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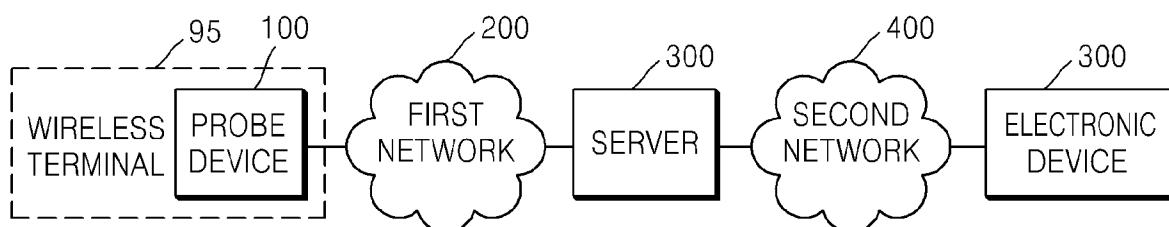
**(54) PROBE DEVICE, SERVER, SYSTEM FOR DIAGNOSING ULTRASOUND IMAGE, AND METHOD OF PROCESSING ULTRASOUND IMAGE**

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(57) A probe device, a server, a system for diagnosing an ultrasound image, and a method of processing an ultrasound image. The system includes: a probe device for transmitting an echo signal received from a transducer to a server; a server for executing an ultrasound image diagnostic application. Ultrasound image data is gener-

ated by using the echo signal received from the probe device; and an electronic device including a display unit for receiving and displaying the ultrasound image data generated by the ultrasound image diagnostic application of the server.

## FIG. 1





## EUROPEAN SEARCH REPORT

Application Number

EP 16 16 0299

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
10 X	US 2011/034209 A1 (RUBINSKY BORIS [US] ET AL) 10 February 2011 (2011-02-10) * paragraphs [0016], [0039], [0046], [0088] - [0121]; figures 8-12 *	1-4	INV. A61B8/00 G06F19/00
15 X	----- US 2002/067359 A1 (BRODSKY MICHAEL [US] ET AL) 6 June 2002 (2002-06-06) * figures 3D, 7B *	1-4	
20 X	----- US 2004/030585 A1 (SARIEL AVIRAM [IL]) 12 February 2004 (2004-02-12) * figure 1 *	1-4	
25 X	----- US 2011/054296 A1 (MCCARTHY MATTHEW [AU] ET AL) 3 March 2011 (2011-03-03) * paragraphs [0027], [0064], [0073] - [0080]; figures 4,6 *	5-9,11	
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30			TECHNICAL FIELDS SEARCHED (IPC)
			A61B
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50 3	The present search report has been drawn up for all claims		
55	Place of search Munich	Date of completion of the search 30 November 2016	Examiner Koprinarov, Ivaylo
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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## CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

## LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION  
SHEET B**

Application Number  
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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

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1. claims: 1-4  
related to a probe device  
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2. claims: 5-11  
related to an electronic device  
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**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 16 16 0299

5 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.

30-11-2016

10	Patent document cited in search report	Publication date	Patent family member(s)			Publication date
	US 2011034209	A1 10-02-2011	NONE			
15	US 2002067359	A1 06-06-2002	EP 1370888 A2	17-12-2003		
			JP 2004530463 A	07-10-2004		
			TW 537885 B	21-06-2003		
			US 2002067359 A1	06-06-2002		
			WO 02068992 A2	06-09-2002		
20	US 2004030585	A1 12-02-2004	AU 1265702 A	06-05-2002		
			US 2004030585 A1	12-02-2004		
			WO 0235468 A2	02-05-2002		
25	US 2011054296	A1 03-03-2011	AU 2009212098 A1	13-08-2009		
			US 2011054296 A1	03-03-2011		
			WO 2009097652 A1	13-08-2009		
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专利名称(译)	探测装置，服务器，用于诊断超声图像的系统，以及处理超声图像的方法		
公开(公告)号	<a href="#">EP3058876A3</a>	公开(公告)日	2017-01-25
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[标]申请(专利权)人(译)	三星电子株式会社		
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当前申请(专利权)人(译)	SAMSUNG ELECTRONICS CO. , LTD.		
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发明人	EUM, JAE-YOUNG CHO, JEONG		
IPC分类号	A61B8/00 G06F19/00		
CPC分类号	A61B8/4411 A61B8/4427 A61B8/4438 A61B8/4472 A61B8/565 A61B8/582 G06F19/321 G06F19/3418 G16H30/40 G16H40/67 A61B8/00		
审查员(译)	KOPRINAROV, IVAYLO		
优先权	1020120005275 2012-01-17 KR		
其他公开文献	<a href="#">EP3058876A2</a>		
外部链接	<a href="#">Espacenet</a>		

## 摘要(译)

探针装置，服务器，用于诊断超声图像的系统，以及处理超声图像的方法。该系统包括：探头装置，用于将从换能器接收的回波信号发送到服务器;用于执行超声图像诊断应用的服务器。通过使用从探头装置接收的回波信号产生超声图像数据;以及电子设备，包括用于接收和显示由服务器的超声图像诊断应用生成的超声图像数据的显示单元。

FIG. 1

