

CORRECTED VERSION

(19) World Intellectual Property
Organization
International Bureau



WIPO | PCT



(10) International Publication Number
WO 2012/129140 A8

(43) International Publication Date
27 September 2012 (27.09.2012)

- (51) International Patent Classification:
A61B 6/03 (2006.01) *G06T 15/00* (2006.01)
G06F 19/00 (2011.01)
- (21) International Application Number:
PCT/US2012/029591
- (22) International Filing Date:
18 March 2012 (18.03.2012)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/454,387 18 March 2011 (18.03.2011) US
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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, QA, RO, RS, RU, RW, SC, SD,

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(54) Title: IMAGE RECONSTRUCTION USING GRADIENT PROJECTION FOR MEDICAL IMAGING APPLICATIONS

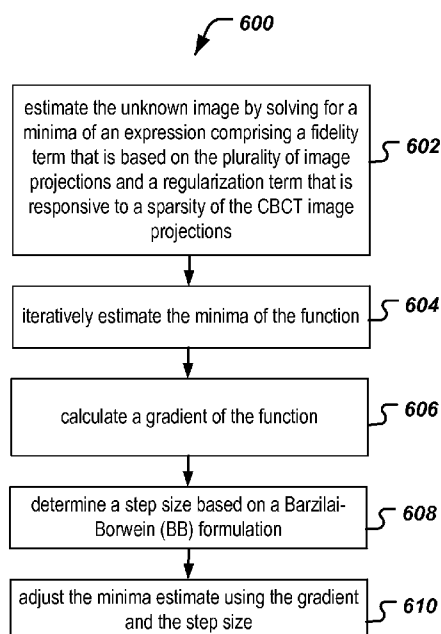


FIG. 6

(57) Abstract: Techniques and systems are disclosed for estimating an unknown image from a plurality of cone-beam computed tomography (CBCT) image projections. The unknown image is estimated by solving for minima of an expression comprising a fidelity term that is a function of the plurality of image projections and a regularization term that is responsive to a sparsity of the CBCT image projections. The minima of the expression is iteratively estimated by calculating an image gradient of the function, determining a step size based on a based on a Barzilai-Borwein (BB) formulation and adjusting the minima estimate using the projected image gradient and a step size.



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, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, 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, RS, 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:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

Published:

- *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:

26 October 2012

(48) Date of publication of this corrected version:

29 November 2012

(15) Information about Correction:

see Notice of 29 November 2012