

(19) World Intellectual Property
Organization
International Bureau



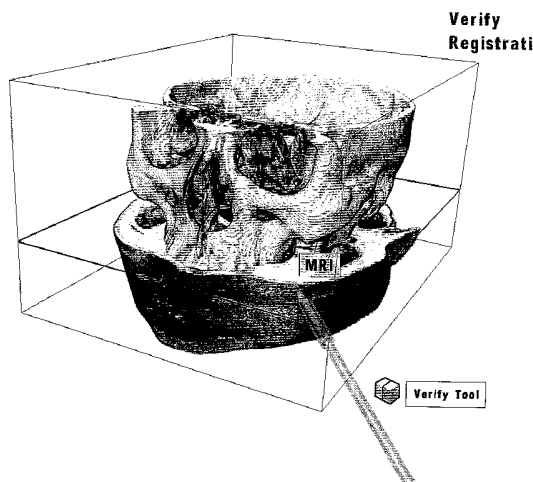
(43) International Publication Date
22 July 2004 (22.07.2004)

PCT

(10) International Publication Number
WO 2004/061775 A3

- (51) International Patent Classification⁷: **G06T 15/00**
- (21) International Application Number:
PCT/IB2003/006503
- (22) International Filing Date: 1 December 2003 (01.12.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/505,344 29 November 2002 (29.11.2002) US
60/505,345 29 November 2002 (29.11.2002) US
60/505,346 29 November 2002 (29.11.2002) US
- (71) Applicant: **BRACCO IMAGING, S.P.A.** [IT/IT]; Via Egidio Folli 50, I-20134 Milano (IT).
- (72) Inventor: **SERRA, Luis**; 23 Oxley Garden, Singapore 238754 (SG).
- (74) Agent: **KARAGHIOSOFF, Giorgio, A.**; Via Pecorile, 25, I-17015 Celle Ligure (IT).
- (81) Designated States (*national*): AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW.
- (84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (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:
11 November 2004
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: SYSTEM AND METHOD FOR DISPLAYING AND COMPARING 3D MODELS



(57) Abstract: A system and method for displaying 3D data are presented. The method involves subdividing a 3D display region into two or more display subregions, and assigning a set of display rules to each display subregion. Visible portions of a 3D data set in each display subregion are displayed according to the rules assigned to that display subregion. In an exemplary embodiment of the present invention the boundaries of the display regions, the display rules for each display subregion, and the 3D data sets assigned to be displayed in each display subregion can be set by a user, and are interactively modifiable by a user during the display. In exemplary embodiments of the invention the same 3D data can be displayed in each display subregion, albeit using different display rules. Alternatively, in other exemplary embodiments of the present invention, a different 3D data set can be displayed in each display subregion. In still other exemplary embodiments of the present invention, the various 3D data sets can comprise scans of the same object or body using different sensing modalities.

WO 2004/061775 A3

INTERNATIONAL SEARCH REPORT

onal Application No
IB 03/06503

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06T15/00

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)
IPC 7 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, INSPEC, WPI Data, COMPENDEX, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	R.A.KOCKRO, L.SERRA,Y.TSENG-TSAI,C.CHAN,S.YIH-YIAN: "planning and simulation of neurosurgery in a virtual reality environment" NEUROSURGERY, vol. 46, no. 1, January 2000 (2000-01), pages 118-137, XP002292548 the whole document	1-28
A	SERRA L ET AL: "Multimodal volume-based tumor neurosurgery planning in the Virtual Workbench" BERLIN, GERMANY, SPRINGER-VERLAG, GERMANY, 1998, pages 1007-1016, XP002292549 ISBN: 3-540-65136-5 the whole document	1-28

Further documents are listed in the continuation of box C. Patent family members are listed in annex.

° Special categories of cited documents :

A document defining the general state of the art which is not considered to be of particular relevance	*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
E earlier document but published on or after the international filing date	*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
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)	*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.
O document referring to an oral disclosure, use, exhibition or other means	*&* document member of the same patent family
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 20 August 2004	Date of mailing of the international search report 31/08/2004
------------------------------------------------------------------------------------	-------------------------------------------------------------------------

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 Kulak, E
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------

INTERNATIONAL SEARCH REPORT

IB 03/06503

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CHUA GIM GUAN ET AL: "Volume-based tumor neurosurgery planning in the Virtual Workbench" LOS ALAMITOS, CA, USA, IEEE COMPUT. SOC, USA, 1998, pages 167-173, XP002292550 ISBN: 0-8186-8362-7 the whole document -----	1-28