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SMARTPHONES: THE UBIQUITOUS MEAN TO DEFEAT COUNTERFEITING

WHITE PAPER ABOUT A DARK INDUSTRY

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2 TRILLION \$



COUNTERFEITING : A GLOBAL ISSUE

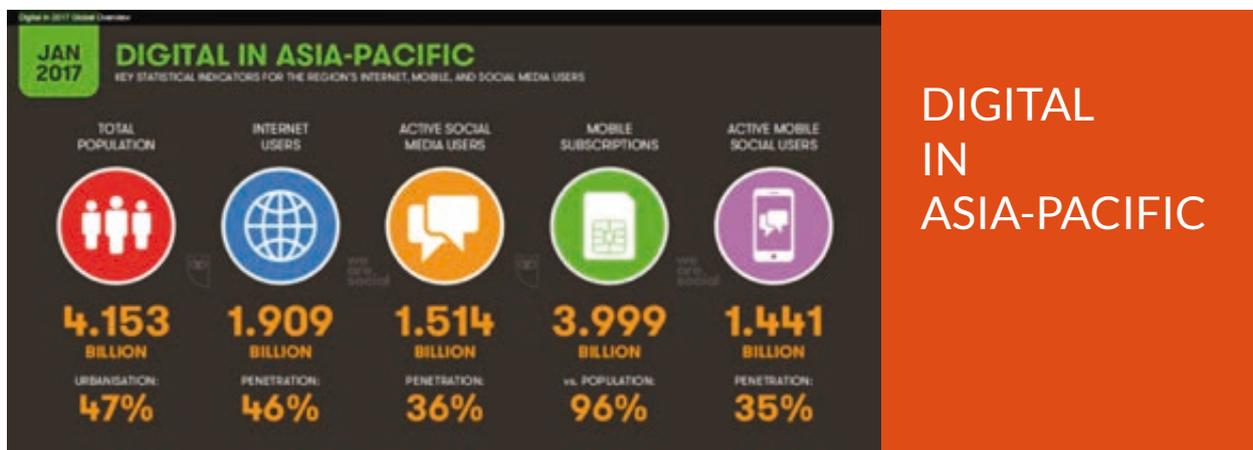
DAMAGE

The damage due to counterfeiting to the global economy is an estimated 2 trillion \$.

No single industry is spared, even if the criminal energy is focused on a selection of industries.



SMARTPHONES: A GLOBAL DEPLOYMENT



FIGHTING COUNTERFEITING WITH SMARTPHONES

To fight against a global scourge requires a global weapon. Fighting counterfeiting has become a necessity for a very large number of companies throughout all kind of industries. Even if the “industry” born

from this combat is offering a wealth of solutions, the search is still on for the one and only reasonable standard to make the fight ubiquitous, cost efficient and easily deployable.

In 2015, a team of searchers in the field of imagery at the University of Sienna have discovered a unique feature common to all printing technologies: every equipment used to stamp a document with visual content generates a slightly different result than another equipment. To put it simply: take two offset stamping machines produced by one of the leaders in that field, take the exact same template and print it on this two equipment and have a very close look at it! You will discover, that even if at first glance and accurate visual control, the documents are quite similar thanks to the magic of the machine drivers, in reality and at pixel level, several clear differences appear between the two prints. What is more, during the whole process of printing this specific document, the little differences are replicated, not dissimilar to the way as a person leaves always the same fingerprint on whatever it touches.

Moved by the typical Italian enterprise spirit, some members of the scientific team created a spin-off under the brand ViDiTrust. The mission of this start-up was to investigate the potential use of this discovery in industrial applications. Very quickly, the team understood, that the fight against the proliferation of fake products and documents all over the world might be the right field of application for their discovery. It became also clear to the team very early on, that the use of their scientific find cannot be linked to the use of a cumbersome equipment to scrutinise prints, but should be a ubiquitous tool. At the University of Siena, different scientists were analysing the future performance of smartphone cameras at the time, and the ViDiTrust team was betting on a huge improvement of the quality and performance of these devices. The decision to point to smartphones to render the result of their years long scientific quest accessible to everybody was instrumental to the immediate success of the solution they developed to combat counterfeiting.



Smartphones are an excellent example of disruptive technology. Whilst two decades ago, the Nokia “cereal bar” was top notch to communicate with each other, the understanding of deep rooted social needs beyond verbal communication and the ability to bundle otherwise existing technologies in one single gizmo by the team around

Steve Jobs created the right disruption in our way to communicate with each other. Latest data shows that the penetration of smartphones around the globe has already reached over three quarters of the developed world and is still growing. The technology itself has improved dramatically as well and the optical sensors used in the micro-camera

of smartphones have reached resolutions which a far beyond the level of early professional digital cameras. The performance of these cameras, even if very disparate from one manufacturer to the other, is now potentially good enough across all platforms (iOs, Android and others) to be used for high end applications.

THE VISEQR® (PRONOUNCE VISECURE) SOLUTION OFFERED BY VIDITRUST IS BENEFITING FROM THE TECHNOLOGICAL PROGRESS AND THE UBIQUITY OF SMARTPHONES AROUND THE GLOBE.

VIDITRUST HAVE DISCOVERED PRINTING “FINGERPRINT”

ViDiTrust own international intellectual property rights on the peculiar fact, that every printed document bears a clearly distinct “fingerprint” linked to the specific equipment used to print a document, packaging or label.

The features of each printer are different at a definitely verifiable level.



VISeQR®

This simple marker made according to ViDiTrust safety protocol and used on labels, packaging or documents simply printed with offset or serigraphic technology is allowing easy authentication via a simple smartphone application, similar to QR-code readers..



IN THE CURRENT MELTING POT OF CONCURRING SOLUTIONS, DIFFERENT APPROACHES WITH VARIOUS TECHNOLOGICAL CONTENT ARE FIGHTING TO BE THE FUTURE STANDARD. AS ALWAYS IN THE WORLD OF NEW TECHNOLOGIES, THERE ARE SERIOUS OFFERS AND A LOT OF BLATANT STUPIDITIES AROUND. THE OFFERS DIFFER AT VARIOUS LEVELS:

TECHNOLOGICAL PRINCIPLE

There are solutions around based on many technologies, which can be broadly categorized into non-visual and visual solutions. Non-visual solutions are based on the detection of hidden features, which in turn, can be inspected with non-visual technologies. RFID tagging is one such technology.

Visual solutions are combining a warning effect (“Careful, I am protected by a safety feature!”) with the effective protection. Solutions like holograms or printed identifiers (codes, hidden features...) are amongst the ones in use. Modern

holograms from major specialist have a high level of sophistication and are extremely difficult to copy. The high-level features are also difficult to inspect, which make these solutions less prone to become ubiquitous.

The ViSeQR® benefits:

A visual solution like the optical control of a printed code is preferable, when it comes to devising an omnipresent solution



WAY OF INSPECTION

The means to verify the marking vary from technology to technology. RFID tags require an RFID reader for identification. High protection holograms require laser pointers to highlight some of their advanced features. A few solutions include

the use of smartphones into the inspection process. Some require only visual control.

The ViSeQR® benefits:

the use of a smartphone for the optical control is a future oriented high performance solution for inspection.

COST

Adding tags, labels or stickers has a cost for the realisation of these means and for their application to the goods to protect. Very few solutions have quasi-zero or zero cost for their “production” and deployment.

The ViSeQR® benefits:

including the ViSeQR® marker during the printing process doesn't add any cost to this process.

EASE OF DEPLOYMENT

The ease of deployment is linked to the choice of technology and the efforts required to implement the product at a global scale. Additive technologies preconising the use of tags, labels or stickers are always more difficult to deploy,

than simple technologies linked printing for example.

The ViSeQR® benefits:

most products are packaged or accompanied by printed documents or labels. Including the ViSeQR® marker in their printing process is an extremely easy way of deploying the technology.

EASE OF USE

One of the most important aspects of anti-counterfeiting is the ease of identification of fakes. The easier this identification is, the better the system. Non-visual technologies are immediately falling out of the top ranking on this specification, as the use of unusual means for inspection makes control unnecessarily difficult. Most of the

visual solutions also don't rank very high on ease of use, as the human eye can just see so much on a simple glance. The use of the high precision sensor of smartphone cameras stands out as a very simple and ubiquitous high precision solution to inspect goods for genuineness.



The ViSeQR® benefits:

the technology makes use of the smartphone as mean of inspection.

SAFETY LEVEL ACHIEVED

“The only 100% certainty is death! All the rest is probabilities.” This adage applies also to “anti-counterfeiting” technologies. Inventiveness and criminal energy of crooks are always potentiating themselves, when it comes to finding new ways to defraud others. This is particularly true in the world of counterfeiting. The fight is therefore always to find a reasonable balance between the requested level of safety and the costs and difficulties linked to generate counterfeits. Direct optical control with the use of smartphones stands out as a cost effective and easily deployable mean, if what is controlled is also easy to deploy and safe. According to forensic magazines, in the world of general crime fighting, fingerprint evidence and fingerprint identification are safe at a level

of 99,8%. We are nowadays entrusting our life and safety to a technique, which has a very high level of safety, even if it is not 100%. 0,2% means that out of one million fingerprints analysed, 2000 people are falsely identified as the owner of a specific fingerprint. The ViSeQR® solution offered by ViDiTrust offers a 99,9% safety of identification, and this at an infinite fraction of the cost of more sophisticated solutions and with the need for counterfeiters to develop an inventiveness and deploy means with no common measure with the achievable results and benefits.

The ViSeQR® benefits:

high level of protection at a fraction of the cost.

TRACEABILITY

One thing is to identify a fake, the other is to report this finding back. This reporting equates to a traceability of the fakes, which is important for the supplier, to understand the commercial dynamics behind their counterfeiter’s activities, and ultimately to be able to identify the network of culprits behind the deed. A warned customer will not buy the fake product, but might

not make the effort to report this find to the supplier. This in turn is poor anti-counterfeit activity. The ultimate result is to eradicate the source of fakes, on top of giving a protection to the customer.

The ViSeQR® benefits:

the use of the smartphone application is automatically generating traceability reports.

GEOLOCALIZATION

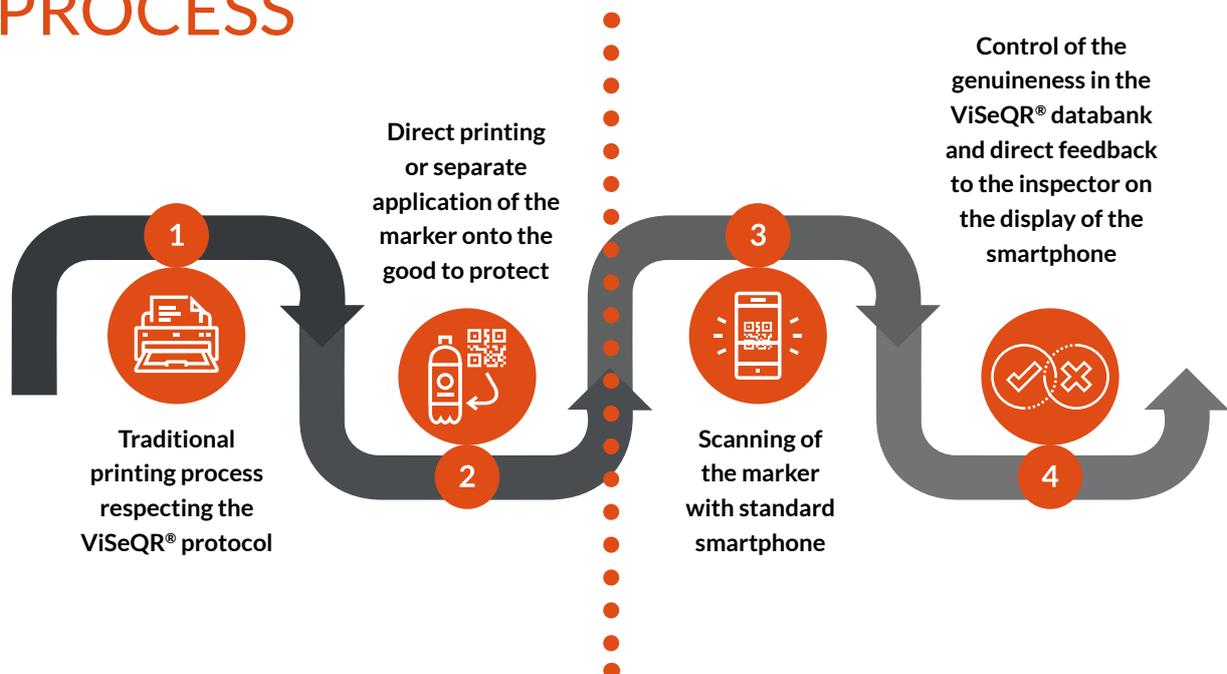
The ability to understand geographical penetration and repartition of sales is a powerful marketing tool. Knowing that a certain product sold to a certain distributor appears in a certain market is giving invaluable insights into market dynamics. The important thing here is “numbers”. You need a large number of data to make correct assessments. With the wrong technology, difficult to deploy and to inspect, the number of

inspections will be tiny, ending in very poor geolocation data. The more ubiquitous the anti-counterfeiting solution, the more inspections will be done and the more quality data from the geographic localization will be generated.

The ViSeQR® benefits:

the cost effective, easy to deploy and easy to control solutions is the perfect prerequisite for good geolocation.

ViSeQR® SAFEGUARD PROCESS





VIDITRUST
TRULY YOURS

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