Cyberguerre informatique une réalité

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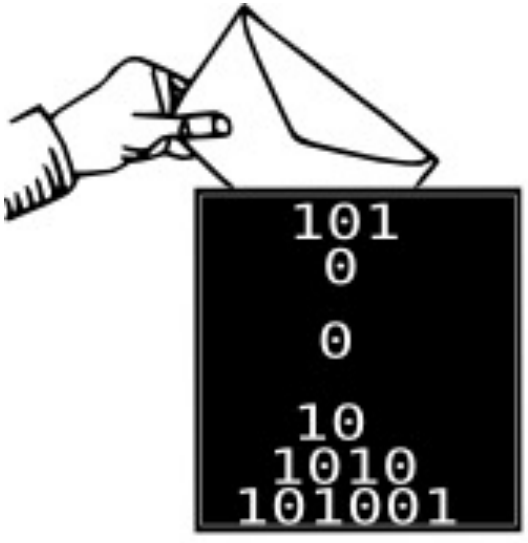
LIMOS

UNIVERSITÉ Clermont Auvergne

Octobre 2017

Computers are everywhere!

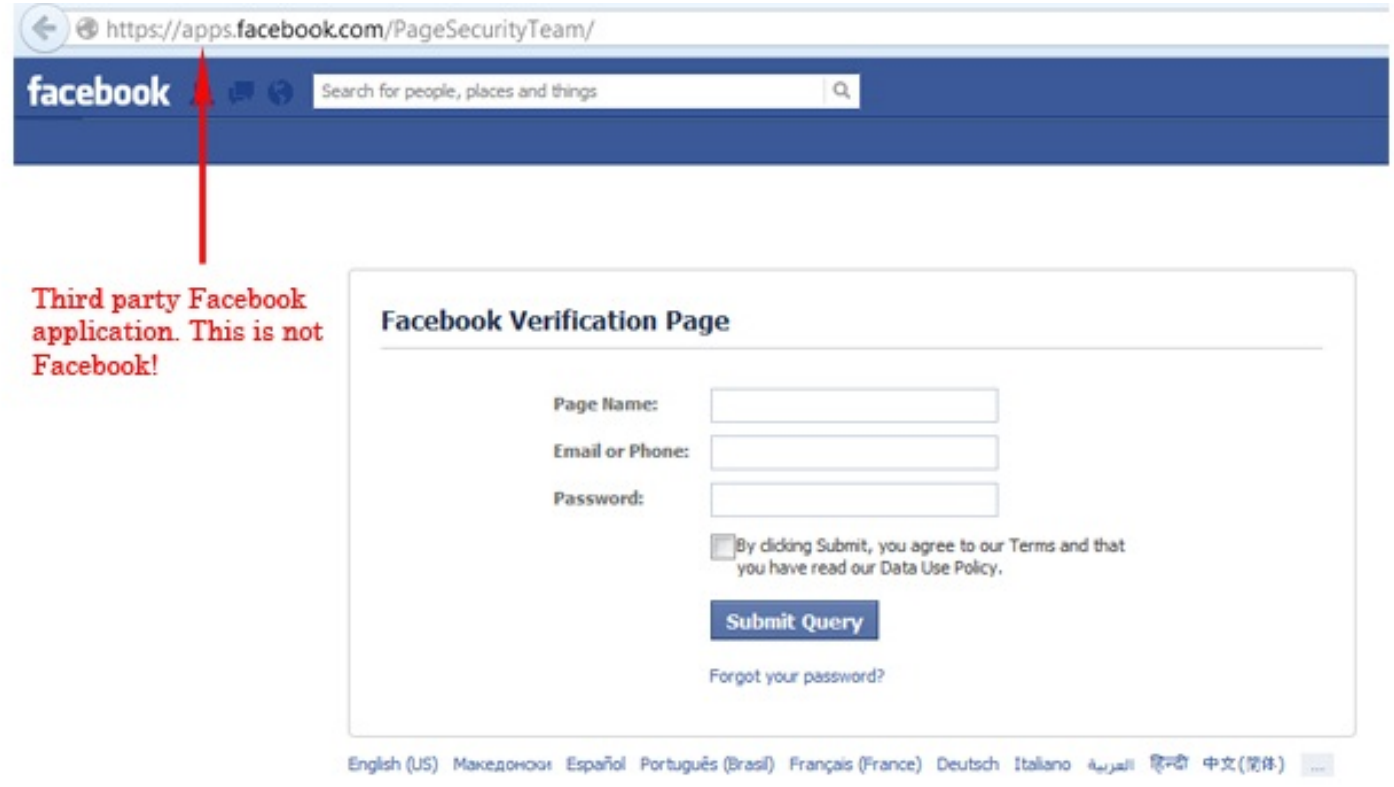


5 Famillies of Cyber Criminality

- Phishing
- Espionnage
- Ransomwares
- Sabotage
- Destabilisation

Phishing

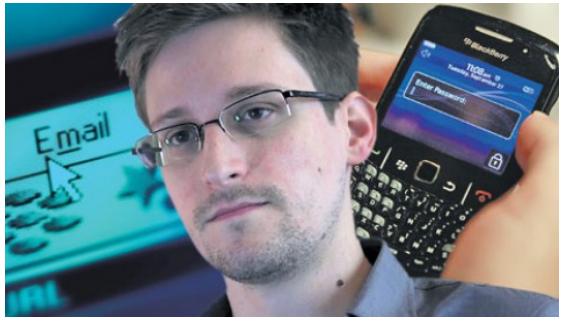

CREDIT CARD
1234 5678 9101 1213
Paul A. Cardholder


https://apps.facebook.com/PageSecurityTeam/
facebook
Search for people, places and things
Third party Facebook application. This is not Facebook!
Facebook Verification Page
Page Name:
Email or Phone:
Password:
By clicking Submit, you agree to our Terms and that you have read our Data Use Policy.
Submit Query
Forgot your password?
English (US) Español Português (Brasil) Français (France) Deutsch Italiano

Espionnage

- Little Brother (Individual)
- Medium Brother (Corporation)
- Big Brother (Government)

Edward Joseph Snowden, 6th june 2013

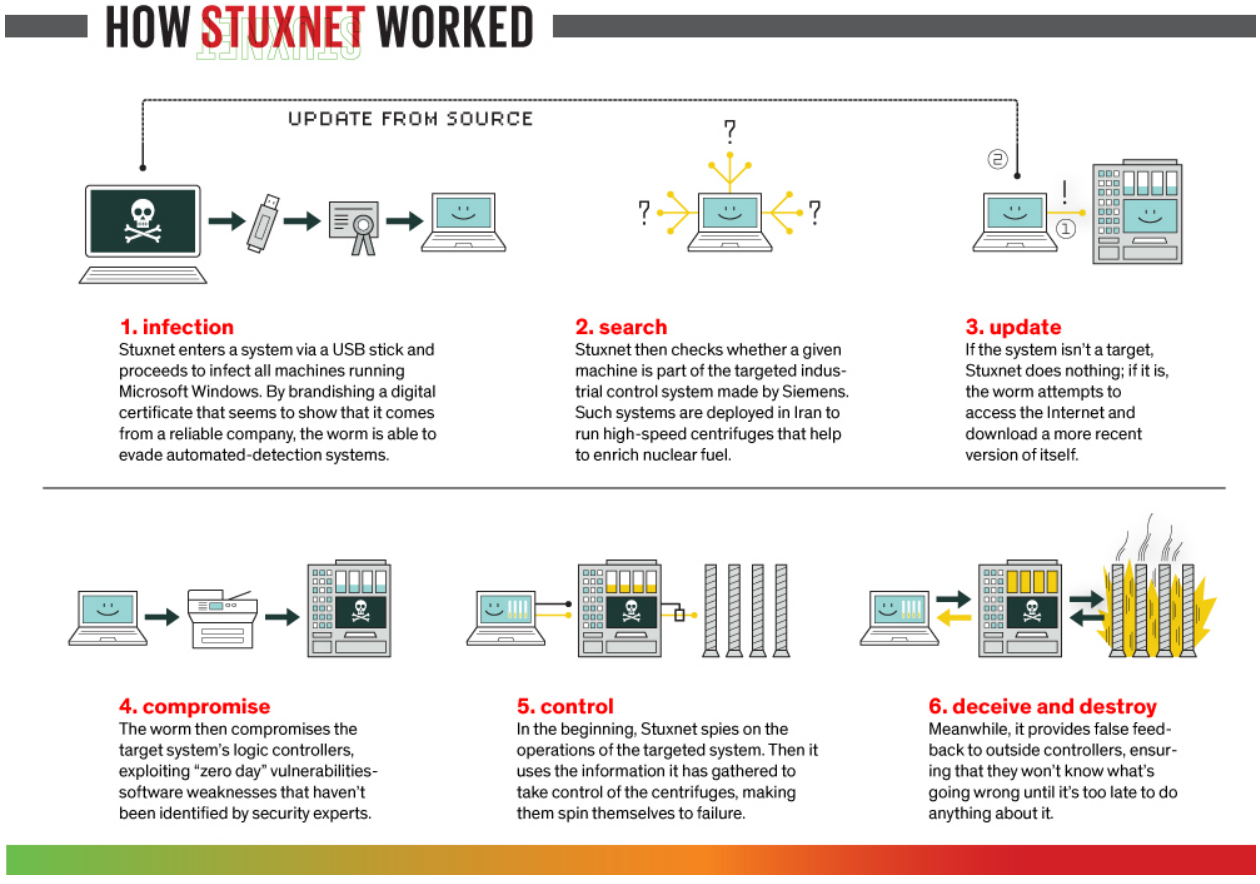


Ransomwares: Wannacry et al. 12 may 2017

http://stopransomware.fr/

Sabotage

Stuxnet, 2010

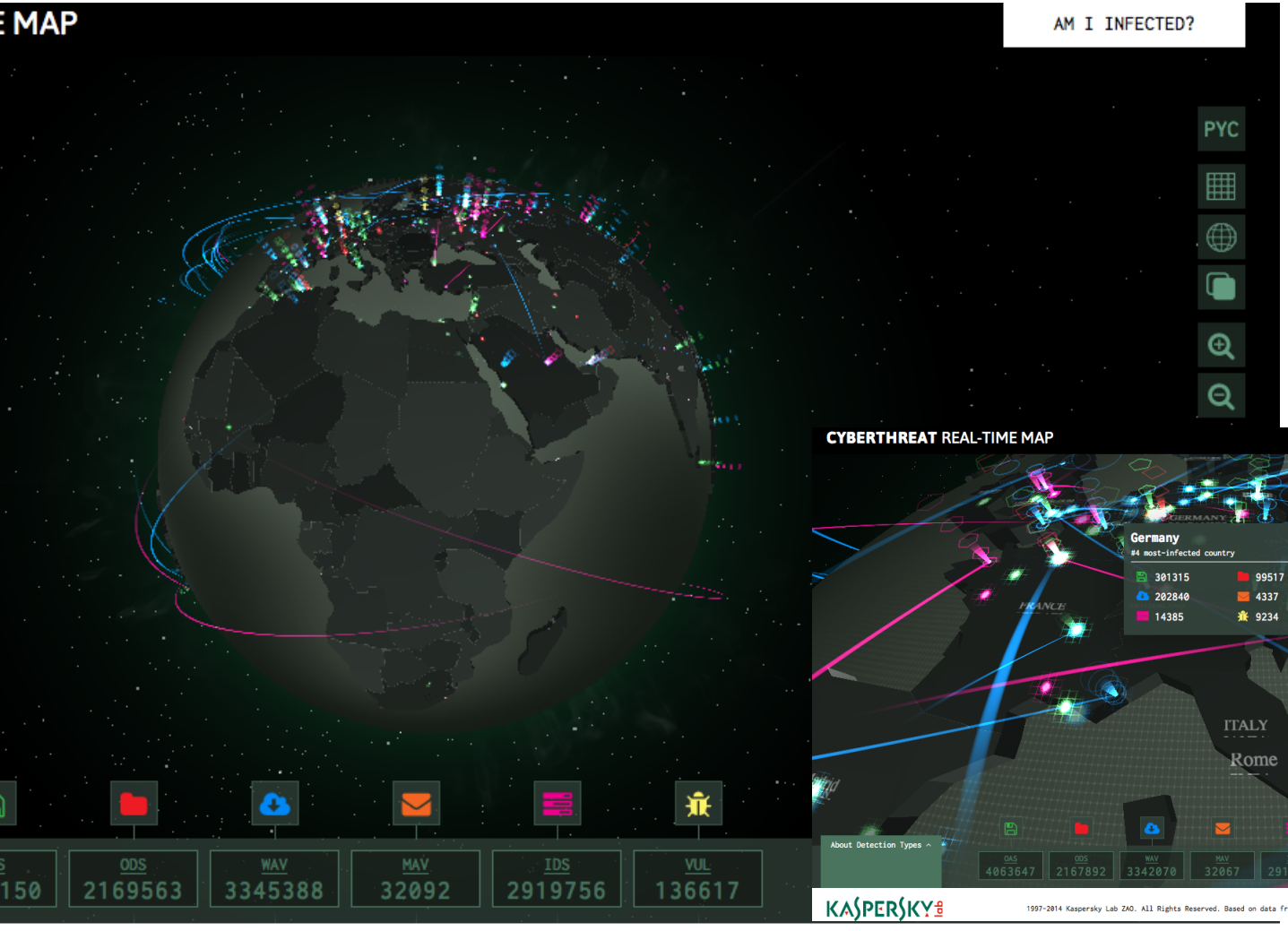


Saudi Aramco 35 000 PC deleted in 2012.

Destabilisation: Defacing

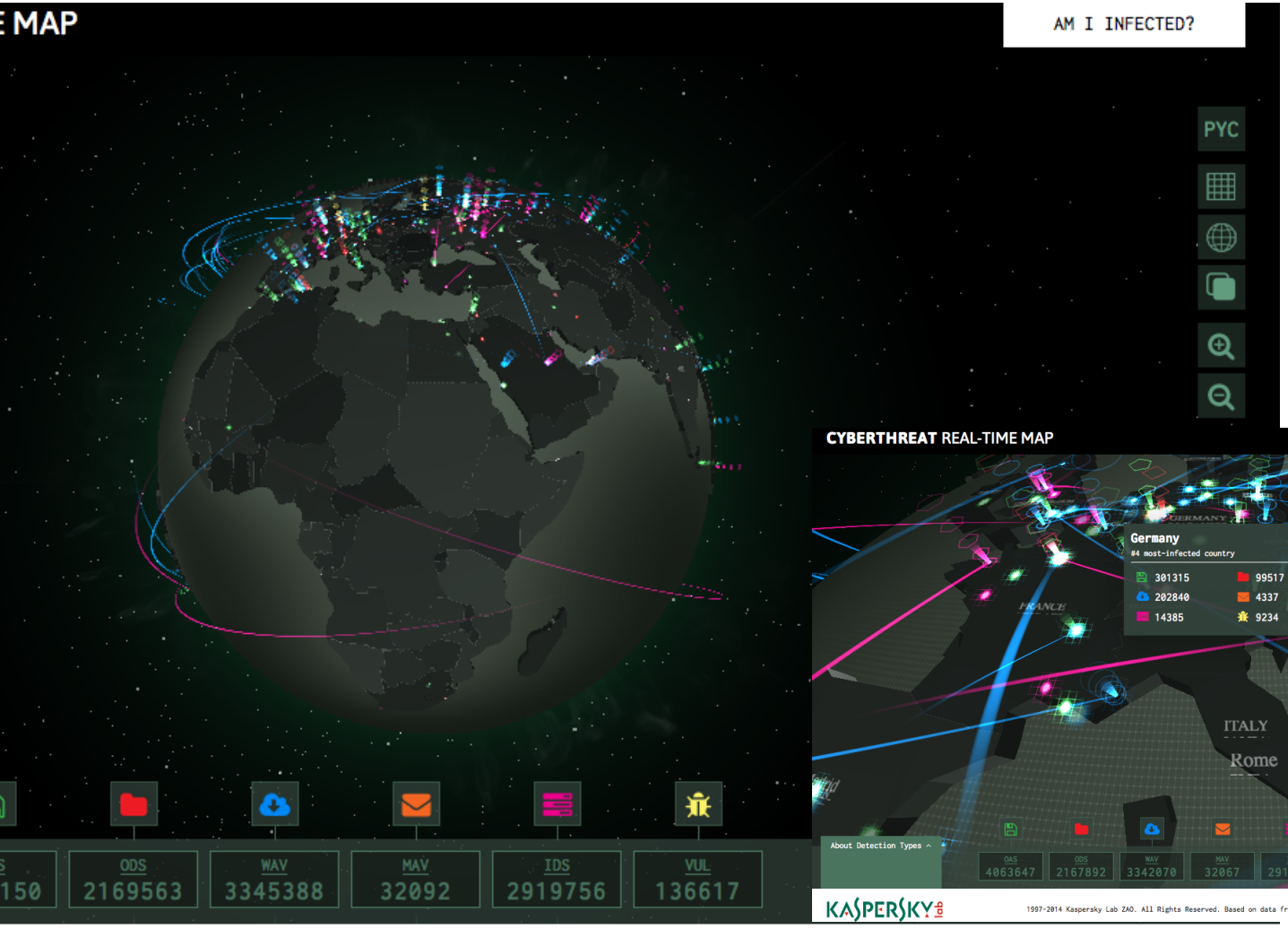
Destabilisation: Trojan, Botnets and Zombies

http://cybermap.kaspersky.com/



 Toggle Demo Mode

http://cybermap.kaspersky.com/



14 September 2017 USA stops to use Kaspersky

29 September 2017 France is doing the same

Why are there more and more attacks?

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but you wrongly feel anonymous!

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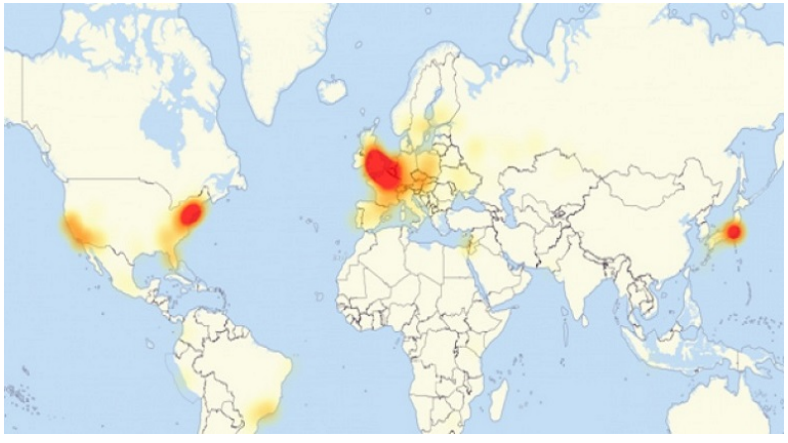
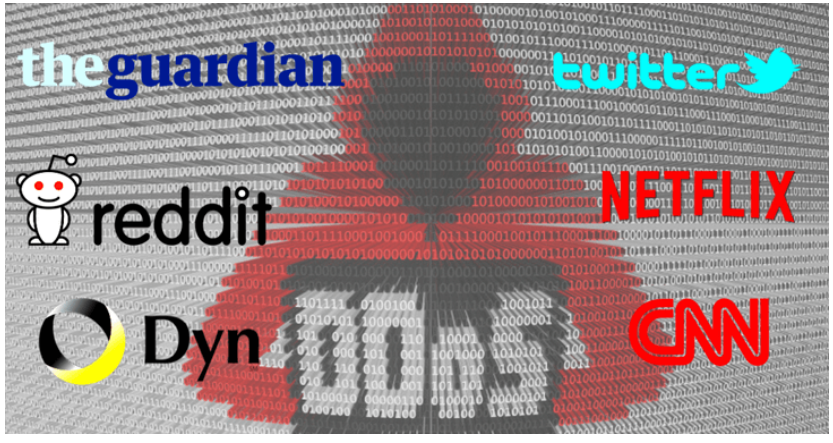
Internet was not designed to be secure but just to work!

Cyber Attack against Estonia April 2007

DDos Attack against Dyn DNS 21 October 2016





Advanced Persistent Threat: Govermment attacks

- Titan Rain discovered in 2003: Massive USA data collected during 3 years
- Operation Aurora discovered in 2010: Chinese attack against USA
- November 2014, SONY
- 2011 Bercy, 150 PC infected

Computer Science Security Agencies

- 1919 

- 1952, 

- 1995, 

- 2002, 
- 7 July 2009, 

Livre blanc sur la défense et la sécurité nationale 2013

5 milieux (p84):

- terre
- air
- mer
- espace extra-atmosphrique
- cyberespace

"le dispositif de cyberdéfense, qui est appel à s'amplifier dans les années qui viennent." ANSSI et OIV

Backdoors

- NSA's backdoor into `Dual_EC_DRBG` Dual Elliptic Curve Deterministic Random Bit Generator.
- Backdoor identified by academic researchers (Crypto 2007) and revealed by Snowden 2013.

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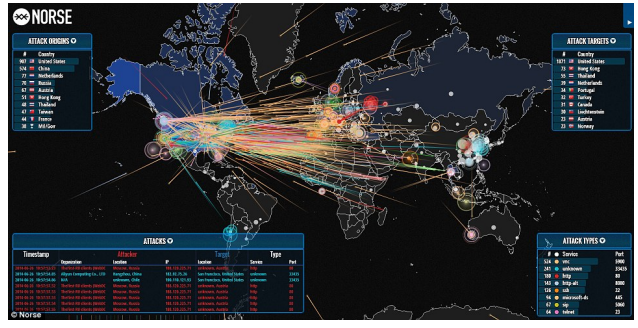

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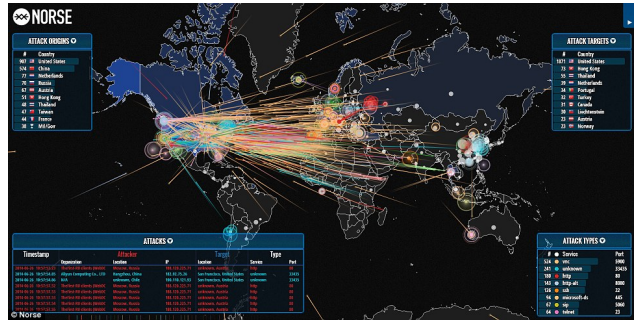

- Cyberattacks can have physical consequences

Thanks for your attention.

War games, 1983
Could be a reality?

Questions?