EMEA Internet Observatories

## The case of Cyprus

hack66.info/observatory
Anonymous, anadahz, Costas, gregcy, neeii, Lefkoşa
Hackerspace, Neof, observer, prometheas, savvas, wfdd

66 hack*

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a Cyprus-based Internet Observatory that aims to collect and analyze data, and routes of data through EMEA, and to work with initiatives like OONI.torproject.org, in order to promote evidence-based policy making.
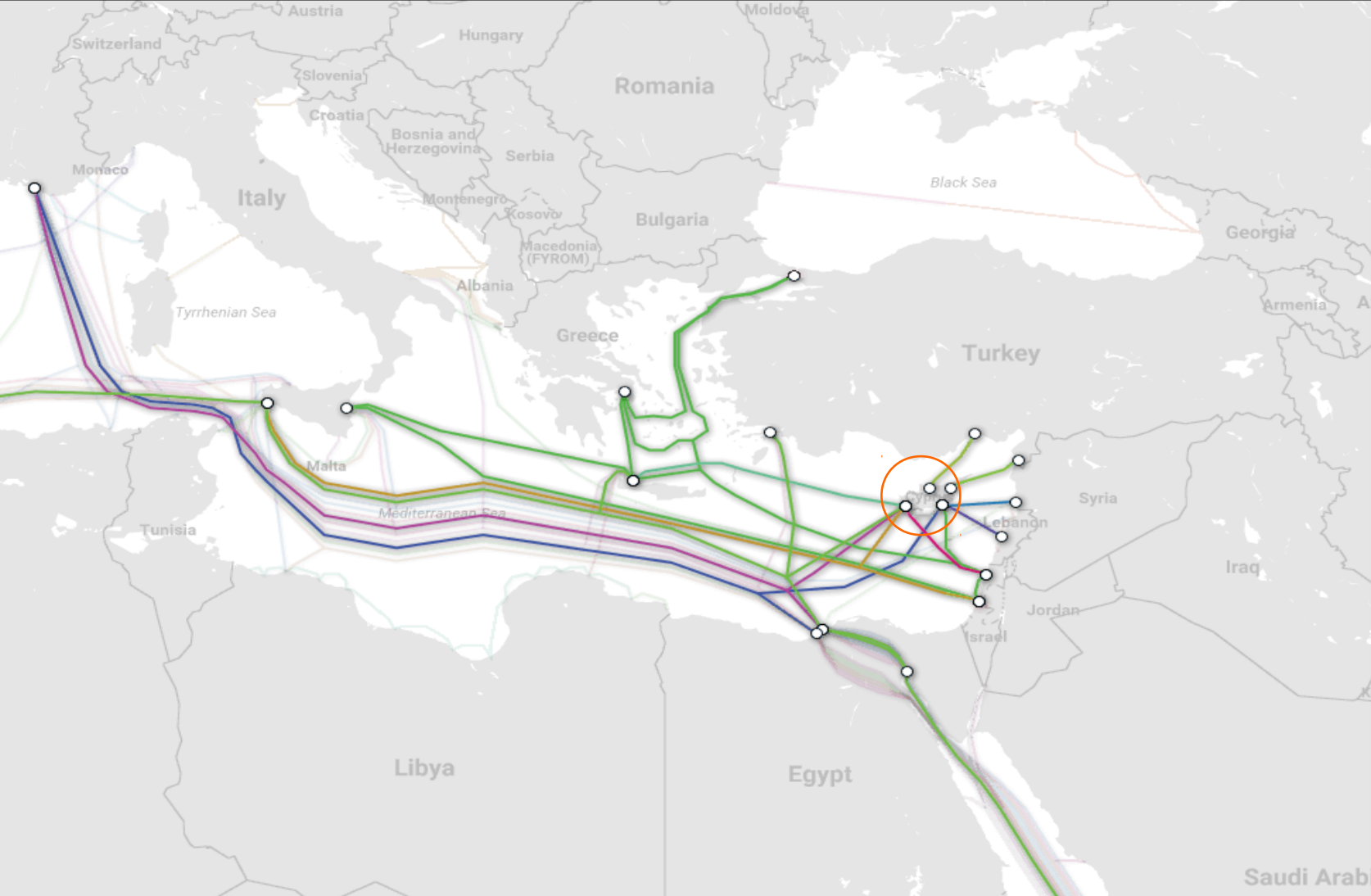
TeleGeography

Submarine Cable Map

The Submarine Cable Map is a free and reg
updated resource from TeleGeography.

Got a question about how we make this map
how submarine cables work? Look no furthe

Feedback

Q Search

Submarine Cable List

Cyprus

✉ Email link

Cables

Turcyos-2
Turcyos-1
Tamares North
Hawk
POSEIDON
Aphrodite 2
SeaMeWe-3
Lev Submarine System
CADMOS
UGARIT
MedNautilus Submarine System
TE North/TGN-Eurasia/SEACOM/Alexandros

ted on September 6, 2017

Map data ©2017 GeoBasis-DE/BKG (©2009), Google, Inst. Geogr. Nacional, Mapa GISrael, ORION-ME   Terms of Use

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https://www.submarinecablemap.com/#/country/cyprus

"The Internet (in Cyprus) is completely free of any specific regulation. No ownership monitoring agency exists in either the press or the Internet sectors."

Christophorou, C. (2016). Cyprus: Media Pluralism Monitor 2015 [European University Institute, Robert Schuman Centre for Advanced Studies]. Retrieved from http://monitor.cmpf.eui.eu/mpm2015/results/cyprus/

hack66.info/observatory/bet2512

Internet censorship capabilities in Cyprus:
An investigation of online gambling blocklisting

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2nd International Conference on the Right of Freedom of Expression in the Digital Age
7th International Conference on eDemocracy

The BIG Questions

- What is the capacity of Internet Service Providers (ISPs) in Cyprus to perform online censorship?

- To what extend is censorship transparent and justified?

- How is online gambling blocklisting implemented?

- What are the variations among ISPs?

- What about collateral damage or privacy implications?

- How can citizens bypass censorship?

Where is "network interference"?

Source: https://securityinabox.org
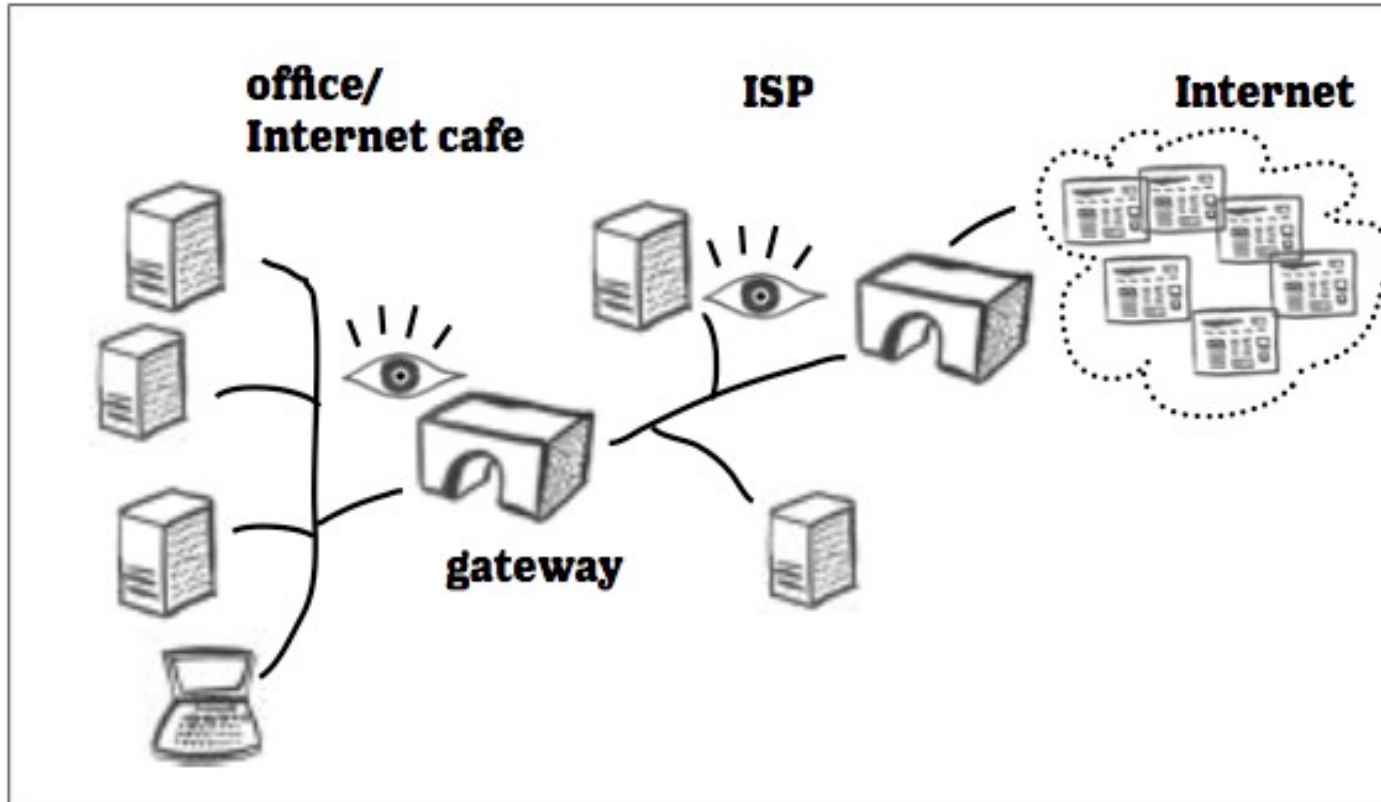
Detecting Network Interference with https://OONI.torproject.org
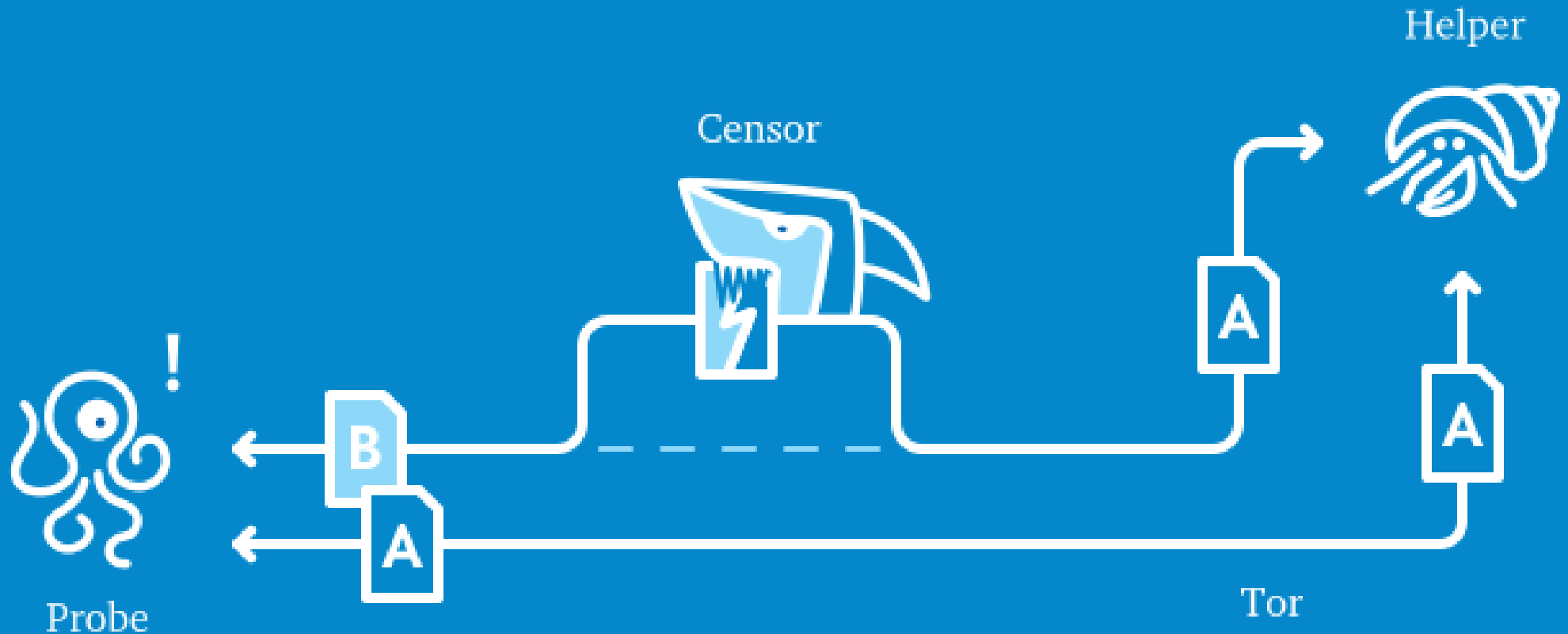
The Blocklist Chronicles

- Cyprus National Betting Authority blocklist
  - 14/02/2013 … 95 entries
  - 12/02/2016 … 550 entries
  - 27/04/2017 … 2563 entries
  - Some entries are malformed, while others require sophisticated censorship mechanisms

- CitizenLab lists: global, Greece, Turkey

- Wordpress blogs banned in Turkey, as reported at lumendatabase.org

Collecting measurements

- ~45.000 measurements throughout March-May 2017
- Volunteers from 5 residential ISPs

- Custom OONI distribution https://github.com/hack66/bet2512
- All measurements are available via the OONI explorer https://explorer.ooni.torproject.org/country/CY

Early findings

- The most common blocking method is DNS hijacking

- Users can visit the blocked websites simply by using an alternative DNS resolver

- Some ISPs have deployed middle-boxes (network components that could be responsible for censorship and/or traffic manipulation)

Problematic implementations

- Many entries of the gambling blocklist are actually not blocked

- Not all ISPs inform users why they cannot visit a blocked page

  - Even worse, some ISPs return error pages (HTTP status 403 or 404) or terminate the connection

- Email communication with the blocklisted domains is also restricted

- ISPs and the National Betting Authority can log unique identifiers of citizens who tried to visit a blocked website

Interesting bits

- The Ministry of Justice has prepared a bill to allow the police to censor "hate speech" websites

- There have been multiple government requests to private companies for content removal and user information

- Measurements from ISPs operating in the area occupied by Turkey in the north of the island, indicate network interference practices similar to those of mainland Turkey

The need for local Observatories

- It is easier to coordinate the measurement collection

- Findings should be seen as indications of interference

- Interpreting measurement data assumes the understanding of the broader context

- The purpose should be evidence-based policy making

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