

# OONI: Open Observatory of Network Interference

Arturo Filastò

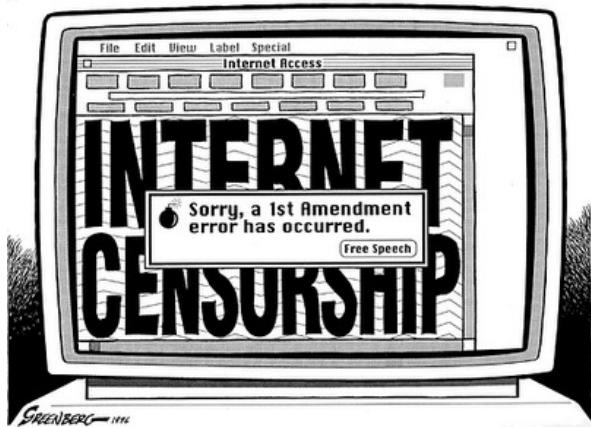
[art@torproject.org](mailto:art@torproject.org)

# Surveillance

Internet filtering is a subset of surveillance

If they are censoring *something* they are surveilling *everything*

# Censorship



It's a human rights issue

It's a non democratic form of oppression on people

It allows those in power to subvert reality

Filternet

# **What we are doing?**

Allow people to circumvent censorship (bridges)

Allow people to speak freely and anonymously (Tor Hidden Services)

Measure internet filtering in the world (OONI-probe)

# OONI

Open Observatory of Network Interference

Methodology and Framework for detecting censorship

Make all data and code publicly available

# Goals

## Detect

Network Filtering (Is my network being intercepted (DPI))

Network Tampering (Is somebody playing with my packets?)

Content Blocking (What is being blocked?)

Filtering technique (How are they blocking me?) - Filtering software/hardware (Who is the vendor and software version of this device?)

# **Why?**

**Existing tools are:**

**Closed source**

**Closed methodologies**

**Closed data**

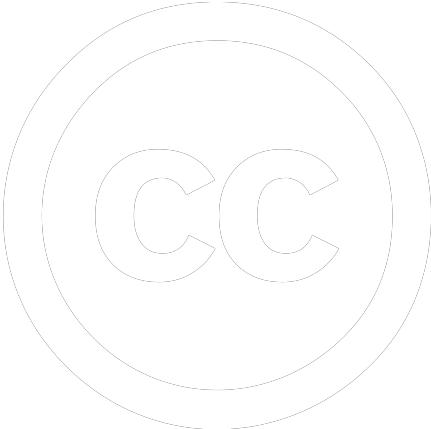
**We aim at making:**

**An FLOSS tool**

**using Open Methodologies**

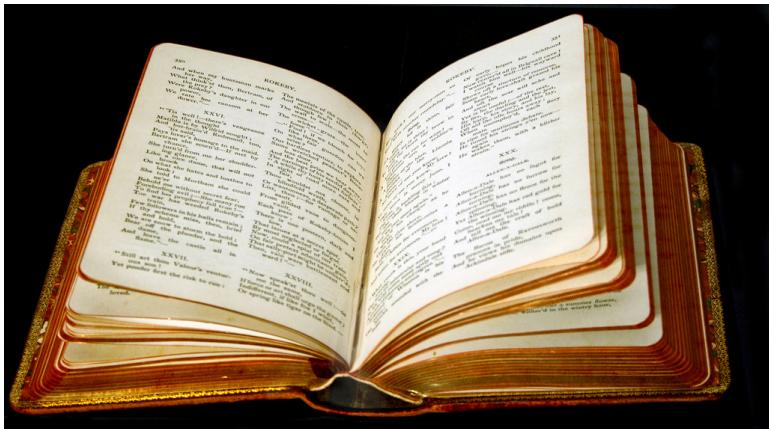
**publish all data with open license**

# **Open Data**



**Allows the results to be independently verified**  
**People can draw their own conclusions on the data**

# Open Methodologies

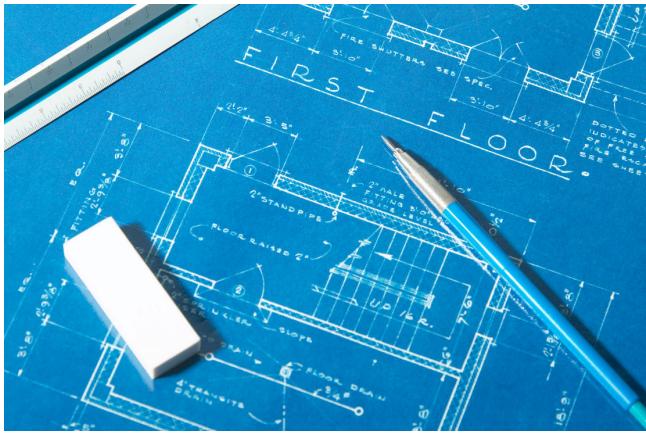


**Allows us to do proper science!**

# FLOSS



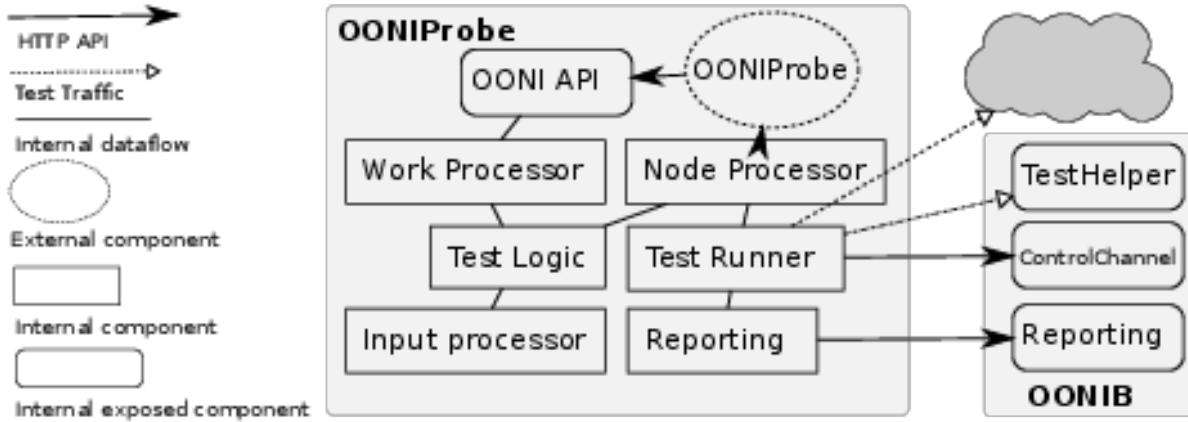
# Architecture



Modular design

OONI-probe and OONIB

# Architecture



# Implementation



Based on twisted and scapy

Is currently a prototype

# **Daphn3**

**Go to other screen**

# **Domclass**

The objective is to distinguish

# This

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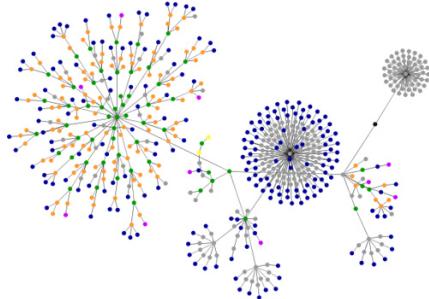
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In applicazione del decreto dell'Amministrazione autonoma dei monopoli di Stato (AAMS) del 2 gennaio 2007, disciplinante la rimozione dei casi di offerta in assenza di autorizzazione, attraverso rete telematica, di giochi, lotterie, scommesse o concorsi promossi con vincite in denaro, con il quale è stata data attuazione all'*art. 1, comma 50, della Legge 27 dicembre 2006, n° 296*, il sito richiesto non è raggiungibile poiché sprovvisto delle autorizzazioni necessarie per operare la raccolta di giochi in Italia.

L'elenco degli operatori autorizzati al gioco telematico è disponibile sul sito istituzionale [www.aams.gov.it](http://www.aams.gov.it).

# DomClass

Build the XML tree



Compute the eigenvalues of a special matrix

Compare eigenvalues to determine site correlation

# **Thanks for your attention**

**Questions?**

# Contacts

<https://gitweb.torproject.org/ooni-probe.git>

<https://trac.torproject.org/projects/tor/wiki/doc/OONI>

<http://ooni.nu/> (<http://5m4rylprkig4swgg.onion/>)

[art@torproject.org](mailto:art@torproject.org) @hellais

