The state of mass surveillance

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First things first

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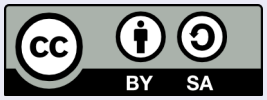
- Language: German ok?
  - slides are in English, just in case
- Interaction is fun!
- Talk and slides are CC-BY-SA



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About Me

- Simon Hornbachner

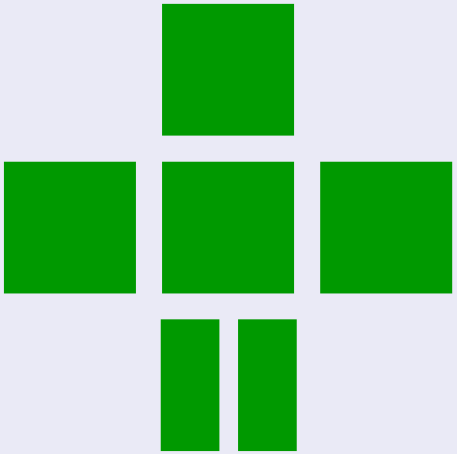
About Me

- Simon Hornbachner
- Alumni of FH OÖ, SI Bachelor
- Currently looking for a job ...

About Me

OWASP
The Open Web Application Security Project

- Simon Hornbachner
- Alumni of FH OÖ, SI Bachelor
- Currently looking for a job ...
- Coordinator of FSFE Group Linz



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This talk

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- ...is not about
  - Political issues behind mass surveillance

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This talk

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- ...is not about
  - Political issues behind mass surveillance
  - Conspiracy theories

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This talk

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- ...is not about
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→ Happy to discuss this issues afterwards

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This talk

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- ...is about
  - Providing an overview over NSA/GCHQ mass surveillance programs

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This talk

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The Open Web Application Security Project

- ...is about
  - Providing an overview over NSA/GCHQ mass surveillance programs
  - Taking a look at the technology

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This talk

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- ...is about
  - Providing an overview over NSA/GCHQ mass surveillance programs
  - Taking a look at the technology
  - Talking shortly about where to go from here

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NSA

- Biggest U.S. intelligence agency

NSA

- Biggest U.S. intelligence agency
- Strict focus on overseas surveillance

NSA

- Biggest U.S. intelligence agency
- Strict focus on overseas surveillance
- Run by General Keith Alexander

NSA

- Biggest U.S. intelligence agency
- Strict focus on overseas surveillance
- Run by General Keith Alexander
- Overseen by congressional committees and Foreign Intelligence Surveillance Court

GCHQ

- Government Communications Headquater

GCHQ

- Government Communications Headquater
- UK's answer to NSA

GCHQ

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- Government Communications Headquater
- UK's answer to NSA
- permitted to spy in the interests of national security, preventing serious crime, or defending the UK’s economic interests

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GCHQ

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- Government Communications Headquater
- UK's answer to NSA
- permitted to spy in the interests of national security, preventing serious crime, or defending the UK’s economic interests
- Answers to foreign secretary, overseen by the Intelligence and Security Committee

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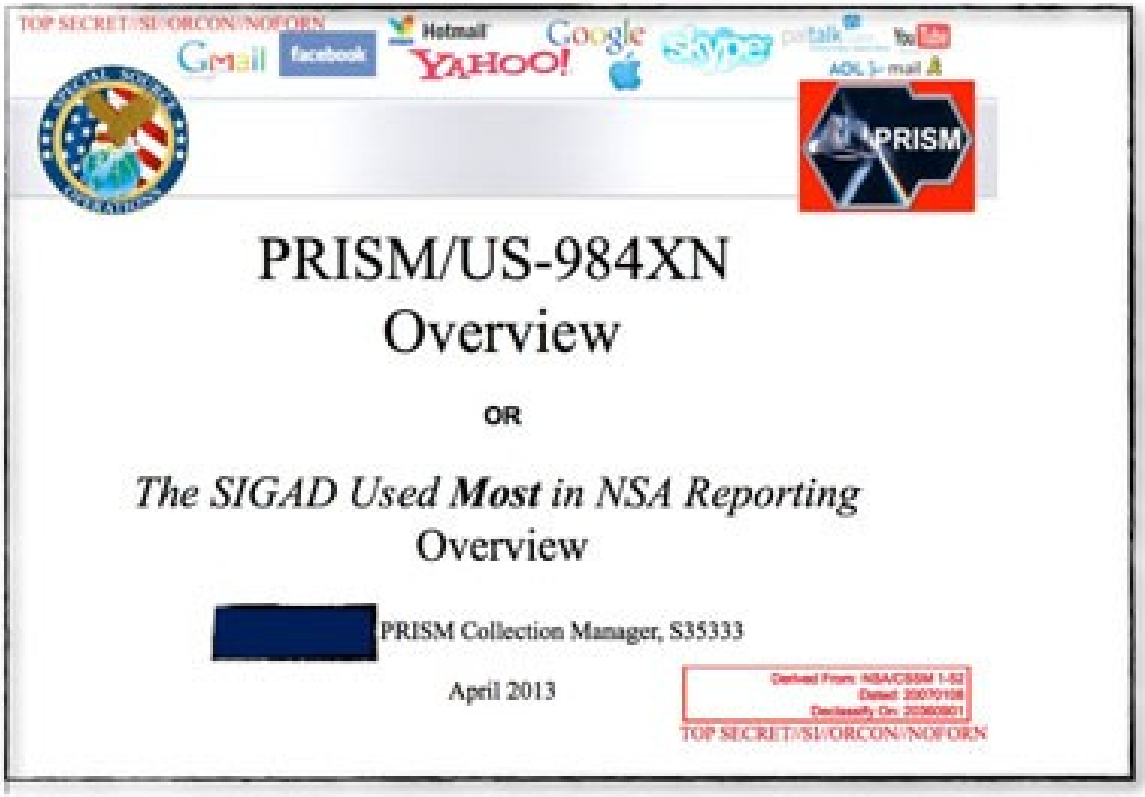
PRISM


TOP SECRET//SI//ORCON//NOFORN
Gmail
facebook
Hotmail
YAHOO!
Google
skype
AOL mail
PRISM
PRISM/US-984XN
Overview
OR
The SIGAD Used Most in NSA Reporting
Overview
[redacted] PRISM Collection Manager, S35333
April 2013
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PRISM

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- Top secret, $20m-a-year surveillance program
- Used to gain information on targets stored on Servers of U.S. technology firms

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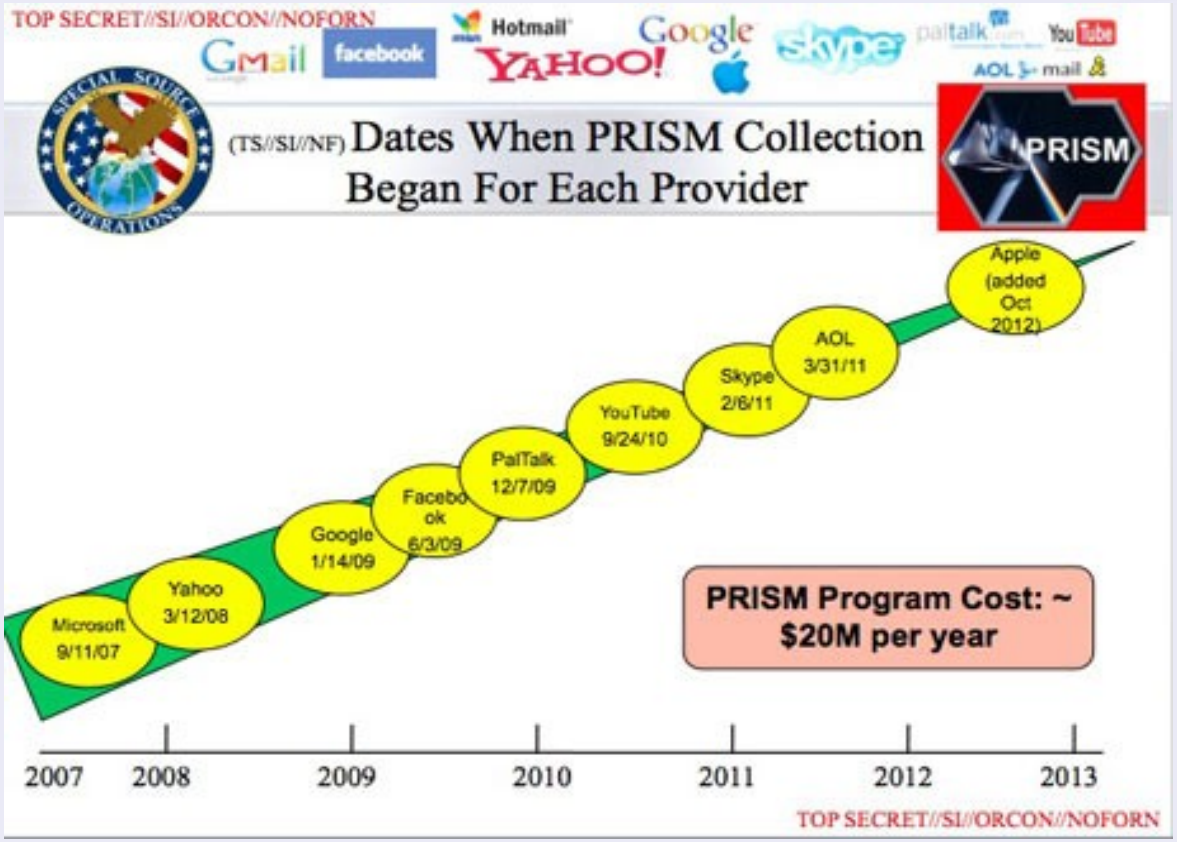
PRISM


TOP SECRET//SI//ORCON//NOFORN
Gmail
facebook
Hotmail
YAHOO!
Google
skype
paltalk
YouTube
AOL mail
(TS//SI//NF) Dates When PRISM Collection Began For Each Provider
PRISM
Microsoft 9/11/07
Yahoo 3/12/08
Google 1/14/09
Facebook 6/3/09
PalTalk 12/7/09
YouTube 9/24/10
Skype 2/6/11
AOL 3/31/11
Apple (added Oct 2012)
PRISM Program Cost: ~ $20M per year
2007
2008
2009
2010
2011
2012
2013
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PRISM

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- PRISM (allegedly) gives access to
  - Emails
  - Chat conversations
  - Voice calls

- Yet unclear, what PRISM exactly is

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PRISM

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- Believed to be upstream monitoring of cable communications

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PRISM

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- Believed to be upstream monitoring of cable communications
- Leaked documents describe it as „direct access to servers“

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PRISM

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- Believed to be upstream monitoring of cable communications
- Leaked documents describe it as „direct access to servers“
- Upstream monitoring → different program: „Upstream“

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PRISM/Upstream

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Upstream

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- Collecting huge amounts of phone and internet communication

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Upstream

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- Collecting huge amounts of phone and internet communication
- Achieved by working with telecom companies like AT&T and Verizon

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Upstream

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- Collecting huge amounts of phone and internet communication
- Achieved by working with telecom companies like AT&T and Verizon
- Metadata obtained by Upstream is fed into a DB → MARINA

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Xkeyscore

Approx. 150 sites, over 700 servers
(cited from NSA slides)

XKeyscore

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- Framework to search the „Digital Network Intelligence“ (DNI)

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XKeyscore

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- Framework to search the „Digital Network Intelligence“ (DNI)
- DNI = (apparently) data stored by NSA as well as real-time monitoring of internet traffic

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XKeyscore

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- Framework to search the „Digital Network Intelligence“ (DNI)
- DNI = (apparently) data stored by NSA as well as real-time monitoring of internet traffic
- Suggested read → guardian has full NSA presentation on XKS

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What now?

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- Use free software

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What now?

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- Use free software
  - prism-break.org → freie Alternativen

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What now?

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- Use free software
  - prism-break.org → freie Alternativen
- Need to review our trust

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What now?

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- Use free software
  - prism-break.org → freie Alternativen
- Need to review our trust
  - istruecryptauditedyet.com

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What now?

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- Use free software
  - prism-break.org → freie Alternativen
- Need to review our trust
  - istruecryptauditedyet.com
- Use european providers
  - mykolab.com
  - autistici.org

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What now?

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- Use encryption where possible
  - GnuPG for E-Mail
  - OTR for IM → otr.cypherpunks.ca

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What now?

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- Use encryption where possible
  - GnuPG for E-Mail
  - OTR for IM → otr.cypherpunks.ca
- Best alternative: self-hosted

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Reach me

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- lfodh@fsfe.org
  - GPG KeyID D61C4FCF
- lfodh@jabber.fsfe.org
- irc.freenode.net (SSL on port 7000)
  - #owaspat, nick: lfodh

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Thank you

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