



TÜVRheinland®

Precisely Right.

Counterfeiting is Damaging your Brand and your Profits, but there are Solutions

Authored by *Bob Driggers*

Business Development Manager, Brand Risk Management

TUV Rheinland of North America, Inc.



Executive Summary

Counterfeiters and criminals are working hard to copy your products, compromise your supply network and steal your trade secrets – and they're becoming smarter and better-equipped with every passing day. The good news: It is possible to protect your brand and your revenues. This whitepaper illustrates the scope of the problem, shows in concrete terms how organizations can protect themselves and provides specific examples of how the right solution can provide relief.

To give just one example of the effectiveness of deploying the right solution, one of the world's top 10 IT and computer peripheral manufacturers reduced its annual loss from theft during shipment by 90 percent after implementing TÜV Rheinland's recommendations. Your organization can enjoy similar success – if it chooses the right partner.

Why Counterfeiting is Flourishing

It's easy money – and getting easier. Illicit trade, including counterfeiting, grey marketing, fraudulent returns and piracy, is growing seven times faster than its legal counterpart, according to Dr. Moises Naim, an international expert on global commerce.

One reason is the globalization. More goods are being moved through more countries than ever before. Unfortunately, the longer and more complex the supply chain, the more potential for leaks. Another reason counterfeiting is flourishing is the emergence of the electronic transferal of funds. In addition, penalties are often not severe enough to serve as a deterrent.

Thus, a perfect storm is created. Moving high-demand products through a complex supply chain and then making it easy for criminals to transfer, hide and ultimately spend their profits, creates conditions ripe for damage.

By the Numbers

The World Bank estimates that counterfeiting may equal 10% of global trade. The U.S. Chamber of Commerce estimates the global scope of the problem at U.S. \$750 billion a year, with \$250 billion of that in the U.S. alone. The U.S.-based Center for Medicine in the Public Interest predicts that counterfeit drug sales will reach U.S. \$75 billion globally this year – a 90% increase since 2005. Other estimates include:

- The Federal Trade Commission says counterfeiting costs the global automotive parts industry U.S. \$12 billion a year, \$3 billion in the U.S. alone. This correlates to 200,000 to 250,000 fewer manufacturing jobs in the United States.
- According to the Global IP Center, international and domestic theft of sound recordings cost the U.S. economy \$12.5 billion in 2010.
- The International Data Corporation (IDC) reports that at least 45% of the world's computers contain counterfeit software.
- Zippo says that up to half the lighters bearing its name are fake. In 2008, this cut into the company's revenue by about 25% - and forced it to lay off 15% of its workforce.
- According to IDC projections, reducing PC piracy by ten percentage points could result in 600,000 additional jobs and more than U.S. \$24 billion in additional tax revenue.

The Human Consequences

Al Qaeda, Hezbollah, organized crime and street gangs use counterfeiting to fund other illegal enterprises – and they care little who it hurts. If your sole purpose is to make a profit, does it matter if the toys you produce contain lead-based paints, or if your pharmaceutical prescriptions are only 10% of the recommended dosage due to repackaged and diverted products?

During one recent investigation, TÜV Rheinland agents found brake pads made out of compressed sawdust – with some of those defective parts going into school buses. Counterfeit extension cords are fire hazards. Children have died in South America from infant formula because counterfeiters used powdered concrete for color and consistency.

These are only a few examples of the dangers posed by counterfeit products.

Solutions

Overt Solutions: The First Step

Like a police car parked on the side of the road, overt methods of fighting counterfeiting employ visibility to deter. Two examples of proven overt methods are holograms and the TUV PACS solution. The TÜV Rheinland Product Authentication and Control System (PACS) is a patented solution gaining popularity as a comprehensive Brand Risk Management solution.

PACS offers an online platform that generates unique alpha-numeric verification codes for product authentication, tracking and tracing. Thus, PACS manages visibility and protection of products throughout the supply chain, start to finish, from logistics to customs, distribution, sales channels and retail.

Adding Covert Solutions for Added Protection

It is important to combine overt methods with covert strategies as well. One example of a covert method is the use of taggants.

Taggants are invisible markers or codes on packaging proving that the product is the real thing. Item-specific taggants make it impossible for counterfeiters to replicate protected items. That is, they can produce products that appear identical to the real thing, but a lack of the proper taggants quickly reveals them as fake.

Taggants can be mixed with inks, toners and varnishes for use with any type of conventional, digital and thermal

Case Study

Company adopts TÜV Rheinland recommendations; theft drops 90%

TÜV Rheinland began an intensive two-week project for one of the world's top 10 IT and computer peripheral manufacturers. In the U.S. alone, the company was losing \$5 million a year from stolen cargo, with the majority disappearing between the ports of Houston and Los Angeles.

After completion of the onsite audits and interviews, the TÜV team embarked on a detailed risk analysis of the supply chain. This part of the project involved two weeks of tracking trains along the route, looking at rail stations, fencing, urban areas, pit stops, and trucking routes.

Using a combination of international security standards, industry best practices, regional legislative documentation and experience, the team provided solutions to secure the supply chain.

As a result, theft was reduced by more than 90%.

Case Study

Background: Many people believe that when a vehicle or parts are purchased from a legitimate retailer, the automobile or its parts are authentic and safe. That is not necessarily the case. Some parts may be counterfeit: the brake pads, for example.

One of the world's top five automotive makers was recently experiencing large problems with counterfeit brake pads. It asked the TÜV Rheinland Group to undertake an investigation to discover the full extent of the situation in a specific city in China.

Results: TÜV Rheinland's team found that 31 of the 50 shops investigated offered counterfeit brake pads. With the client producing at least 250,000 automobiles each year in China, TÜV Rheinland calculated that the minimum size of the entire true market volume of branded brake pads was at least one million units (four brake pads per automobile).

Conclusion: The TÜV Rheinland Group provided the client with a range of anti-counterfeiting solutions to ensure brand risk management and protection.

printing equipment. They have no functional or aesthetic impact on the finished product.

However, taggants do require an external device for authentication. In addition, some may need extreme magnification for detection. Customs and Border Patrol and governing bodies of other countries' borders are opposed to carrying "extra" equipment - one reader for Brand X covert features and another reader for Brand Y covert features and another for Brand Z.

Covert strategies such as taggants do offer several advantages. They are not excessively expensive, they usually don't affect production and they deliver a high degree of certainty in a legal manner.

Mass Serialization: Even More Protection

Another significant advantage of taggants is that they can be layered in combination with mass serialization. Mass serialization and cloud storage are effective strategies employed by TÜV Rheinland and other industry leaders. In fact, the Food and Drug Administration calls mass serialization "the single most powerful tool available to secure the U.S. drug supply."

Mass serialization involves assigning unique numbers to individual items so they can be tracked, traced and uniquely identified. These numbers are easily human readable or verified with a barcode reader or by RFID. With taggants, mass serialization takes on a deeply covert aspect. They are added invisibly to the product or packaging, but can easily be read. This makes them very dangerous to counterfeiters and anybody in their supply chain.

The advantage of cloud storage is that it offers something very close to "universal authentication." With a cell phone signal or an Internet connection, cloud storage enables verification of the authenticity of a product. Combining taggants and cloud storage can escalate security and reduce losses substantially.

Conclusion: The Right Solution Equals Strong Protection

With an experienced global partner on your side – one with the people, technology and skills required to combat a growing threat – your organization can successfully protect its brand, products and revenue.

What to Look for in a Brand Management Solution

All brand management/counterfeiting detection and prevention systems are not made equally. Experience counts. So does technology, feet on the ground and a global network of contacts from which to gather intelligence.

We find the best results come from first employing a PACS-type overt-style solution, then adding covert capabilities. Beyond those two high-level strategies, below are some capabilities that will make a difference.

Product Authentication

A product authentication system such as the use of taggants is a powerful tool for identifying and verifying products on the factory floor, through the distribution process, and by owners and end users. The right tool enables organizations to detect and deter counterfeiting and diversion wherever and whenever its products are found.

But not all authentication systems are created equal. At the heart of the TÜV Rheinland system is a verification code based on an unbreakable alphanumeric algorithm. The code is not tied to a specific labeling or marking technology, so new identification techniques can be introduced while retaining the underlying verification system. Easily incorporated into manufacturing processes, the system is highly customizable.

No system works unless it is easy to use. With TÜV Rheinland, authorized users can employ a mobile phone or Web browser to confirm a product's authenticity simply by entering the verification code into the secure TÜV Rheinland database. The system is redundant and includes emergency fail-over capability.

Supply Network Security Management

Security is an important factor. A robust solution employs a modular approach that focuses on common risks, including product packaging, carrier contracts, freight forwarding and specific geographical risks. TÜV Rheinland experts, for example, provide a range of related services, including support for the new ISO/PAS 28000 standard.

People on the Ground to Gather Essential Intelligence

Technology is essential, but it's important to be able to deploy people – many people, if necessary. TÜV Rheinland's 300-office network enables the company to have people on the ground in all markets that matter. TÜV Rheinland works with licensed investigators who combine state-of-the-art techniques with discretion, tenacity and attention to detail. They have the skills to determine who is counterfeiting products and where the fakes are being manufactured and sold. From simple mystery-shopping programs to multinational investigations, the right partner knows how to quickly obtain the information companies need.

In addition, the company's legal knowledge and intellectual property experience enables it to support both civil and criminal enforcement actions.

Top Ten Most Counterfitted Products in the United States

1. Footwear
2. Consumer electronics
3. Handbags, wallets and backpacks
4. Apparel
5. Watches
6. Computers and other hardware
7. Media like DVDs and CDs
8. Pharmaceuticals
9. Jewelry
10. Toys and video games

Information Security Assessments: Guard Those Secrets

Brand piracy often has its beginnings in IT. Secure data exchange is therefore vital – from the first brainstorm to the sale of the finished product. A company offering brand protection must be able to identify vulnerable points in security controls, policies and processes. Beyond that, it must also be able to create a real-world action plan to protect systems from unauthorized use. TÜV Rheinland takes the process a step further: It supports its recommendations with spot checks and follow-up programs.

Labeling and Marking: Look for Covert and Overt

TÜV Rheinland works closely with technology leaders in Europe, Asia and North America to offer secure systems for affixing verification codes to a range of products. TÜV Rheinland recommends covert, overt and combined labeling and printing technologies that can be simply and cost-effectively added to products. TÜV Rheinland's solutions include:

- Holograms
- Taggants
- Tamper-evident radio frequency identification (RFID)
- Multilayer heat-sensitive scratch-off 2D/3D bar codes
- Engraved laser marking

Patent, design and brand protection

Any organization offering brand protection must be able to support companies with commercial patent and protection right analyses, patent research and applications, as well as norm monitoring and research. Be sure your brand protection partner offers these services.

About TÜV Rheinland's Brand Risk Management Service

TÜV Rheinland's Brand Risk Management Service is part of a comprehensive portfolio that includes corporate social responsibility reviews; supplier management and education; supplier quality insurance and inspections; brand asset process reviews; quality, environment, health and safety audits; recycling and hazardous substance reviews; and product performance and lifetime simulations.

For More Information

To learn how to protect your brands, please contact:

TÜV Rheinland of North America, Inc.

Bob Driggers, Business Development Manager, Brand Risk Management

1300 Massachusetts Ave, Suite #103, Boxborough, MA 01719

Tel: 1+ (850) 206-7888

Cell: 1+ (770) 510-9747

Fax: 1+ (978) 266-9992

email: rdriggers@us.tuv.com

<http://www.tuv.com>