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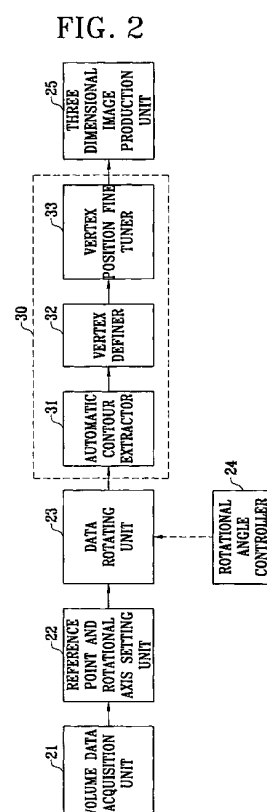
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(54) **Ultrasonic image apparatus for separating object**

(57) An ultrasonic image apparatus is provided in which a diagnostic object is separated from the background to show the separated object in a three dimensional image. Here, a contour of a target object is automatically separated and extracted and the extracted information is used to visualize the object in three dimension. Thus, the object can be visualized in three dimension based on the extracted information, to thereby observe the shape of the object without having a physical treatment such as a surgical operation. It is also possible to display the shape of the two dimensional cross-section on a monitor in the case that the object is cut at a certain angle without running a surgical operation. Also, since the shape information of the three dimensional object can be obtained additionally, the volume of the apparatus necessary for diagnosis can be obtained without making a particular additional calculation.





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 11 9226

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	US 5 732 203 A (MENEGAZZI PASCAL) 24 March 1998 (1998-03-24) * column 1, line 23 - line 28 * * column 2, line 35 - line 58; figures 2,3 *	1-7	G01S15/89 G01S7/52 A61B8/00 G06T5/00 G06T17/20
A	US 5 435 310 A (BOLSON EDWARD L ET AL) 25 July 1995 (1995-07-25) * abstract * * column 6, line 21 - column 8, line 28; figures 6A-7 * * column 12, line 17 - line 63 *	1-7	
A	BOLSON E L ET AL: "Applying the CenterSurface model to 3-D reconstructions of the left ventricle for regional function analysis" COMPUTERS IN CARDIOLOGY 1995 VIENNA, AUSTRIA 10-13 SEPT. 1995, NEW YORK, NY, USA, IEEE, US, 10 September 1995 (1995-09-10), pages 63-66, XP010154359 ISBN: 0-7803-3053-6 * page 63, left-hand column, line 1 - page 64, left-hand column, line 43 *	1-7	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			G06T G06F
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 16 October 2003	Examiner Zamuner, U
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 11 9226

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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FIG. 2

THREE DIMENSIONAL IMAGE PRODUCTION UNIT

VERTEX POSITION DATA INPUT UNIT

VERTEX DATA INPUT UNIT

ACTUALITY OUTPUT EXTRACTOR

DATA INPUT UNIT

REFERENCE POINT AND ORIGIN POINT AND AXIS SETTING UNIT

VOLUME DATA ACQUISITION UNIT

ROTATIONAL TRANSFORM CONTROLLER