

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2012/226178 A1 (FREEMAN GARY A [US] ET AL) 6 September 2012 (2012-09-06) * abstract; figures 3a,3b,6,8 * * paragraphs [0002], [0003], [0023], [0025], [0029], [0046], [0059], [0070] - [0072] *	1-20	INV. A61B5/0402 A61B5/00 A61N1/39 A61B5/04 A61N1/04 A61B5/0452
A	US 2014/107541 A1 (SULLIVAN JOSEPH L [US] ET AL) 17 April 2014 (2014-04-17) * the whole document *	1-20	
A	US 2013/324867 A1 (FREER PAUL [US] ET AL) 5 December 2013 (2013-12-05) * the whole document *	1-20	
A	US 2010/312297 A1 (VOLPE SHANE S [US] ET AL) 9 December 2010 (2010-12-09) * the whole document *	1-20	
A	US 2010/114217 A1 (KRAUSE PAUL G [US] ET AL) 6 May 2010 (2010-05-06) * the whole document *	1-20	TECHNICAL FIELDS SEARCHED (IPC)
A	US 2008/188762 A1 (JOHN MICHAEL SASHA [US] ET AL) 7 August 2008 (2008-08-07) * the whole document *	1-20	A61B A61N
A	US 2008/009917 A1 (ROSSING MARTIN [US] ET AL) 10 January 2008 (2008-01-10) * the whole document *	1-20	
A	US 2004/059237 A1 (NARAYAN SANJIV MATHUR [US] ET AL) 25 March 2004 (2004-03-25) * the whole document *	1-20	
A	US 6 287 328 B1 (SNYDER DAVID E [US] ET AL) 11 September 2001 (2001-09-11) * the whole document *	1-20	
The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
Place of search Munich		Date of completion of the search 15 January 2018	Examiner Pereda Cubián, David
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p>			

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

EP 15 81 8798

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.

15-01-2018

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2012226178 A1	06-09-2012	EP 1595575 A2	16-11-2005
		EP 2295111 A2	16-03-2011
		JP 4920902 B2	18-04-2012
		JP 5620874 B2	05-11-2014
		JP 2005339533 A	08-12-2005
		JP 2011189139 A	29-09-2011
		US 2006025824 A1	02-02-2006
		US 2012226178 A1	06-09-2012
		US 2016331330 A1	17-11-2016
		WO 2005112749 A1	01-12-2005
US 2014107541 A1	17-04-2014	US 2014107541 A1	17-04-2014
		US 2015112401 A1	23-04-2015
US 2013324867 A1	05-12-2013	US 2013324867 A1	05-12-2013
		US 2014350420 A1	27-11-2014
US 2010312297 A1	09-12-2010	DE 102008020562 A1	02-01-2009
		FR 2917298 A1	19-12-2008
		JP 5478034 B2	23-04-2014
		JP 5939523 B2	22-06-2016
		JP 2008307382 A	25-12-2008
		JP 2014121629 A	03-07-2014
		JP 2016105831 A	16-06-2016
		US 2008312709 A1	18-12-2008
		US 2010312297 A1	09-12-2010
		US 2014163334 A1	12-06-2014
US 2016296125 A1	13-10-2016		
US 2010114217 A1	06-05-2010	US 2010114217 A1	06-05-2010
		US 2010114221 A1	06-05-2010
		WO 2010051499 A1	06-05-2010
		WO 2010051500 A1	06-05-2010
US 2008188762 A1	07-08-2008	US 2007208263 A1	06-09-2007
		US 2008188762 A1	07-08-2008
US 2008009917 A1	10-01-2008	US 2008009916 A1	10-01-2008
		US 2008009917 A1	10-01-2008
		WO 2007136851 A2	29-11-2007
US 2004059237 A1	25-03-2004	AU 2003299035 A1	08-04-2004
		US 2004059237 A1	25-03-2004
		US 2007021679 A1	25-01-2007
		WO 2004026123 A2	01-04-2004

EPO FORM P0459

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

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

EP 15 81 8798

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.

15-01-2018

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6287328	B1	11-09-2001	DE 19942658 A1 16-11-2000
			GB 2349701 A 08-11-2000
			JP 4574793 B2 04-11-2010
			JP 2000350709 A 19-12-2000
			US 6287328 B1 11-09-2001

专利名称(译)	用于将心脏事件与心电图 (ECG) 信号中的噪声区分开的系统和方法		
公开(公告)号	EP3166482A4	公开(公告)日	2018-02-21
申请号	EP2015818798	申请日	2015-07-06
[标]申请(专利权)人(译)	卓尔医学产品公司		
申请(专利权)人(译)	ZOLL医疗公司		
当前申请(专利权)人(译)	ZOLL医疗公司		
[标]发明人	SULLIVAN ADAM KAIB THOMAS E NICOLO FRANCESCO SZYMKIEWICZ STEVE		
发明人	SULLIVAN, ADAM KAIB, THOMAS E. NICOLO, FRANCESCO SZYMKIEWICZ, STEVE		
IPC分类号	A61B5/0402 A61B5/00		
CPC分类号	A61B5/0022 A61B5/04012 A61B5/04014 A61B5/04085 A61B5/0452 A61B5/6802 A61B5/7203 A61B5/7221 A61B5/7257 A61B5/746 A61B5/747 A61N1/046 A61N1/0484 A61N1/3904 A61N1/3925 A61N1/3956 A61N1/3987 A61N1/3993 G06F19/00 G16H40/67		
优先权	62/021451 2014-07-07 US		
其他公开文献	EP3166482B1 EP3166482A1		
外部链接	Espacenet		

摘要(译)

一种心脏监测装置，包括：至少一个感应电极，用于从患者获得心电图 (ECG) 信号;处理单元，包括至少一个可操作地耦合到所述至少一个感测电极的处理器;至少一种非暂时性计算机可读介质，包括程序指令，当由所述至少一个处理器执行时，使所述心脏监测装置：从所述至少一个感测电极获得ECG信号;基于ECG信号确定变换的ECG信号;提取至少一个表示变换的ECG信号的至少一个特征的值;提供至少一个值以确定与ECG信号相关联的分数，从而提供ECG导出的分数;将ECG导出的分数与机器学习确定的预定阈值分数进行比较;如果ECG导出的分数是高于或低于机器学习确定的预定阈值分数之一，则提供心脏事件的指示。

DOCUMENTS CONSIDERED TO BE RELEVANT		Relevant document	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2012/226178 A1 (FREEMAN GARY A [US] ET AL) 8 September 2012 (2012-09-06) * Abstract; Figures 3a-3b, 6, 8 * Paragraphs [0002], [0003], [0023], [0025], [0029], [0041], [0053], [0070]-[0072]	1-20	INV. A61B5/0402 A61B5/00 A61N1/35 A61B5/04 A61N1/04 A61B5/0452
A	US 2014/107541 A1 (SULLIVAN JOSEPH L [US] ET AL) 17 April 2014 (2014-04-17) * the whole document	1-20	
A	US 2013/324807 A1 (FREER PAUL [US] ET AL) 5 December 2013 (2013-12-05) * the whole document	1-20	
A	US 2010/312297 A1 (VOLPE SHANE S [US] ET AL) 9 December 2010 (2010-12-09) * the whole document	1-20	
A	US 2010/114217 A1 (MORSE PAUL G [US] ET AL) 6 May 2010 (2010-05-06) * the whole document	1-20	TECHNICAL FIELD BACKGROUND
A	US 2008/188762 A1 (JOHN MICHAEL SASHA [US] ET AL) 7 August 2008 (2008-08-07) * the whole document	1-20	AG1B AG1N
A	US 2008/009917 A1 (ROSSING MARTIN [US] ET AL) 10 January 2008 (2008-01-10) * the whole document	1-20	
A	US 2004/059237 A1 (NARAYAN SANJIV MATHUR [US] ET AL) 25 March 2004 (2004-03-25) * the whole document	1-20	
A	US 6,287,328 B1 (SHYDER DAVID E [US] ET AL) 11 September 2001 (2001-09-11) * the whole document	1-20	
The supplementary search report has been based on the latest set of search results available at the start of the search.			
Munich		15 January 2018	Pereda Cubián, David
CATEGORIES OF CITED DOCUMENTS: X: Internationally relevant if known alone A: Internationally relevant if combined with another U: Internationally relevant if combined with another P: Internationally relevant if combined with another I: Member of the same patent family, corresponding document			