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(54) **SYSTEM AND METHOD FOR THREE-DIMENSIONAL SPACE MANAGEMENT AND VISUALIZATION OF ULTRASOUND DATA ("SONODEX")**

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(57) **ABSTRACT**

A system and method for the imaging management of a 3D space where various substantially real-time scan images have been acquired is presented. In exemplary embodiments according to the present invention, a user can visualize images of a portion of a body or object obtained from a substantially real-time scanner not just as 2D images, but as positionally and orientationally located slices within a particular 3D space. In such exemplary embodiments a user can convert such slices into volumes whenever needed, and can process the images or volumes using known image processing and/or volume rendering techniques. Alternatively, a user can acquire ultrasound images in 3D using the techniques of UltraSonar or 4D Ultrasound. In exemplary embodiments according to the present invention, a user can manage various substantially real-time images obtained, either as slices or volumes, and can control their visualization, processing and display, as well as their registration and fusion with other images, volumes and virtual objects obtained or derived from prior scans of the body or object of interest using various modalities.

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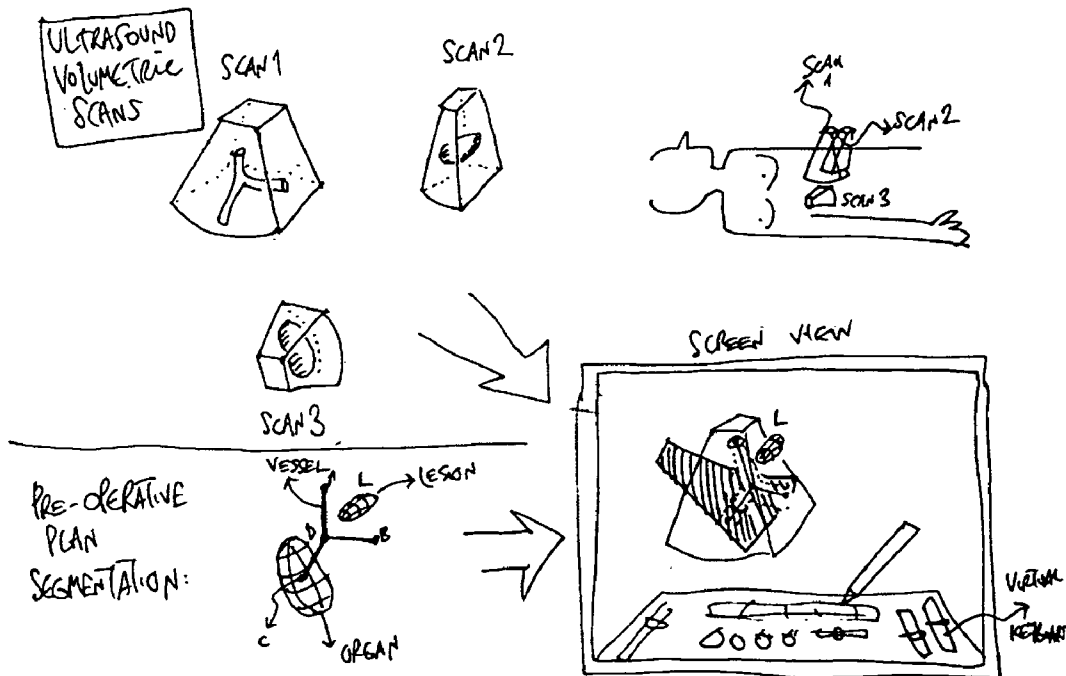


Image 6

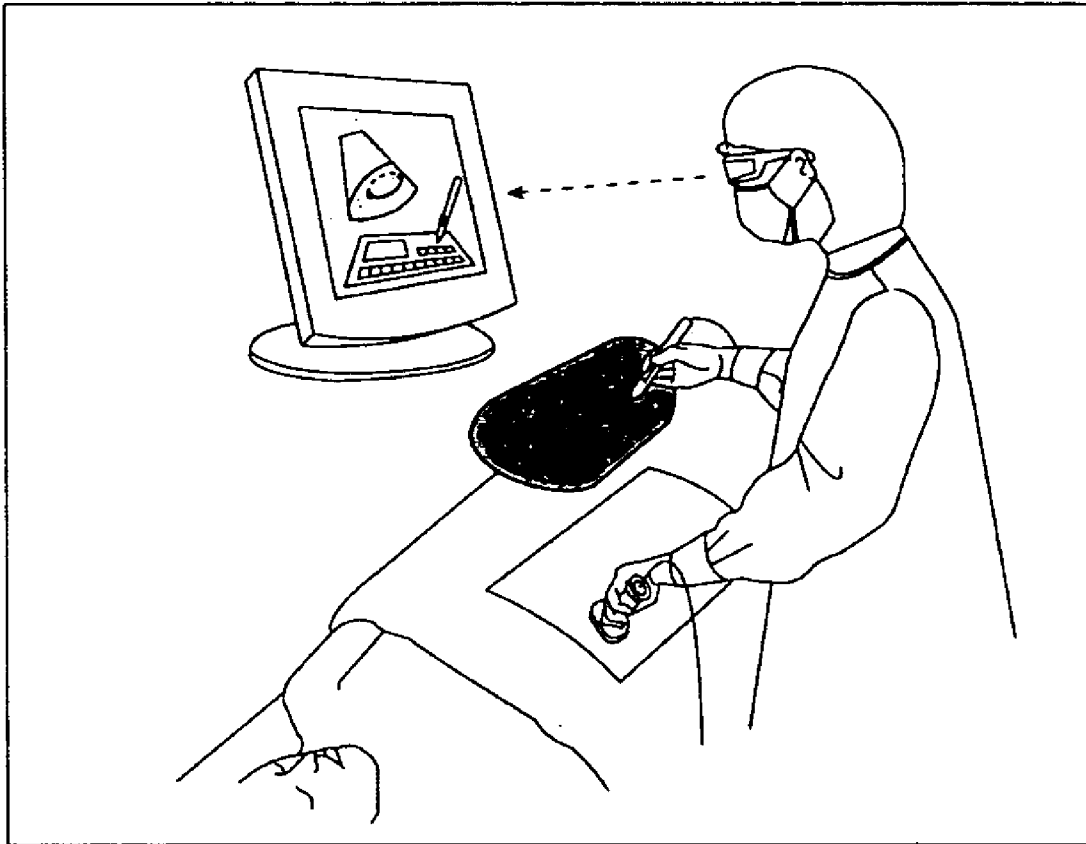


FIG. 1

Image 2

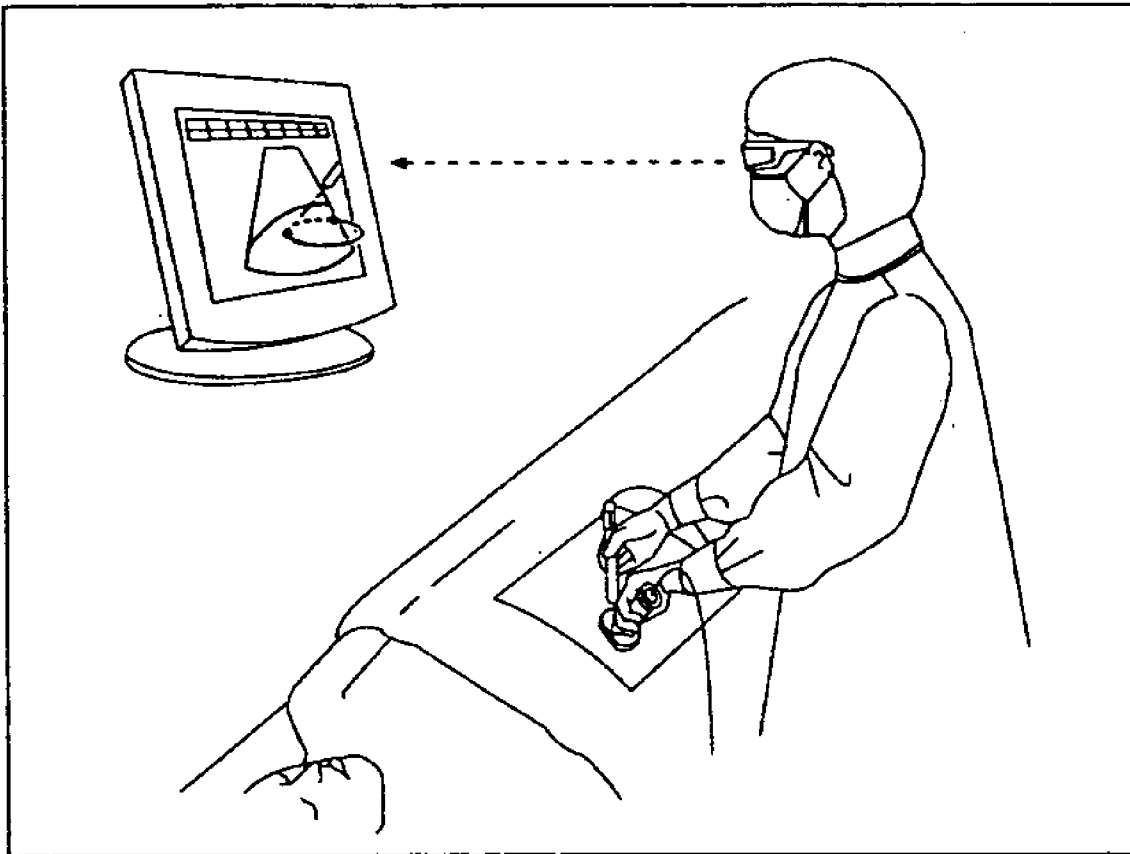


FIG. 2

Image 1

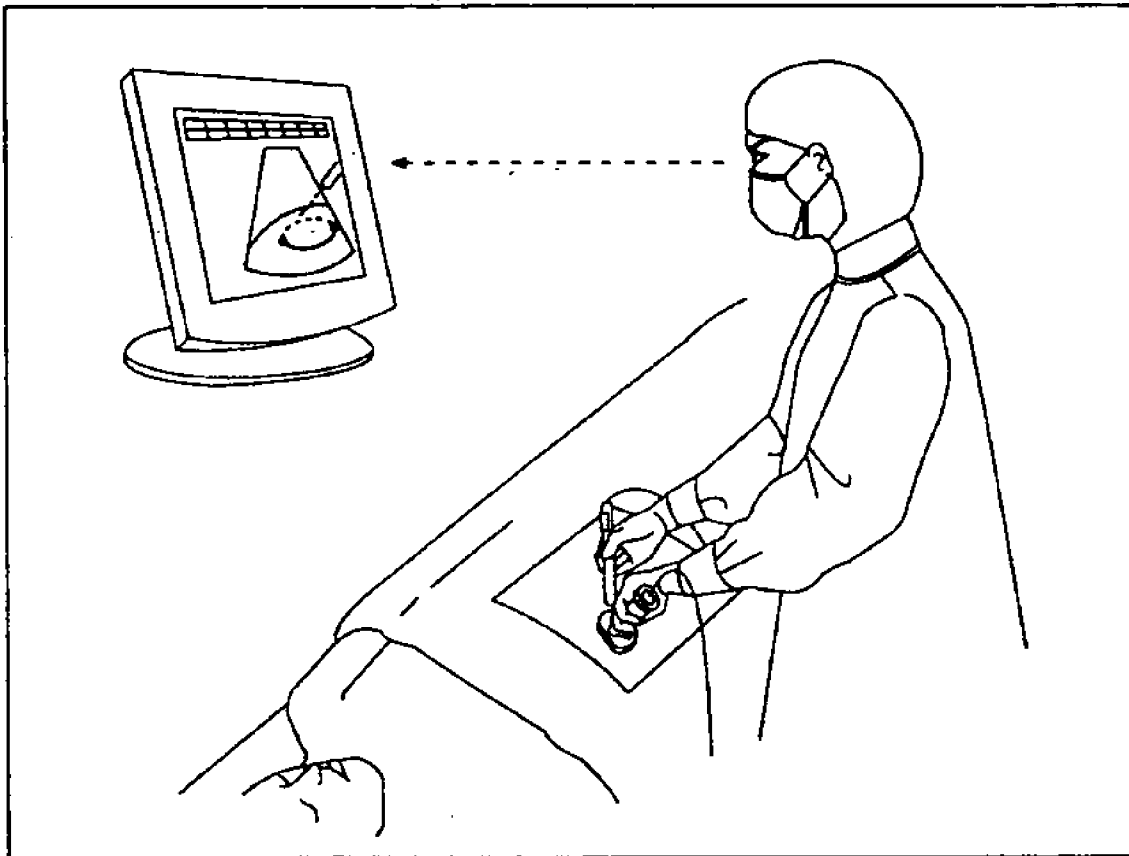


FIG. 3

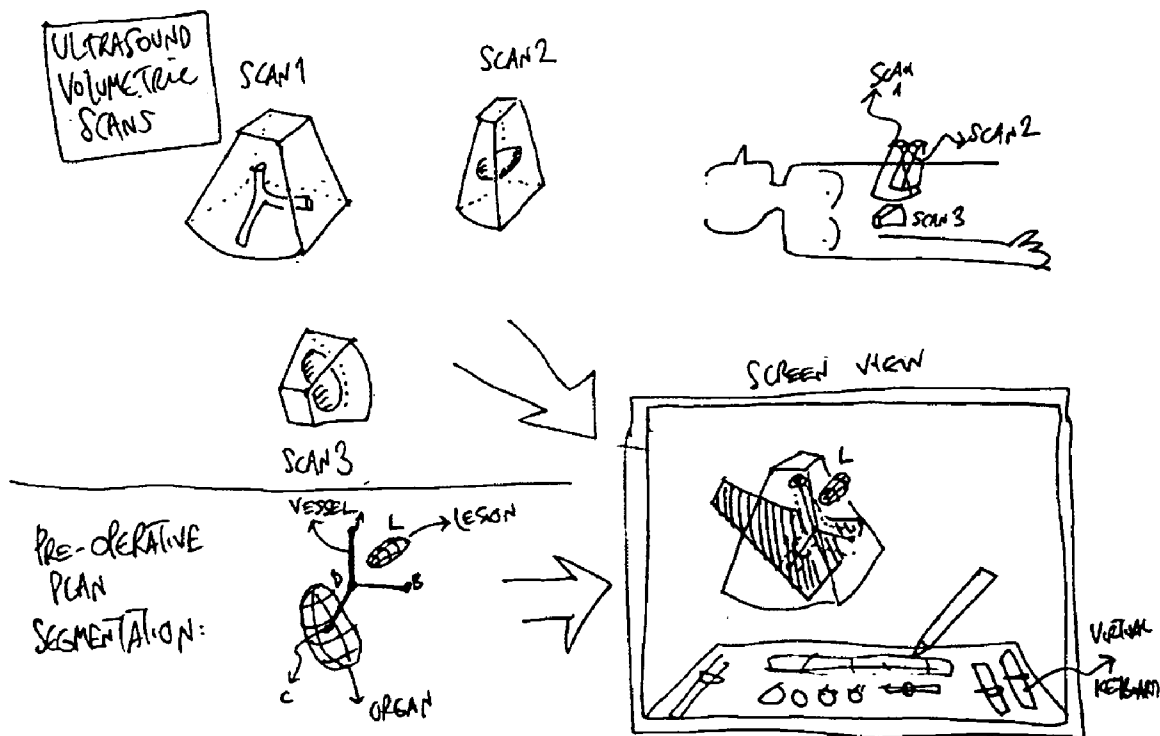


FIG. 4

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