

ods, systems and techniques described herein can thus be incorporated into a variety of functional or physical combinations of components.

[0065] I have described a touch-sensitive input overlay for use with a graphical user interface. The systems and methods described herein are useful in a number of graphical user interface applications, and in particular to industrial control environments, such as semiconductor manufacturing equipment. My invention aids in the programming of flexible and convenient graphical user interfaces, especially in environments where user interaction with a traditional keyboard or mouse is not convenient or practical. While specific examples and details are described above, I do not intend to limit the scope of my invention to any embodiment described or depicted herein, but rather only by the claims that follow.

What is claimed is:

1. A graphical user interface system comprising:

a computer including: a microprocessor, a display communicatively coupled to the microprocessor and configured to display text and images, and further configured to receive a touch input from a user, and a memory communicatively coupled to the microprocessor, the memory comprising one or more program modules configured to cause the microprocessor to execute a graphical user interface on the display, and in which the one or more program modules are further configured to:

determine a location of a first touch input received on the display;

correlate the first touch input to a control on the graphical user interface;

determine a location to present a touch-sensitive input overlay relative to the control;

place the touch-sensitive input overlay at the location; and

receive a second touch input in the area defined by the touch-sensitive input overlay, the second touch input aiding entry of a parameter into the control.

2. The graphical user interface system of claim 1, wherein the touch-sensitive input overlay includes navigation guides configured to allow navigation within a list box control.

3. The graphical user interface system of claim 1, wherein the touch-sensitive input overlay includes navigation guides configured to allow navigation within a tree control.

4. The graphical user interface system of claim 1, wherein the touch-sensitive input overlay includes a numeric pad for entry of data into the control.

5. The graphical user interface system of claim 1, wherein the control includes a location indicator configured to direct placement of the touch-sensitive input overlay in an unobtrusive location relative to the control.

6. The graphical user interface system of claim 1, the one or more program modules further configured to:

receive a first touch gesture at a location in the touch-sensitive input overlay;

receive a second touch gesture at the display; and

move the touch-sensitive input overlay relative to the second touch gesture.

7. The graphical user interface system of claim 1, the one or more program modules further configured to present a control delineator on a border of the touch-sensitive input overlay corresponding to the control.

8. The graphical user interface system of claim 1, the one or more program modules further configured to animate the touch-sensitive input overlay from one or more points corresponding to the control to multiple points corresponding to the location touch-sensitive input overlay.

9. The graphical user interface system of claim 1, wherein the touch-sensitive input overlay is semi-transparent.

10. A computer implemented method for a graphical user interface system including instructions for causing one or more processors to perform the acts comprising:

determining a location of a first touch input received on a display;

correlating the first touch input to a control on a graphical user interface presented on the display;

determining a location to present a touch-sensitive input overlay relative to the control;

placing the touch-sensitive input overlay at the location; and

receiving a second touch input in the area defined by the touch-sensitive input overlay, the second touch input aiding entry of a parameter into the control.

11. The method of claim 10, wherein in response to receiving the second touch input, the method further comprises the act of navigating a list box control.

12. The method of claim 10, wherein in response to receiving the second touch input, the method further comprises the act of navigating a tree control.

13. The method of claim 10, further comprising determining a type of touch-sensitive input overlay to present on the display, the type of touch-sensitive input overlay varying depending on information corresponding to the control.

14. The method of claim 13, further comprising storing a location indicator with the control, the location indicator configured to direct placement of the touch-sensitive input overlay in an unobtrusive location relative to the control.

15. The method of claim 10, further comprising:

receiving a first touch gesture at a predetermined location in the touch-sensitive input overlay;

receiving a second touch gesture at the display; and

moving the touch-sensitive input overlay relative to the second touch gesture.

16. The method of claim 10, further comprising:

receiving a touch-transparent input at a predetermined location on the touch-sensitive input overlay; and

modifying the presentation of the touch-sensitive input overlay such that it is semi-transparent and reveals information from the underlying graphical user interface, in reply to the touch-transparent input.

17. The method of claim 10, further comprising presenting a control delineator on a border of the touch-sensitive input overlay corresponding to the control.

18. The method of claim 10, further comprising animating the touch-sensitive input overlay from one or more points corresponding to the control to multiple points corresponding to the location touch-sensitive input overlay.