

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
11 December 2003 (11.12.2003)

PCT

(10) International Publication Number
WO 2003/102870 A3

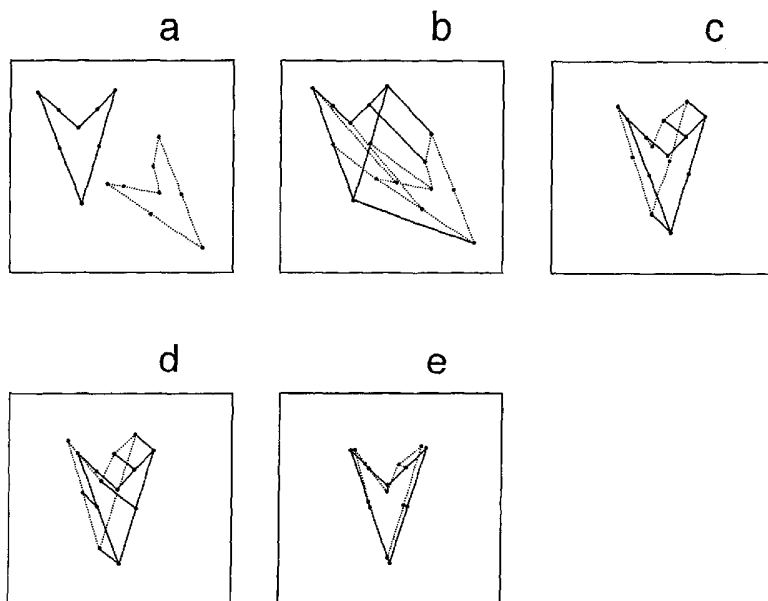
- (51) International Patent Classification⁷: **G06T 7/20**
- (21) International Application Number: PCT/GB2003/002329
- (22) International Filing Date: 28 May 2003 (28.05.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0212748.8 31 May 2002 (31.05.2002) GB
- (71) Applicant (for all designated States except US): **QINETIQ LIMITED** [GB/GB]; Registered Office, 85 Buckingham Gate, London SW1 6PD (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **CARMICHAEL, Douglas, Rayner** [GB/GB]; QinetiQ Limited, Bingleaves Technology Park, Bldg 42, Newton Road, Weymouth, Dorset DT4 8UR (GB). **CHAPMAN, Sean, Alaric** [GB/GB]; QinetiQ Limited, Bingleaves Technology Park, Bldg 40D, Newtons Road, Weymouth, Dorset DT4 8UR (GB).
- (74) Agent: **DAVIES, P.**; IP QinetiQ Formalities, Cody Technology Park, A4 Building, Room G016, Ively Road, Farnborough, Hampshire GU14 0LX (GB).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, 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, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (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 patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

[Continued on next page]

(54) Title: FEATURE MAPPING BETWEEN DATA SETS



(57) Abstract: The present invention relates to data mapping and involves the mapping of at least one feature from one data set to a corresponding feature in a second data set. Individual points of the features are initially mapped and a transformation for mapping the entire feature is derived from the individual mappings. The feature mapping may be used to enhance vehicle navigation, in feature tracking algorithms, and in image processing systems.

WO 2003/102870 A3



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*

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.

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

1 July 2004

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/02329

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 G06T7/20

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)

IPC 7 G06T

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, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	TON J ET AL: "REGISTERING LANDSAT IMAGES BY POINT MATCHING" IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING, IEEE INC. NEW YORK, US, vol. 27, no. 5, 1 September 1989 (1989-09-01), pages 642-651, XP000053188 ISSN: 0196-2892 page 647, left-hand column, line 11 - line 21 <div style="text-align: center;"> --- -/-- </div>	1, 29

Further documents are listed in the continuation of box C.

Patent family members are listed in 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

16 April 2004

Date of mailing of the international search report

10/05/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Chateau, J-P

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 03/02329

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>GOTTESFELD BROWN L: "A SURVEY OF IMAGE REGISTRATION TECHNIQUES" ACM COMPUTING SURVEYS, NEW YORK, NY, US, vol. 24, no. 4, December 1992 (1992-12), pages 325-376, XP002942558 ISSN: 0360-0300 page 329; table 2 page 347, right-hand column, paragraph 3.3 -page 348, right-hand column, paragraph 3.3.1 page 350, left-hand column, paragraph 3.3.2 -right-hand column, line 25</p> <p style="text-align: center;">---</p>	1,29
A	<p>WO 01/78007 A (IOIMAGE LTD ;KIRO SHMUEL (IL); MAIMON ORNIT (IL)) 18 October 2001 (2001-10-18) abstract</p> <p style="text-align: center;">-----</p>	1,29

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 03/02329

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 0178007	A	18-10-2001	AU	5060001 A	23-10-2001
			WO	0178007 A2	18-10-2001
