

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

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Application

EP 06722577 A 20060309

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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

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CPC (source: EP US)

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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

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