Europäisches Patentamt
European Patent Office
Office européen des brevets

SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application Number
EP 15 78 9422

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	GROVE J R ET AL: "MODIFIED VENTILATOR WITH LOGIC CONTROLLER FOR CARDIORESPIRATORY SYNCHRONISATION OF MAGNETIC RESONANCE IMAGING IN SMALL ANIMALS", MEDICAL AND BIOLOGICAL ENGINEERING AND COMPUTING, SPRINGER, HEILDELBERG, DE, vol. 33, no. 1, January 1995 (1995-01), pages 104-107, XP000486797, ISSN: 0140-0118 * the whole document *	10,12	INV. G01R33/567 G01R33/563 A61B5/055 A61B5/0205 A61B5/00 ADD. G01R33/56 G01R33/561 G01R33/48
Y	Johannes F M Schmidt: "Advanced motion correction and image reconstruction for cardiac magnetic resonance", , 2013, pages 1-131, XP055431385, Internet DOI: 10.3929/ethz-a-010182976 Retrieved from the Internet: URL:https://www.research-collection.ethz.ch/bitstream/handle/20.500.11850/86026/eth-8792-02.pdf [retrieved on 2017-12-04]	1-3,6, 11,12	
A	* page 39 - page 40 *	8,9,14, 15	
Y	DE 10 2008 032827 A1 (SIEMENS AG [DE]) 21 January 2010 (2010-01-21) * paragraphs [0002], [0009], [0026], [0028], [0032], [0036] *	1,4-7, 11-13	
Y	US 2004/030234 A1 (HAYEK ZAMIR [GB]) 12 February 2004 (2004-02-12) * paragraph [0014] - paragraph [0017] * * paragraph [0031] - paragraph [0033] *	1,4-7, 11-13	

-/--

TECHNICAL FIELDS SEARCHED (IPC)
G01R

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	Date of completion of the search	Examiner
Munich	7 December 2017	Skalla, Jörg

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

2

EPO FORM 1503 03.82 (P04C04)

Europäisches Patentamt
European Patent Office
Office européen des brevets

SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application Number
EP 15 78 9422

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	MARKUS HENNINGSSON ET AL: "Contrast-enhanced specific absorption rate-efficient 3D cardiac cine with respiratory-triggered radiofrequency gating", JOURNAL OF MAGNETIC RESONANCE IMAGING, vol. 37, no. 4, 25 September 2012 (2012-09-25), pages 986-992, XP055430908, US ISSN: 1053-1807, DOI: 10.1002/jmri.23821	4	
Y	* the whole document *	1-3,5-7, 11-13	
A		8,9,14, 15	

Y	ENNIS D.B. ET AL.: "Respiratory and cardiac gated 3D imaging for improved spatial and temporal resolution", PROCEEDINGS OF THE INTERNATIONAL SOCIETY FOR MAGNETIC RESONANCE IN MEDICINE, 18 May 2002 (2002-05-18), XP040586414, Hawaii, USA * the whole document *	1-3,5-7	TECHNICAL FIELDS SEARCHED (IPC)

Y	PRINCE MARTIN R ET AL: "A pilot investigation of new superparamagnetic iron oxide (ferumoxytol) as a contrast agent for cardiovascular MRI", JOURNAL OF X-RAY SCIENCE AND TECHNOLOGY, IOS PRESS, AMSTERDAM, NL, vol. 11, no. 4, 1 January 2003 (2003-01-01), pages 231-240, XP009502106, ISSN: 0895-3996 * chapter 1 *	6,12	

	-/--		

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	Date of completion of the search	Examiner
Munich	7 December 2017	Skalla, Jörg

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

2

EPO FORM 1503 03.82 (P04C04)

Europäisches Patentamt
European Patent Office
Office européen des brevets

SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application Number
EP 15 78 9422

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,P	FEI HAN ET AL: "Four-dimensional, multiphase, steady-state imaging with contrast enhancement (MUSIC) in the heart: A feasibility study in children : MUSIC in the Heart in Children", MAGNETIC RESONANCE IN MEDICINE., vol. 74, no. 4, 9 October 2014 (2014-10-09), pages 1042-1049, XP055431037, US ISSN: 0740-3194, DOI: 10.1002/mrm.25491 * the whole document * -----	1-15	

TECHNICAL FIELDS SEARCHED (IPC)

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	Date of completion of the search	Examiner
Munich	7 December 2017	Skalla, Jörg

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

2

EPO FORM 1503 03.82 (P04C04)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 15 78 9422

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.

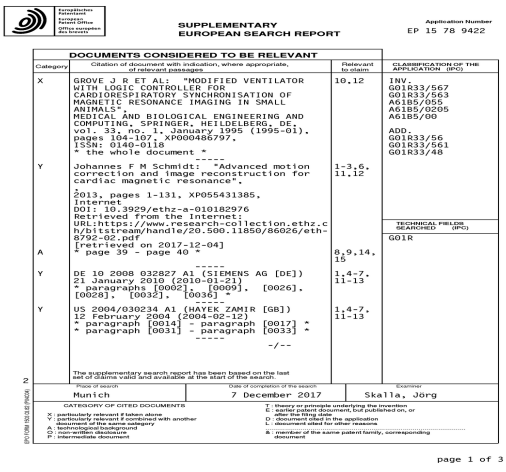
07-12-2017

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 102008032827 A1	21-01-2010	NONE	
US 2004030234 A1	12-02-2004	AT 470873 T	15-06-2010
		AU 8234001 A	04-03-2002
		EP 1322972 A1	02-07-2003
		GB 2371364 A	24-07-2002
		GB 2409285 A	22-06-2005
		JP 2004507297 A	11-03-2004
		US 2004030234 A1	12-02-2004
		US 2010041980 A1	18-02-2010
		WO 0216957 A1	28-02-2002

专利名称(译)	心脏相位分辨非呼吸三维磁共振血管造影		
公开(公告)号	EP3139833A4	公开(公告)日	2018-01-17
申请号	EP2015789422	申请日	2015-05-08
[标]申请(专利权)人(译)	加利福尼亚大学董事会		
申请(专利权)人(译)	加利福尼亚大学董事会		
当前申请(专利权)人(译)	加利福尼亚大学董事会		
[标]发明人	FINN J PAUL HU PENG HAN FEI		
发明人	FINN, J. PAUL HU, PENG HAN, FEI		
IPC分类号	A61B5/055 A61B5/0205 A61B5/00		
CPC分类号	A61B5/0263 A61B5/055 A61B5/7285 A61B2503/06 G01R33/4822 G01R33/5601 G01R33/5616 G01R33/56325 G01R33/5635 G01R33/5673 A61B5/0402 A61B5/113 A61K49/1818 A61M5/007 A61M16/0003 A61M2016/0027		
代理机构(译)	RICHARDS，JOHN		
优先权	61/990776 2014-05-09 US		
其他公开文献	EP3139833A1		
外部链接	Espacenet		

摘要(译)

公开了3D电影MR血管造影系统和方法，用于在ferumoxytol的稳态血管内分布阶段期间使用。 3D电影MRA技术可以改善接受心血管MRI的儿科患者的心脏解剖结构。



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application Number EP 15 78 9422

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	GROVE J R ET AL: "MODIFIED VENTILATOR WITH LOGIC CONTROLLER FOR CARDIORESPIRATORY SYNCHRONISATION OF MAGNETIC RESONANCE IMAGING IN SMALL ANIMALS", MEDICAL AND BIOLOGICAL ENGINEERING AND COMPUTING, SPRINGER, HEILDELBERG, DE, vol. 33, no. 1, January 1995 (1995-01), pages 104-107, XP000486797, ISSN: 0140-0118 * the whole document *	10,12	INV. G01R33/567 G01R33/563 A61B5/055 A61B5/0205 A61B5/00 ADD. G01R33/56 G01R33/561 G01R33/48
Y	Johannes F M Schmidt: "Advanced motion correction and image reconstruction for cardiac magnetic resonance", 2013, pages 1-131, XP055431385, Internet DOI: 10.3929/ethz-a-010182976 Retrieved from the Internet: URL:https://www.research-collection.ethz.ch/bitstream/handle/20.500.11850/86026/eth-8792-02.pdf [retrieved on 2017-12-04] * page 39 - page 40 *	1-3,6, 11,12	
A		8,9,14, 15	TECHNICAL FIELDS SEARCHED (IPC) G01R
Y	DE 10 2008 032827 A1 (SIEMENS AG [DE]) 21 January 2010 (2010-01-21) * paragraphs [0002], [0009], [0026], [0028], [0032], [0036] *	1,4-7, 11-13	
Y	US 2004/030234 A1 (HAYEK ZAMIR [GB]) 12 February 2004 (2004-02-12) * paragraph [0014] - paragraph [0017] * * paragraph [0031] - paragraph [0033] *	1,4-7, 11-13	

-/--

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	Date of completion of the search	Examiner
Munich	7 December 2017	Skalla, Jörg

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

EPO FORM 1503 03.82 (P04C01)