

(19)



(11)

EP 2 105 094 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
16.04.2014 Bulletin 2014/16

(51) Int Cl.:
A61B 8/13 (2006.01) A61B 8/12 (2006.01)

(43) Date of publication A2:
30.09.2009 Bulletin 2009/40

(21) Application number: **09004498.3**

(22) Date of filing: **27.03.2009**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR
Designated Extension States:
AL BA RS

(72) Inventors:
• **Tanaka, Toshizumi**
Saitama-shi
Saitama (JP)
• **Sato, Tomoo**
Ashigarakami-gun, Kanagawa (JP)
• **Karasawa, Hiroyuki**
Ashigarakami-gun, Kanagawa (JP)

(30) Priority: **28.03.2008 JP 2008088713**

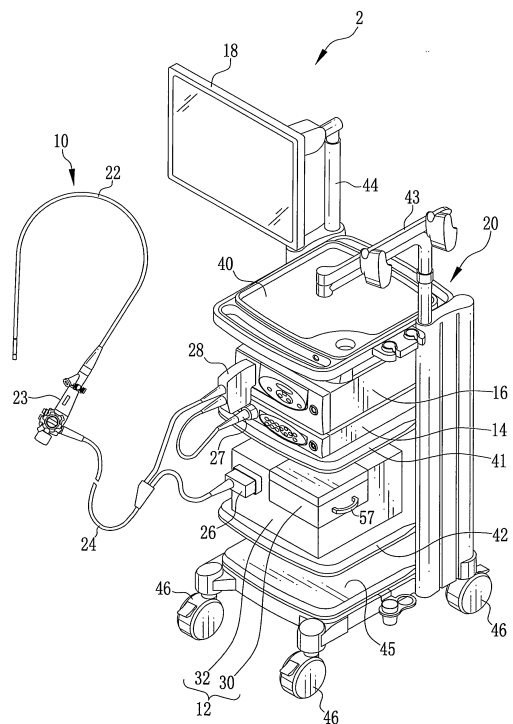
(71) Applicant: **FUJIFILM Corporation**
Tokyo 106-0031 (JP)

(74) Representative: **Höhfeld, Jochen**
Klunker Schmitt-Nilson Hirsch
Patentanwälte
Destouchesstrasse 68
80796 München (DE)

(54) Adapter and ultrasonic diagnosis system

(57) An ultrasonic diagnosis system includes an ultrasonic diagnosis device (30) for diagnosis according to a signal from a first ultrasonic probe (60) for extracorporeal use. A second ultrasonic probe (10, 82) detects an object for in-vivo diagnosis. An adapter inputs and/or outputs between the ultrasonic diagnosis device and the second ultrasonic probe. The adapter includes a holder chamber (71, 186) for holding the ultrasonic diagnosis device. A diagnosis device connector (74) is for connection with the ultrasonic diagnosis device. A probe connector (72) is for connection with the second ultrasonic probe. An input/output device (120) is for transmission and/or reception between the probe connector and the diagnosis device connector. In addition to the ultrasonic diagnosis device, a picture-in-picture processing unit operates for picture-in-picture processing of an ultrasonic or endoscopic image. Furthermore, a processor connector is for connection with an endoscope processor for receiving a signal from the endoscope to create an endoscopic image.

FIG. 1



EP 2 105 094 A3



PARTIAL EUROPEAN SEARCH REPORT

Application Number

under Rule 62a and/or 63 of the European Patent Convention.
This report shall be considered, for the purposes of subsequent proceedings, as the European search report

EP 09 00 4498

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 2004/150963 A1 (HOLMBERG RANDY T [US] ET AL) 5 August 2004 (2004-08-05)	1-7,9-14	INV. A61B8/13 A61B8/12
Y	* paragraphs [0013], [0029] - [0036], [0040], [0051]; figures 1C,3A,4 *	8,15	
Y	EP 1 645 231 A1 (FUJI PHOTO FILM CO LTD [JP] FUJIFILM CORP [JP]) 12 April 2006 (2006-04-12)	15	
A	* paragraphs [0006] - [0010] *	1	
Y	JP 2002 125219 A (OLYMPUS OPTICAL CO) 26 April 2002 (2002-04-26)	8	
A	* paragraph [0027] *	1	
A	WO 00/66003 A1 (SONOSITE INC [US]) 9 November 2000 (2000-11-09) * the whole document *	1	
			TECHNICAL FIELDS SEARCHED (IPC)
			A61B G01S
INCOMPLETE SEARCH			
The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC so that only a partial search (R.62a, 63) has been carried out.			
Claims searched completely :			
Claims searched incompletely :			
Claims not searched :			
Reason for the limitation of the search: see sheet C			
Place of search Berlin		Date of completion of the search 7 March 2014	Examiner Clevorn, Jens
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			

1
EPO FORM 1503 03 82 (P04E07)



**INCOMPLETE SEARCH
SHEET C**

Application Number
EP 09 00 4498

Claim(s) completely searchable:
1-15

Claim(s) not searched:
16, 17

Reason for the limitation of the search:

The search has been restricted to the subject-matter indicated by the applicant in his letter filed in reply to the invitation pursuant to Rule 62a(1) EPC.

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

EP 09 00 4498

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.

07-03-2014

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2004150963 A1	05-08-2004	AT 446714 T	15-11-2009
		CN 1758878 A	12-04-2006
		EP 1589878 A2	02-11-2005
		EP 2116186 A2	11-11-2009
		ES 2337140 T3	21-04-2010
		JP 2006518252 A	10-08-2006
		US 2004150963 A1	05-08-2004
		WO 2004069028 A2	19-08-2004
EP 1645231 A1	12-04-2006	EP 1645231 A1	12-04-2006
		JP 4433972 B2	17-03-2010
		JP 2006102213 A	20-04-2006
		US 2006074317 A1	06-04-2006
JP 2002125219 A	26-04-2002	NONE	
WO 0066003 A1	09-11-2000	AU 4991100 A	17-11-2000
		CA 2372158 A1	09-11-2000
		EP 1180972 A1	27-02-2002
		JP 2002542870 A	17-12-2002
		US 6447451 B1	10-09-2002
		US 2002143256 A1	03-10-2002
		WO 0066003 A1	09-11-2000

专利名称(译)	适配器和超声波诊断系统		
公开(公告)号	EP2105094A3	公开(公告)日	2014-04-16
申请号	EP2009004498	申请日	2009-03-27
[标]申请(专利权)人(译)	富士胶片株式会社		
申请(专利权)人(译)	富士胶片株式会社		
当前申请(专利权)人(译)	富士胶片株式会社		
[标]发明人	TANAKA TOSHIZUMI SATO TOMOO KARASAWA HIROYUKI		
发明人	TANAKA, TOSHIZUMI SATO, TOMOO KARASAWA, HIROYUKI		
IPC分类号	A61B8/13 A61B8/12		
CPC分类号	A61B8/12 A61B8/4405 A61B8/4411 A61B8/4427 A61B8/4433 A61B8/462 A61B8/5238 G01S7/52074 G01S7/52082 G01S15/899		
优先权	2008088713 2008-03-28 JP		
其他公开文献	EP2105094A2 EP2105094A8		
外部链接	Espacenet		

摘要(译)

超声波诊断系统包括用于根据来自用于体外使用的第二超声波探头 (60) 的信号进行诊断的超声波诊断装置 (30)。第二超声波探头 (10,82) 检测用于体内诊断的对象。适配器在超声诊断装置和第二超声探头之间输入和/或输出。适配器包括用于保持超声波诊断装置的保持室 (71,186)。诊断装置连接器 (74) 用于与超声波诊断装置连接。探头连接器 (72) 用于与第二超声波探头连接。输入/输出装置 (120) 用于在探针连接器和诊断装置连接器之间的传输和/或接收。除了超声诊断装置之外，画中画处理单元操作于超声或内窥镜图像的画中画处理。此外，处理器连接器用于与内窥镜处理器连接，用于从内窥镜接收信号以创建内窥镜图像。

