

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
25 October 2007 (25.10.2007)

PCT

(10) International Publication Number
WO 2007/120280 A3

(51) International Patent Classification:

G06K 9/00 (2006.01)

(21) International Application Number:

PCT/US2006/061113

(22) International Filing Date:

20 November 2006 (20.11.2006)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/737,947 18 November 2005 (18.11.2005) US

60/738,290 18 November 2005 (18.11.2005) US

11/561,659 20 November 2006 (20.11.2006) US

11/561,735 20 November 2006 (20.11.2006) US

(71) Applicant (for all designated States except US):

KLA-TENCOR TECHNOLOGIES CORPORATION
[US/US]; One Technology Drive, Milpitas, California
95035 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KULKARNI,**

Ashok [US/US]; 1149 Valley Quail Circle, San Jose, California 95120 (US). **DUFFY, Brian** [US/US]; 1073 Crosswind Ct., San Jose, California 95120 (US). **MAAYAH, Kais** [JO/US]; 20667 Forge Way, Apt. 334, Cupertino, California 95014 (US). **ROUSE, Gordon** [US/US]; 7962 Shannon Ct., Dublin, California 94568 (US).

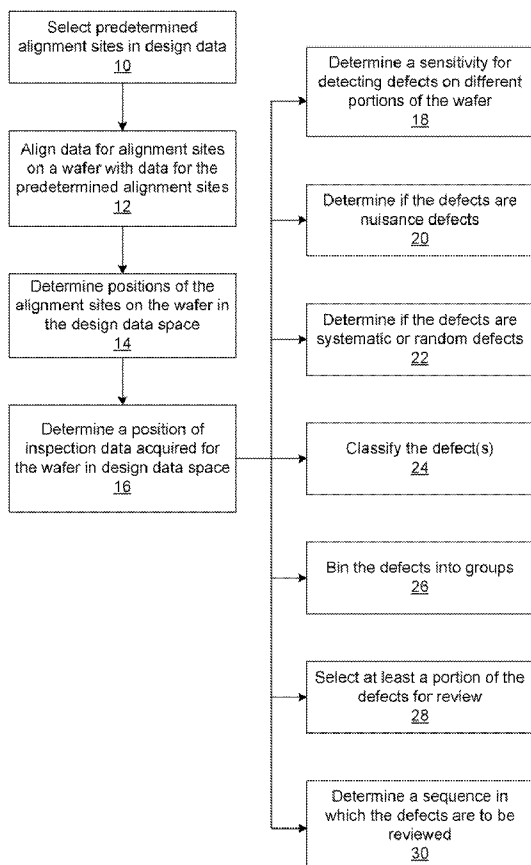
(74) Agent: **MEWHERTER, Ann Marie**; Baker & McKenzie LLP, 1114 Avenue of the Americas, New York, New York 10036 (US).

(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, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, 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: METHODS AND SYSTEMS FOR UTILIZING DESIGN DATA IN COMBINATION WITH INSPECTION DATA



(57) Abstract: Various methods and systems for utilizing design data in combination with inspection data are provided. One computer-implemented method for determining a position of inspection data in design data space includes aligning data acquired by an inspection system for alignment sites on a wafer with data for predetermined alignment sites. The method also includes determining positions of the alignment sites on the wafer in design data space based on positions of the predetermined alignment sites in the design data space. In addition, the method includes determining a position of inspection data acquired for the wafer by the inspection system in the design data space based on the positions of the alignment sites on the wafer in the design data space. In one embodiment, the position of the inspection data is determined with sub-pixel accuracy.

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GM, KE, LS, MW, MZ, NA, 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, IS, IT, LT, LU, LV, MC, NL, PL, 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:

18 September 2008

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/61113

A. CLASSIFICATION OF SUBJECT MATTER

IPC: **G06K 9/00** (2006.01)

USPC: 382/151

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. : 382/144,145,151,287,294

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.
A	US 2005/0004774 A1 (VOLK et al) 06 January 2005 (06.01.2005), entire document	1-61
A	US 2005/0198602 A1 (BRANKNER) 08 September 2005 (08.09.2005), entire document	1-61
A	US 6,882,745 B2 (BRANKNER et al) 19 April 2005 (19.04.2005), entire document	1-61
A	US 2004/0102934 A1 (CHANG) 27 May 2004 (27.05.2004), entire document	1-61
A	US 2004/0030430 A1 (MATSUOKA) 12 February 2004 (12.02.2004), entire document	1-61

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"&"

document member of the same patent family

Date of the actual completion of the international search

16 June 2008 (16.06.2008)

Date of mailing of the international search report

16 JUL 2008

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. (571) 273-3201

Authorized officer

Colin LaRose/

Telephone No. (571) 272-2600