

# White Paper: The Dark Web

## *Making sense of this mysterious being*

### **Introduction**

The Silk Road was a network running within the Dark Web which was used to openly sell illegal drugs between users for years. Eventually, police were able to track down the founder Ross Ulbricht and in May 2015 he was arrested and is now serving life in prison. The very name “Dark Web” sounds ominous, and whilst there are certainly shady operators on the network, it is also becoming an increasingly important platform for repressed populations to voice their feelings and make their stories heard, circumventing the blocks and censors their governments put in place. This White Paper explains what the Dark Web (sometimes referred to as the Deep Web) is, and how it can have very important, legitimate uses as a tool for free speech.

### **What is it?**

Here is an analogy: you are driving your car to visit your friend. On the road, your car has a number plate, and your friend’s house has an address and postcode. This information is public, and can be used to identify you and your friend if needed. Imagine that your car did not have a number plate, the windows were blacked out, and your friend’s address and postcode was encrypted with a code that only you have the key for. Now imagine if all the traffic on the road and all the addresses in the country were configured in this way. No-one would ever know who is who and where they are going.

On the Dark Web, this is the case. Your identity on the web (called an IP Address) is masked, and the sites you visit are encrypted. The process of masking or even faking your IP Address is known as Onion Routing, and most websites on the Dark Web use a tool called Tor to encrypt themselves. Thus, the things you do and the sites you visits are unable to be blocked or tracked by anyone, even a government, because their scanning and tracing tools will be totally unaware of the traffic. In itself, using this network is completely legal. What people do with this facility, however, is another matter.

### **How do I access it?**

The most common way is via a free program called Tor Browser - <https://www.torproject.org/> this is a web browser like Chrome, Firefox or Internet Explorer, but it points into the Dark Web. Once installed it will run various encryption tools which hides your traffic, and you will be online “invisibly”. When you close the Tor program, it disconnects you from the network – it’s very easy.

What is harder is knowing where to go once you are online; this is of course totally up to you. One list of sites and search engines is here: <http://thehiddenwiki.org/> but please remember you will be able to access everything, including websites which display videos of things you would not want to see.

## **Practical Applications**

The Tor network was created to allow people to access websites blocked by their government at a national level. One example is Facebook and YouTube in North Korea, both of which are blocked and indeed if you attempt to access those sites you could be in serious trouble.

Using a program like Tor Browser you can access these sites without fear of repression, and post your views and opinions online for the world to see

Internet Service Providers (ISPs) also make a lot of money by selling your activity on the web to marketers. The data will probably be anonymized but you are inadvertently adding to their sales by using the normal internet. Using a Tor network removes your contribution.

It can be a very important tool for journalists and people wanting to report on human rights issues. The web group Reporters Without Borders (<http://en.rsf.org/who-we-are-12-09-2012,32617.html>) tracks journalists who have been imprisoned for releasing their stories via the internet, which has been tracked and they have been arrested. If they had used the Dark Web this would not have been possible.

Finally, even the police use the Dark Web; accessing suspect websites on the public internet through the Dark Web is a good way to investigate the issue without arousing suspicion

## **Can I contribute?**

A major way you could contribute is to run a Tor Relay – the Tor network relies on relays to move traffic around anonymously. This does require a good internet connection and the relay would only work when your PC or server is switched on. Other less technical ways to support the Tor project specifically are here: <https://www.torproject.org/getinvolved/volunteer.html.en>

## **Our Conclusions**

The Dark Web is a very powerful tool. In these times of increased surveillance - the NDA in USA and GCHQ in the UK for example almost certainly tracking everything we do online and on our phones – networks like Tor give people a way to circumvent the tracking and censorship imposed on them against their will.

The Dark Web should also be treated with extreme caution – nothing can be stopped or blocked, and so there is doubtless a lot of content within that should never be shared or seen.

If you would like to discuss this topic with us further, please do not hesitate to get in touch

## **Further Reading**

<http://www.pcadvisor.co.uk/how-to/internet/what-is-dark-web-how-access-dark-web-deep-3593569/>