

said additional activation areas (48) have center points equidistant from said common point and one of said additional activation areas (48) is adjacent to an outer surface of said at least one of said plurality of activation areas (44).

8. The user interface of claim 1, further comprising an additional activation area (24) defined on said touchscreen (18) which when touched, causes said segmented activation area (30) to appear on said touchscreen (18) with its center at the touched location on said additional activation area (24), said segmented activation area (30) being related to said additional activation area (24).

9. In an ultrasound imaging system, a user interface for providing user control over device functions of the imaging system, comprising:

a touchscreen (18);

a first activation area (24) defined on said touchscreen (18) which when touched, causes a plurality of related second activation areas (32) to appear on said touchscreen (18), each of said second activation areas (32) having a unique assigned function relating to the imaging system with an indication of said function being displayed on said second activation area (32); and

a processor (16) coupled to said touchscreen (18) for detecting a touch on said first and second activation areas (24, 32) defined on said touchscreen (18) and performing the function associated with each of said first and second activation areas (24, 32) upon being touched.

10. The user interface of claim 9, wherein said second activation areas (32) are arranged in a single segmented activation area (30).

11. The user interface of claim 9, wherein said second activation areas (32) comprise an activation area (26) having the form of a thumbwheel for adjusting a function value and an activation area (28) providing a readout of the function value.

12. In an ultrasound imaging system, a user interface for providing user control over device functions of the imaging system, comprising:

a touchscreen (18);

an activation area (22, 26, 40) defined on said touchscreen (18), said activation area (22, 26, 40) having an assigned parameter or profile of a parameter relating to the imaging system with an indication of said parameter or profile being displayed on said activation area (22, 26, 40); and

a processor (16) coupled to said touchscreen (18) for detecting a sliding touch over said activation area (22, 26, 40) and adjusting the parameter or profile based on the sliding touch.

13. The user interface of claim 12, wherein said activation area (26) has the appearance of a thumbwheel for adjusting the assigned parameter and said processor (16) is arranged to detect a direction of the sliding touch over said activation area (26).

14. The user interface of claim 13, further comprising a numerical readout (28) arranged in association with said activation area (26) to display a value of the assigned parameter.

15. The user interface of claim 12, wherein said processor (16) is arranged to display an initial profile of the parameter, adjust the assigned profile based on the sliding touch, and display the adjusted profile.

16. An ultrasound imaging system (10), comprising:

an ultrasound scanner (12);

a touchscreen (18);

a processor (16) coupled to said ultrasound scanner and said touchscreen (18) and arranged to display real-time three-dimensional ultrasound images on said touchscreen (18); and

a plurality of activation areas (22, 26) defined on said touchscreen (18), each of the activation areas (22, 26) having a unique assigned function relating to processing of a three-dimensional image with an indication of said function being displayed on said activation area (22, 26), said processor (16) being arranged to detect touches of said activation areas (22, 26) and perform the function associated with each of said activation areas (22, 26) upon being touched.

17. The system of claim 16, wherein said processor (16) is arranged to display the three-dimensional ultrasound images as multiple planes oriented in their true spatial positions with respect to each other.

18. The system of claim 16, wherein one of said activation areas is arranged to enable vertical/horizontal translation of the displayed ultrasound images.

19. The system of claim 16, wherein one of said activation areas is arranged to enable rotation of the displayed ultrasound images.

20. In an ultrasound imaging system, a user interface for providing user control over device functions of the imaging system, comprising:

a touchscreen (18);

a plurality of activation areas (22) defined on said touchscreen (18); and

a processor coupled to said touchscreen (18) for assigning unique functions relating to the imaging system to each of said activation areas (22) depending on an operation mode of the imaging system such that each of said activation areas (22) has a variably assigned function, an indication of said function being displayed on said activation area (22), said processor (16) detecting a touch on said activation areas (22) defined on said touchscreen (18) and performing the function associated with each of said activation areas (22) upon being touched.

21. A method for providing user control over device functions of an ultrasound imaging system, comprising:

displaying ultrasound images on a touchscreen (18);

defining a plurality of activation areas (22, 24, 26) on a touchscreen (18) simultaneous with the display of the ultrasound images, each of the activation areas (22, 24, 26) having a unique assigned function relating to processing of the ultrasound images with an indication of the function being displayed on the activation area (22, 24, 26);

positioning the activation areas (22, 24, 26) to minimize interference with the simultaneous display of the ultrasound images;

detecting when one of the activation areas (22, 24, 26) is touched; and

performing the function associated with the touched activation area (22, 24, 26) to change the displayed ultrasound images.

22. The method of claim 21, further comprising controlling the appearance and disappearance of activation areas (22, 24, 26) based on need for the functions assigned to the activation areas (22, 24, 26) or based on activation by a user.