(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
30 November 2006 (30.11.2006)

PCT

(10) International Publication Number
WO 2006/127416 A3

(51) International Patent Classification:
*A61B 6/14* (2006.01)

(21) International Application Number:
PCT/US2006/019320

(22) International Filing Date: 20 May 2006 (20.05.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/682,971 20 May 2005 (20.05.2005) US

(71) Applicant *(for all designated States except US)*: **IMAGING SCIENCES INTERNATIONAL, INC.** [US/US]; 1910 North Penn Road, Hatfield, 19440 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **SINGH, Arun** [US/US]; 234 Mallard Drive East, North Wales, PA 19454 (US). **KIA, Omid** [US/US]; 5704 Exetor Hill Way, North Bethesda, MD 20852 (US).

(74) Agents: **HUMPHREY, Thomas, W.** et al.; WOOD, HERRON & EVANS, L.L.P., 441 VINE STREET, Suite 2700, Cincinnati, OH 45202 (US).

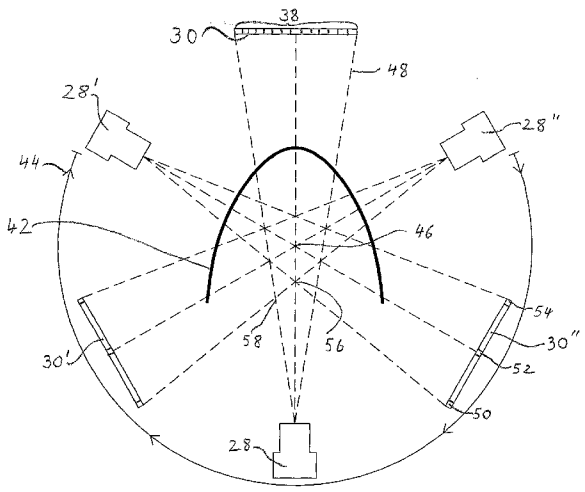
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:
3 April 2008

(54) Title: LOCATION OF FOCAL PLANE




(57) Abstract: A method and apparatus for generating a panoramic image of part of a target, comprises providing a scanner having a source of penetrating radiation facing a detector having an array of sensors for the penetrating radiation. The target is positioned between the source of penetrating radiation and the detector, and scanned with relative rotation of the scanner and the target. Radiation received at a plurality of the sensors spaced apart in the circumferential direction of the relative rotation is separately recorded. A panoramic image is generated by combining for each pixel of the panoramic image outputs from different sensors at different times during the relative rotation, the combined outputs being selected to represent rays of radiation passing through a point on a defined curve. The generated panoramic image and a graphical representation of the defined curve are displayed. Instructions are received from a user to alter the defined curve. The generating and displaying of the panoramic image are repeated using the altered curve.

WO 2006/127416 A3

# INTERNATIONAL SEARCH REPORT

International application No.
PCT/US06/19320

A. CLASSIFICATION OF SUBJECT MATTER
IPC: **A61B 6/14**( 2006.01)

USPC: 378/38
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)
U.S. : 378/21, 22, 27, 38-40

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 practicable, search terms used)
US-PGPUB, USPAT, USOCR, EPO, JPO, DERWENT, IBM_TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| X | US 6,049,584 A (PFEIFFER) 11 April 2000 (11.04.2000), Figures 1, 4, 7-12; columns 4 and 5 | 1-15 |
| A | US 5,784,429 A (ARAI) 21 July 1998 (21.07.1998), Figures 2, 5, 6, 10, 11; column 2 | 1-15 |
| A | US 5,677,940 A (SUZUKI et al) 14 October 1997 (14.10.1997), Figures 2, 6, 9 and 16; columns 1-2 | 1-15 |
| A | US 5,511,106 A (DOEBERT et al) 23 April 1996 (23.04.1996), Figures 2 and 8 | 1-15 |

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
05 February 2008 (05.02.2008)

Date of mailing of the international search report
11 FEB 2008

Name and mailing address of the ISA/US
Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
Facsimile No. (571) 273-3201

Authorized officer
THOMAS R. ARTMAN

Telephone No. (703) 308-1782

Form PCT/ISA/210 (second sheet) (April 2007)