Anti-counterfeiting and anti-piracy technology guide

https://euipo.europa.eu/anti-counterfeiting-and-anti-piracy-technology-guide

Unique Identifier Marks

This technology essentially works by inserting visible or hidden identifiers into products or documents. Where visible, the identifiers have the appearance of unintended ink spots or smudges. They are generally produced by random and practically non-replicable chemical and physical processes. For example, a particular printing technology can be used to randomly generate a series of small, coloured patches, which will serve as an exclusive, original and unique identifier, much like a fingerprint. A numerical code is assigned to each individual identifier (its signature) and stored in a reference database.

Used for

- Authentication
- Tracking/Tracing

Suitable for

- Very small products
- Small products
- Medium-sized products
- Large products

Goes on

- Product
- Packaging

Can be used for

- Physical products

Visibility

- Visible
- Invisible

Reading device needed

- Yes

Connection to server

- Yes

Description

There are many different methods for creating unique product identifier marks. However, in all cases, special recording equipment is installed on either the printing or the production line to capture an image of each product’s identifier and store it together with the encoded signature in a database. In some cases it may also be possible to print the encoded signature as part of a 2D barcode on the item. This would support identification and tracking of the marked products as well.

Uses

This technology can be applied directly to documents and packaging. Alternatively, the pre-recorded identifiers and/or encoded signatures may be printed onto labels.

Implementation

The changes that need to be made to the production process in order to implement this technology vary significantly depending on the type of product and the methods used to generate the unique identifier and associate it with the product. If you want to apply unique identifier marks directly to your product(s), you will need to install the specific hardware in your production line to record the signature of each identifier. However, if you wish to use adhesive labels with a built-in, pre-recorded unique identifier, only limited changes to the

production process will be necessary.

Cost

Given the diversity of methods available for applying this technology, it is difficult to give a general idea of the costs involved in its implementation. That said, the cost for pre-recorded unique identifiers printed onto labels is usually around a few euro cents per item.

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