Mortgage Sales contact for the project and each phase of the projects.

FIG. 11B

Products:

- Vendor Information - Enters data elements related to products, i.e. home upgrade options
- Product Groups - Assigns a product item to a general grouping of product types.

Project Maintenance - Enters data elements and description of housing development project.

Tract Maintenance - Enters data elements and description of tract of homes in the project.

- Tract Maintenance - Enters description of tract.
- Available Plans - Assigns home floorplans to tract.

Phase Maintenance - Enters data elements and description of the phases of the tract of homes in the project.

- Phase - Identifies the number of phases, phase identification code, and dates that each phase begins and ends.
- Mortgage Company - Identifies the mortgage company tha is assigned to the phase.
- Mortgage Contact - Identifies the mortgage sales contact for each phase of the project.

Lot Maintenance - Identifies and describes lot specification data and order status; permits web site update from lot maintenance screen.

FIG. 11C

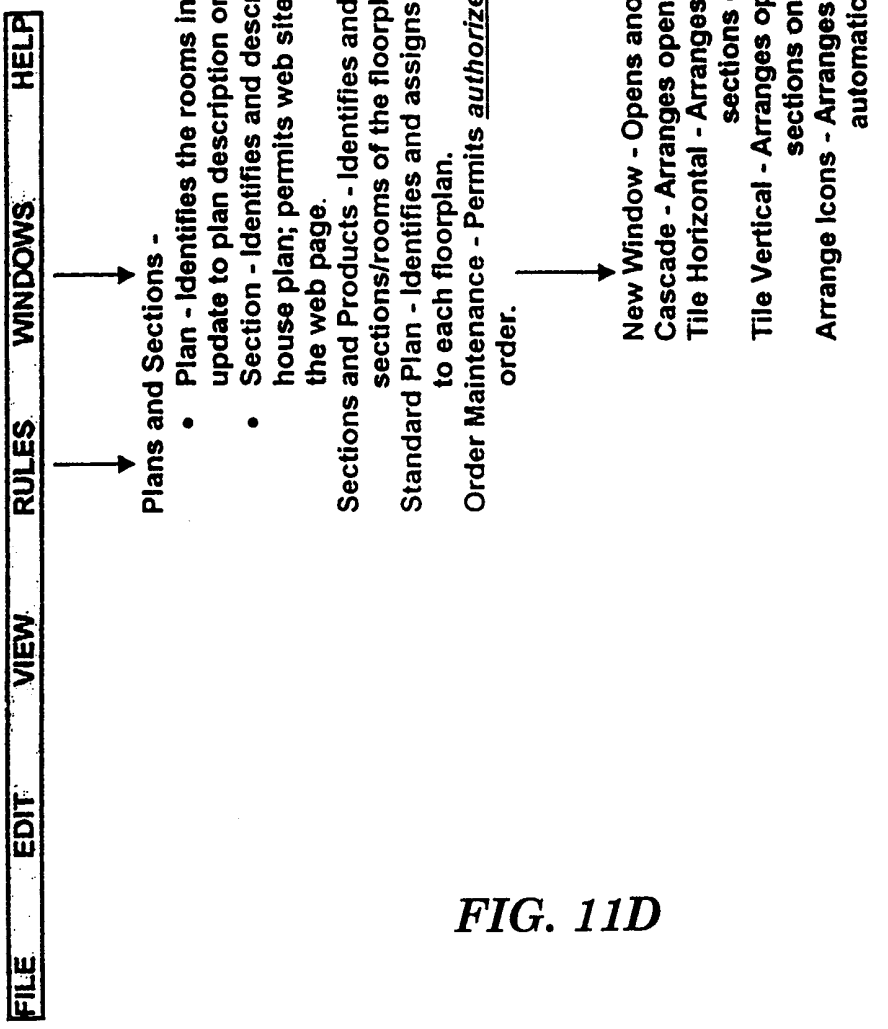

MENU:
FILE
EDIT
VIEW
RULES
WINDOWS
HELP
Plans and Sections -
• Plan - Identifies the rooms in each plan; permits web site update to plan description on the web page.
• Section - Identifies and describes each section/room of the house plan; permits web site update to plan description on the web page.
Sections and Products - Identifies and assigns upgrade products to sections/rooms of the floorplan.
Standard Plan - Identifies and assigns the standard product features to each floorplan.
Order Maintenance - Permits authorized user to make changes to an order.
New Window - Opens another window in the application
Cascade - Arranges open windows in a cascade format
Tile Horizontal - Arranges open windows in horizontal sections on the screen.
Tile Vertical - Arranges open windows in vertical sections on the screen.
Arrange Icons - Arranges icons on the screen automatically.

FIG. 11D

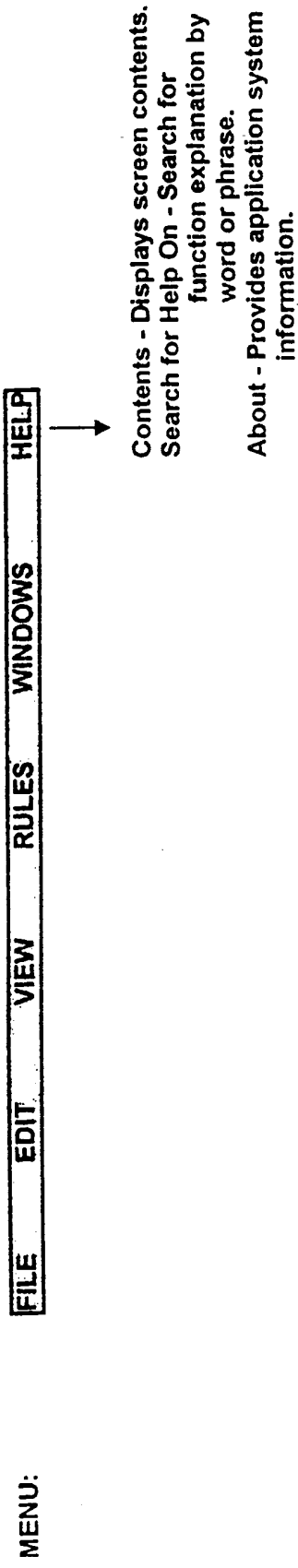

MENU:
FILE
EDIT
VIEW
RULES
WINDOWS
HELP
Contents - Displays screen contents.
Search for Help On - Search for function explanation by word or phrase.
About - Provides application system information.

FIG. 11E