

GNU Taler

An Introduction for the GNU Health Community

Good News

Tryton / GNU Health integration
with GNU Taler funded by
NGI-Taler



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Our Motivation

- Electronic Payments are inevitable
- Mainstream suggestions are not Free Software
- ... do not have privacy protections
- ... do not care about the (financial/psychological) well-being of end users.

The Free Software community should push for a better solution

The GNU Taler System

- Project started in 2014
- Goal #1: Develop libre infrastructure for deploying privacy-friendly electronic payment systems
- Goal #2: Gain mainstream adoption!

Small scale: Cafeteria, festival, company office, hacker space

Large scale: Retail Banks, Currency Regions PSPs, Central Banks (CBDC)

What's Different?

- Taler is a **bearer token** based payment system
- Always used as a second layer on top of an **account-based system**

Comparison: Credit Card / Direct Debit

1. Merchant asks for payment
2. Customer provides (CC details / IBAN) connected to their identity
3. Maybe/hopefully customer does 2FA
4. Merchant books payment of the CC / SEPA account

Why does this need to involve identity?

Comparison: Taler (simplified)

1. Merchant asks for payment
2. Customer gives **token serial numbers blindly signed by payment service provider** to the merchant, with **authorization** to redeem them (for account-based money)

No identity, no authentication, just authorization => privacy, security

Cash-like payment system

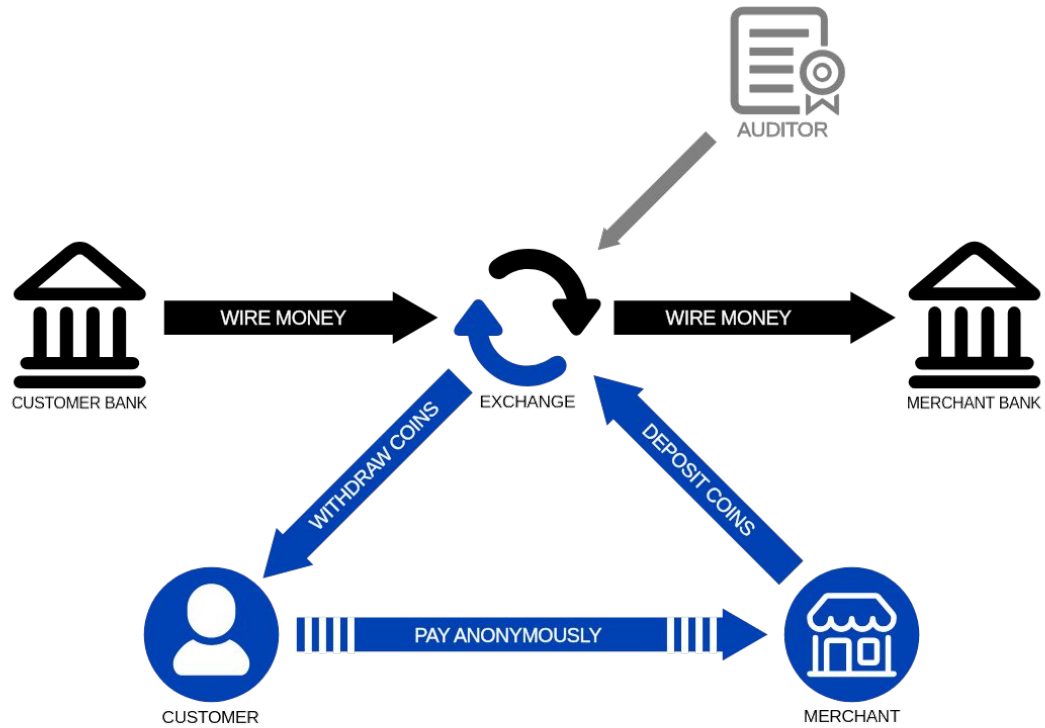
Principles

1. Free/Libre Software
2. Protect the privacy of buyers
3. Auditability (tax/fraud)
4. Prevent payment fraud
5. Collect the minimum information necessary
6. Be usable
7. Be efficient
8. Fault-tolerant design
9. Foster competition

Technology

- Based on Chaum's E-Cash (1980s) with some improvements
- Proven and time-tested cryptographic technology
- Income-transparency for merchants, anonymity for customers





ANONYMOUS PAYMENT PROCESS

Concretely: How to run Taler

- Taler Exchange
 - **Trusted entity that issues e-money**
 - Connected to some existing account-based system
 - (Or using regional currency deployment with libeufin-bank)

Concretely: How to use Taler

- Merchant
 - Have a bank account in the underlying settlement layer
 - Install the merchant backend (or use third party provider)
- Customer
 - Install wallet
 - To withdraw into wallet, send money from bank account to exchange
 - Spend money with merchants

Challenges

- Taler doesn't have the same network effects and speculation-based growth as Blockchains experienced
- To **legally** operate a Taler exchange, needs to be a **regulated entity**, needs to do **KYC/AML**
- Chicken/egg problem of onboarding merchants

The NGI-Taler Project Consortium



KYC/AML in Taler

- **Know Your Customer:** Collect data about the user/merchant
 - Tension with privacy and data minimization
- **Anti Money Laundering:** Make decisions based on the data available to prevent money laundering

Complex, needs to be completely configurable

Taler Deployments

- Events:
 - LUGCamp 2024 (German Linux Users Group)
 - Datenspuren 2024
 - GLS 20th anniversary
- Regional Currencies
 - CHF at BFH
 - NetzBon in Basel
- Digital Cash:
 - EUR in Germany: GLS Deployment (2025)
 - CHF Switzerland: TOPS (2025)
 - HUF in Hungary: MagNet Bank (2026?)



Future

- Deployments in DE, CH and (later) HU will go live
- Polishing!
- Merchant onboarding
- More integrations for merchants => NGI Taler Open Calls

Participate!

Get between 5.000 and 50.000
EUR to work on Free Software
and Taler!

Next deadline: February 1st
2025

<https://nlnet.nl/taler/>



Q/A

GNU Taler Ecosystem

What about the digital euro?

Offline payments?