



US 20060020204A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2006/0020204 A1**

Serra et al.

(43) **Pub. Date: Jan. 26, 2006**

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

Publication Classification

(51) **Int. Cl.**
A61B 8/00 (2006.01)
(52) **U.S. Cl.** **600/437**

(75) **Inventors: Luis Serra, Singapore (SG); Chua Beng Choon, Singapore (SG)**

(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 UltraSona 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.

Correspondence Address:

KRAMER LEVIN NAFTALIS & FRANKEL LLP
INTELLECTUAL PROPERTY DEPARTMENT
1177 AVENUE OF THE AMERICAS
NEW YORK, NY 10036 (US)

(73) **Assignee: Bracco Imaging, S.p.A., Milano (IT)**

(21) **Appl. No.: 11/172,729**

(22) **Filed: Jul. 1, 2005**

Related U.S. Application Data

(60) **Provisional application No. 60/585,214, filed on Jul. 1, 2004. Provisional application No. 60/660,858, filed on Mar. 11, 2005. Provisional application No. 60/585,462, filed on Jul. 1, 2004.**

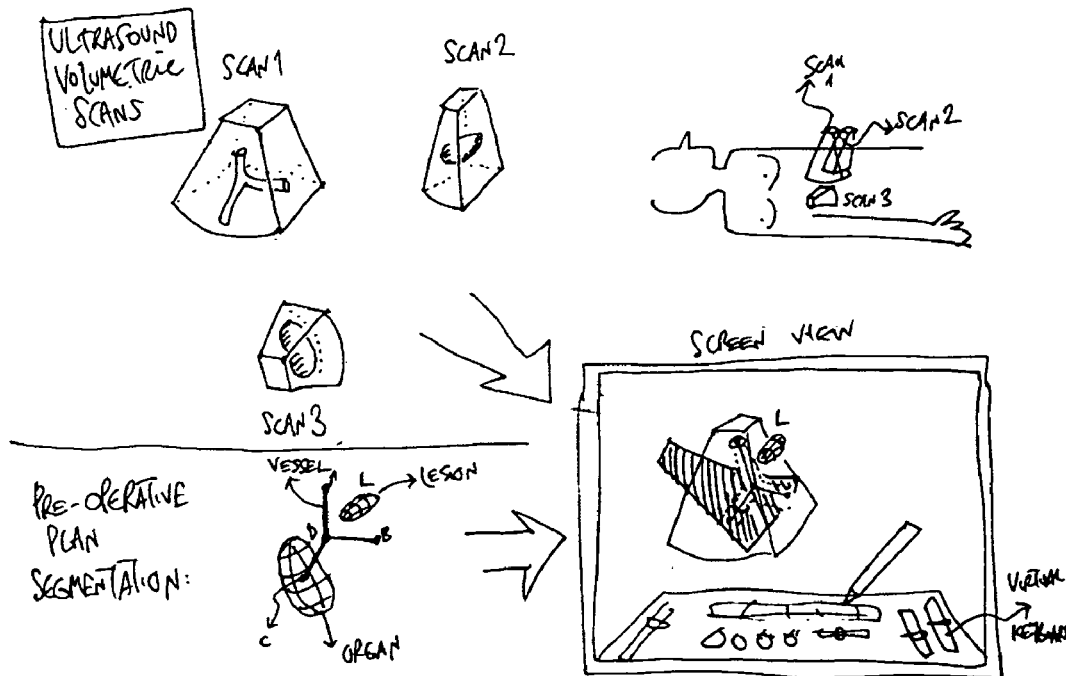


Image 6

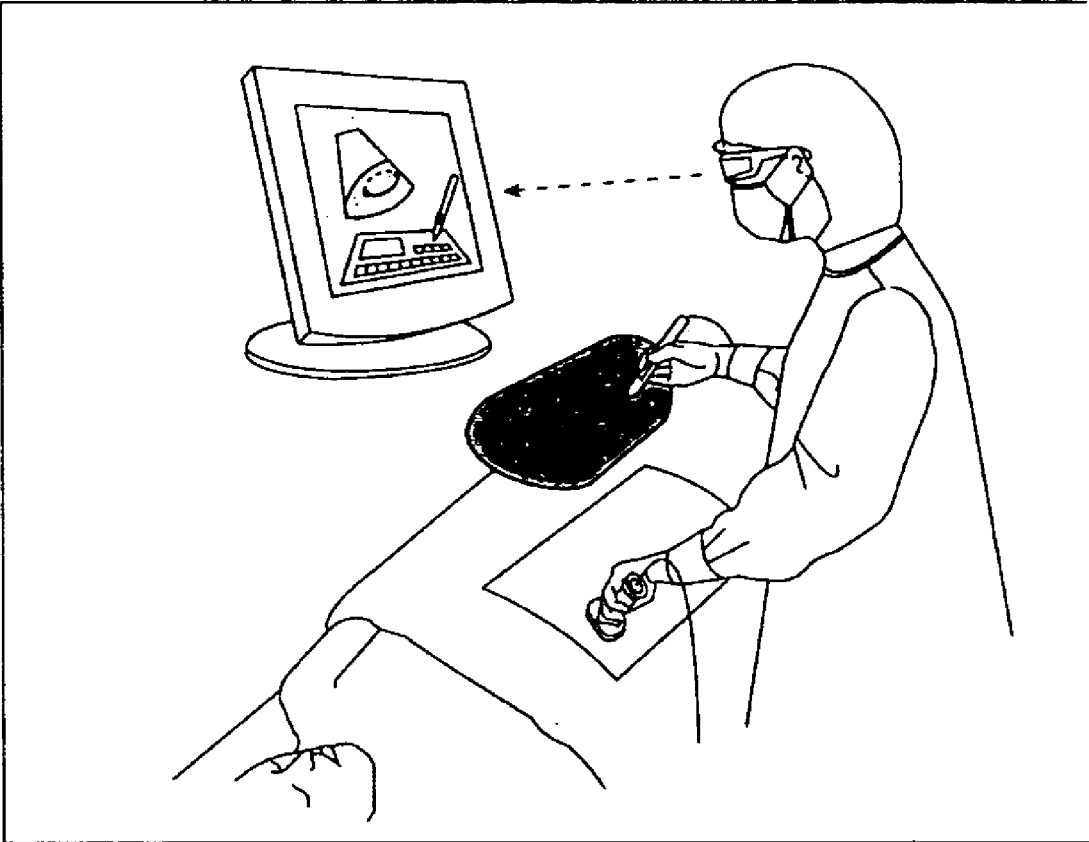


FIG. 1

image 2

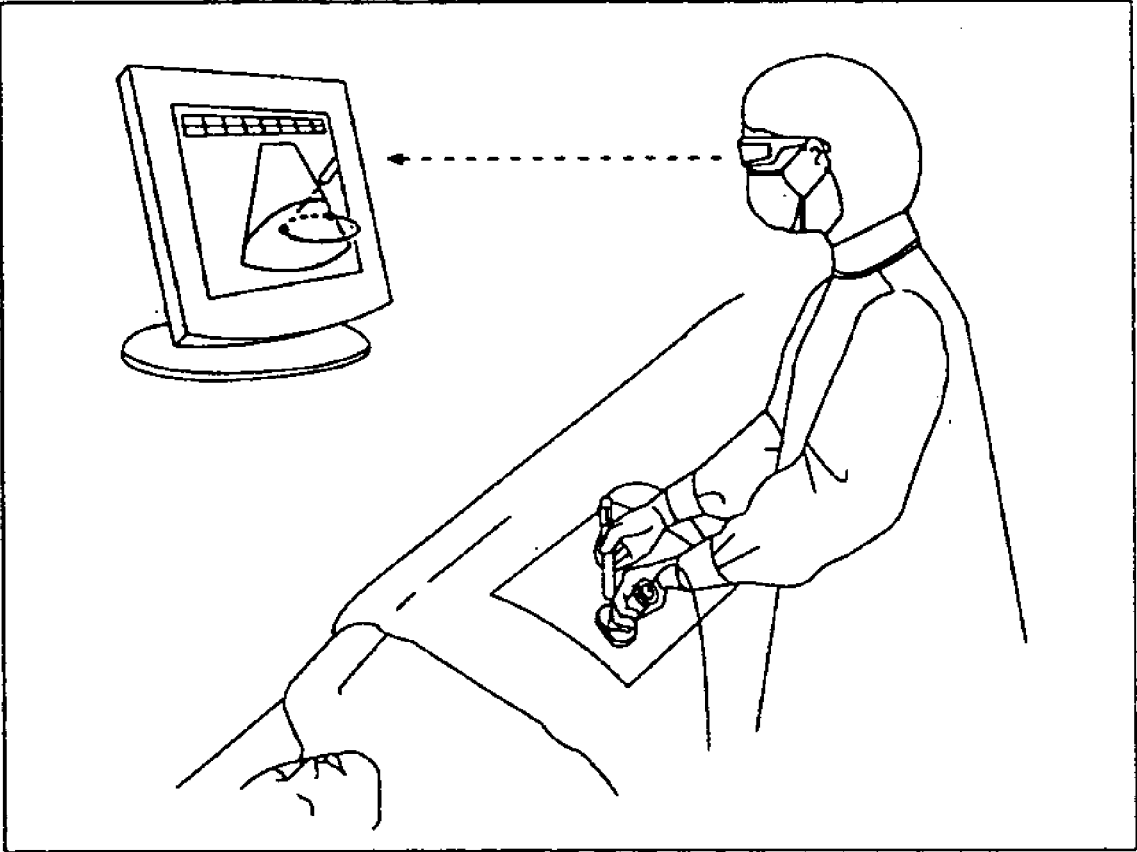


FIG. 2

Image 1

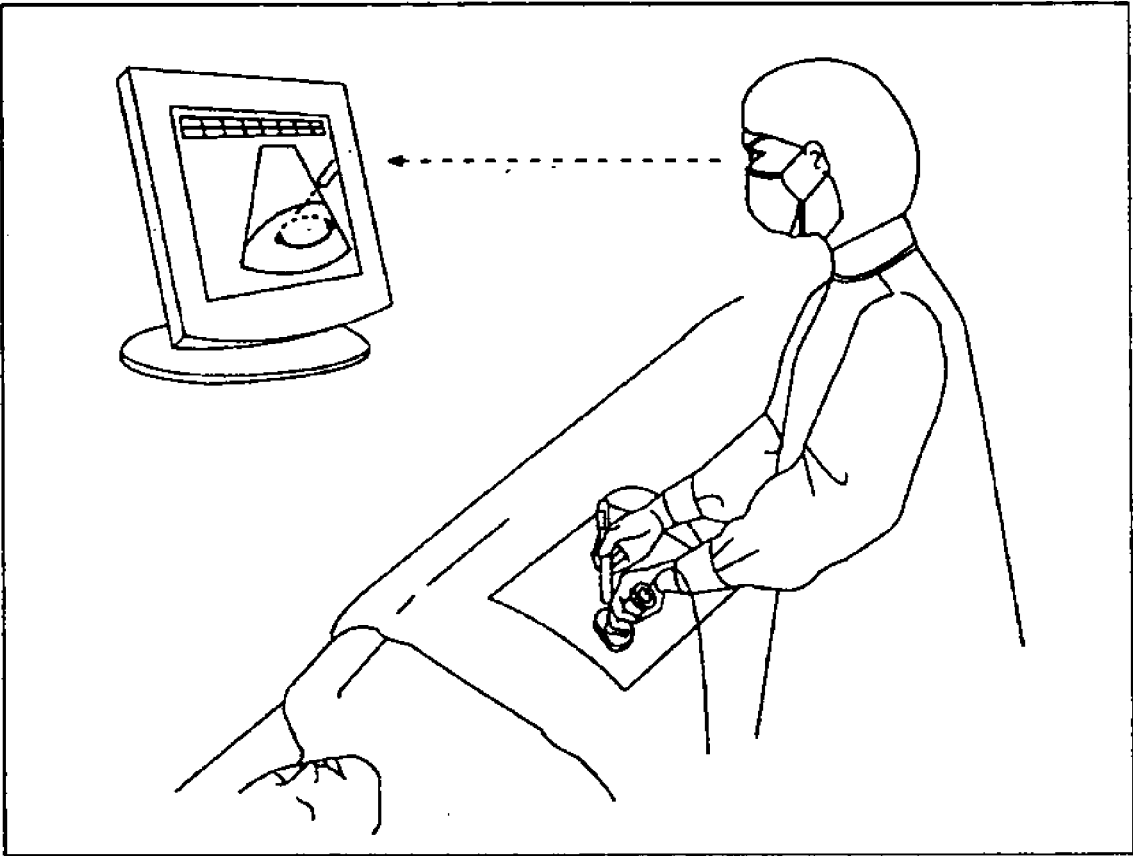


FIG. 3

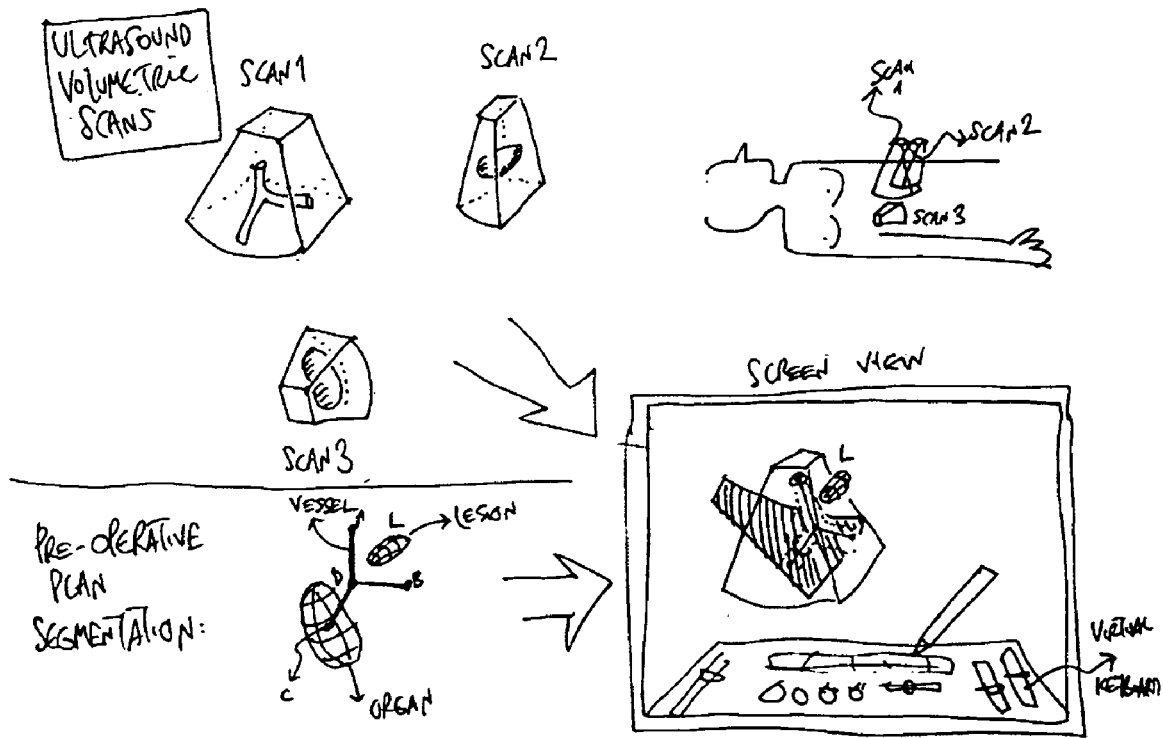


FIG. 4

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.