# 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*

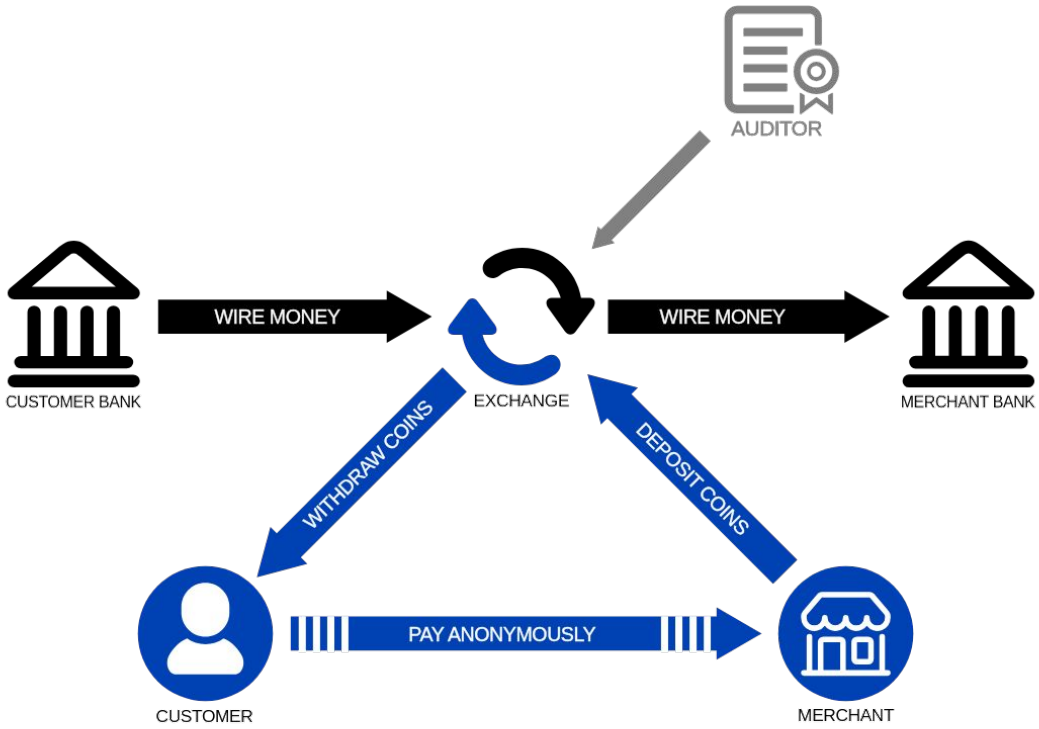
*Cash-like payment system*

# 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

- **K**now **Y**our **C**ustomer: Collect data about the user/merchant
  - Tension with privacy and data minimization
- **A**nti **M**oney **L**aundering: 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?