

Title (en)
IMAGE REGISTRATION METHOD

Title (de)
VERFAHREN ZUR BILDREGISTRIERUNG

Title (fr)
PROCEDE DE RECALAGE D'IMAGES

Publication
EP 1563460 A1 20050817 (DE)

Application
EP 03778261 A 20031118

Priority
• DE 0303805 W 20031118
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Abstract (en)
[origin: WO2004047024A1] Disclosed is an image registration method by iteratively determining a transformation that is optimal regarding a given distance criterion and smoothness criterion. Said method allows corresponding landmarks in the images to be definitely represented on top of each other and comprises the following steps: (1) an iteration counter and the initial displacement field are initialized; (2) the numerical solutions of the non-linear partial differential equation (PDE) are determined by means of the differential operator that can be derived from a predefined smoothness criterion and the point evaluation functionals located at given landmarks; (3) the interpolation conditions are combined; (4) a special numerical solution of the PDE is calculated by means of the force that is determined based on the distance criterion and the actual displacement field as well as the differential operator derived from the smoothness criterion; (5) the special solution is evaluated at the landmarks; (6) the coefficients are calculated in order to calculate an updated displacement; (7) the displacement field is updated and the iteration counter is increased; (8) the displacement is verified regarding convergence; and (9) steps (4) to (8) are repeated if the convergence criterion is not satisfied.

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G06T 7/00; **G06T 3/00**

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