



Building an Open Source Payment System

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About this talk



Take away:

- digital payment system
- token based, no ledger

Agenda:

- use case & differences with cryptocurrencies
- main components & how they interact
- demo

About Alice



Alice is a hacker

- like videogames
- has a arcade room business
- friends build games with her
- new people all the time



Business is working good but...

Alice problem



Alice lives in Argentina

- inflation is bad
- currency has low value
- security is an issue



She wants to go digital and stay legal

Alternatives to cash



Credit / Debit cards

- kids can't use them
- high fees for small amounts

Fintech / Banks

- needs account
- different proprietary APIs



Bob suggested an idea!

Needs more blockchain!



Bitcoin/ETH/etc...

- transaction cost
- transaction delay
- lightning network?

... build a new coin!

- the problem is getting bigger
- not 100% private

then she heard about this guy **Richard...**





// *Now, with Taler. Only the payer is anonymous. The payee has to identify itself for each transaction. And so Taler can't be used to hide wealth. However, Taler is **really anonymous for the payer**. There is no way, the developers are quite confident, there's no way to figure out from Taler itself, who made the payment.*

<https://libreplanet.org/wiki/LibrePlanet:Conference/2022/Transcripts/RMS-state-of-free-so>



Taler difference



wire transfer & cryptos	GNU Taler	digital
ledger book	cash	physical
account	token	



A digital Euro based on accounts poses “democratic risks” and could allow “state surveillance of all transactions of every individual”
(French National Council for Digitalization)

Taler resources



Documentation: docs.taler.net

FLOSS: git.taler.net

Community: taler@gnu.org

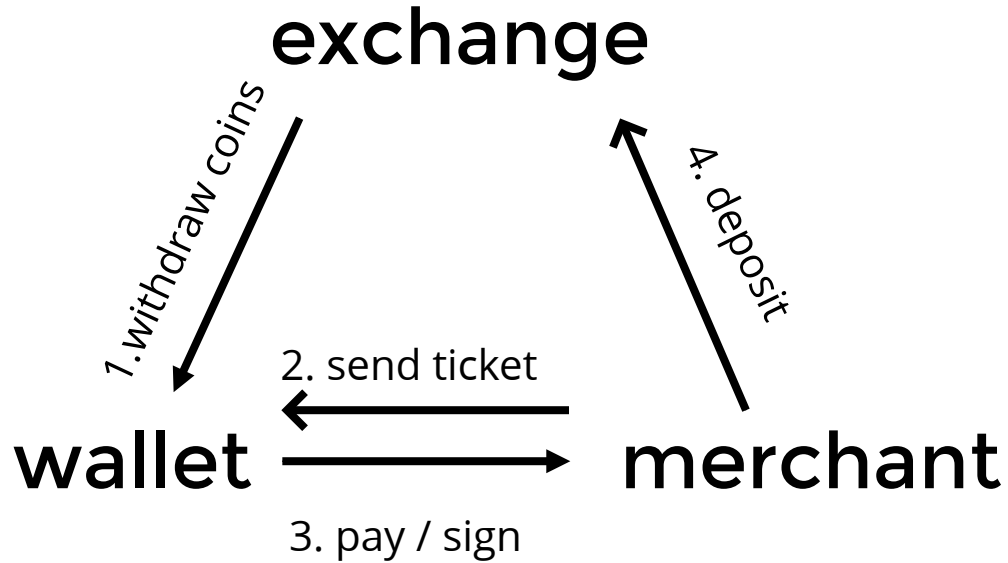
News: taler.net/en/news/

Twitter: [@taler](https://twitter.com/taler)



Then she understood the key parts...

Taler components



So she plays with the demo...

Taler demo

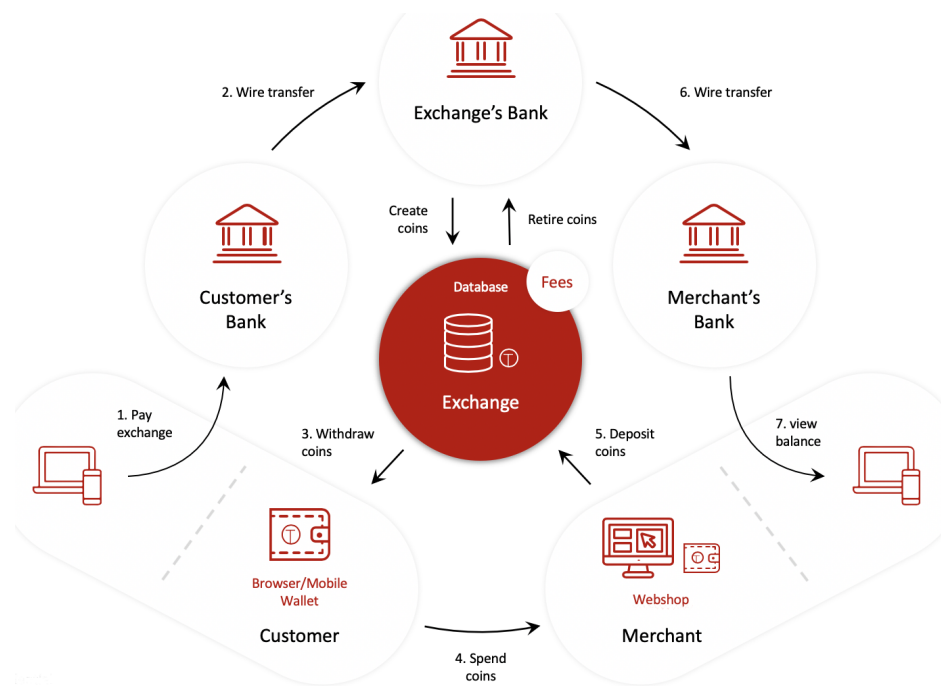


1. she installs the wallet web-extension
2. then fills the wallet with KUDOS
3. goes to the essay shop
4. buys an article
5. receives a tip for participating in a survey

also doable with the Android app



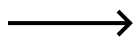
Taler demo



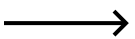


but Alice still needs to integrate Taler with her arcades...

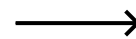
Taler Arcade



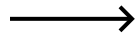
cash validator
listener



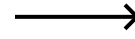
arcade pickup
tipping



arcade payment
listener



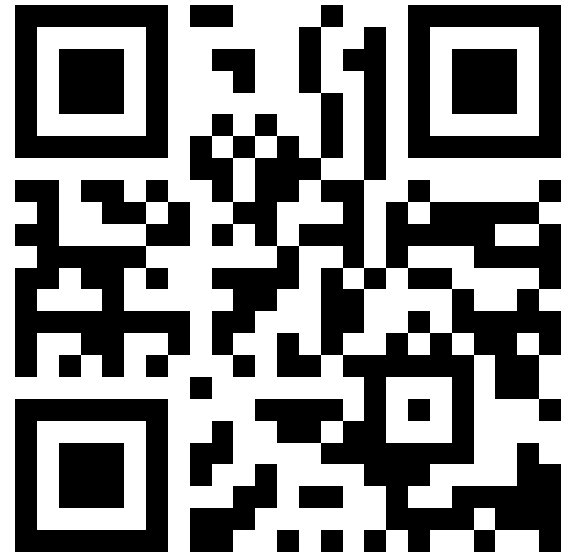
arcade insert
coin watcher



Taler Arcade



<https://arcade.taler.ar/pickup>



this service has some security issues

Taler Arcade



<https://arcade.taler.ar/pay>



Final comments



Missing topics in this presentation:

- auditors & back-office
- regulations: KYC, AML, CFT
- age restricted coins
- operation fees
- p2p payments
- wallet backups



If you want more....



Connect with us taler.net, at [The Libre rCBDC Technology Forum](#) or write to taler@gnu.org

Read more:

1. [A digital euro and the future of cash](#) by the **Central Bank of Austria**
2. [How to issue a privacy-preserving central bank digital currency](#) by **The European Money and Finance Forum**.
3. [Who comes after us? The correct mindset for designing a Central Bank Digital Currency](#) by **The European Money and Finance Forum**

from [1]

*// Implemented as a CBDC, GNU Taler would be issued by the **central bank** and distributed to commercial banks, just like banknotes. Issuance is central and no distributed ledger is involved in issuing, distributing and paying. The central bank does not directly interact with customers in this model, and **the only information that remains with the central bank is a list of spent coins.***



Thanks!

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