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(54) Imaging Volumes with Arbitrary Geometries in Contact and Non-Contact Tomography

(57) A method for tomographic imaging of diffuse medium includes directing waves into a diffusive medium, solving a surface-bounded inversion problem by forward field calculations calculations through decomposition of contributions from the multiple reflections from an arbitrary surface within the diffusive medium or outside the diffusive medium into a sum of different orders of reflection up to an arbitrary order, and using contact or non-contact measurements of waves outside said diffusive medium to generate a tomographic image.

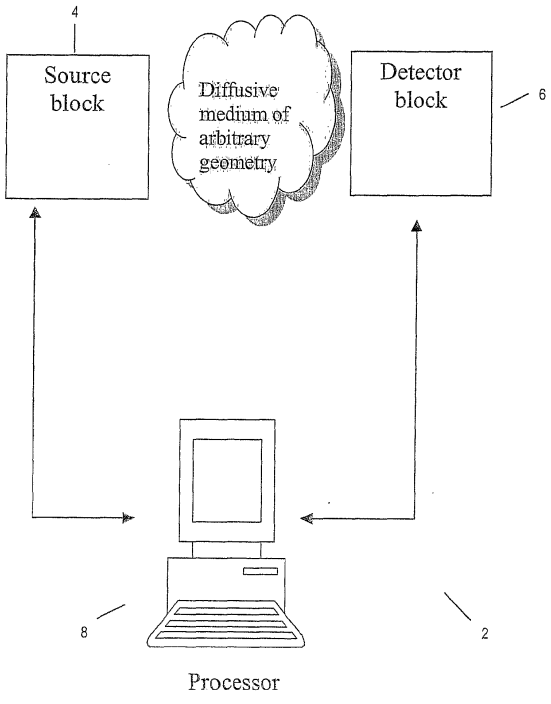

FIG. 1

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EUROPEAN SEARCH REPORT

Application Number
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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)
X	US 6 205 353 B1 (CAI WEI ET AL) 20 March 2001 (2001-03-20) * column 1, line 8 - line 19 * * column 2, line 29 - line 62 * * column 4, line 13 - line 21 * * column 6, line 19 - column 7, line 60 * * claims 1,18 * * figure 1 * -----	1-12	INV. G01N21/47 A61B5/00
X	DE 44 45 214 A1 (BERLIN LASER MEDIZIN ZENTRUM) 20 June 1996 (1996-06-20) * column 1, line 6 - line 18 * * column 1, line 61 - column 2, line 16 * * column 3, line 45 - line 53 * * column 4, line 1 - column 5, line 5 * * figures * -----	1-12	
X	US 5 762 607 A (SCHOTLAND JOHN CARL ET AL) 9 June 1998 (1998-06-09) * column 6, line 5 - column 7, line 49 * * column 16, line 23 - column 17, line 31 * * claim 1 * * figure 4 * -----	1-12	TECHNICAL FIELDS SEARCHED (IPC) G01N A61B
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	23 June 2014	Krametz, Edeltraud

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
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D : document cited in the application
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& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 11 18 2730

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23-06-2014

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

专利名称(译)	在接触和非接触式断层扫描中具有任意几何的成像体积		
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申请(专利权)人(译)	VISEN MEDICAL，INC.		
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优先权	60/385931 2002-06-04 US PCT/US2003/017558 2003-06-04 WO		
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摘要(译)

用于漫射介质的层析成像的方法包括将波引导到漫射介质中，通过前向场计算计算通过分解来自漫射介质内或漫射介质外的任意表面的多次反射的贡献来解决表面有界反转问题。反射直到任意顺序的不同反射次序的总和，并且使用所述漫射介质外部的波的接触或非接触测量来生成断层图像。

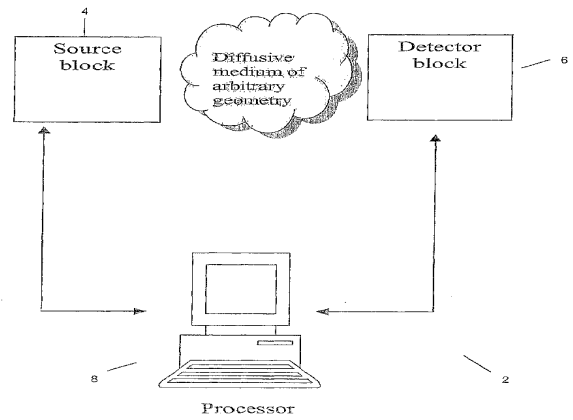

FIG. 1