

capture device located for imaging a first side of the screen opposite a second side where user interaction occurs: determining at least one of where and when a person touches an area on the second side of the screen by detecting a change in intensity of light emanating from the touched area relative to a surrounding area.

23. A signal bearing medium as in claim 22, where detecting uses an image differencing technique.

24. A signal bearing medium as in claim 22, where detecting uses a background subtraction technique.

25. A signal bearing medium as in claim 22, where providing further provides at least one light source located for illuminating the first side of the screen.

26. A signal bearing medium as in claim 25, where providing further provides at least one additional light source located for illuminating the second side of the screen.

27. A signal bearing medium as in claim 22, where when incident light on the second side of the screen is brighter than incident light on the first side of the screen, detecting detects that an image of the point of contact with the screen is silhouetted and appears darker than the surrounding area, while when incident light on the first side of the screen is brighter than incident light on the second side of the screen, detecting detects that an image of the point of contact with the screen is highlighted and appears brighter than the surrounding area.

28. A signal bearing medium as in claim 27, where detecting detects a location of the point of contact by comparing a first image of the first side of the screen with a second image of the first side of the screen.

29. A signal bearing medium as in claim 27, where detecting detects a time of the contact by comparing a first image of the first side of the screen with a second image of the first side of the screen.

30. A signal bearing medium as in claim 22, where there are a plurality of screens provided and serviced by a single camera sequentially or simultaneously.

31. A signal bearing medium as in claim 22, further comprising displaying projected imagery generated by an imaging device on the screen.

32. A signal bearing medium as in claim 22, further comprising detecting a difference between incident light on the second side of the screen and incident light on the first side of the screen, and using the detected difference to control the brightness of at least one light source.

33. A touch screen system comprising:

a translucent screen;

an image capture device located for imaging a first side of the screen opposite a second side whereon a user touches the screen;

at least one light source disposed for illuminating the first side of the screen and providing an illumination differential between the first side and the second side; and

an image processor coupled to the output of the image capture device to determine at least one of where and when the user touches an area on the second side of the screen by a change in intensity of light emanating from the touched area relative to a surrounding area, where when incident light on the second side of the screen is brighter than incident light on the first side of the screen, an image of the point of contact with the screen is silhouetted and appears darker than the surrounding area, while when incident light on the first side of the screen is brighter than incident light on the second side of the screen, an image of the point of contact with the screen is highlighted and appears brighter than the surrounding area.

34. A touch screen system as in claim 33, where the screen comprises at least a part of a window, and where the second side is an out-of-doors side of the window.

35. A touch screen system as in claim 34, further comprising light source control for adjusting the brightness level of the at least one source of illumination as a function of an amount of illumination on the second side of the screen.

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