

Title (en)

A METHOD OF CONTENT AUTHENTICATION INSIDE A SEALED BOX USING SPECIAL LABELS

Title (de)

VERFAHREN ZUR INHALTSAUTHENTIFIZIERUNG IN EINER VERSIEGELTEN SCHACHTEL MITHILFE SPEZIELLER ETIKETTEN

Title (fr)

PROCÉDÉ D'AUTHENTIFICATION DE CONTENU DANS UNE BOÎTE SCELLÉE À L'AIDE D'ÉTIQUETTES SPÉCIALES

Publication

**EP 2545496 A4 20170823 (EN)**

Application

**EP 11752928 A 20110301**

Priority

- IN 625CH2010 A 20100310
- IB 2011050859 W 20110301

Abstract (en)

[origin: WO2011110973A2] This invention proposes a content verification and authentication method inside a sealed box, which transits between point-of-packaging and point-of delivery through a logistics supply-chain on per-hop basis. This method is about tagging each item with a label containing internal layering of radio-opaque material randomly oriented. Externally all labels/tags look symmetrical and hence even if an insider replaces the original item and tags with genuine labels on fake item, still this gets detected as original reference imaging signature will have different orientation. Every-time these labels are reused they auto-acquire their imaging credential. This method also mitigates false alarm after ensuring that imaging has changed only due to horizontal movement of items inside the box and not because of orientation. Method has inherent capability to resolve count-deficiency due to pattern overlap. For accelerated direction-agnostic scanning in high volume logistics industry for box level authentication, two labels with covert pattern is highly useful. Labels with covert pattern is again based on orientation, which is not known by insiders and credential is acquired only at time of application of labels. This method can also be used as covert anti-counterfeiting mechanism by associating imaging of random covert patterns with overt feature of unique-alpha-numeric per-piece id.

IPC 8 full level

**G06K 19/06** (2006.01); **G06V 20/50** (2022.01); **G06V 20/80** (2022.01); **G06V 30/224** (2022.01)

CPC (source: CN EP KR US)

**G06F 18/00** (2023.01 - CN KR); **G06F 18/2155** (2023.01 - KR); **G06V 20/50** (2022.01 - EP US); **G06V 20/80** (2022.01 - CN EP KR US); **G06V 20/95** (2022.01 - EP)

Citation (search report)

- [X] EP 1318486 A1 20030611 - FRACTURE CODE CORP APS [DK]
- [X] US 2009097647 A1 20090416 - HARRIS SCOTT C [US]
- [A] US 5642442 A 19970624 - MORTON JAMES S [US], et al
- [A] US 2006118437 A1 20060608 - GOSEBRUCH HARALD [DE], et al
- [A] JP 2006133360 A 20060525 - TOPPAN PRINTING CO LTD
- [A] WO 2010003585 A1 20100114 - KLOECKNER PENTAPLAST GMBH & CO [DE], et al
- See references of WO 2011110973A2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**WO 2011110973 A2 20110915; WO 2011110973 A3 20120705**; AU 2011225766 A1 20121108; AU 2011225766 B2 20141113; CN 102959563 A 20130306; CN 102959563 B 20161116; CN 107025424 A 20170808; EP 2545496 A2 20130116; EP 2545496 A4 20170823; JP 2013527486 A 20130627; JP 5826774 B2 20151202; KR 101759664 B1 20170719; KR 20130060169 A 20130607

DOCDB simple family (application)

**IB 2011050859 W 20110301**; AU 2011225766 A 20110301; CN 201180023176 A 20110301; CN 201610909490 A 20110301; EP 11752928 A 20110301; JP 2012556621 A 20110301; KR 20127024515 A 20110301