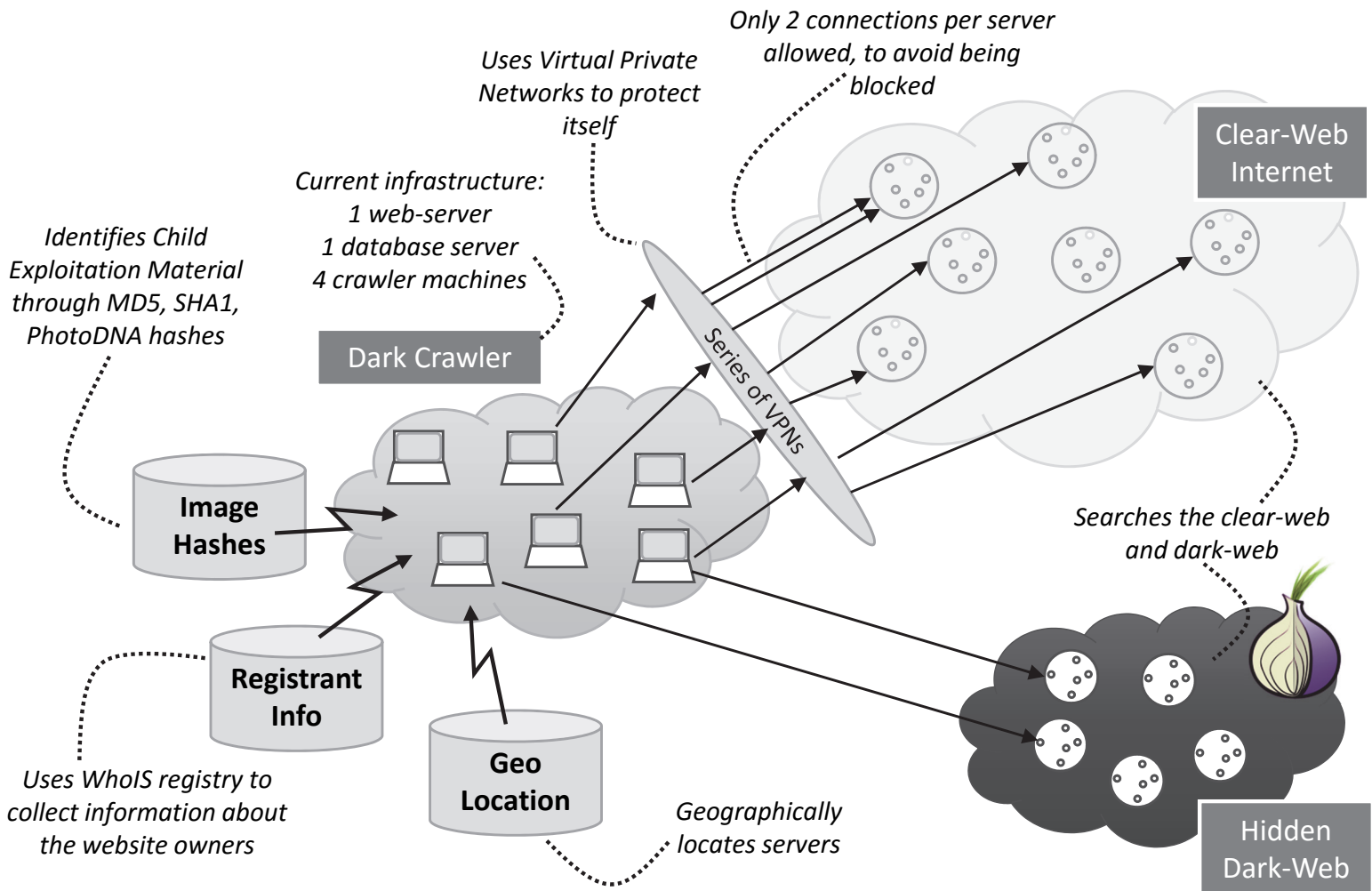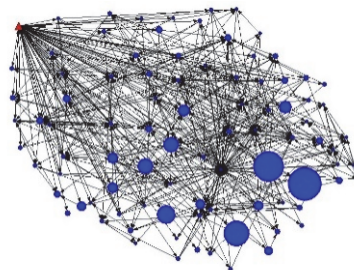# Dark Crawler

Development of the Dark Crawler started 6 years ago in the School of Criminology at Simon Fraser University in Canada. Its purpose was to search online for child exploitation material (CEM), without having to manually visit each potential website. The Dark Crawler is a web-based system that, given a set of user-specified starting websites, will recursively follow the links out of that site, both on the Clear-Web Internet and the hidden Dark-Web. As it is visiting the websites, the Dark Crawler downloads all images and checks them against a hash-image database for CEM. It then collects geolocation and registrant information of the websites it encounters, which provides the geographical identification of both the location of the website server and the server hosting the image (where a webpage links to an image hosted by an external host for example), as well as the contact information of the organization who registered the domain. This allows law enforcement to prioritize CEM within their jurisdiction based on which websites are reachable either through contacting the hosting provider or by identifying who is responsible for the domain name. So far, various applications of the Dark Crawler resulted in 15 academic publications and 21 presentations, including at the United Nations Office on Drugs and Crime in Doha, Qatar (2015).

Uses Virtual Private Networks to protect itself

Only 2 connections per server allowed, to avoid being blocked

Clear-Web Internet

Current infrastructure:
1 web-server
1 database server
4 crawler machines

Identifies Child Exploitation Material through MD5, SHA1, PhotoDNA hashes

Dark Crawler

Series of VPNs

Image Hashes

Registrant Info

Searches the clear-web and dark-web

Uses WhoIS registry to collect information about the website owners

Geo Location

Geographically locates servers

Hidden Dark-Web

Dark Crawler web-interface reports

Review location of child exploitation material on a map

View as a social-network

http://suxodro4ka.info:80

administrative
Michail Trushkov

Vysotskogo 31
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FEDERATION
620345
michail@infoincaworld.com

Lookup Date
1/5/2015 7:09:58 AM
1/5/2015 7:09:58 AM
1/5/2015 7:09:58 AM
1/5/2015 7:09:59 AM

Review registrant data