

Fighting Online Fakes

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In my intervention will share my perspective and the results of recent research on business cases and the experience of IT based solution providers in the context of the Coalition Against Illicit Trade¹. Will focus on:

- The rise of online market of counterfeited goods
- How new technologies can support the fight against counterfeiting
- Key conditions to ensure effective adoption and use of new technologies

1. Online market of counterfeited goods is rising

Imports of counterfeited and trade of illicit goods have doubled in less than a decade and are worth nearly half trillion dollars or around 2,5% of global import². Recent research have estimated that 1 out of 6 products bought online is a fake. Research by cybersecurity experts over three days of monitoring, identified almost 30K Instagram accounts that posted 14 million photos and found that 20% of all items displayed as luxury goods were fake³.

The availability and use of low-cost and more sophisticated technology-based means of falsification and automatised digital marketing tools of fake products have driven such expansion.

From the abuse of the Domain Name System where unsuspected consumers are lured to imitation domains, to the massive distorted use of social networks such as Facebook and Instagram, backed by algorithms and AI software, cybercriminals are not short of means when deploying their activities. Their criminal activities ensure high financial rewards at a very low risk.

The expansion of this black market is likely to increase in the absence of new, bolder and more concerted initiatives by brand owner, intermediaries, regulators, enforcement authorities and consumer associations, supported by the expert and independent advice of ICT based specialists.

2. New technologies provide critical tools to fight illicit trade and counterfeiting

New advanced technological solutions are being applied and further developed to support brand owners, intermediaries and public authorities along the supply chain. They can be articulated around two main work stream:

1st software systems that can scan the on-line market place and monitor websites for fraudulent listing

2nd Tracking, tracing and authentication IT based solutions which enable brand owners and supply chain partners to record, monitor and secure products as they move through the supply chain, and verify their authenticity from manufacturer to retailer and consumers.

¹ Coalition Against Illicit Trade, several research report and business case studies available at www.coalitionagainstillicittrade.org

² OECD-EUIPO, Trade in counterfeit and pirated goods: mapping the economic impact, 2016. OECD, Converging Criminal Networks, 2016. OECD-EUIPO, Mapping the real routes of trade in fake good, 2017. OECD-EUIPO, Trade in counterfeit goods and free trade zone, 2018.

³ A. Stroppa-Di Stefano, Social media and luxury goods counterfeit, B. Parrella editor, 2016

Tracking is the ability to record information about the movement of the product along the supply chain.

Tracing is the ability of these operators, but also of the controlling authorities and, in many cases, final consumers, to access all the tracking information associated with the given product in order to understand its properties and the path taken for it to arrive at the location monitored.

Product authentication is the capability to check that that product is genuine, and not counterfeited. Such solutions can come in different forms - overt, covert and forensic. Overt solutions are obvious to the naked eye and enable instant authentication through visual inspection, such as holographic devices and colour-shift inks. Covert solutions, on the other hand, often require specialist equipment to identify their presence, such as microtext and UV fluorescent inks. For a further layer of authentication there are also forensic solutions, which include using intrinsic features within the product structure or package to create a unique signature or molecular markers that can only be identified using specific equipments.

The optimal approach to protect against counterfeiting includes several layers of security and authentication features to combine both overt and covert technologies, track and trace systems and tamper verification, with a view to make as difficult as possible for counterfeiters to succeed. Furthermore, such layers should wherever possible be intrinsic to the item or packaging to ensure that the entire product is authenticated rather than the security feature alone.

For TT&A, the range of already available tools include:

- Comprehensive systems and software to generate unique codes and to mark product units on any kind of packaging material
- Powerful image processing software and systems that can associate the codes marked on the product to features of the product or packaging in order to guarantee the security of the code itself
- Efficient systems to aggregate product codes into their shipment/sale packaging codes and to build one-to-many relationship to simplify tracking along the supply chain.
- Very powerful devices to query the identifiers marked on the product and on the shipping cases.
- Radio frequency identification technology, including radio tags to insert in the product
- Technology marking raw fibers (based on DNA unique molecular signature) ex. For textile and watches jewelry via a liquid)
- Secure and accessible internet network and apps that allow product authentication throughout the supply chain and by the consumer post-purchase. The constant development of smartphone technologies and application –notably leveraging block-chains- are instrumental to better associate and empower consumers in the fight against illicit trade and counterfeiting.

3. Key conditions for effective adoption and use of new technologies

The complexity of a supply chain for any manufactured product subject to counterfeiting and smuggling, involving a variety of stakeholders and partners, requires carefully designed inter-connectable systems and a well-planned approach to integrate TT&A solutions from sourcing to production and distribution.

Given the international dimension of sourcing and trade, we need to think about cross-border solutions that ensure the necessary inter-operability among systems and operators, although due account should be taken of different local market needs and abilities to enforce.

The definition and adoption of voluntary technical standards at a European and global level is instrumental to apply more effective and widely spread tracking, tracing and authentication solutions, making life much more difficult to criminals.

Experience from a wide range of industries shows that successful deployment of track and trace systems depends on seamless interoperability among disparate information technology systems and internationally-recognized technical standards that establish clear rules for capturing and sharing data. Interoperability is a critical requirement in tracking and tracing as legitimate trade is globalized. Systems of different economic operators and authorities involved along the legitimate supply chain should be able “to speak to each other” i.e. exchange data, irrespective of national borders.

In summary, key conditions to consider for an effective deployment on new technologies in this field, include:

Development and adherence to global technical standards. Coding system suppliers work with many global standards bodies such as ISO, and GS1 for data carrier symbology. Clearly defined standards are necessary to allow systems interoperability, which allows different technology providers to develop their own TT&A solutions.

Ease-of-use and flexibility. The systems may be complex but their use must be made simple for all the operators involved in the production and distribution processes: large companies as well as SME's. To maintain operational efficiency within a manufacturing environment, coding systems should be designed to be ‘operator friendly’. TT&A systems should not duplicate, but complement and be compatible with established systems and procedures and be adaptable to integrate forthcoming technological developments. Moreover, business-friendly systems provide an opportunity to leverage data mining and insights on production, distribution and product life-cycle.

Cost effectiveness. Avoidance of redundant complexity and costs should be built into the design of all track and trace systems from system inception to system management. Initial investments should also be viable for every company and operator in a given industry and market sector in order not to discriminate from one company to the other due to lack of investment capabilities.

Reinforced multi-stakeholders cooperation. The fight against counterfeiting and organized crime can be more successful if the cooperation among all stakeholders concerned is reinforced. A more open, transparent and multi-disciplinary approach, based on mutual trust and with the involvement of brand-owners, intermediaries and public authorities is more than every critical.