#### Lauro Gripa Neto

# How to own your identity

MAGRATHEA LABS

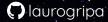
www.magrathealabs.com

# MAGRATHEA LABS

#### Lauro Gripa Neto

Software Engineer





## THE PROBLEM

#### OPINION

#### Facebook is not free

The economics of much of the Internet is built on two valuable commodities: your time, and your content











#### By Ira Winkler

Contributing Columnist, Computerworld

OCT 17, 2011 5:24 PM PST

source: https://www.computerworld.com/article/2499036/facebook-is-not-free.html

#### It's official: Google wants to own your online identity

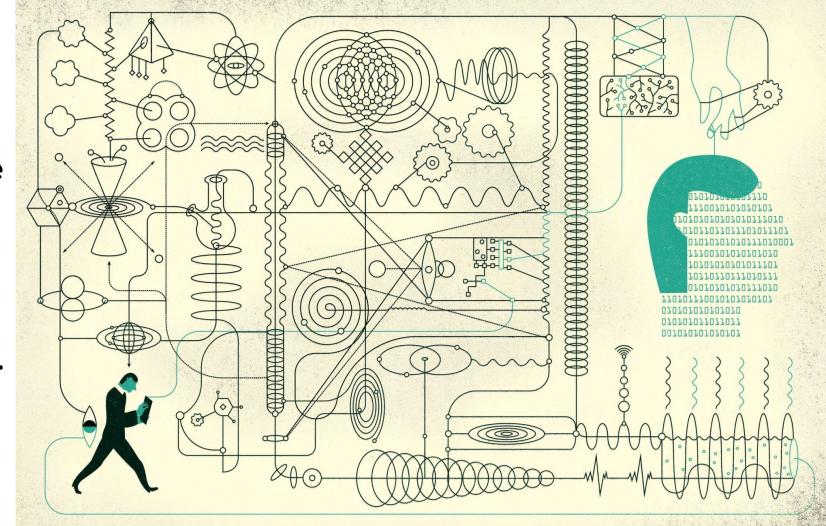
MATHEW INGRAM | AUG 29, 2011 - 10:03 AM CDT

TOPIC: TECHNOLOGY

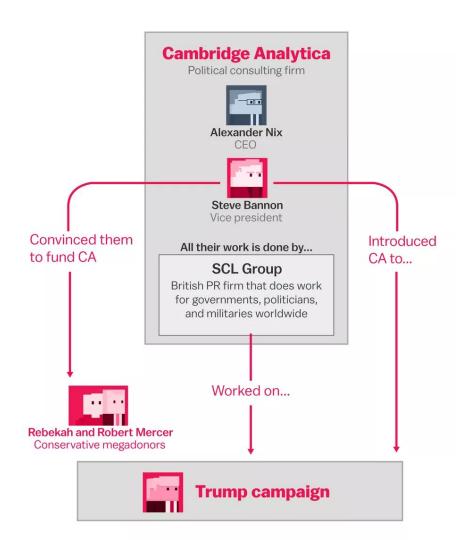


source: https://gigaom.com/2011/08/29/its-official-google-wants-to-own-your-online-identity/

If you're not paying, you're the product.



source <u>here</u> and <u>here</u>



#### Up to 87 million Facebook users



Had their data exposed by



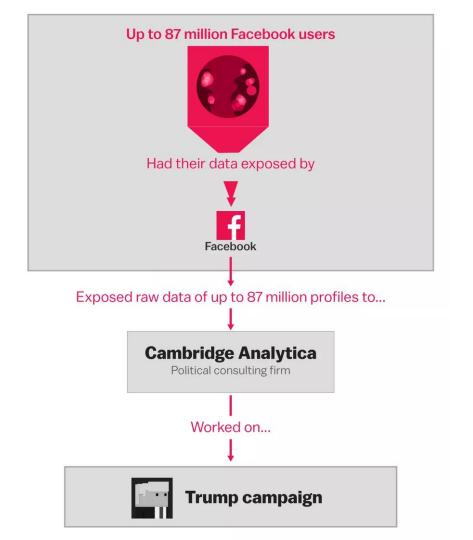
270,000 Facebook users who took the quiz

Who used a quiz app



thisismydigitallife A quiz app Kogan built on Facebook







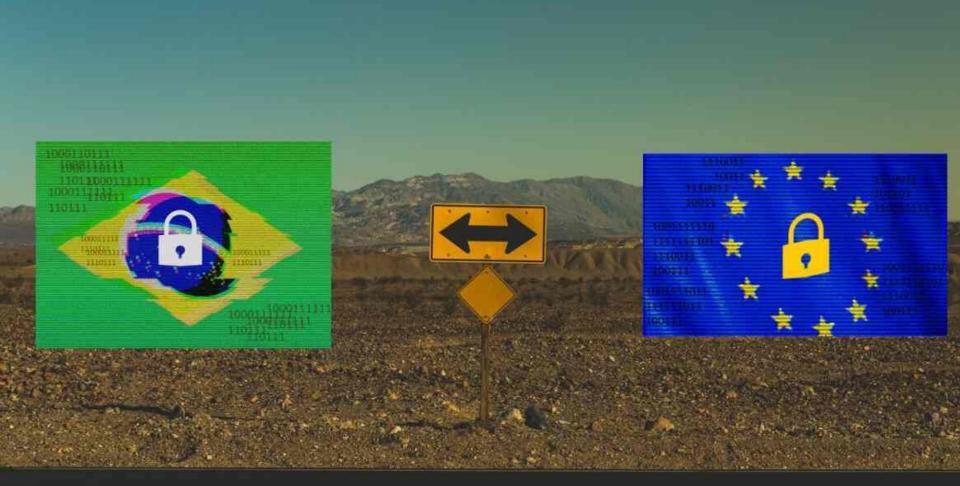
# Cambridge Analytica wasn't a technical data breach. What can happen next?

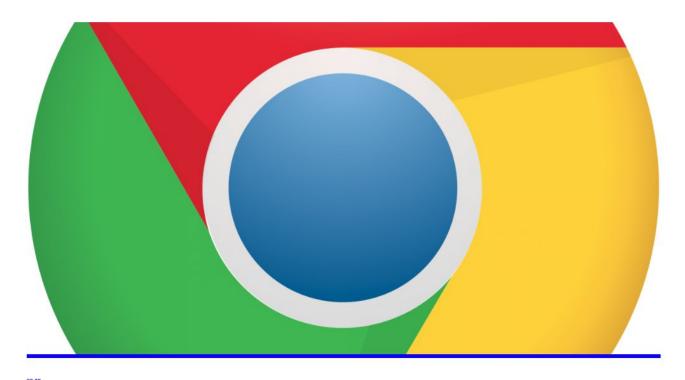
## Facebook agrees to pay fine over Cambridge Analytica scandal

Company withdraws appeal against £500,000 penalty imposed by UK data watchdog



▲ Under the terms of the settlement with the Information Commissioner's Office, Facebook has made no admission of liability. Photograph: NurPhoto/Getty Images

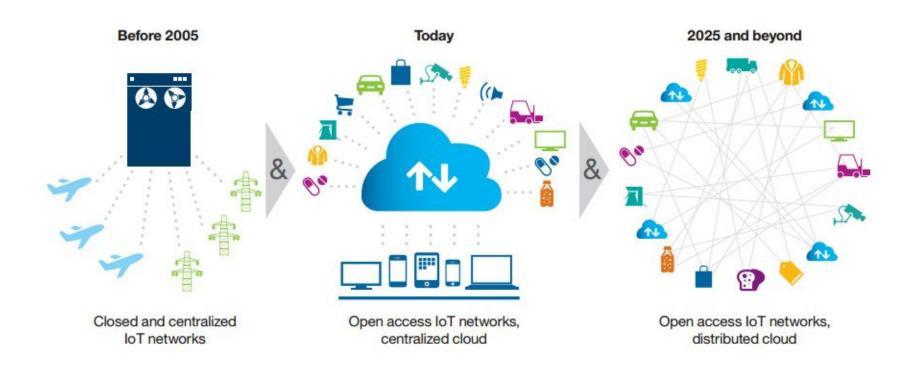




By 2030, You'll Be Living in a World That's Run by Google

And it may be both the best and worst thing to happen to humanity.

## Self-sovereign identities



## PRIVACY BY DESIGN / PRIVACY BY DEFAULT

https://gdpr-info.eu/issues/privacy-by-design/

#### Criticado por ser muito "vago"

- https://www.esat.kuleuven.be/cosic/publications/article-1542.pdf

Engineering Privacy by Design

Seda Gürses, Carmela Troncoso, and Claudia Diaz

K.U. Leuven/IBBT, ESAT/SCD-COSIC firstname, lastname@esat.kuleuven.be

#### **LOCAL-FIRST**

- fast
- multi-device
- offline
- collaboration
- longevity
- privacy
  - o cloud apps are fundamentally non-private
- user control

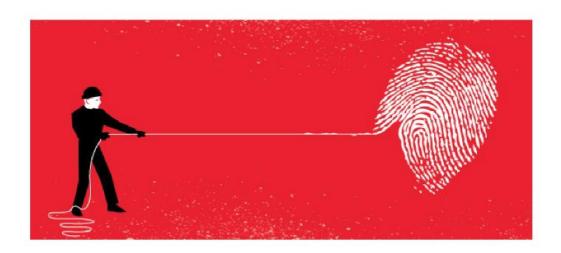
CRDT: conflict-free replicated data types

https://en.wikipedia.org/wiki/Conflict-free replicated data type



# Want to own your data? Start by owning your identity



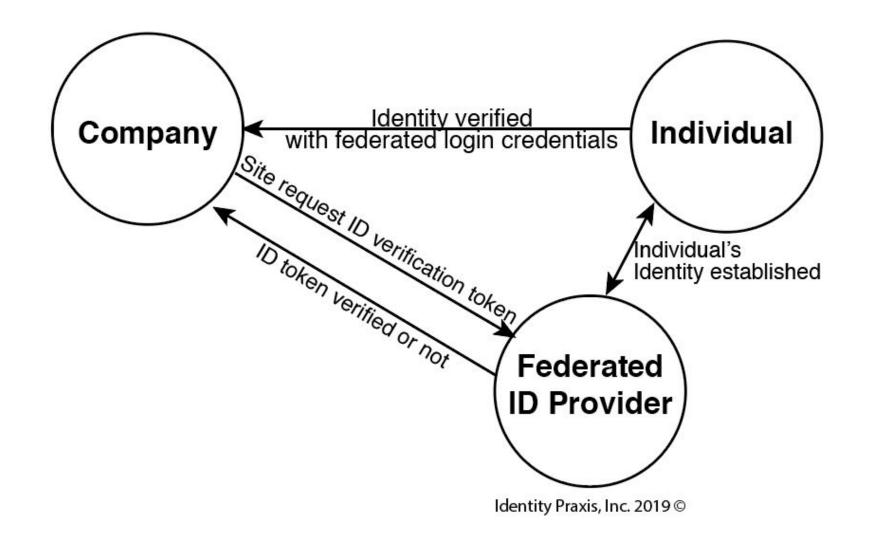


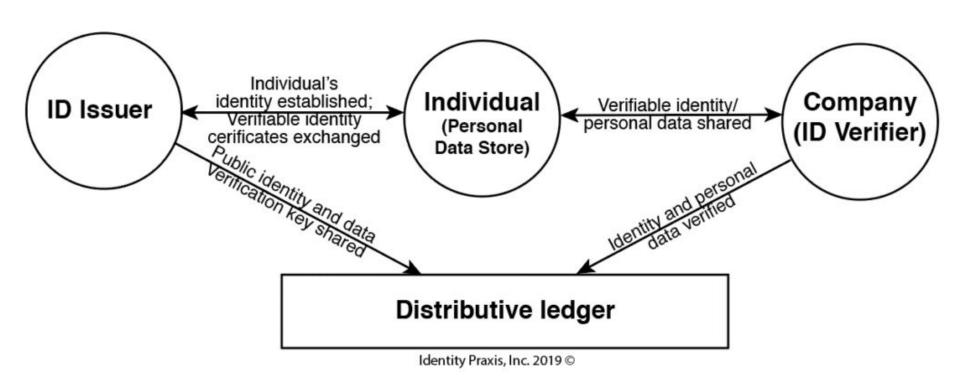


The New Yorker Collection 1993 Peter Stei From cartoonbank.com. All rights reserve

"On the Internet, nobody knows you're a dog."







## **Guiding Principles of SSI**

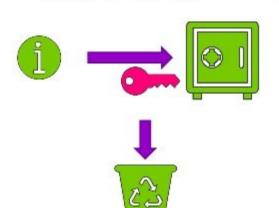
- 1. **Existence** Users must have an independent existence.
- 2. **Control** Users must control their identities.
- 3. Access Users must have access to their own data
- 4. Transparency Systems and algorithms must be transparent.
- 5. Persistence Identities must be long-lived.
- Portability Information and services about identity must be transportable
- 7. Interoperability Identities should be as widely usable as possible.
- 8. **Consent** Users must agree to the use of their identity.
- 9. Minimization Disclosure of claims must be minimized
- 10. **Protection** The rights of users must be protected

## **ZERO-KNOWLEDGE PROOF**



PEER TO PEER SYSTEM

## Cryptographic erasure



#### Core idea:

- Store data in encrypted form
- · To delete the data, throw away the key

A.k.a. "crypto erase", "cryptoshredding", "digital shredding"

### **Verifiable Credentials Data Model 1.0**

Expressing verifiable information on the Web



W3C Proposed Recommendation 05 September 2019



identity for all... begins now!



# JOLOCOM

# Questions?

MAGRATHEA LABS

www.magrathealabs.com

# MAGRATHEA LABS

www.magrathealabs.com contact@magrathealabs.com

# Thank you!

MAGRATHEA LABS

www.magrathealabs.com