(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau

(43) International Publication Date 31 March 2011 (31.03.2011)



(10) International Publication Number WO 2011/036465 A3

(51) International Patent Classification: G06F 17/30 (2006.01) G06K 9/74 (2006.01) G06F 12/00 (2006.01)

(21) International Application Number:

PCT/GB2010/001810

(22) International Filing Date:

28 September 2010 (28.09.2010)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

28 September 2009 (28.09.2009) 0916983.0 GB 0917084.6 29 September 2009 (29.09.2009) GB 1013195.1 5 August 2010 (05.08.2010) GB

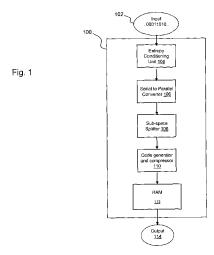
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: PROCESSOR



(57) Abstract: Apparatus (100) is provided which is arranged to accept an input data stream. In some embodiments, the apparatus (100) comprises a sampler arranged to sample the input data stream to provide k samples thereof, wherein each of the samples is n bits long and a string selector arranged to select m binary strings n bits long from at least a chosen subset of all random binary strings of a predetermined length. The apparatus (100) may further comprise a logical operator arranged to perform a logical function for each of the k samples with each of the selected binary strings to provide a vector, a memory arranged to store a matrix of the vectors generated from k samples, and an address generator arranged to generate RAM address segments from the matrix. In embodiments, the apparatus (100) may comprise a processor for, for example, pattern matching; feature detection, image recognition.



GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, Published: ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

of inventorship (Rule 4.17(iv))

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

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

23 June 2011

INTERNATIONAL SEARCH REPORT

International application No PCT/GB2010/001810

A. CLASSIFICATION OF SUBJECT MATTER INV. G06K9/74 G06F12/00 G06F17/30 ADD.

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)

G06K G06F

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

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X	US 2005/086520 A1 (DHARMAPURIKAR SARANG [US] ET AL) 21 April 2005 (2005-04-21) abstract paragraph [0065] - paragraph [0074]; figures 1-7 the whole document		
X	US 2007/260602 A1 (TAYLOR DAVID E [US] TAYLOR DAVID EDWARD [US]) 8 November 2007 (2007-11-08) paragraph [0043] - paragraph [0049]; figures 1-7	1-15, 24-30	
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X Further documents are listed in the continuation of Box C.	X See patent family annex.
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Date of the actual completion of the international search 18 April 2011	Date of mailing of the international search report $28/04/2011$
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Grigorescu, Cosmin

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INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2010/001810

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International application No
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