

PCTWORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : G02B 27/22, H04N 13/04, 15/00, G01B 11/03	A1	(11) International Publication Number: WO 99/27412 (43) International Publication Date: 3 June 1999 (03.06.99)
(21) International Application Number: PCT/AU98/00969 (22) International Filing Date: 20 November 1998 (20.11.98) (30) Priority Data: PP 0480 21 November 1997 (21.11.97) AU (71) Applicant (for all designated States except US): DYNAMIC DIGITAL DEPTH RESEARCH PTY. LTD. [AU/AU]; Suite 1 & 2, 41 Walters Drive, Osborne Park, W.A. 6017 (AU). (72) Inventor; and (75) Inventor/Applicant (for US only): HARMAN, Philip, Victor [AU/AU]; 43 Vantor Street, Scarborough, W.A. 6019 (AU). (74) Agent: WATERMARK PATENT & TRADEMARK ATTORNEYS; Durack Centre, 4th floor, 263 Adelaide Terrace, Perth, W.A. 6000 (AU).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, 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, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, 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), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published With international search report.
(54) Title: EYE TRACKING APPARATUS (57) Abstract		
The present invention relates to a tracking system for locating the eyes of a viewer including: an illumination means (61); a plurality of cameras (60); and a processing means (55); wherein at least the viewer's eyes are illuminated by the illumination means (61) to enable capture by each camera (60), and wherein the processing means (55) is adapted to process images from each camera (60) so as to detect the position of the viewer's eyes. <pre>graph TD subgraph Left_Eye_System [Left Eye System] SMDL[STEPPER MOTOR DRIVER LEFT] CPLE[CALIBRATION Potentiometer LEFT] SML[STEPPER MOTOR LEFT] CL[CAMERA LEFT] PSL[POWER SUPPLY LEFT] end subgraph Right_Eye_System [Right Eye System] SMDR[STEPPER MOTOR DRIVER RIGHT] CPRE[CALIBRATION Potentiometer RIGHT] SMR[STEPPER MOTOR RIGHT] CR[CAMERA RIGHT] PSR[POWER SUPPLY RIGHT] end MP[MAIN POWER SUPPLY] subgraph Processing [Processing] VPL[VIDEO PROCESSING BOARD (CAMERA INTERFACE BOARD) LEFT] VPR[VIDEO PROCESSING BOARD (CAMERA INTERFACE BOARD) RIGHT] CPU[CPU BOARD] end SMDL --- CPLE SMDR --- CPRE CPLE --- SML CPRE --- SMR SML --- CL SMR --- CR CL --- PSL CR --- PSR MP --- PSL MP --- PSR CL --- VPL CR --- VPR VPL --- CPU VPR --- CPU CPU --- AO[ABSOLUTE POSITION OUTPUT (RS-232)]</pre>		