

ASSIGNING SCREEN DESIGNATION CODES TO IMAGES

RELATED APPLICATIONS

[0001] The present application is a continuation of U.S. patent application Ser. No. 10/048,966, filed Feb. 6, 2002, naming Gabriel Engel and Pita Witehira as inventors, assigned to the assignee of the present invention, and having attorney docket number PURE-P003, which claims the benefit of International Application Number PCT/NZ00/00161, filed Aug. 18, 2000, which claims the benefit of New Zealand Patent Number 337334, filed Aug. 19, 1999. Each of these applications is incorporated herein by reference in their entirety and for all purposes.

BACKGROUND OF THE INVENTION

[0002] Many software programs these days display information on a screen using effective a multi-layered approach.

[0003] For example, a drawing package may have a central area which the software user can draw upon.

[0004] In a typical drawing package there are many drop down menus, tool bars, cursors or templates which effectively overlay the drawing on the screen. The reason for this is that there is only limited screen area available. Thus, for the user to be able to view the functions to be selected, some of the drawing space has to be borrowed for this.

[0005] Often, the user is placed in the undesirable position of having to move around the tool bars and menus if possible, or alternatively move the drawing (or whatever file the user is working on) so that the user can actually see parts of the drawing formerly obscured by the menus and so forth.

[0006] There is another related problem experienced by software users, particularly in relation to drawing packages, but not exclusively.

[0007] Often when compiling a drawing, it is necessary to compile the drawing using several layers of "objects". A typical drawing function gives the user the ability to determine whether the object is viewed as being at the back of the picture or overlaying everything at the front of the picture. This can in some cases lead to the objects at the back of the picture being obscured by larger objects at the front of the picture. Thus, the user cannot readily select the object at the back of the picture with it being obscured.

[0008] This is understandably frustrating and can impede the user's ability to work efficiently, often requiring the user to move the front object so as to gain access to the back object.

[0009] This frustration is not limited to drawing packages. It can also be frustrating to not having ready access to the multiple levels in such diverse applications as geographical information system (GIS) programs, including medical models, instrumentation using browsers for the internet or game software, for example flight simulators.

[0010] All of the aforementioned packages have information on various levels with which the user would desire ready access to.

[0011] It is an object of the present invention to address the foregoing problems or at least to provide the public with a useful choice.

[0012] Further aspects and advantages of the present invention will become apparent from the ensuing description which is given by way of example only.

SUMMARY OF THE INVENTION

[0013] According to one aspect of the present invention there is provided a method for creating a visual effect in the display of software wherein the software is for the presentation of data or images on a screen using software functions, the method characterized by the steps of: a) assigning a particular screen designation code to some software components; and b) assigning other screen designation code to other components of the software, wherein the screen designation code determines which physical screen the image or software components is displayed in a multi-level screen display.

[0014] In further embodiments of the invention, the software components being assigned a particular screen designation code all relate to images being manipulated. However this should not be seen as limiting. The image being manipulated can mean the manipulation of any image, whether the image is in text format, numbers, graphical or otherwise.

[0015] For example, the present invention can be used in relation to software for word processing, drawing, financial and scientific information, flight simulators, internet browsers, spreadsheets, slot machines, instrumentation, medical programs, mapping programs, games and the like.

[0016] In some embodiments of the present invention certain software components may be reference data of lesser importance than other data. This, is the data of greater importance may be assigned to the front screen where as data of lesser importance may be placed on background or mid-ground screen. In preferred embodiments if there is an image on the screen which is being manipulated via software functions—even if it is a game scene "being traveled through"—it has a particular screen designation separate to other functions.

[0017] It is envisaged that in most cases, the other components of software are standard features which come with the software program. For example, screen template, drop down menus, function keys, cursors, tool bars, head-up displays and the like. However, in some embodiments of the present invention, the different components of the image may be assigned a separate designation code, for example an object which is laid over part of the image.

[0018] In some embodiments of the present invention, the method can be applied to existing software, for example Microsoft Word™, Microsoft Powerpoint™, Adobe Photoshop™, MacroMedia Director™ and so forth. However, in other embodiments of the present invention there may be created software which uses the principles behind the present invention.

[0019] The screen designation code is merely a code that identifies which physical screen the image or software component is displayed upon.

[0020] The inventors of the present invention also invented a multi-level screen display and this is described in detail in PCT Application Nos. PCT/NZ98/00098 and PCT/NZ99/00021.

[0021] This is a device which is created by combining multiple layers of selectively transparent screens. Each screen is capable of showing an image. In preferred embodiments, the screen layers are liquid crystal displays. Preferably the screens are aligned parallel to each other with a preset distance between them.