

Title (en)

Method and apparatus for currency discrimination and counting

Title (de)

Verfahren und Vorrichtung zum erkennen und zählen von verschiedenen währungen

Title (fr)

Méthode et appareillage permettant d'identifier et de compter des billets dans diverses monnaies

Publication

**EP 0883094 A3 19990630 (EN)**

Application

**EP 98115458 A 19910114**

Priority

- EP 95116745 A 19910114
- US 47511190 A 19900205

Abstract (en)

[origin: WO9111778A1] An improved method and apparatus for discriminating between currency bills (17) of different denominations uses an optical sensing (18) and correlation technique based on the sensing of bill reflectance characteristics obtained by illuminating (22) and scanning a bill along its narrow dimension. A series of detected reflectance signals are obtained by sampling and digitally processing (30), under microprocessor control, the reflected light at a plurality of predefined sample points as a currency bill is moved across an illuminated strip (24) with its narrow dimension parallel to the direction of transport of the bill. The sample data is subjected to digital processing, including a normalizing process, whereby the reflectance data represents a characteristic pattern that is unique for a given bill denomination and incorporates sufficient distinguishing features between characteristic patterns for discriminating between different currency denominations.

IPC 1-7

**G07D 7/00**

IPC 8 full level

**G06K 9/00** (2006.01); **G06M 3/10** (2006.01); **G06T 1/00** (2006.01); **G06T 7/00** (2006.01); **G07D 3/00** (2006.01); **G07D 7/00** (2006.01); **G07D 7/04** (2006.01); **G07D 7/06** (2006.01); **G07D 7/12** (2006.01); **G07D 7/16** (2006.01); **G07D 7/20** (2006.01); **G07D 11/00** (2006.01); **G07F 19/00** (2006.01)

CPC (source: EP)

**G07D 7/12** (2013.01); **G07D 7/1205** (2017.04); **G07D 7/128** (2013.01); **G07D 7/16** (2013.01); **G07D 7/162** (2013.01); **G07D 7/20** (2013.01); **G07D 11/50** (2018.12); **G07F 19/20** (2013.01)

Citation (search report)

- [A] EP 0338123 A2 19891025 - LANDIS & GYR AG [CH]
- [A] EP 0077464 A2 19830427 - LANDIS & GYR AG [CH]
- [A] EP 0342647 A2 19891123 - SIEMENS NIXDORF INF SYST [DE]
- [XAY] EP 0264125 A1 19880420 - TOSHIBA KK [JP]
- [Y] EP 0253935 A2 19880127 - LIGHT SIGNATURES INC [US]

Cited by

WO0233665A1

Designated contracting state (EPC)

DE FR GB IT NL

DOCDB simple family (publication)

**WO 9111778 A1 19910808**; AU 5948394 A 19940630; AU 6428296 A 19961121; AU 645523 B2 19940120; AU 669781 B2 19960620; AU 688688 B2 19980312; AU 7180691 A 19910821; CA 2050589 A1 19910806; CA 2050589 C 19951226; CA 2109791 A1 19910806; CA 2109791 C 19950718; CA 2156998 A1 19910806; CA 2156998 C 19990216; CA 2156999 C 19961217; DE 69125660 D1 19970522; DE 69125660 T2 19970731; DE 69131078 D1 19990506; DE 69131078 T2 19990715; EP 0466869 A1 19920122; EP 0466869 A4 19940202; EP 0466869 B1 19970416; EP 0706156 A2 19960410; EP 0706156 A3 19971022; EP 0706156 B1 19990331; EP 0883094 A2 19981209; EP 0883094 A3 19990630; JP 2994461 B2 19991227; JP 2995156 B2 19991227; JP H05504220 A 19930701; JP H1131251 A 19990202; JP H1153603 A 19990226

DOCDB simple family (application)

**US 9100283 W 19910114**; AU 5948394 A 19940414; AU 6428296 A 19960827; AU 7180691 A 19910114; CA 2050589 A 19910114; CA 2109791 A 19910114; CA 2156998 A 19910114; CA 2156999 A 19910114; DE 69125660 T 19910114; DE 69131078 T 19910114; EP 91903057 A 19910114; EP 95116745 A 19910114; EP 98115458 A 19910114; JP 50340591 A 19910114; JP 6482096 A 19960321; JP 6483196 A 19960321