

PERSONAL TRACKING DEVICES

A JOURNEY INTO THE TRUE DARK NET

Silvia Puglisi - silviap@ieee.org / [@nopressure](https://twitter.com/nopressure)

HELLO WORLD

My name is Silvia Puglisi. I am a software engineer and Ph.D. candidate at UPC Barcelona Tech.

I research in privacy and web science.

I am here to talk you about the real dark web.

WHAT IS THIS ALL ABOUT?

- Marketing
- Privacy
- User tracking
- Online footprint
- Identity
- Control

WHAT HAS MARKETING TO DO WITH THIS?

Think of the so-called *new economy* without online marketing and advertising..

Aehm.. You probably can't.

Most of the successful *online* companies of the last.. make it 20 years.. use advertising to sustain their business at least in part.

THE SOURCE OF ADVERTISING

Advertising wants you to buy products.

So advertising companies are doing all that they can to know you so they can recommend you products that you are more likely to buy.

The source of advertising is **data**.

Data about you.

HOW DOES ONLINE MARKETING WORK?

eMarketing follows users in their online and sometimes offline activities.

Information about what users do and are interested in are collected by websites, applications, devices.

This information is crawled, analysed and categorised.

WHAT ABOUT ONLINE PRIVACY?



If our actions on the web are constantly collected and analysed.
Do we have online privacy? Have we lost our right to be
anonymous?

In an online context, the right to privacy has commonly been interpreted as a right to “information self-determination”.

Acts typically claimed to breach online privacy concern the collection of personal information without consent, the selling of personal information and the further processing of that information.

IS PRIVACY THE RIGHT TO BE FORGOTTEN?

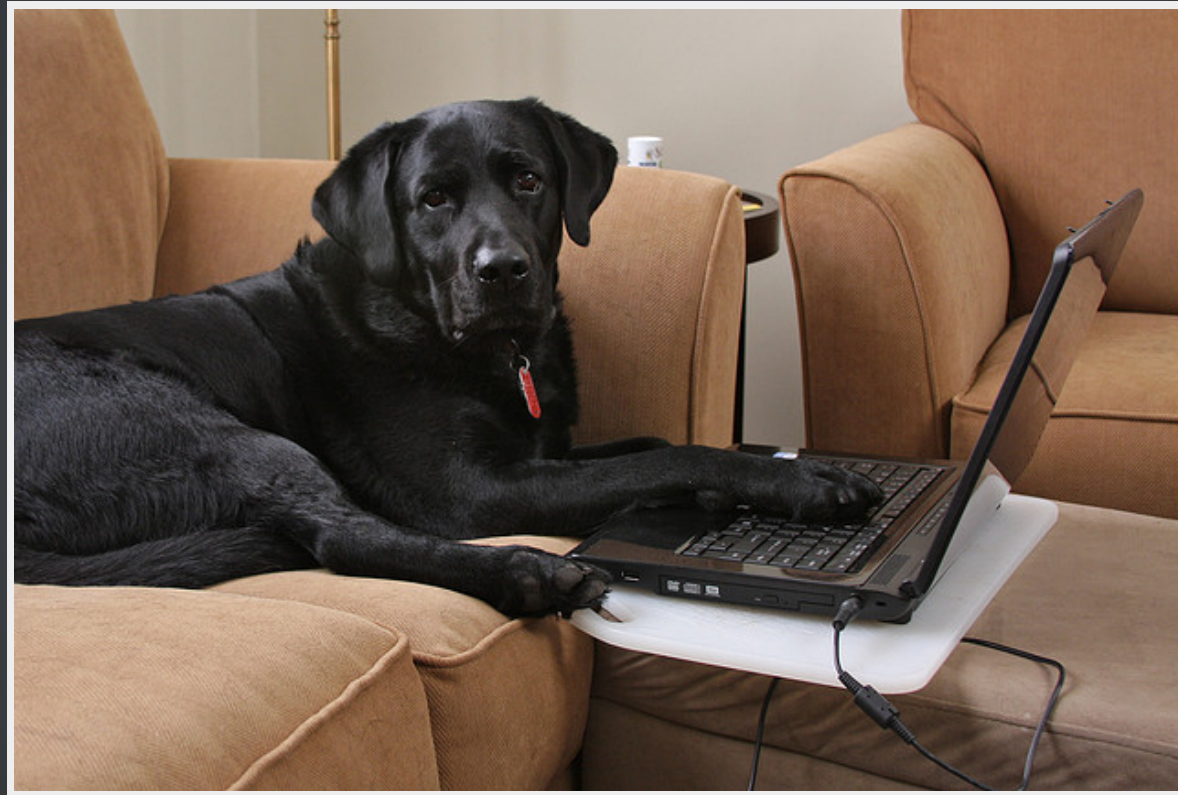
In 2011, the amount of digital information created and replicated globally exceeded 1.8 zettabytes (1.8 trillion gigabytes).

75% of this information is created by individuals through new media fora such as blogs and via social networks.

By the end of 2011, Facebook had 845 million monthly active users, sharing over 30 billion pieces of content.

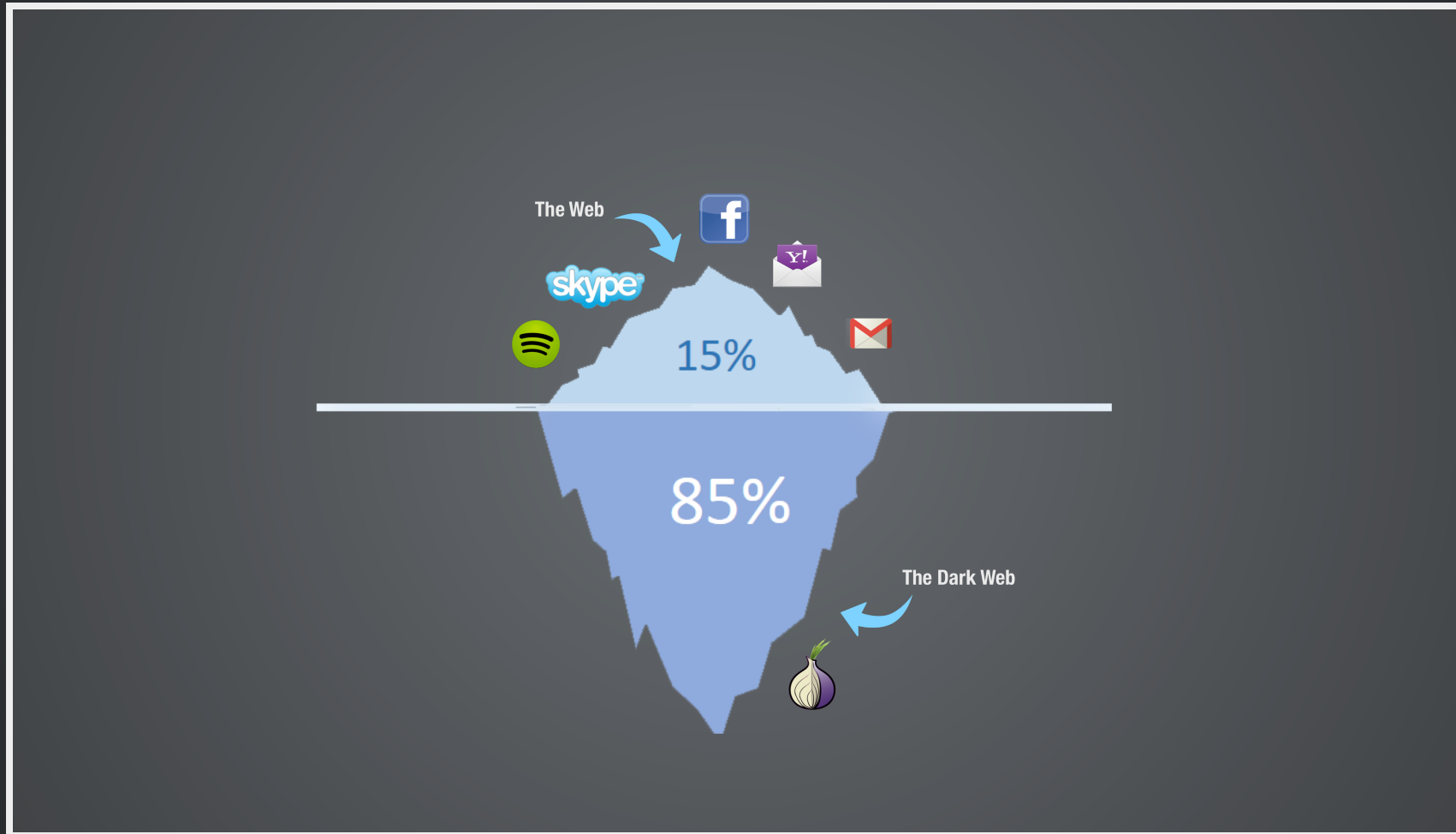
Library Briefing - Library of the European Parliament - 01/03/2012

**A FEW YEARS AGO ON THE INTERNET NOBODY KNEW YOU
WERE A DOG.**



Now they probably also know the colour of your fur.

THIS IS THE DARK WEB



Or at least this is how "they" pictured it.

THE DARK WEB IS THE WEB THAT CANNOT BE CRAWLED.

In a way is the web that companies can reach and control.

LET US SWITCH THIS MYTH AROUND

What if things were actually a bit different..

THE DARK WEB OF MARKETING



THE DARK WEB OF MARKETING IS THIS CONCEPT THAT WE USE SOFTWARE AND HARDWARE THAT WE DO NOT CONTROL.

- We do not know how these object are made.
- We cannot make modifications.
- They collect a huge amount of data about ourselves.
- We are perfectly content with it.

THE AGE OF THE METADATA

“meta-data” is collected and stored by public and private organisations about where, when and who created and accessed a particular online content.

Websites have embeded structured data for a few years now.

-

Structured data is used to describe product, services, events, and make user information available already into their HTML pages using markup standards such as Microformats, Microdata and RDFa.

LET'S MAKE A FEW EXAMPLES

Google Conversion Tracking

```
<html>
  <body>
    <!-- Below is sample text link with a phone number.
           You need to replace the number with your own
           phone number and the CALL NOW text with the text
           you want to hyperlink. -->
    <a onclick="goog_report_conversion('tel:949-555-1234')"
       href="#" >CALL NOW</a>
  </body>
</html>
```