

Title (en)
HALFTONE WATERMARKING AND RELATED APPLICATIONS

Title (de)
HALBTON-WASSERZEICHEN UND DIESBEZÜGLICHE ANWENDUNGEN

Title (fr)
FILIGRANAGE EN DEMI-TEINTES ET APPLICATIONS ASSOCIEES

Publication
EP 1325464 A1 20030709 (EN)

Application
EP 01979700 A 20011010

Priority

- US 0131784 W 20011010
- US 68922600 A 20001011
- US 84001601 A 20010420
- US 93887001 A 20010823

Abstract (en)
[origin: WO0231752A1] One method for halftone image watermarking assigns halftone watermark dot values to pseudorandom locations in an image and diffuses the error (106) of the watermark to neighboring pixel locations of these dots. Another method modulates halftone thresholds to convert multilevel pixels to watermarked halftone pixels. This method may be used in conjunction with a robust watermark (110) spread throughout image before embedding the halftone watermark. In a compatible watermark reader (124), digital watermark signal strength is measured by analyzing bit errors in the extracted watermark message signal.

IPC 1-7
G06K 9/00; **G09C 5/00**

IPC 8 full level
G06T 1/00 (2006.01); **H04N 1/387** (2006.01); **H04N 17/00** (2006.01)

CPC (source: EP KR)
G06F 18/00 (2023.01 - KR); **G06T 1/0071** (2013.01 - EP); **H04N 17/004** (2013.01 - EP); **H04N 21/4425** (2013.01 - EP); **H04N 21/8358** (2013.01 - EP); **G06T 2201/0051** (2013.01 - EP)

Citation (search report)
See references of WO 0231752A1

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
WO 0231752 A1 20020418; AU 1163402 A 20020422; CA 2422412 A1 20020418; EP 1325464 A1 20030709; JP 2004511938 A 20040415; JP 2006270972 A 20061005; JP 4187749 B2 20081126; JP 4199540 B2 20081217; KR 20030051712 A 20030625

DOCDB simple family (application)
US 0131784 W 20011010; AU 1163402 A 20011010; CA 2422412 A 20011010; EP 01979700 A 20011010; JP 2002535062 A 20011010; JP 2006083301 A 20060324; KR 20037005154 A 20030411