

AN INSIDE LOOK at AlpVision

The company helping to protect pharmaceutical products from counterfeiting.

It goes without saying that safety in the pharmaceutical industry is absolutely paramount. Every step of the journey, from drug discovery to formulation, through to packaging and logistics, is done with a common thread in mind: patient safety.

As the industry has progressed, so too have the various ways in which medicines are protected throughout the supply chain. One significant area of concern is the rise of counterfeit medicines, which are estimated to cost the pharmaceutical industry €16.5bn every year, also affecting employment levels and not to mention potentially harmful effects on patients.

One company which has entered the market to help protect products from counterfeiting is AlpVision, which has developed a range of digital solutions that are able to detect the authenticity of drugs via a smartphone.

The company was founded 19 years ago by Dr. Martin Kutter, AlpVision's president, and Dr. Fred Jordan, the CEO.

"This company is really a dream come true actually, we did not expect it to be so successful," Jordan says.

Like many fledgling companies, AlpVision started off in a garage. That was in 2001, where Dr. Kutter

and Dr. Jordan were trying to establish how technology they'd invented during a PhD could be put into different industries.

"We tried to put this technology into many fields in 2001 when we were just trying to make money actually in one way or another. We tried it, essentially randomly in different fields, and one of the fields was product packaging so we use this technology to hide invisible information on printed packaging. This idea worked commercially. All of our other ideas were big failures," Jordan laughs.

The technology AlpVision developed is called Cryptoglyph which consists of a digital, invisible marking that is applied to printed products such as labels and blister packs. The technology works through a series of invisible micro-holes which are embedded into the varnish atop the product's packaging. These micro-holes create the digital Cryptoglyph which can tell a vendor company whether or not the product they've ordered is authentic or not. All a company has to do is use AlpVision's dedicated app which can scan a pharmaceutical package to provide the authentication.

An important point that Dr. Jordan makes is how Cryptoglyph is able to be adapted into current manufacturing lines, meaning that pharmaceutical customers can use

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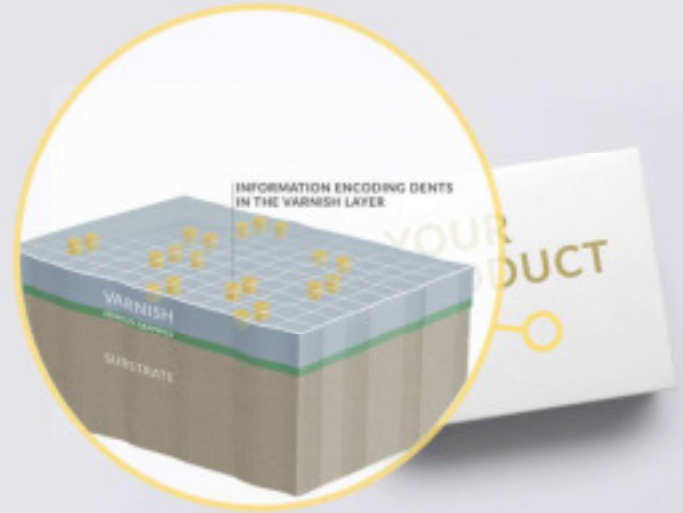
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their standard printing process without having to install or revamp new and existing lines.

“So it’s a very easy process. Right now I guess in the world there are over 200 printers which are officially qualified by us to print the Cryptoglyph technology. I’ve never met in 19 years of existence one single printer that was not able to print directly, with their machines, their technology, their varnish, the Cryptoglyph solution,” Dr. Jordan clarifies.

The Cryptoglyph technology was invented in 2001 and brought to profitability two years later. By 2007, AlpVision was protecting 1 billion products every year through its technology, something which has only increased as the company has grown, and developed more protective technologies.

For instance in 2010, AlpVision invented what it calls Fingerprint technology, a system designed to authenticate vial flip-off tops, bottle closures and other solid and plastic moulded or tooling parts. The interesting thing about ‘Fingerprint’ is that it is designed around plastic parts which already includes an anti-counterfeiting feature – that is the microstructures of the plastic. What this means is that pharmaceutical products which use moulded plastic parts can be authenticated due to having the same microstructure in the plastic when viewed through a microscope.



With no changes required to manufacturers’ moulding practices, AlpVision Fingerprint captures a digital image of a matte-finished surface, storing that image in a database which can then be used as a reference point for product authentication.

“This means that if you take one single reference from it, with a smartphone, you can check the authenticity of millions of other plastic parts,” Dr. Jordan says.

Whilst AlpVision works across a number of industries, Dr. Jordan tells me how pharma is the industry which provides the most revenue for the company, something which makes sense considering the sector’s safety requirements and regulations.

As a technology company, AlpVision has had to get used to working within pharma’s strict regulatory requirements, particularly the Good Automated Manufacturing Practice (GAMP) guidelines, which means that any software a company produces for pharma has to be appropriate for its intended use. As an industry overall, pharma can be particularly

slow-moving when it comes to the adoption of new technologies, but Dr. Jordan doesn’t think this is due to regulation.

“A pharma company is not built like other companies. In pharma companies you have a lot of people who are dedicated to quality and checking regulations, so it’s a very complex, hierarchical organisation. So a decision like changing all the packages is going to touch many people throughout the company,” Dr. Jordan says.

With pharma being such a complex industry to work in, AlpVision has had to get used to how to operate within its parameters, and flexibility has been the key to this, Dr. Jordan explains.

“The IT organisation of the pharmaceutical sector is always complex and AlpVision learned how to adapt to each one, so that it can integrate seamlessly in existing architecture. From a software architecture perspective, flexibility is key.”

**Cryptoglyph and Fingerprint are technologies under copyright by AlpVision.*