### (19) World Intellectual Property Organization

International Bureau



# 

# (43) International Publication Date 24 May 2007 (24.05.2007)

PCT

# (10) International Publication Number WO 2007/059172 A3

(51) International Patent Classification: *G06F 3/048* (2006.01) *G06F 3/01* (2006.01)

(21) International Application Number:

PCT/US2006/044266

(22) International Filing Date:

14 November 2006 (14.11.2006)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/736,753 14 Novemb

14 November 2005 (14.11.2005) US

(71) Applicant (for all designated States except US): IM-MERSION CORPORATION [US/US]; 801 Fox Lane, San Jose, California 95131 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): CONNACHER, Hugh [US/US]; 104 Sunhigh Drive, Thurmont, Maryland 21788 (US). FALK, Robert, B. [US/US]; 504 Lincoln Avenue, Takoma Park, Maryland 20912 (US). IKITS, Milan [HU/US]; 957 Clopper Road, Apt. B3, Gaithersburg, Maryland 20878 (US). DICUCCIO, Michael [US/US]; 15005 Red Clover Drive, Rockville, Maryland 20853 (US). NELSON, Donald, D. [US/US]; 9716 Duffer Way, Montgomery Village, Maryland 20886 (US). ADHAMI, Louai [LB/US]; 975 Clopper Road, Apt. B1, Gaithersburg, Maryland 20878 (US). PONNAMPERUMA, Iyanka [LK/US]; 17344 Founders Mill Drive, Rockville, Maryland 20855 (US). JOSHI, Dhananjay [IN/US];

19908 Sweetgum Circle, Apt. 22, Germantown, Maryland 20874 (US). **GRENIER, Lionel** [FR/FR]; 25 Rue D'arcueil, F-92120 Montrouge (FR).

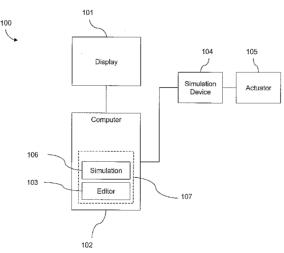
- (74) Agents: GARDNER, Steven et al.; Kilpatrick Stockton LLP, 1001 West Fourth Street, Winston-Salem, NC 27101 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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

[Continued on next page]

(54) Title: SYSTEMS AND METHODS FOR EDITING A MODEL OF A PHYSICAL SYSTEM FOR A SIMULATION



(57) Abstract: Systems and methods for modifying a medical model of a physical system is disclosed. One disclosed system includes a graphical user interface configured to display at least one parameter associated with the medical model and receive a modification of the at least one parameter. The system also includes a processor configured to receive the modification of the at least one parameter from the graphical user interface and execute a simulation of a part of the medical model including the modification of the at least one parameter.



#### 

(88) Date of publication of the international search report:

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.

## INTERNATIONAL SEARCH REPORT

International application No PCT/US2006/044266

			FC1/U32UU0/U44266	
A. CLASSINV.	IFICATION OF SUBJECT MATTER G06F3/048 G06F3/01			
According t	o International Patent Classification (IPC) or to both national classific	cation and IPC		
	SEARCHED			
Minimum de G06F	ocumentation searched (classification system followed by classificat	tion symbols)		
Documenta	ation searched other than minimum documentation to the extent that	such documents are include	ed in the fields searched	
Electronic d	data base consulted during the international search (name of data ba	ase and, where practical, s	earch terms used)	
EPO-In	ternal, WPI Data, PAJ			
C. DOCUM	ENTS CONSIDERED TO BE RELEVANT			
Category*	Citation of document, with indication, where appropriate, of the re	elevant passages	Relevant to claim No.	
Х	US 2004/193393 A1 (KEANE JOHN F 30 September 2004 (2004-09-30) paragraphs [0024] - [0038] figure 5	[US])	1-31	
X	US 2005/187747 A1 (PAXSON RICARDO ET AL) 25 August 2005 (2005-08-2) paragraphs [0025] - [0088] figures 1-4		1-31	
A	WO 03/079149 A (UNIV VERMONT [US KENNETH G [US]; EVERSE STEPHEN J HOCKIN) 25 September 2003 (2003- the whole document	[US];	1,10,19, 28	
<b>A</b>	US 2003/112269 A1 (LENTZ JAMES [1 19 June 2003 (2003-06-19) the whole document	US] ET AL) -/	1,10,19, 28	
X Furti	l her documents are listed in the continuation of Box C.	X See patent family	r annex.	
<ul> <li>"A" document defining the general state of the art which is not considered to be of particular relevance</li> <li>"E" earlier document but published on or after the international filing date</li> <li>"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)</li> <li>"O" document referring to an oral disclosure, use, exhibition or other means</li> <li>"P" document published prior to the international filing date but later than the priority date claimed</li> </ul>		<ul> <li>"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</li> <li>"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</li> <li>"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 combined with one or more other such documents, such combination being obvious to a person skilled in the art.</li> <li>"&amp;" document member of the same patent family</li> </ul>		
	actual completion of the international search	_	international search report	
	1 May 2007	08/06/200	J/ 	
rvaine allu f	nailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Flijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Authorized officer Baldan, Marco		

## INTERNATIONAL SEARCH REPORT

International application No PCT/US2006/044266

C(Continua				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
A	US 2005/093847 A1 (ALTKORN ROBERT [US] ET AL) 5 May 2005 (2005-05-05)	4,7,12, 16,21, 25,31		
	the whole document	25,51		
1	US 2005/162383 A1 (ROSENBERG LOUIS B [US]) 28 July 2005 (2005-07-28)	4,7,12, 16,21, 25,31		
	the whole document	25,51		
, '	,			
,				
		,		
,				
ı		,		
			, ·	
	·			

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2006/044266

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2004193393	A1	30-09-2004	NONE	<u> </u>
US 2005187747	A1	25-08-2005	EP 1725970 A2 WO 2006025861 A2	29-11-2006 09-03-2006
WO 03079149	Α	25-09-2003	AU 2003213821 A1	29-09-2003
US 2003112269	A1	19-06-2003	NONE	
US 2005093847	A1	05-05-2005	NONE	
US 2005162383	A1	28-07-2005	NONE	