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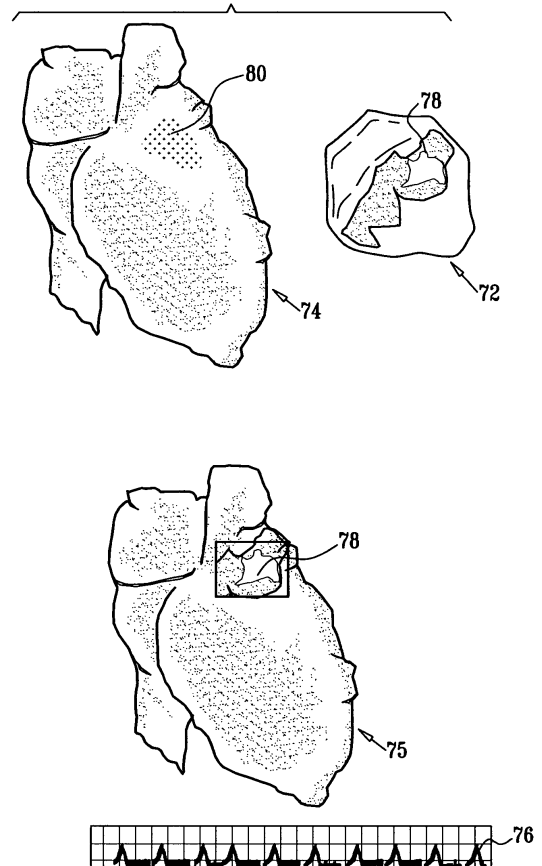
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(54) **Segmentation and registration of multimodal images using physiological data**

(57) Systems and methods are provided for registering maps with images, involving segmentation of three-dimensional images and registration of images with an electro-anatomical map using physiological or functional information in the maps and the images, rather than using only location information. A typical application of the invention involves registration of an electro-anatomical map of the heart with a preacquired or real-time three-dimensional image. Features such as scar tissue in the heart, which typically exhibits lower voltage than healthy tissue in the electro-anatomical map, can be localized and accurately delineated on the three-dimensional image and map.

FIG. 5



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EUROPEAN SEARCH REPORT

Application Number
EP 06 25 4473

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2 The present search report has been drawn up for all claims			
Place of search Berlin		Date of completion of the search 22 April 2009	Examiner Ellerbrock, Thomas
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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EUROPEAN SEARCH REPORT

Application Number
EP 06 25 4473

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The present search report has been drawn up for all claims			
Place of search Berlin		Date of completion of the search 22 April 2009	Examiner Ellerbrock, Thomas
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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Application Number
EP 06 25 4473

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
2	Place of search Berlin	Date of completion of the search 22 April 2009	Examiner Ellerbrock, Thomas
CATEGORY OF CITED DOCUMENTS		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	
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			

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

EP 06 25 4473

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 The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

22-04-2009

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US 5738096 A	14-04-1998	NONE	

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

专利名称(译)	使用生理数据对多模态图像进行分割和配准		
公开(公告)号	EP1760661A3	公开(公告)日	2009-06-17
申请号	EP2006254473	申请日	2006-08-29
[标]申请(专利权)人(译)	韦伯斯特生物官能公司		
申请(专利权)人(译)	生物传感韦伯斯特, INC.		
当前申请(专利权)人(译)	生物传感韦伯斯特, INC.		
[标]发明人	PREISS ASSAF SCHWARTZ YITZHACK		
发明人	PREISS, ASSAF SCHWARTZ, YITZHACK		
IPC分类号	G06T7/00 A61B5/00 A61B5/01 A61B5/0408 A61B5/044 A61B5/0478 A61B5/0492 A61B5/05 A61B6/03 A61B8/06 A61B8/08 A61B8/12		
CPC分类号	A61B5/0422 A61B5/0538 A61B5/06 A61B5/062 A61B5/063 A61B6/12 A61B6/5247 A61B6/541 A61B8/12 A61B8/4488 A61B8/5238 A61B8/543 G06K9/00 G06K2209/05 G06T5/50 G06T7/30 G06T2207/10132 G06T2207/30048		
优先权	11/215435 2005-08-30 US		
其他公开文献	EP1760661B1 EP1760661A2		
外部链接	Espacenet		

摘要(译)

提供了用于向图像登记图的系统和方法, 涉及使用地图和图像中的生理或功能信息而不是仅使用位置信息来分割三维图像和利用电解剖图登记图像。本发明的典型应用涉及用预先获得的或实时的三维图像配准心脏的电解剖图。诸如心脏中的瘢痕组织的特征(其通常表现出比电解剖图中的健康组织更低的电压)可以在三维图像和图上被定位和精确描绘。

