

35. The method of claim 31, wherein associating the touch signal shape with the local minimum in touch-induced error present in the touch signal comprises associating the touch signal shape to a time during the touch signal that inertial effect errors are minimal.

36. The method of claim 31, wherein associating the touch signal shape with the local minimum in touch-induced error present in the touch signal further comprises associating a predetermined slope of the touch signal with the local minimum in touch-induced error present in the touch signal.

37. The method of claim 31, wherein associating the touch signal shape with the local minimum in touch-induced error present in the touch signal further comprises associating a predetermined relative slope of the touch signal with the local minimum in touch-induced error present in the touch signal.

38. A method for determining a touch location on a touch screen, comprising:

acquiring a touch signal arising from a touch force on a touch screen;

detecting a touch signal shape within an interval of the touch signal associated with maximum touch force; and

determining touch location using touch signal information obtained in response to detecting the touch signal shape.

39. The method of claim 38, wherein detecting the touch signal shape within the interval of the touch signal associated with maximum touch force comprises detecting the touch signal shape within an interval beginning with the application of a touch and ending when a slope of the touch signal falls below a predetermined value.

40. The method of claim 38, wherein detecting the touch signal shape within the interval of the touch signal associated with maximum touch force comprises detecting the touch signal shape within an interval beginning with the application of a touch and ending when a magnitude of the touch signal falls below a predetermined value.

41. The method of claim 38, wherein detecting a touch signal shape within the interval of the touch signal associated with maximum touch force comprises detecting a preferred time for obtaining touch signal information to determine touch location.

42. The method of claim 41, wherein detecting the preferred time comprises detecting a time when touch signal errors in the touch signal are minimal.

43. The method of claim 41, wherein detecting the preferred time comprises detecting a time when damping effect errors in the touch signal are minimal.

44. The method of claim 37, wherein detecting the preferred time comprises detecting a time when inertial effect errors in the touch signal are minimal.

45. The method of claim 38, wherein detecting the touch signal shape within the interval of the touch signal associated with maximum touch force further comprises detecting a predetermined slope of the touch signal.

46. The method of claim 38, wherein detecting the touch signal shape within the interval of the touch signal associated with maximum touch force comprises detecting a predetermined relative slope of the touch signal.

47. A method for determining touch location on a touch screen, comprising:

acquiring a touch signal representative of a touch on the touch screen, the touch signal having an error related to the rate of change of the touch signal;

detecting a particular time for obtaining touch signal information for determining touch location based on the rate of change of the touch signal; and

determining the touch location using touch signal information obtained at the particular time.

48. A touch screen system, comprising:

a touch surface;

a plurality of touch sensors, each of the touch sensors physically coupled to the touch surface and producing a sensor signal in response to a touch applied to the touch surface; and

a control system, coupled to the touch sensors and receiving the sensor signals, the control system acquiring a touch signal corresponding to a touch on the touch screen, detecting a first occurrence of a touch signal shape in the touch signal, and determining touch location using touch signal information obtained in response to detecting the touch signal shape.

49. The system of claim 48, wherein the touch sensors comprise force sensors.

50. The system of claim 48, wherein the touch sensors comprise capacitive force sensors.

51. The system of claim 48, wherein the touch surface is substantially rectangular with one of the plurality of touch sensors located at each corner of the touch screen.

52. The system of claim 51, wherein each touch sensor produces a sensor signal indicative of a force of a touch sensed at a location of the touch sensor.

53. The system of claim 48, wherein the control system derives one or more touch signals by combining one or more sensor signals.

54. The system of claim 48, wherein the control system comprises a filter for filtering touch signals produced by the touch sensors.

55. The system of claim 54, wherein the filter comprises a digital filter.

56. The system of claim 55, wherein the digital filter comprises a finite impulse response filter or an infinite impulse filter.

57. The system of claim 48, wherein the touch signal shape used to determine the touch location comprises a slope of the touch signal calculated by the processor.

58. The system of claim 48, wherein the processor calculates a relative slope of the touch signal as the slope of the touch signal at a particular time divided by a magnitude of the touch signal at the particular time.

59. A touch screen display system, comprising:

a touch screen system, including:

a touch surface;

a plurality of touch sensors, each of the touch sensors physically coupled to the touch surface and producing a sensor signal in response to a touch applied to the touch surface;

a control system, coupled to the touch sensors and receiving the sensor signals, the control system acquiring a touch signal corresponding to a touch on the touch screen, detecting a first occurrence of a touch signal shape in the touch signal, and determining touch location using touch signal information obtained in response to detecting the touch signal shape; and