





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, MT, 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).

**Declarations under Rule 4.17:**

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

**Published:**

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*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/US2007/010249

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> INV. G06N3/04 ADD. G05B13/02		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) G06N G05B G06D G05D B25J		
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, INSPEC, COMPENDEX		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MAO, ZHI-HONG: "Modeling the role of the basal ganglia in motor control and motor programming, Thesis (Ph. D.)--Harvard-MIT Division of Health Sciences and Technology, 2005." September 2005 (2005-09), MASSACHUSETTS INSTITUTE OF TECHNOLOGY, US, XP002454350 pages 3,7-11 pages 13-166  <div style="text-align: center;">-/--</div>	1-27
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.		
<input checked="" type="checkbox"/> 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 document but 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  <div style="text-align: center;">11 October 2007</div>	Date of mailing of the international search report  <div style="text-align: center;">22/10/2007</div>	
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2230 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  <div style="text-align: center;">Volkmer, Markus</div>	

## INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2007/010249

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SUNGHO JO ET AL: "A model of cerebellum stabilized and scheduled hybrid long-loop control of upright balance" Biological Cybernetics Springer-Verlag Germany, vol. 91, no. 3, 14 September 2004 (2004-09-14), pages 188-202, XP002454167 ISSN: 0340-1200 the whole document	1-27
X A	EP 1 552 908 A (FUJITSU LTD [JP]) 13 July 2005 (2005-07-13)  abstract; claims 1-17; figures 1-37 pages 2-24	1,23  2-22, 24-27
X A	WO 93/15448 A (HONEYWELL INC [US]) 5 August 1993 (1993-08-05)  abstract; claims 1-12; figures 1-5,8 pages 1-9	1,23  2-22, 24-27
P,X	SUNGHO JO ET AL: "A model of cerebrocerebello-spinomuscular interaction in the sagittal control of human walking" BIOLOGICAL CYBERNETICS ; ADVANCES IN COMPUTATIONAL NEUROSCIENCE, SPRINGER-VERLAG, BE, vol. 96, no. 3, 24 November 2006 (2006-11-24), pages 279-307, XP019491647 ISSN: 1432-0770 the whole document	1-27
A	AYASO O ET AL: "Coarse- gain recurrent integrator model for sensorimotor cortical command generation" PROCEEDINGS OF THE 2002 AMERICAN CONTROL CONFERENCE. ACC. ANCHORAGE, AL, MAY 8 - 10, 2002, AMERICAN CONTROL CONFERENCE, NEW YORK, NY : IEEE, US, vol. VOL. 1 OF 6, 8 May 2002 (2002-05-08), pages 1736-1741, XP010596329 ISBN: 0-7803-7298-0 the whole document	1-27
A	WO 94/17457 A (HONEYWELL INC [US]) 4 August 1994 (1994-08-04) abstract; claims 1-20; figures 1,3-5	1-27

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/010249

Patent document cited in search report	A	Publication date		Patent family member(s)	Publication date
EP 1552908	A	13-07-2005		WO 2004033159 A1	22-04-2004
				US 2005119791 A1	02-06-2005
WO 9315448	A	05-08-1993		DE 69315423 D1	08-01-1998
				DE 69315423 T2	20-05-1998
				EP 0624264 A1	17-11-1994
				JP 7503563 T	13-04-1995
				JP 3328742 B2	30-09-2002
				US 5396415 A	07-03-1995
WO 9417457	A	04-08-1994		AU 6032194 A	15-08-1994
				CA 2153054 A1	04-08-1994
				DE 69420545 D1	14-10-1999
				DE 69420545 T2	23-12-1999
				EP 0680630 A1	08-11-1995
				JP 8505972 T	25-06-1996
				US 5486996 A	23-01-1996