

Title (en)

CORRECTION OF NON-LINEARITIES IN AN IMAGING SYSTEM BY MEANS OF A PRIORI KNOWLEDGE IN RADIOGRAPHY

Title (de)

KORREKTUR VON NICHTLINEARITÄTEN EINES ABBILDUNGSSYSTEMS DURCH EIN A-PRIORI WISSEN BEI DURCHSTRAHLUNGS-AUFNAHMEN

Title (fr)

CORRECTION DE NON-LINEARITES D'UN SYSTEME D'IMAGERIE PAR UNE CONNAISSANCE A PRIORI EN RADIOGRAPHIE

Publication

**EP 1861734 A2 20071205 (DE)**

Application

**EP 06722577 A 20060309**

Priority

- DE 2006000420 W 20060309
- DE 102005011161 A 20050309

Abstract (en)

[origin: WO2006094493A2] The invention relates to a method for online correction of non-linearities in the imaging system during the data acquisition in industrial computer tomography (CT). The above provides a method for the provision of corrected projection data as an improved CT reconstruction, whereby measuring beams (q) are emitted from a radiation source (Q) which pass through the sample (10,11), the intensity of which is recorded by a detector (31). The following steps are provided: a first initialisation, whereby a first orientation of the sample (10) is merely coarsely determined with a first rapid recording, a recording in which the position of the sample (10) is more accurately determined, in particular by feature point pairs, a movement, whereby after a successful recording of several projections, the position of the sample (10,11) is calculated for at least one further projection, a simulation, whereby a virtual CT is carried out using the results from the previous step, providing input data for an ensuing correction method for the CT reconstruction, carrying out a correction, whereby during data recording (70) by the detector, parameters are determined from the correction data and a correction is then carried out (73a,73b) and the reconstruction, whereby in the period at the end of the recording process corrected projection data (11\*) as a data recording (70) are provided as an improved CT reconstruction (74,75).

IPC 8 full level

**G01T 1/29** (2006.01)

CPC (source: EP US)

**G01T 1/2985** (2013.01 - EP US)

Citation (search report)

See references of WO 2006094493A2

Citation (examination)

KASPERI S ET AL: "QUALITY IMPROVEMENTS FOR CONE-BEAM CT USING BEAM HARDENING AND SCATTERING CORRECTION", PROCEEDINGS OF 3RD WORLD CONGRESS ON INDUSTRIAL PROCESS TOMOGRAPHY,, 3 September 2003 (2003-09-03), pages 90 - 95, XP008066728

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

**WO 2006094493 A2 20060914; WO 2006094493 A3 20061116; WO 2006094493 A8 20100805**; CA 2600648 A1 20060914; DE 112006001354 A5 20080306; EP 1861734 A2 20071205; US 2008212734 A1 20080904

DOCDB simple family (application)

**DE 2006000420 W 20060309**; CA 2600648 A 20060309; DE 112006001354 T 20060309; EP 06722577 A 20060309; US 90826706 A 20060309