

Title (en)  
SYSTEM AND METHOD FOR ULTRASOUND HARMONIC IMAGING

Title (de)  
SYSTEM UND VERFAHREN FÜR HARMONISCHE ULTRASCHALLBILDGEBUNG

Title (fr)  
SYSTÈME ET PROCÉDÉ POUR IMAGERIE HARMONIQUE À ULTRASONS

Publication  
**EP 2097009 A4 20100106 (EN)**

Application  
**EP 07870148 A 20071231**

Priority

- US 2007089231 W 20071231
- US 88288806 P 20061229

Abstract (en)  
[origin: WO2008083386A2] A system includes at least one transducer configured to transmit at least one ultrasound pulse into a region of interest (ROI) of a patient. The pulse has at least a first frequency and propagates through a bodily structure in the ROI. The system further includes at least one receiver configured to receive at least one echo signal corresponding to the pulse. The echo signal includes the first frequency and at least one harmonic multiple of the first frequency. The system further includes a processor configured to automatically determine, from the at least one harmonic multiple, at least one boundary of the bodily structure. In an embodiment, the processor is configured to automatically determine, from the at least one harmonic multiple, an amount of fluid within the bodily structure.

IPC 8 full level  
**A61B 8/00** (2006.01); **A61B 8/08** (2006.01); **G06T 7/00** (2006.01)

CPC (source: EP)  
**A61B 5/204** (2013.01); **A61B 8/0858** (2013.01); **A61B 8/14** (2013.01); **G01S 7/52038** (2013.01); **G06T 7/11** (2016.12); **A61B 5/20** (2013.01); **G06T 2207/10132** (2013.01); **G06T 2207/30004** (2013.01)

Citation (search report)

- [A] BOUAKAZ A ET AL: "Noninvasive bladder volume measurements based on nonlinear wave distortion", ULTRASOUND IN MEDICINE AND BIOLOGY, NEW YORK, NY, US, vol. 30, no. 4, 1 April 2004 (2004-04-01), pages 469 - 476, XP004506179, ISSN: 0301-5629
- [A] EGON J W MERKS ET AL: "Design of a Multilayer Transducer for Acoustic Bladder Volume Assessment", IEEE TRANSACTIONS ON ULTRASONICS, FERROELECTRICS AND FREQUENCY CONTROL, IEEE, US, vol. 53, no. 10, 1 October 2006 (2006-10-01), pages 1730 - 1738, XP011143293, ISSN: 0885-3010
- [A] MERKS E J W ET AL: "A KLM-circuit model of a multi-layer transducer for acoustic bladder volume measurements", ULTRASONICS, IPC SCIENCE AND TECHNOLOGY PRESS LTD. GUILDFORD, GB, vol. 44, 22 December 2006 (2006-12-22), pages E705 - E710, XP025009264, ISSN: 0041-624X, [retrieved on 20061222]
- See references of WO 2008083386A2

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 MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**WO 2008083386 A2 20080710; WO 2008083386 A3 20080828**; CA 2671708 A1 20080710; EP 2097009 A2 20090909; EP 2097009 A4 20100106; JP 2010514524 A 20100506

DOCDB simple family (application)  
**US 2007089231 W 20071231**; CA 2671708 A 20071231; EP 07870148 A 20071231; JP 2009544324 A 20071231