

## Authenticating original products without any markings

Swiss company AlpVision has launched an authentication process called Fingerprint, which requires no additional markings. The process is based on a digital image of the original product stored in a secure server.

Every manufactured object contains unique characteristics that come directly from its manufacturing process. For example, a machining or moulding leaves unique "prints" related to the tooling and the raw material (plastics, metals, leather) used. There are always unique, microscopic differences on every part of a product. These differences can be used to identify the object if there is a technical means to capture them.

Based on substantial know-how built up while developing digital technologies to protect packaging and printed documents, AlpVision has patented a process that uses a standard scanner to capture an image of an object needing identification. This image is sent over the Internet to a secured server for later comparison when needed. The server contains the digital prints of genuine objects as well as any previously identified as counterfeits in the markets. Sophisticated mathematical algorithms allow comparison of the image of an object with millions of stored reference images in a matter of seconds. The return verdict: genuine, counterfeit or unknown.

One of the first applications is for the Swiss watch-making industry, where the Fingerprint process can track and trace every watch model during its lifetime. This solution opens new possibilities to authenticate and track and trace original products on the global market handling multiple supply chains, without any additional markings.

Many applications are being developed for various types of products. First in line are products such as food, small bottles cosmetics, medical instruments, luxury products, automotive parts and airplane parts.

*Details of two objects that were evaluated as identical, but with visible differences seen under magnification and identifiable with the AlpVision Fingerprint procedure.*

