

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
30 September 2004 (30.09.2004)

PCT

(10) International Publication Number  
**WO 2004/083454 A3**

(51) International Patent Classification : **G10L 21/00**,  
G06T 15/70

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(21) International Application Number:  
PCT/US2004/003611

(22) International Filing Date: 5 February 2004 (05.02.2004)

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(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/454,989 13 March 2003 (13.03.2003) US  
10/443,506 22 May 2003 (22.05.2003) 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, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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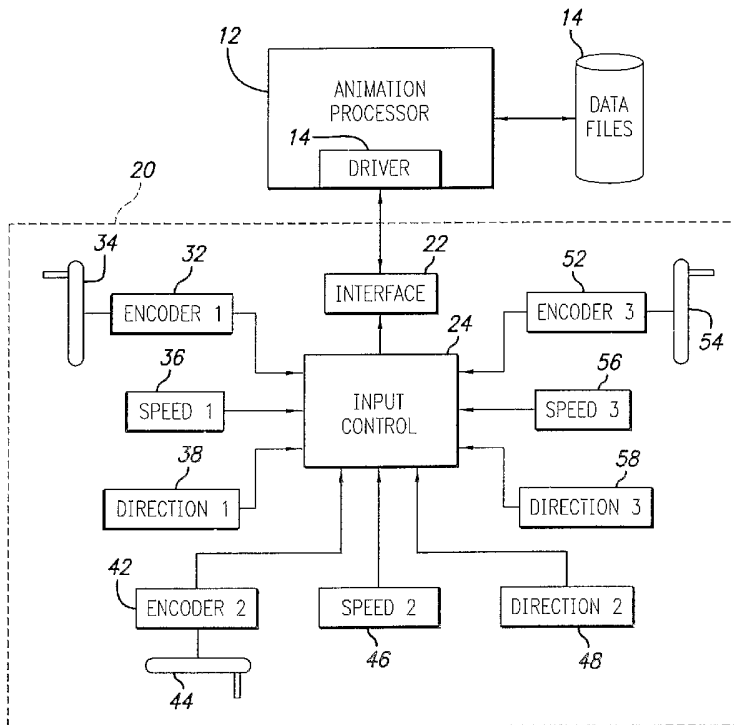
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(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

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[Continued on next page]

(54) Title: WHEEL MOTION CONTROL INPUT DEVICE FOR ANIMATION SYSTEM



(57) Abstract: An input device (20) for a computer graphics system provides a plurality of wheels that control movement of a virtual camera. The input device can be readily used by professional cameraman without knowledge or training on CG animation software tools. The input device comprises a housing having at least one wheel (34) operatively coupled to at least one outer surface of the housing. The at least one wheel has an axially coupled shaft that is driven rotationally by manipulation of the wheel. Circuitry contained within the housing and operatively coupled to the shaft generates a control signal corresponding to rotational motion of the at least one wheel. The control signal is thereby provided to the animation processor (12) to control the virtual camera. In a preferred embodiment of the invention, the at least one wheel further comprises a plurality of wheels (34,44,54) with each such wheel corresponding to a different range of motion of the virtual camera, including a first wheel corresponding to a panning motion of the virtual camera, a second wheel corresponding to tilting motion of the virtual camera, and a third wheel corresponding to rolling motion of

the virtual camera. The circuitry further includes an angle encoder (32,42,52) operatively coupled to the shaft and a control circuit adapted to convert the control signal into a data stream having a format readable by the animation processor. The input device may also include at least one speed control adapted to change effective resolution of the at least one wheel, and at least one direction control adapted to change effective direction of the at least one wheel.

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GM, KE, LS, MW, MZ, 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, IT, LU, MC, NL, 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:**  
27 April 2006

**(15) Information about Correction:****Previous Correction:**

see PCT Gazette No. 05/2006 of 2 February 2006

*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/US04/03611

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>				
IPC(7) : G10L 21/00; G06T 15/70 US CL : 345/302,473-475,328,355; 704/270,275 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) U.S. : 345/302,473-475,328,355; 704/270,275				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched IEEE DATABASE				
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EAST, WEST				
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>				
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
Y, P	US 6,040,841 (COHEN et al) March 21 2000, Column 5,6,7,8	1-18		
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.				
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Date of the actual completion of the international search		Date of mailing of the international search report		
11 December 2004 (11.12.2004)		08 MAR 2006		
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. (703)305-3230		Authorized officer Bipin H Shalwala Telephone No. 703-305-9618		