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(71) Applicant (for all designated States except US):
AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH [SG/SG]; 20 Biopolis Way, #07-01 Centros, Singapore 138668 (SG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **VOLKAU, Ihar** [BY/SG]; 6 Jalan Lempeng #12-03, Singapore 128795 (SG). **PRAKASH, Bhanu, KN** [IN/SG]; Block 305, #06-419, Clementi Avenue 4, Singapore 120305 (SG). **NG, Ting Ting** [SG/SG]; 738 Bedok Reservoir Road, Waterfront View, #08-5398, Singapore 470738 (SG). **GUPTA, Varsha** [IN/SG]; c/o Exploit Technologies Pte Ltd, 30 Biopolis Street, #09-02, Matrix, Singapore 138671 (SG). **NOWINSKI, Wieslaw L.** [PL/SG]; 111 Clementi Road, #10-06, Blk C, Singapore 129792 (SG).

(74) Agent: **WATKIN, Timothy Lawrence Harvey**; Lloyd Wise, Tanjong Pagar, P.O. Box 636, Singapore 910816 (SG).

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Declaration under Rule 4.17:

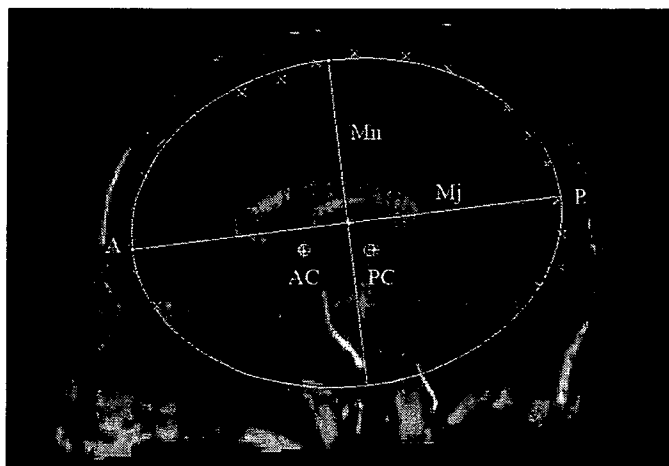
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(54) Title: LOCALIZATION OF BRAIN LANDMARKS SUCH AS THE ANTERIOR AND POSTERIOR COMMISSURES BASED ON GEOMETRICAL FITTING



(57) Abstract: A method of estimating the location of the anterior and posterior commissures in a brain scan image is proposed. Firstly, a geometrical object is constructed using points on a brain scan image of an individual which are on the surface of the brain, such as an ellipse fitting the cerebral surface of a sagittal image of the mid-sagittal plane, or an adjacent sagittal plane. The locations on the MSP of the AC and PC landmarks (and optionally other landmarks) are estimated using the five parameters which define the ellipse, plus numerical values obtained in advance from statistical analysis of other individuals.

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INTERNATIONAL SEARCH REPORT

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PCT/SG2007/000274

A. CLASSIFICATION OF SUBJECT MATTER
 INV. G06T7/00 G06T7/60

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G06T

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PRAKASH ET AL: "Morphologic Relationship Among the Corpus Callosum, Fornix, Anterior Commissure, and Posterior Commissure" ACADEMIC RADIOLOGY, RESTON, VA, US, vol. 13, no. 1, 1 January 2006 (2006-01-01), pages 24-35, XP005426462 ISSN: 1076-6332 figures 1-3 page 25, right-hand column, line 20 - page 28, left-hand column, line 2 page 31, right-hand column, line 7 - page 33, left-hand column, line 13 ----- -/--	1-11

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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Name and mailing address of the ISA/
 European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Gauthier, J

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International application No

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BHANU PRAKASH ET AL: "Rapid and Automatic Localization of the Anterior and Posterior Commissure Point Landmarks in MR Volumetric Neuroimages<1>" ACADEMIC RADIOLOGY, RESTON, VA, US, vol. 13, no. 1, 1 January 2006 (2006-01-01), pages 36-54, XP005426463 ISSN: 1076-6332 page 39, right-hand column, line 1 - page 41, right-hand column, line 5 figures 1-4,6-9	1-11
A	QINGMAO HU ET AL: "Knowledge-driven extraction of the four modified talairach cortical landmarks (A, P, L, and R) from MR neuroimages" BIOINFORMATICS AND BIOENGINEERING, 2004. BIBE 2004. PROCEEDINGS. FOURTH IEEE SYMPOSIUM ON TAICHUNG, TAIWAN, ROC 19-21 MAY 2004, PISCATAWAY, NJ, USA, IEEE, 19 May 2004 (2004-05-19), pages 93-99, XP010711335 ISBN: 978-0-7695-2173-2 page 1, left-hand column, paragraph 1 - right-hand column page 3, left-hand column, paragraph 2.2.3 - page 4, left-hand column figures 1;2	1-11
A	WO 2005/048844 A (AGENCY SCIENCE TECH & RES [SG]; NAGARAJA RAO BHANU PRAKASH KIR [SG]; N) 2 June 2005 (2005-06-02) figures 3,5,10-14 page 8, line 4 - page 12, line 14	1-11
A	YU H S ET AL: "Anatomic labelling of PET brain images with automatic detection of AC and PC" JOURNAL OF DIGITAL IMAGING ; THE JOURNAL OF THE SOCIETY FOR COMPUTER APPLICATIONS IN RADIOLOGY, SPRINGER-VERLAG, NE, vol. 11, no. 3 SUPP 1, 1 August 1998 (1998-08-01), pages 56-58, XP008086806 ISSN: 1618-727X figures 1-3 page 56, left-hand column, line 1 - page 57, right-hand column, last line	1-11

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INTERNATIONAL SEARCH REPORT

International application No

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	HAN Y ET AL: "Automatic registration of brain-magnetic resonance images based on Talairach reference system" JOURNAL OF MAGNETIC RESONANCE IMAGING, SOCIETY FOR MAGNETIC RESONANCE IMAGING, OAK BROOK, IL, US, vol. 20, no. 4, 1 October 2004 (2004-10-01), pages 572-580, XP003018472 ISSN: 1053-1807 figures 1,2,6,7,12,13 page 575, left-hand column, line 16 - page 576, left-hand column, line 20	1-11
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A	WO 2006/011850 A (AGENCY SCIENCE TECH & RES [SG]; HU QINGMAO [SG]; NOWINSKI WIESLAW LUCJ) 2 February 2006 (2006-02-02) page 5, line 18 - page 6, line 26 figures 1,2	1-11

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