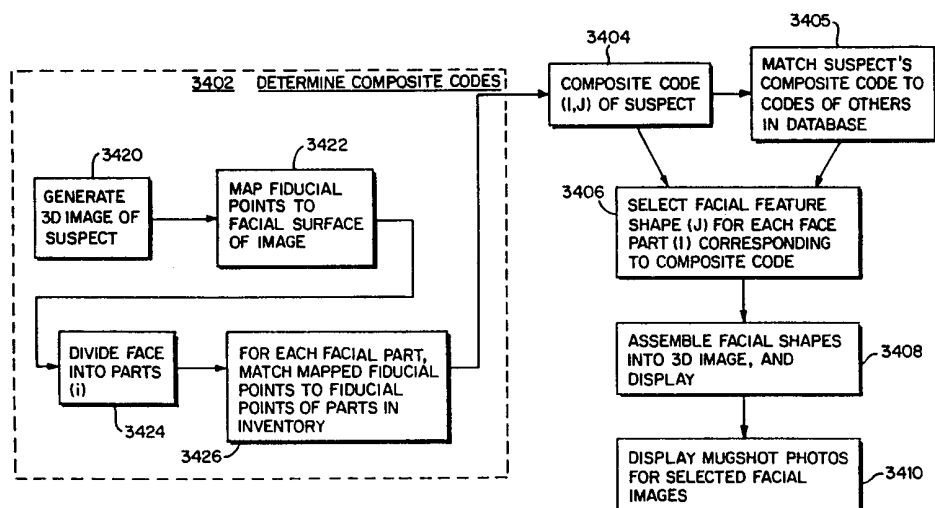




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| (21) International Application Number: PCT/US98/25410 (22) International Filing Date: 1 December 1998 (01.12.98) (30) Priority Data: 60/067,065 1 December 1997 (01.12.97) US (71)(72) Applicant and Inventor: ERASLAN, Arsev, H. [US/US]; 13 Lenox Avenue, Wheeling, WV 26003 (US). (74) Agent: NELSON, Jeffry, H.; Nixon & Vanderhye P.C., 8th Floor, 1100 North Glebe Road, Arlington, VA 22201-4714 (US). | | (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, 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, 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 <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims</i> <i>and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 12 August 1999 (12.08.99) |

(54) Title: THREE-DIMENSIONAL FACE IDENTIFICATION SYSTEM**(57) Abstract**

A three-dimensional (3-D) facial imaging system is disclosed for generating facial images (3420), indexing those images by composite codes (3404, 3405) and for searching for similar two-dimensional (2-D) facial images (3406). The 3-D images of human faces are generated from a data repository of 3-D facial feature surface shapes. These shapes are organized by facial feature parts. By assembling a shape for each facial part (3408), a 3-D facial image is formed. Human facial images may be represented with a composite code (facial feature part code and shape code). A 3-D image of any face may be generated using the code to select the proper facial feature shapes from the stored repository of shapes.

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INTERNATIONAL SEARCH REPORT

 International application No.
PCT/US98/25410

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :G06K 9/00

US CL :382/118, 154

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 382/118, 154, 115, 100, 284; 345/419, 420; 348/42, 46

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 practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| Y | US 5,432,864 A (LU et al.) 11 July 1965, see Abstract, Figs. 1-8, column 1, lines 5-34, column 3, line 41 to column 4, line 38, column 5, line 31 to column 6, line 18, and column 6, line 45 to column 8, line 49. | 1-34 |
| Y | US 5,659,625 A (MARQUARDT) 19 AUGUST 1997, see Abstract, Figs. 1-12, 30-33, column 1, lines 10-15, column 4, line 46 to column 14, line 7. | 1-34 |
| Y, E | US 5,764,790 A (BRUNELLI ET AL.) 09 June 1998, Abstract, Figs. 1-4c, and column 1, line 15 to column 3, line 29. | 1-34 |



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See patent family annex.

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