

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
12 September 2002 (12.09.2002)

PCT

(10) International Publication Number
WO 02/070980 A1

(51) International Patent Classification⁷: **F41G 3/26**

(21) International Application Number: PCT/US02/06604

(22) International Filing Date: 5 March 2002 (05.03.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/273,733 6 March 2001 (06.03.2001) US
60/273,734 6 March 2001 (06.03.2001) US

(71) Applicant: **THE JOHN HOPKINS UNIVERSITY
SCHOOL OF MEDICINE** [US/US]; 111 Market Street,
Suite 906, Baltimore, MD 21202 (US).

(72) Inventors: **ANDERSON, James, A.**; 9813 Davidge
Drive, Columbia, MD 21044 (US). **CHUI, Chee-Kong**;
Blk 325 Yishun Central, #12-373, 760325 (SG). **MA,
Xin**; Blk 702 West Coast Road, #11-373, 120702 (SG).
WANG, Yaoping; Blk 3 Normanton Park Road, #03-175,
Normanton Park, 119000 (SG). **CAI, Yiyu**; Blk 547 Jurong
West St. 42, #08-145, 640547 (SG).

(74) Agents: **Rees, Dianne** et al.; Dike, Bronstein, Roberts &
Cushman, Intellectual Property Practice Group, Edwards &
Angell, LLP, P.O. Box 9169, Boston, MA 02209 (US).

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

(84) Designated States (*regional*): ARIPO patent (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, CH, CY, DE, DK, ES, FI, FR,
GB, GR, IE, IT, LU, MC, NL, PT, SE, 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

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: SIMULATION SYSTEM FOR IMAGE-GUIDED MEDICAL PROCEDURES

(57) Abstract: A system and method for computer simulation of image-guided diagnostic and therapeutic procedures such as vascular catheterization, angioplasty, stent, coil and graft placement, embolotherapy and drug infusion therapy. In a preferred aspect, the system is configured to resemble a cardiovascular catheterization laboratory where interventional radiology procedures are performed. A first user (1) may interactively manipulate therapeutic catheters, guidewires and other medical devices (5) in real-time while viewing patient-specific medical image data (2) in a manner similar to that encountered in a clinical procedure.



WO 02/070980 A1