

Title (en)
METHOD AND APPARATUS FOR THREE-DIMENSIONAL SURFACE CONTOURING USING A DIGITAL VIDEO PROJECTION SYSTEM

Title (de)
VERFAHREN UND VORRICHTUNG ZUM FORMEN VON DREIDIMENSIONALEN OBERFLÄCHENKONTUREN MIT EINEM DIGITALEN VIDEOPROJEKTIONSSYSTEM

Title (fr)
PROCEDE ET APPAREIL POUR FORMER LES CONTOURS TRIDIMENSIONNELS D'UNE SURFACE AU MOYEN D'UN SYSTEME NUMERIQUE DE PROJECTION VIDEO

Publication
EP 1042718 A4 20021016 (EN)

Application
EP 98965560 A 19981231

Priority
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Abstract (en)
[origin: WO9934301A1] A three-dimensional surface contouring method is based on the full-field fringe projection technique. A digital video projection system (18) is used to project digitally created fringe patterns onto the object (12). The fringe pattern distorted by the geometry of the object surface (14) is then captured by a high resolution CCD camera (20). To increase contouring resolution, purely software-based digital phase shifting technique is used, which eliminates the need for accurate positioning systems in the traditional phase shifting methods. The surface (14) is reconstructed by applying the phase wrapping and unwrapping algorithms.

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IPC 8 full level
G01B 11/25 (2006.01); **G06T 1/00** (2006.01)

CPC (source: EP)
G06T 1/0007 (2013.01)

Citation (search report)
• [XY] EP 0769674 A2 19970423 - ALUMINUM CO OF AMERICA [US]
• [DY] EP 0076866 A1 19830420 - IBM DEUTSCHLAND [DE], et al
• [A] US 4634278 A 19870106 - ROSS JOSEPH [US], et al
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• [X] SANSONI G ET AL: "A NOVEL, ADAPTIVE SYSTEM FOR 3-D OPTICAL PROFILOMETRY USING A LIQUID CRYSTAL LIGHT PROJECTOR", IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, IEEE INC. NEW YORK, US, vol. 43, no. 4, 1 August 1994 (1994-08-01), pages 558 - 565, XP000466818, ISSN: 0018-9456
• See references of WO 9934301A1

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