Electronic Payment Systems and European Values

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19.8.2019

“Action is indeed the sole medium of expression for ethics.” –Jane Addams
Mass-Surveillance can create Mass-Casualties
What domain of digital communication should we be most concerned about?
Surveillance concerns

Everybody knows about Internet surveillance. But is it that bad?
Surveillance concerns

Everybody knows about Internet surveillance. But is it that bad?

- You can choose when and where to use the Internet
- You can anonymously access the Web using Tor
- You can find open access points that do not require authentication
- IP packets do not include your precise location or name
- ISPs typically store this meta data for days, weeks or months
Where is it worse?

SWIFT/Mastercard/Visa are way more invasive.
Where is it worse?

SWIFT/Mastercard/Visa are way more invasive.
What is worse:

- When you pay by CC, the information includes your name
- When you pay in person with CC, your location is also known
- You often have no alternative payment methods available
- You hardly ever can use someone else’s CC
- Anonymous prepaid cards are difficult to get and expensive
- Payment information is typically stored for at least 6 years
Private Networks are Important

Many targets use private networks.

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<th>Google infrastructure</th>
<th>SWIFT Network</th>
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<th>French MFA</th>
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Evidence in Survey: 30%-40% of traffic in BLACKPEARL has at least one endpoint private.
Google, Apple or Facebook’s Libra will be your bank and run your payment system
They target advertising based on your purchase history, location and your ability to pay
They will provide more usable, faster and broadly available payment solutions; our federated banking system will be history
After dominating the payment sector, they will start to charge fees befitting their oligopoly size
Competitors and vendors not aligning with their corporate “values” will be excluded by terms of service and go bankrupt
The imperium will have another major tool for its financial warfare
Which human rights concerns would a solution need to address?

Discuss:
1. Credit cards & W3c Payment Interest Group?
2. BitCoin?
3. Zcash?
4. *-Pay?
Design goals for the GNU Taler Payment System

GNU Taler must ...

1. ... be implemented as free software.
2. ... protect the privacy of buyers.
3. ... must enable the state to tax income and crack down on illegal business activities.
4. ... prevent payment fraud.
5. ... only disclose the minimal amount of information necessary.
6. ... be usable.
7. ... be efficient.
8. ... avoid single points of failure.
9. ... foster competition.
Taler in Operation
Taler in Operation

1. Pay exchange

2. Wire transfer

3. Withdraw coins

4. Spend coins

5. Deposit coins

6. Wire transfer

7. View balance

Customer

Browser/Mobile Wallet

Exchange

Customer’s Bank

Database

Fees

Exchange’s Bank

Merchant’s Bank

Webshop

Merchant
What kind of diversity is desirable?
Diversity

- GNU Taler promotes one payment protocol
Diversity

- GNU Taler promotes **one** payment protocol
- There **may** be multiple implementations
Diversity

- GNU Taler promotes **one** payment protocol
- There **may** be multiple implementations
- Diversity of **commercial operators** is crucial
What are the requirements to get there?
No more sheep!
Transformation Domains

- **Exchange**
  - verify
  - deposit coins
  - withdraw coins

- **Customer**
  - spend coins

- **Merchant**

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Where might this get us exactly?
Visions

- Be paid to read advertising, starting with spam
- Give welfare without intermediaries taking huge cuts
- Forster regional trade via regional currencies
- Eliminate corruption by making all income visible
- Stop the mining by making crypto-currencies useless for anything but crime
How can you help?
Support Domains

- Testing: try it out, report issues (https://bugs.gnunet.org/)
- Propaganda: spread the word
- Documentation: explain things better
- Translation: translate Web site and software
- Design: make nice graphics for illustration, design UI/UX
- Programming: Integrate GNU Taler where it makes sense!
- Security audits: study our code and design
- Funding: GNUnet e.V. takes donations, Taler Systems seeks investments (100k+)
Do you have any questions?

- [https://taler.net/](https://taler.net/)
- Slides will be published at [https://grothoff.org/christian/](https://grothoff.org/christian/).