



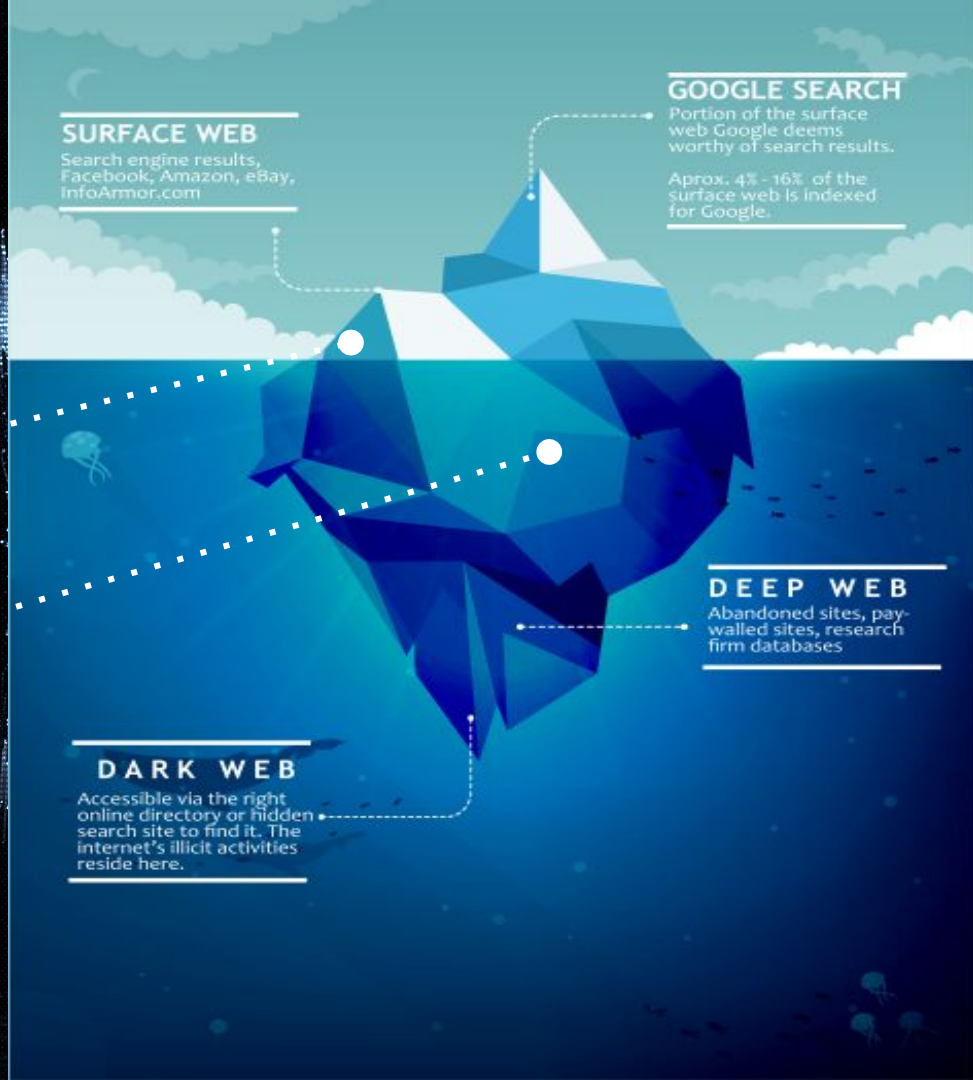
# Deep Web & Dark Web

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# WHAT ARE THEY?

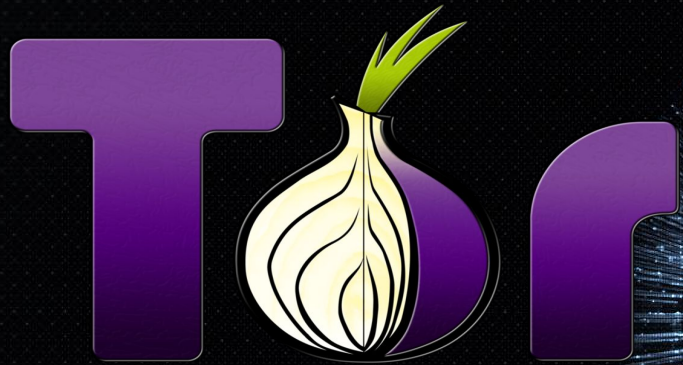
Surface web is only about 19 TB in size

The deep net has a whopping size of over 7500 TB !



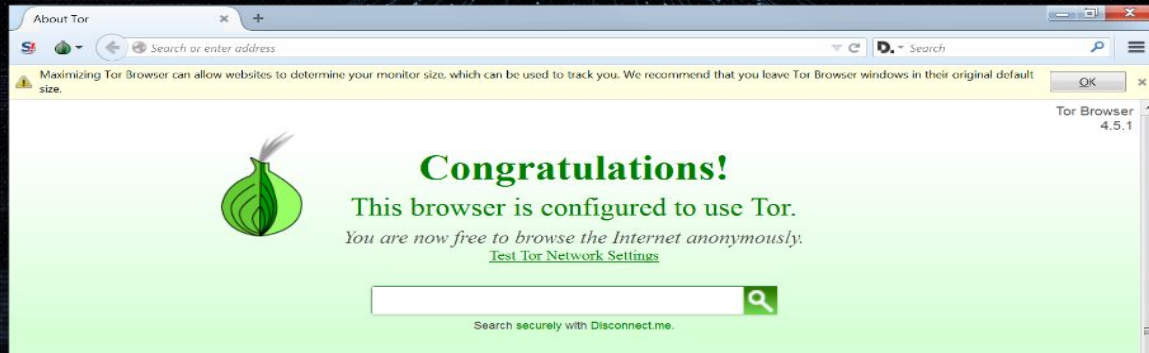


# HOW DO WE GET THERE?



-need browser that masks our identity

-need access to otherwise inaccessible parts of the web



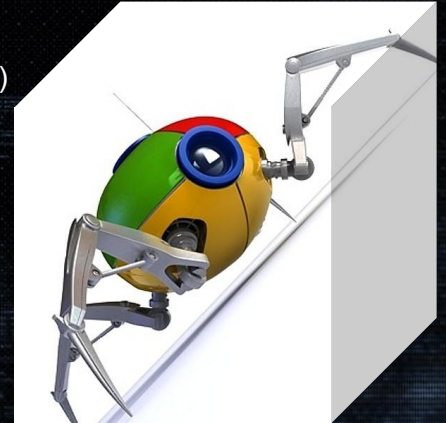


# WHY USE THESE BROWSERS?

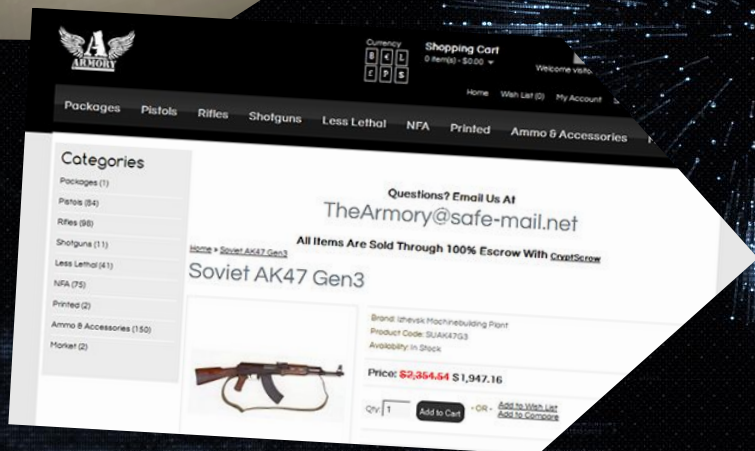
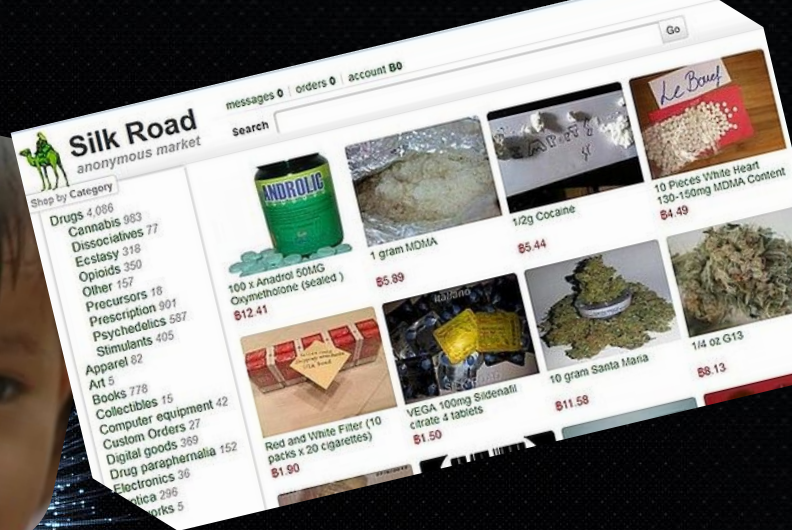


Search engine crawlers do not pick up most resources including:

- **Dynamic content:** dynamic pages which are returned in response to a submitted query or accessed only through a form
- **Unlinked content:** pages which are not linked to by other pages (ie backlinks or inlinks)
- **Private Web:** sites that require registration and login
- **Limited access content:** sites that limit access to their pages in a technical way
- **Scripted content:** pages that are only accessible through links produced in script (ex javascript)
- **Non-HTML/text content:** textual content encoded in multimedia files
- **Text content using the Gopher protocol and files hosted on irregular FTP**



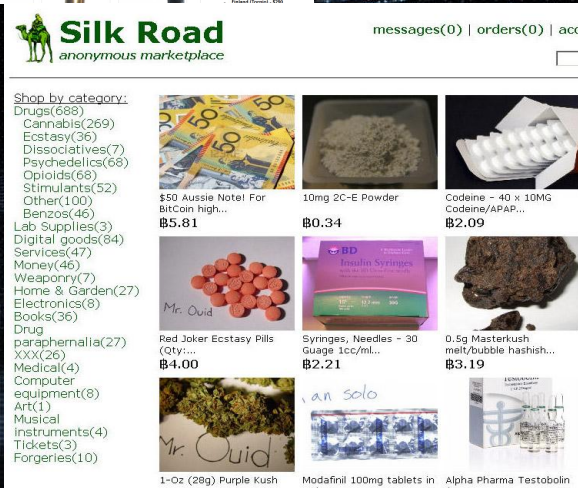
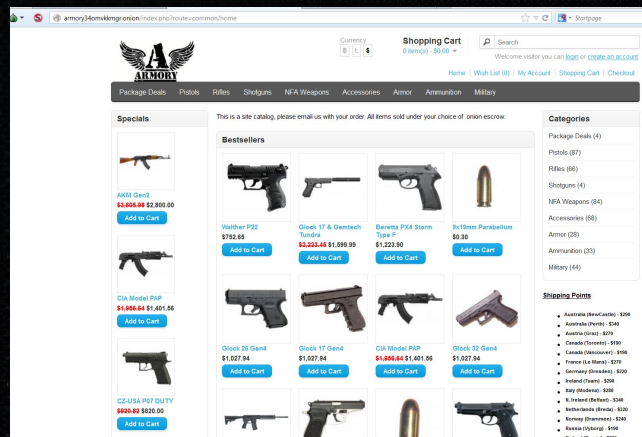




ILLEGAL ACTIVITIES



# PURCHASING ILLEGAL ITEMS/SUBSTANCES



- millions of dollars of transactions made each year
- can purchase weapons, narcotics, credit cards, organs, hackers, hitmen, etc
- From February 6, 2011 to July 23, 2013 roughly \$1.2 billion in revenue and \$79.8 million in commissions were made through Silk Road alone



# SCAMS



- Stealing private and personal info
- exploitations to upload malware



- credit card frauds
- fake passports and ID
- Hitmen

## LEAK OF SENSITIVE INFORMATION





# HUMAN TRAFFICKING & ORGAN DEALING

What do you see  
when you look at  
your fellow man?

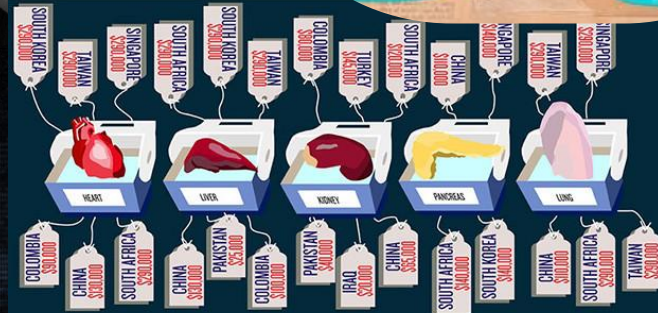


some people see a profit.

There are more people being bought and sold at



- Slaves can be bought and sold over the dark web
- Sites involving human experimentation
- Organs can also be purchased
- People can intentionally sell their organs
- amateur surgery kits



Help Stop Human  
Trafficking Now.



# CHILD PORNOGRAPHY



- one of the biggest problems on the dark web
- more and more sites keep emerging

# PROSTITUTION

- Services are provided discretely through the deep net





# ASSASSINATION



- Hitman services
- Widely regarded as a hoax

# TERRORIST ACTIVITY



- the Deep net has always been considered a place of communication between terrorist groups





# LEGAL USES

- Whistleblowers
- Military
- Policy & Crime units
- Access to additional information
- Accessing websites not available to other countries.
- Everyday buying and selling



U.S. Immigration and  
Customs Enforcement



## THIS HIDDEN SITE HAS BEEN SEIZED

as part of a joint law enforcement operation by  
the Federal Bureau of Investigation, ICE Homeland Security Investigations,  
and European law enforcement agencies acting through Europol and Eurojust

in accordance with the law of European Union member states  
and a protective order obtained by the United States Attorney's Office for the Southern District of New York  
in coordination with the U.S. Department of Justice's Computer Crime & Intellectual Property Section  
issued pursuant to 18 U.S.C. § 983(j) by the  
United States District Court for the Southern District of New York





# UNDERGROUND JOURNALISTS

- Access for places with heavy censorship laws over the internet
- Obtaining information on the events occurring in other countries
- Cohort exchange of messages
- Private message sending within the country
- Information leaking concerning the states of other places
- Leaking of Classified information for betterment of someone





# DEEP WEB USED BY THE GOVERNMENT

- In august 2013, the US intercepted messages being sent amongst senior al qaeda officials
- US embassies were the target
- This was intercepted by the US government. 22 US embassies were shut down across the Middle East and North Africa as part of a counter effort
- Messages were sent through an anonymous email service





# CICADA 3301

- Unknown organization
- Tons of rumors revolving its involvement or meaning. Some believe it be a recruitment agency for government or even terrorist activity.
- Has only appeared 4 times, posting complex puzzles to be solved. Latest one on January 5, 2016.
- All that's known is that they are trying to find “highly intelligent individuals”.
- Puzzles involved media, music, bootable Linux CDs, signs, cryptography, steganography etc.





# IS THE DEEP NET / DARK NET SAFE?

- 
- YES
    - There are much more safety precautions involved in using these deep web browsers
    - Example: masking IP address, encryptions, etc.
    - There are directories that you can use to browse safely in the deep web.
  - NO
    - No matter how updated, browsers still have vulnerabilities that can be exploited
    - Even just using your normal email or a regular username can have serious effects
    - NEVER give up personal info, or credit card info
    - Should be wary when making purchases etc.
    - Provides additional security in terms of hacking and malware prevention

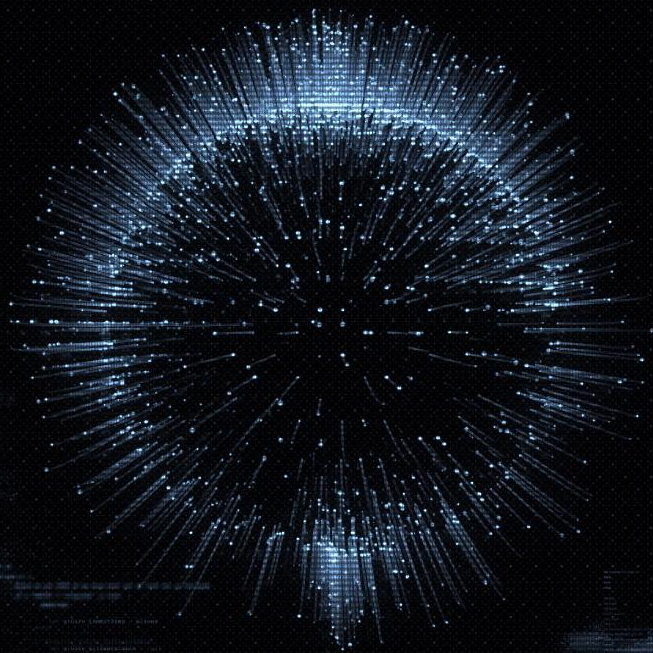


# QUESTIONS AND ANSWERS

- What is the difference between the deep web and the dark web?
  - The Deep Web refers to the broad swath of the internet that traditional search engines are unable to access, including password-protected web forums, chat services, file sharing and P2P technologies. While the Dark Web is a subcomponent of the Deep Web that is not only inaccessible to mainstream search engines but only visible to users who have installed specialized software enabling access to these regions of the internet.
- Why can't you use a surface web browsers and search engines to enter the deep web?
  - Using a regular web browser would not protect your identity and it can arouse suspicion with the law. Tor is exceptionally good because there are several layers of encryption (like an onion) to mask your IP.
  - Using a search engine such as Google is futile as it cannot index or retrieve the amount of data that is not accessed via public DNS services. The Dark Web and the Deep Web itself have their own search engines.
- Name three illegal and legal activities that can be done in the deep web.
  - Illegal: Prostitution, Drug deals, Hitmen services.
  - Legal: Journalism, accessing banned novels, whistleblowing.



# QUESTIONS AND ANSWERS





# REFERENCES

- <http://securityaffairs.co/wordpress/8719/cyber-crime/the-good-and-the-bad-of-the-deep-web.html>
- [https://www.cigionline.org/sites/default/files/gcig\\_paper\\_no6.pdf](https://www.cigionline.org/sites/default/files/gcig_paper_no6.pdf)
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