

Who broke my  
**INTERNET?**



**WE'LL MAKE US A GNU ONE**

*[youbroketheinternet.org](http://youbroketheinternet.org)*

**CARLO VON WHO?**

**/ME**

**PSYC**

**CHAT.LOUPSYCEDYGLGAMF.ONION**

**SECUSHARE.ORG**

**SECUSHARE.CHEETTYIAPSYCIEW.ONION**

**YOUBROKETHEINTERNET.ORG**

**YBTI.CHEETTYIAPSYCIEW.ONION**

**PARTITO PIRATA ITALIANO**

**CERTIFICATE PATROL**

**PAST WORK**



**NO MORE MITM  
ON THE WEB!  
USE CERTIFICATE PATROL  
ADD-ON FOR FIREFOX**

**PAST WORK**



**BUT...**

**PATCHWORKING  
IS NOT ENOUGH ANYMORE**

**IT'S NOT ABOUT  
SELF-DETERMINATION**

**MOST THINGS A PERSON DOES  
ON THE INTERNET  
AFFECTS OTHERS...**

**... AND DEMOCRACY  
AS A WHOLE.**

**BEING ALLOWED TO SELL  
YOUR "PERSONAL" DATA...**

**IS LIKE BEING ALLOWED TO  
DRIVE A CAR AT NIGHT  
WITHOUT LIGHTS ON.**

**YOU ARE ACTING  
IRRESPONSIBLE AND  
PUTTING OTHERS AT RISK.**

**PREDICTABLE  
ELEGIBLE VOTERS:  
DEMOCRACY @ RISK.  
MANIPULATION  
BECOMES CHEAP.**

# **THE MALVINAS INCIDENT 2009:**

**MICRO-INVASIVE MODIFICATIONS  
OF FACEBOOK DASHBOARD  
OF AN ENTIRE POPULATION...**

**... BY JTRIG OF GCHQ**



**IF YOU LIKE TO LIVE IN A  
FREE DEMOCRATIC SOCIETY...**

It should be your

**CIVIL DUTY**

to not allow yourself  
or others to become

**PREDICTABLE  
POPULACE.**

**(LAW ISN'T AN ALGORITHM)**

**THE CONSTITUTION ISN'T  
JUST WHAT IS WRITTEN IN THE LAW.**

**IT IS ALSO WHAT WAS ORIGINALLY  
INTENDED BY ITS AUTHORS – TO  
SAFE-GUARD DEMOCRACY.**

# **(HEROES OF ENLIGHTENMENT)**

**WHAT THE AUTHORS  
DIDN'T PREDICT:**

**GLOBALIZATION  
+ INFORMATION TECHNOLOGY  
= BIG (META)DATA**

**AND WHEN THERE IS  
NO VISIBLE  
EVIDENCE**

**THE SEPARATION OF POWERS FAILS:**

**THE JUDICIARY CANNOT  
EXERCISE ITS DEMOCRATIC  
DUTY TO CHECK UPON THE  
JOB THE EXECUTIVE IS DOING...**

*“Wir sind die Guten...”*

**LET'S IMAGINE**  
**...THE RIGHT PEOPLE**  
**WERE IN POWER NOW.**

**WHAT ABOUT**  
**TOMORROW?**

**(A NEW SOCIAL CONTRACT)**

**IN A TECHNO-GLOBALIZED WORLD  
THE CONSTITUTION MUST  
DEAL WITH FOREIGN GOVERNMENTS  
AND MULTINATIONAL ENTITIES AS  
THREATS FOR DEMOCRACY.**

*"The antidotes against the risk of **totalitarianism** are [...] weakened to a dangerous extent so that it would not take much more than a **spark** for the public space to collapse, and this even under the cover of the **best governance intentions**."*

Nicole Dewandre,  
Societal Advisor to the European Commission  
in "the Onlife Manifesto", p. 195

**LET'S ADMIT IT...**

**THE INTERNET  
IS ILLEGAL**

**WE NEED TO FIX IT.**



**AND NO...**

**THE MARKET  
CAN'T FIX IT**

*there is no business model for  
constitutional fundamentals...*

**THAT IS WHY THERE  
I SEE NO ALTERNATIVE  
TO IMPLEMENTING  
PROTECTION  
BY LAW.**

# **(EU) LEGISLATION PROPOSAL:**

**MANDATORY ANONYMIZED  
AUTHENTICATED AND  
END-TO-END ENCRYPTED  
COMMUNICATIONS IN ALL  
TELEPHONY AND COMPUTING  
APPLIANCES SOLD AFTER 20XX.**

# DETAILS ON

[youbroketheinternet.org/legislation](http://youbroketheinternet.org/legislation)

## IMPLEMENTATION

**INDUSTRY** motivated to agree  
(with “us”), **FUND & DEVELOP** a  
**GNU SECURE COMMUNICATIONS  
SYSTEM** and make it available  
(so you can put it on your old device, too)

# **IMPLEMENTATION**

## **CONSTITUTIONAL SOFTWARE**

- TRANSPARENT FREE SOFTWARE**
- CONSERVATIVE DEVELOPMENT**
  - SANDBOXED MODULES**
- MODIFICATIONS CAN BE VOTED ON  
(LQFB+GIT?)**

# **GNU INTERNET APPS**

**MAIL, MESSAGING,  
SOCIAL NETWORKING,  
TELEPHONY,  
CONFERENCING,  
... AND THE "WEB,"  
BUSINESS TRANSACTIONS ETC.**

# IMPACT ASSESSMENT

HEAVY BLOW AGAINST

**"CYBER CRIME:"**

- NO MORE **SPAM**
- NO MORE **PHISHING**
- NO MORE WEBSITES YOU DIDN'T  
INTENTIONALLY PLAN TO VISIT
- A NEUTRAL & OPEN **MARKETPLACE**
- SECURE BUSINESS **TRANSACTIONS**

**IMPACT ASSESSMENT**

**BULK  
LOCATION  
TRACKING**

**... CAN BE A THING OF THE PAST**

**WE PAY OUR TELECOM  
RELAYS ANONYMOUSLY...**



**CIVIL ECONOMY**

**CRYPTOGRAPHIC**  
**ANONYMOUS**  
**MICROPAYMENT**

**SO YOU NO LONGER PAY  
WITH YOUR DATA...**

**(USING GNU TALER, RE-DO OF DIGICASH)**

**CIVIL ECONOMY**

# **BLOCKCHAINS**

## **NOT SO USEFUL**

- **POW?** A HOUSEHOLD'S DAY PER TRANSACTION
  - NEXT **TAX HAVENS** FOR THE **SUPER-RICH?**
  - MOSTLY **ILLEGAL** USE CASES REMAIN...
- EXPECT EXCHANGE SHOPS TO BE **SHUT DOWN**

**BTW, BLOCKCHAINS PATENTED IN 1979**

# **IMPACT ASSESSMENT**

**SIMPLIFIES CURRENT  
POLITICAL DISCOURSES:**

- DATA RETENTION**
- TOTALITARIAN COPYRIGHT**
- + DATA PROTECTION**
- + NET NEUTRALITY**
- + SOFT- & HARDWARE TRANSPARENCY**

# **IMPACT ASSESSMENT**

## **STRATEGIC ADVANTAGE (1)**

**FOR THE ENTIRE CONTINENT:**

- LESS VULNERABILITY**
- NO INTELLIGENCE IN SIGNALS**
- MAKE XKEYSCORE, TEMPORA,  
ETC ETC... USELESS!**

**CYBER WARFARE?**

**CYBER DISARMAMENT!**

# **IMPACT ASSESSMENT**

## **STRATEGIC ADVANTAGE (2)**

**FOR THE ENTIRE CONTINENT:**

**– DATA CENTRALIZATION BUSINESS MODELS**

**NO LONGER WORK**

**– FAIR NEW CHANCES FOR MOST OF  
EUROPEAN TECH INDUSTRY!**

**PEOPLE STOP BEING THE PRODUCT**

### CAMERA ACCESS:

- one photo
- video stream

### NET ACCESS:

- cryptographic recipient
- authenticated or anonymized
- protocol restrictions

ETC.



# CIVIL RIGHTS DEFENDER CHIP

- *free hardware*
- *free software*



iOS/  
Android-  
style  
SANDBOXES



**POSSIBLE IMPLEMENTATION**

**LIMIT NET ACCESS**

**FOR APPS. EXAMPLES:**

- “FUN GAME” APP ALLOWED TO SEND DATA TO FRIENDS ONLY.
  - “DICTIONARY” APP ALLOWED TO SEND DICT REQUESTS ONLY.
  - TRY TO CHEAT? GET CAUGHT!
- TRANSPARENCY = CHECKS!**

# **IMPACT ASSESSMENT**

**LAWFUL INTERCEPTION  
BY PROTOCOL/API, NOT BREAKAGE!**

**– STRATEGY 1:**

**CRYPTOGRAPHIC AUTHORITIES**

**– STRATEGY 2:**

**DISTRIBUTED CONSENSUS**

**– HACKER'S CHOICE:**

**PHYSICAL ACCESS**



# IMPACT ASSESSMENT

## LAWFUL INTERCEPTION SIMPLIFIED:

- **HAYSTACK** 100%  
ENCRYPTED...
- **NEEDLE** SERVES  
ITS CIVIL DUTY

# IMPACT ASSESSMENT

## LAWFUL INTERCEPTION SHOULD GUARANTEE

- BOTH JUDGE & POLICE WANT IT
  - LIMITED TIMEFRAME
  - USER NOTIFICATION
- NO TOTALITARIAN UPSCALING

# **IMPACT ASSESSMENT**

## **LAWFUL INTERCEPTION INTERCEPTED?**

### **WHAT IF USER MODS THEIR PHONE?**

- HAVE TO ACT NORMAL**
  - RISK GETTING CAUGHT**
    - CONSTITUTIONAL**
- RIGHTS + OBLIGATIONS**

# *Security vs. Democracy*

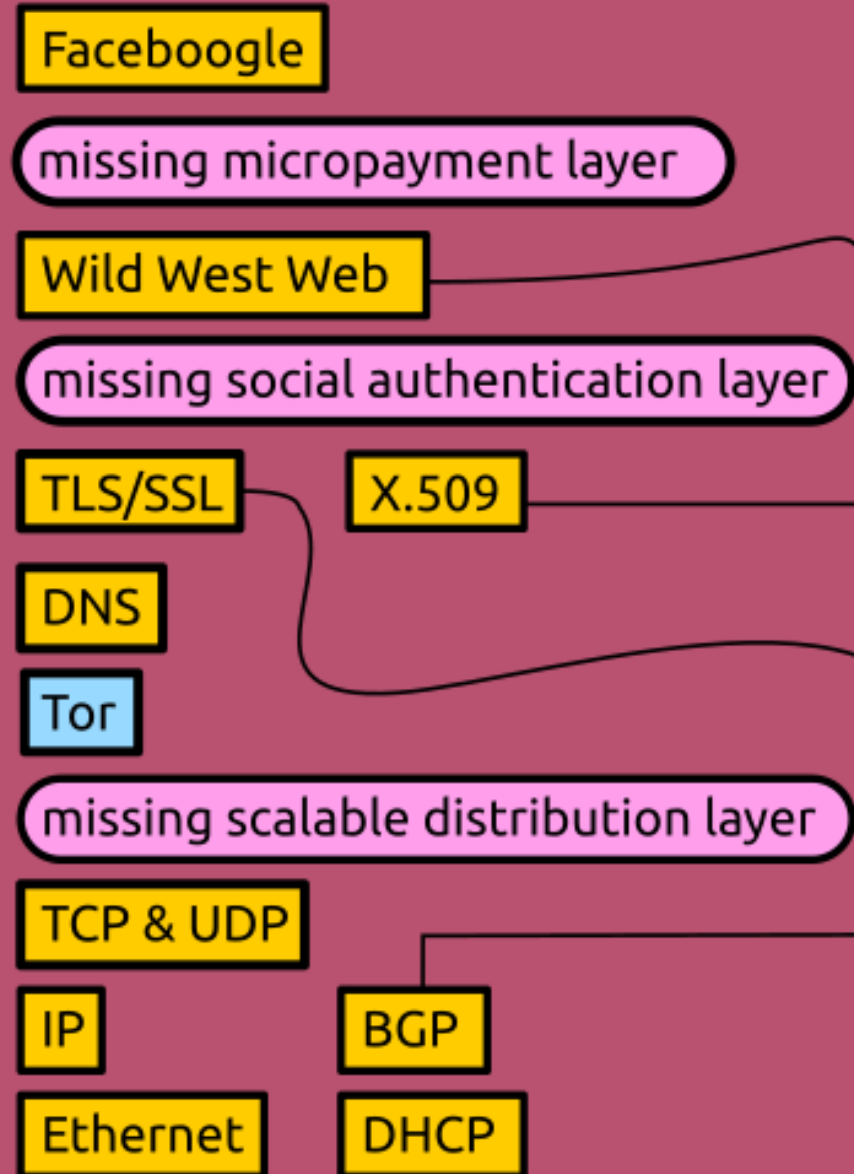
**NOT ENOUGH TO CATCH  
THE CRAZY UNPREDICTIBLE  
SUICIDAL BRAINWASHED FOLKS?**

**TIME TO DEAL WITH THE REAL CAUSES:**

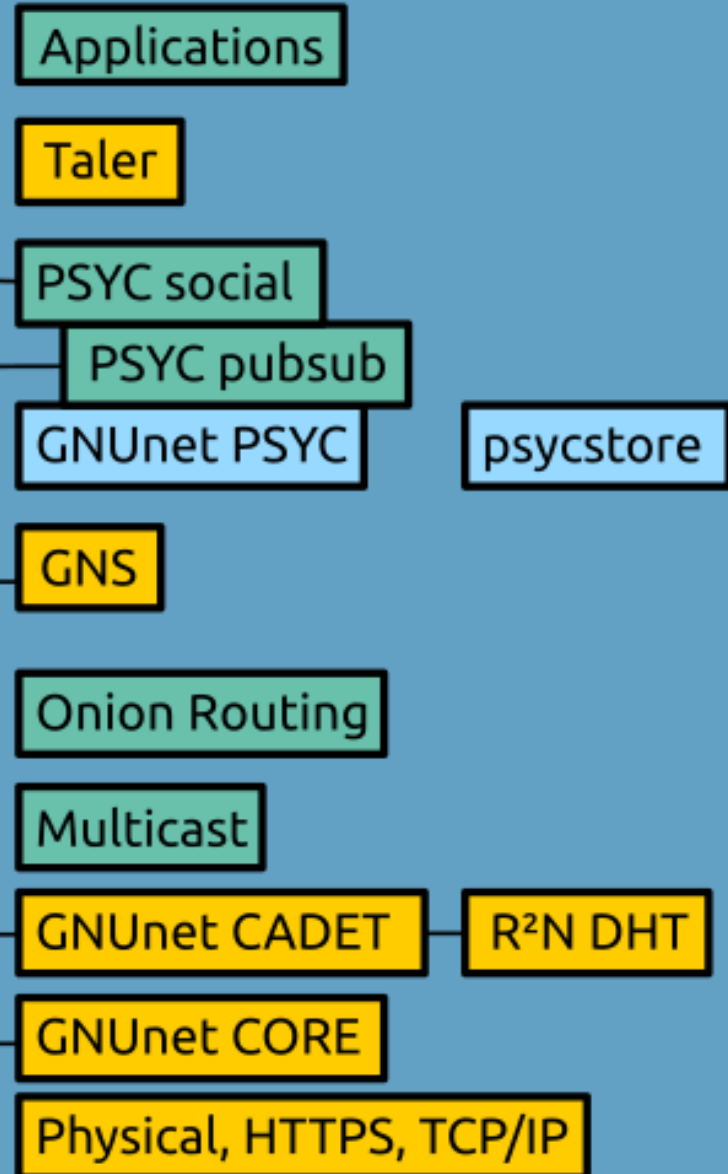
- INEQUALITY**
- GLOBALIZATION**
- BAD GOVERNANCE**
- CLIMATE CHANGE**

**DON'T BLAME IT ON THE INTERNET**

# THE BROKEN INTERNET



# THE GNU INTERNET?



# **GNU INTERNET ARCHITECTURE? SOMETHING LIKE...**

**PRIVATE SOCIAL GRAPH  
DATA DISTRIBUTION PLAN  
CRYPTO/ONION RELAY MESH  
DISTRIBUTED HASHTABLE  
PUBLIC-KEY-BASED ROUTING**

## MANY-TO-MANY SCALABILITY

Multicast & PubSub

Facebook  
Twitter

PSYC

BitTorrent

blackad

NNTP  
IRC

vs Storage  
& Replication

CCN

## ONE-TO-ONE APPLICATION

PGP  
OTR

Microsoft

RetroShare

Briar

Pond

TorChat  
Globaleaks  
Wikileaks

Tribler's Tor over UDP

I2PBote  
etc

ZeroMQ

cjdns

Jitsi

Tox

Skype

Tahoe-LAFS

freenet

## CRYPTO ROUTING

Confidentiality  
Authentication  
Repudiability  
Untraceability  
Unlinkability

Tor

GNUnet

I2P

X.509  
DNS & DANE  
SMTP & XMPP  
Federation



**YOU BROKE**

THE INTERNET

## TRANSPORTS & MESH NETWORKING

TCP/IP, HTTP, Wireless, Sneakernet

Rhizome

Zyre

## OPERATING SYSTEM

Reproducible Build & Trust Chain

EthOS

gentoo / libertè linux  
debian / TAILS / whonix  
cyanogenmod / \*BSD

freedombox

BATMAN etc

Apple

Microsoft  
Google

## FREE HARDWARE

MilkyMist

novena

intel &  
others

intel AMT



# FINANCING & DISSEMINATION VS. POLITICS & LEGISLATION

## INTERFACE & USABILITY

Adoption Threshold

## HTML-BASED SOCIAL APP

## NATIVE SOCIAL APPLICATION

Activity Streams

## MANY-TO-MANY SCALABILITY

Multicast & PubSub

## ONE-TO-ONE APPLICATION

## CRYPTO ROUTING

Confidentiality

Web Browser  
WebRTC  
AJAX

Nightweb  
I2P-UI  
Syndie

Facebook  
Whatsapp  
Twitter

diaspora  
friendika  
lorea  
crabgrass  
buddycloud  
cryptocat  
vole.cc  
etc

Dropbox

mpOTR

SONE

Mumble

psyced

secushare

unhosted

Tribler

BitTorrent

blackadder

NNTP  
IRC

CCNx

vs Storage  
& Replication

Facebook  
Twitter

PSYC

PGP  
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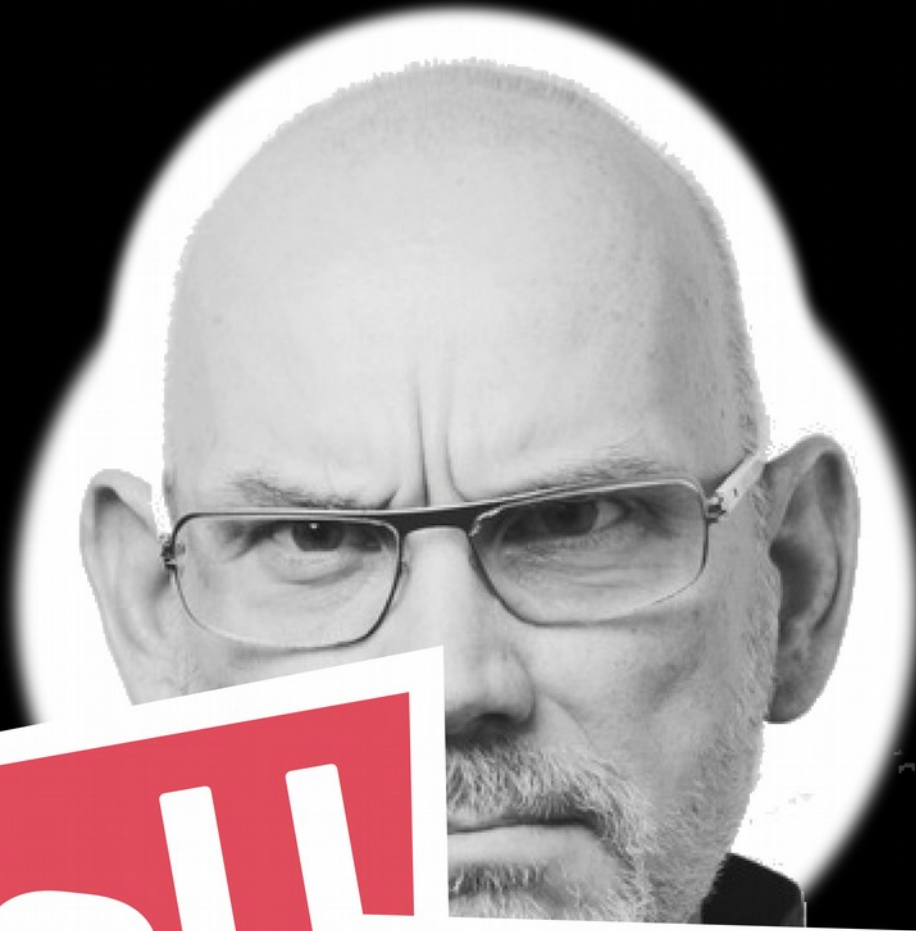
Skype

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freenet

X.509  
DNS & DANE





**you** **BROKE**  
**THE INTERNET**