

WELCOME

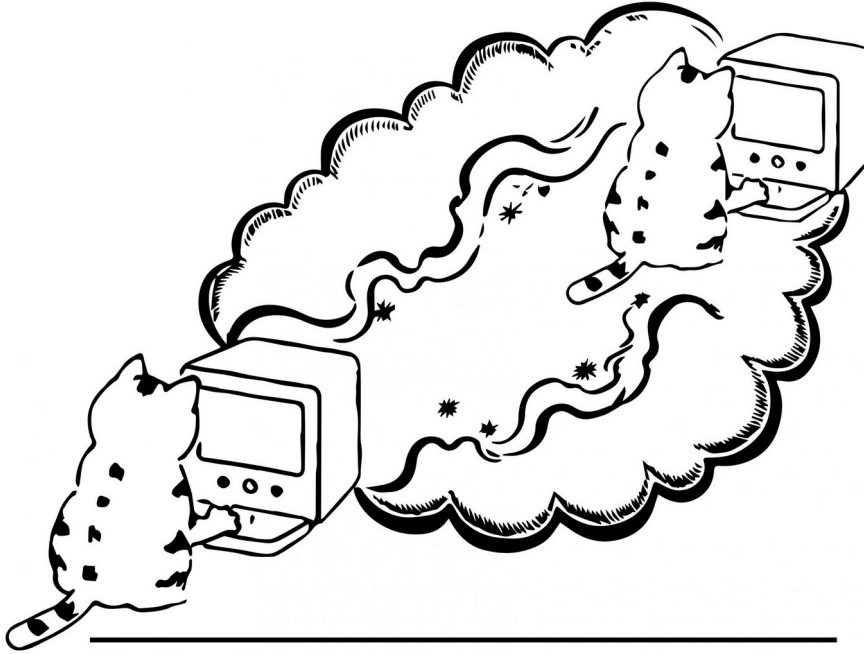
WHAT IS TIME



THANKS p2panda, willow, xpub, p4p.wiki, tangible cloud oracle, ssb, worm blossom, new design congress, cable, cabal, qual, radicle, ink & switch, lores mesh, merri-bek tech and probably a bunch of people I forgot...

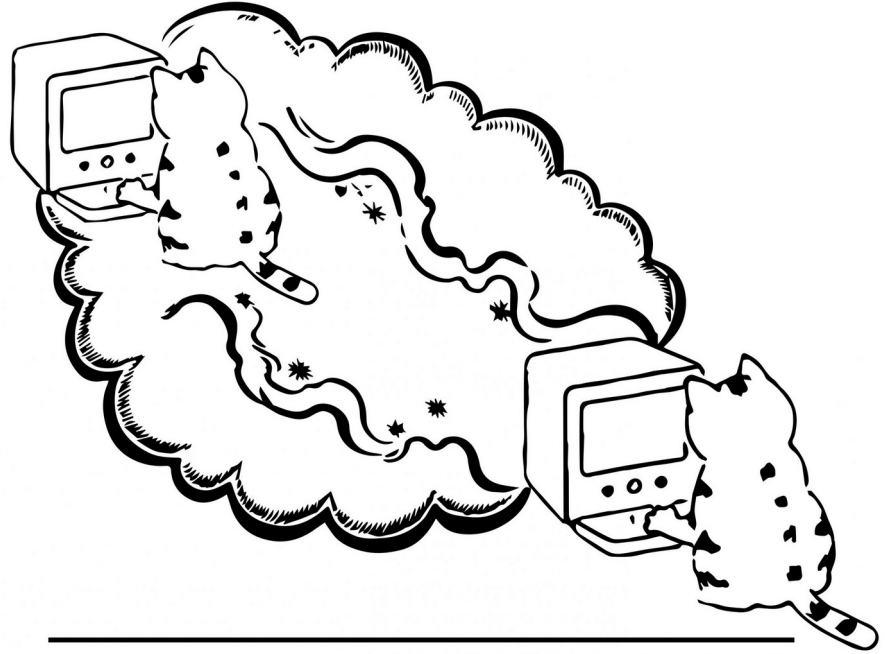
CONTEXT

SERVERS ARE STILL MANDATORY
SOME COOL SHIT HAPPENED THO



XPUB 2020

Remote login is a lot like astral projection

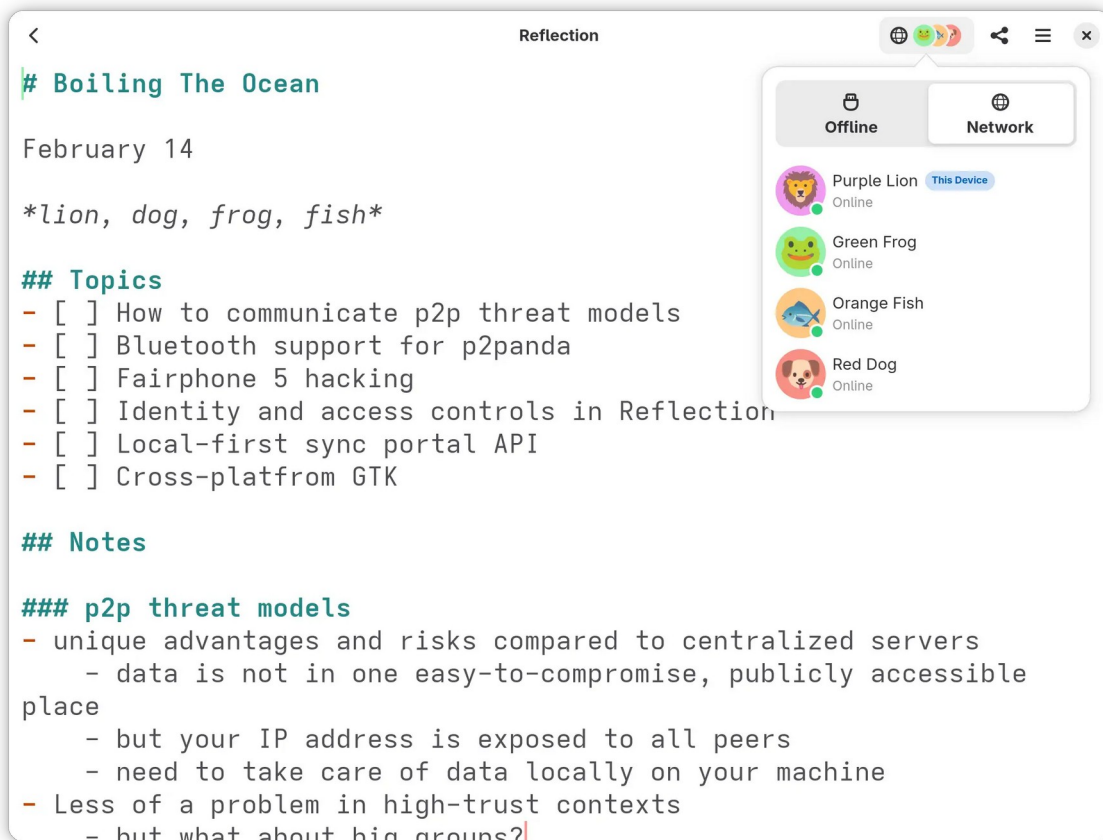


Remote login is a lot like astral projection

XPUB 2020

DEMO TIME

REFLECTION



modal.cx/reflection

PEER 4 PEER

“an approach to building digital tools
rooted in the concepts of **local-first**,
peer-2-peer, **free software**, **routing**
agnostic and **mutual-aid**”

p4p.wiki (adapted)



WHYYYYYYYY

P4P IS A PROMISING CORNER OF P2P
TECH/SOCIAL BARRIERS TO P2P
WE CANT CODE AWAY THEIR WEALTH
WE FACE MANY DIFFICULTIES
WE DONT HAVE COLLABORATION/SYNC
IS SELF-HOSTING REALLY FEASIBLE?



ITS A THING

INCOMPLETE LIST WARNING



قوال qaul

Internet Independent Wireless Mesh Communication App

Scuttlebutt

social network

a decentralised platform



radicle

Cabal

cabal is a chat platform for friends and communities that works offline.

private and peer-to-peer, by volunteers and without owners.



solarcast.cc/@solarcast

ITS A THING

INCOMPLETE LIST WARNING



offline

p4p unconference

Date: Saturday 25 May 2024

Time: 11:00 - 22:00

24.05. - 26.05.24 @ offline, Berlin

DWEB CAMP 2026

8-12 JULY, ^[1h from] BERLIN

LODis:PYP

Event

37th Chaos Communication Congress / assemblies / SoS / Saal D

18:00

—

19:00

Day 1

Day 1

p4p meetup

📍 Saal D **BOREQ** en

SELF-ORGANIZED SESSION

what is solpunk?

Solpunk is a gathering for anyone interested in creating anything solarpunk with others!

What does that actually mean? Is it an un-conference? Is it a festival? Is it just some punks in a field? A wise guess is that people here are interested in many of the following things:

Lowtech and community tech, energy reduction and renewables, sharing resources, temporary nomadic community, dancing, alternative economy, creating a just future, hackathons, dumpster diving, opensource hardware, software and production, means of care and solidarity, community

[FOSDEM 2026](#) / [Schedule](#) / [Tracks](#) / [Developer rooms](#) / [Decentralized Internet and Privacy](#)

Decentralized Internet and Privacy

LOCAL-FIRST

No spinners: your work at your fingertips

Your work is not trapped on one device

The network is optional

Seamless collaboration with your colleagues

The Long Now

Security and privacy by default

You retain ultimate ownership and control



inkandswitch.com/essay/local-first

OFFLINE-FIRST vs. LOCAL-FIRST

OFFLINE-FIRST

"Offline-first focuses primarily on staying functional during network interruptions **but the server remained the primary data source**"

LOCAL-FIRST

"Local-first treats offline capability as a natural side effect of **giving the local device authority over the data**"

shortdiv.com/posts/local-first-is-not-offline-first

PEER 2 PEER

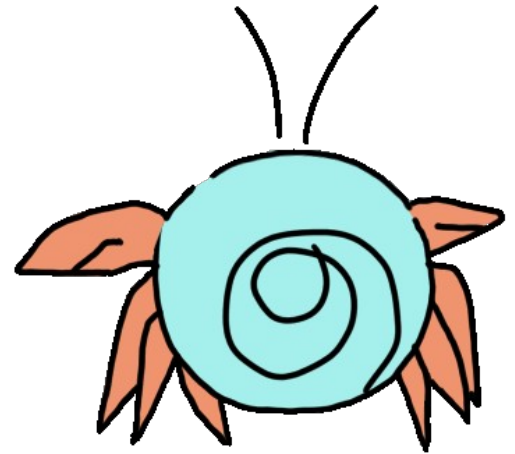
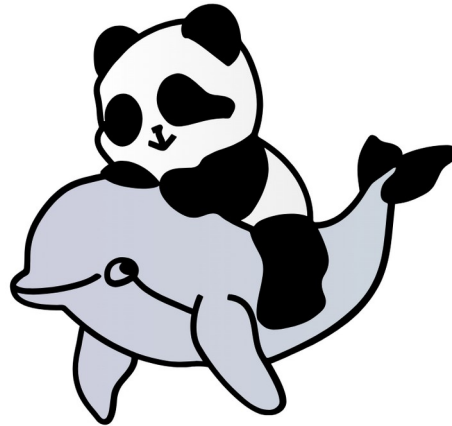
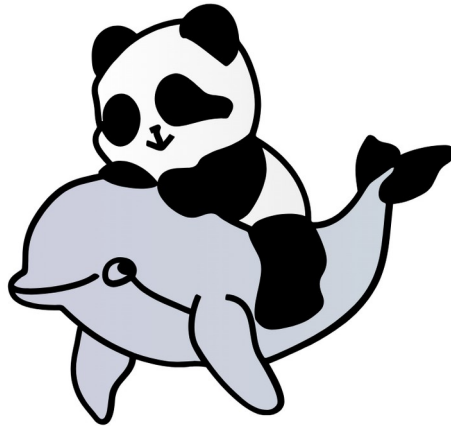
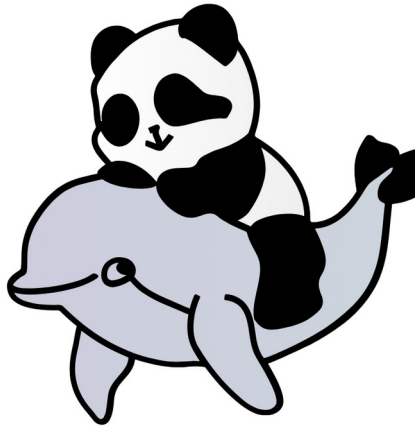
PUNK 2 PUNK

PEASANT 2 PEASANT

PEAR 2 PEAR

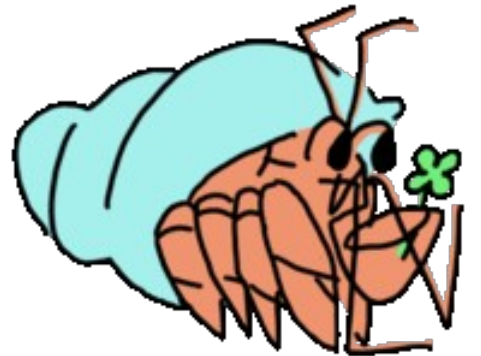
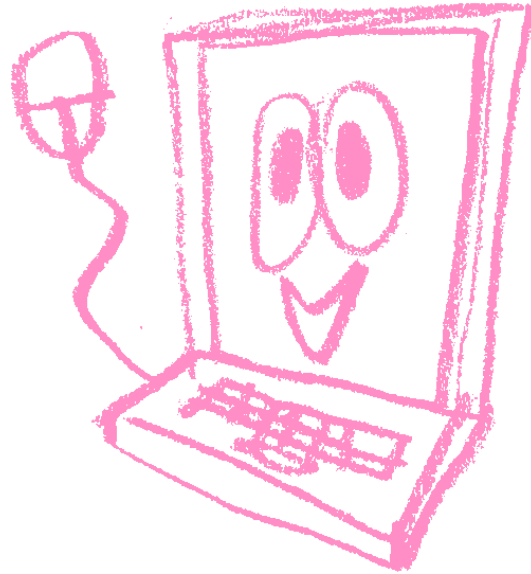
PROLE 2 PROLE

"computers talk directly to each other instead of going through a central boss server. Every participant both gives and receives information"



FREE SOFTWARE

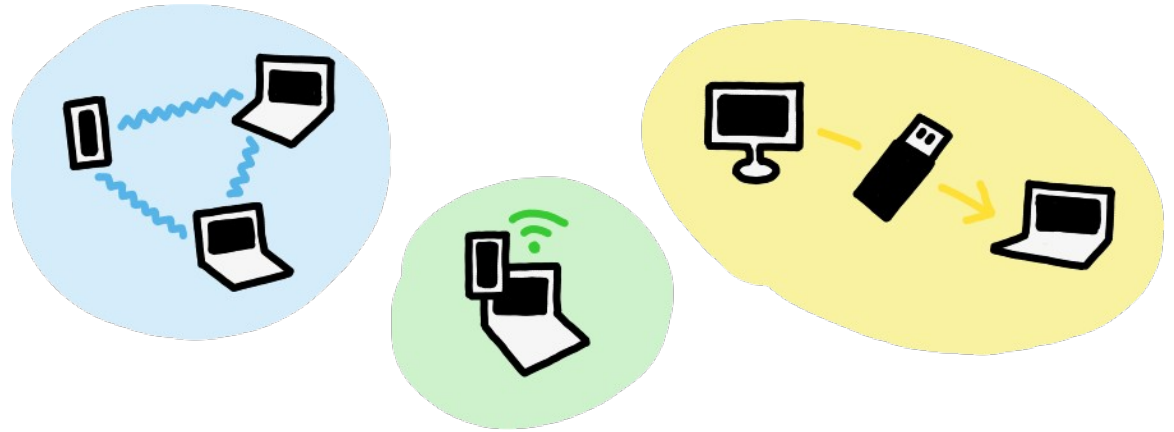
- 0. RUN
- 1. STUDY
- 2. SHARE
- 3. IMPROVE



ROUTING AGNOSTIC

“networks **don't**
care how or when
messages travel,
only that they
eventually get
there”

sneakerweb.org



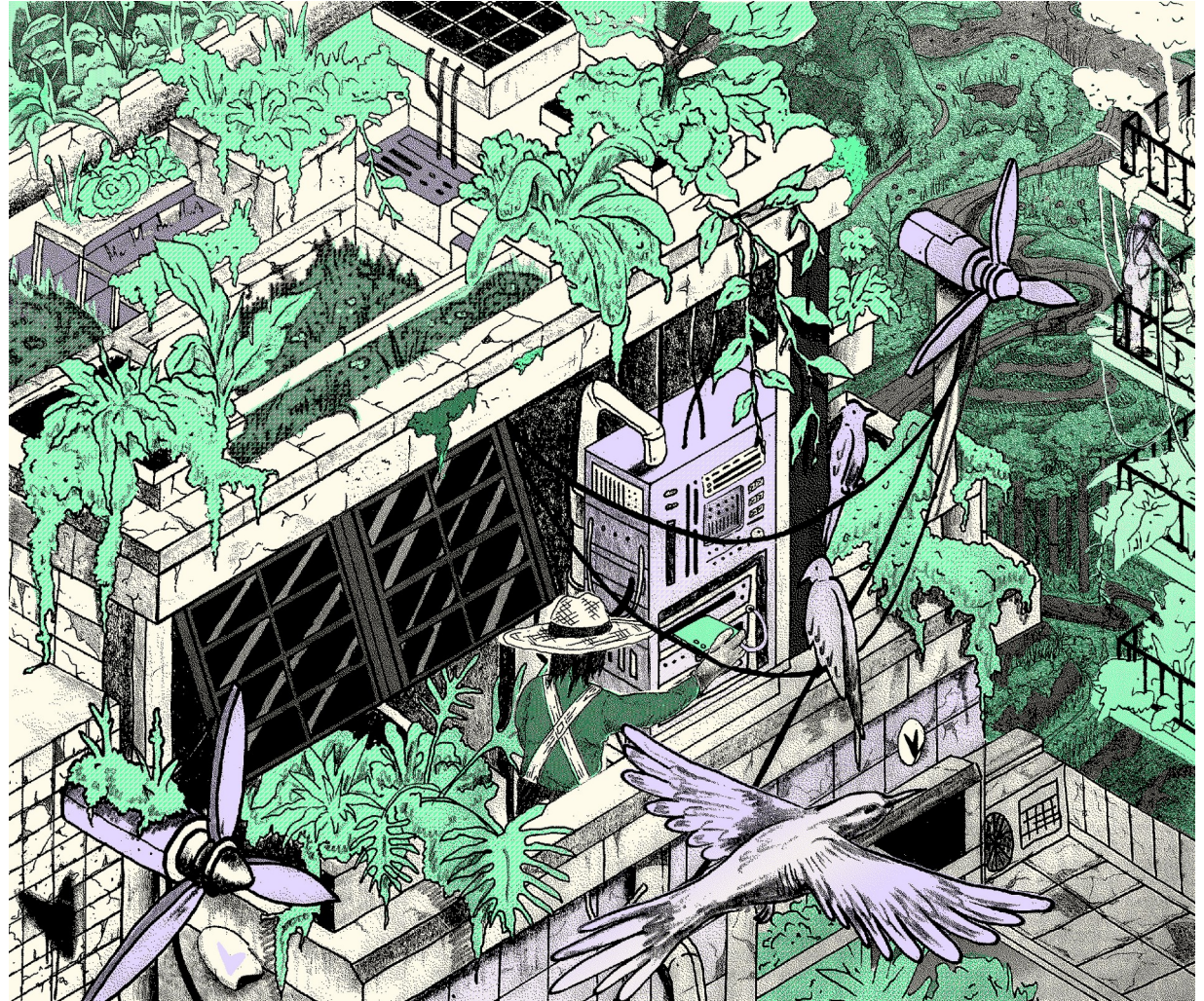
Walkaway Stack

Radical, infrastructure-independent
peer-to-peer systems

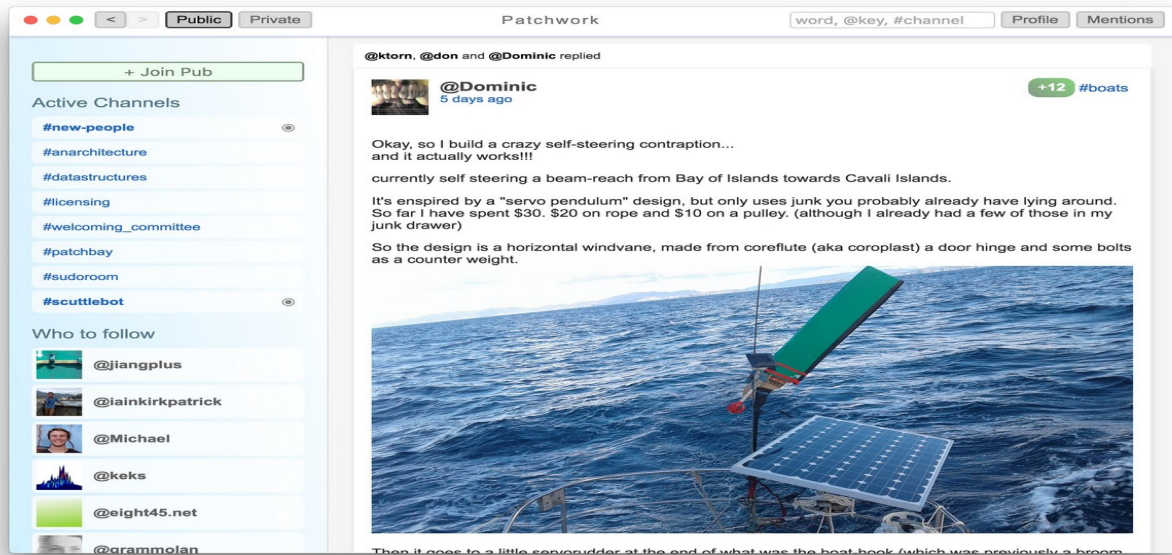
fosdem.org/2026/schedule/event/J3FLC3-walkaway-stack

MUTUAL AID

But first, a
detour...



SECURE SCUTTLEBUTT



NO GLOBAL SINGLETONS

“BUTTS” (WATER-COOLER GOSSIP)

GOSSIP PROTOCOL (2 HOPS OR MORE)

PUBS AS CRITICAL INFRASTRUCTURE

2014 FACEBOOK/CAMBRIDGE ANALYTICA



P2P POPCORN



"On SSB, **nothing can be deleted or modified**, identities are linked cryptographically to individual devices, and the asynchronous nature of the platform is highly resilient – meaning that data can't be erased. Even the act of **changing your name** or following or unfollowing someone creates a **permanent record**. This beautifully designed decentralised network also happens to be a forensically sound surveillance tool, in which nothing can be retracted and proof of authorship can be traced to specific devices. [...] **This is a dream for network surveillance**. The danger could not be more obvious."

This is Fine: Optimism & Emergency in the P2P Network
newdesigncongress.org/en/pub/this-is-fine

P2P POPCORN



"We can no longer marvel at the novel interactions afforded by peer-to-peer technologies, nor perform political theatrics within these networks. **We need to lay aside our delusions that decentralisation grants us immunity.** [...] Without cohesive organisation, mobilisation to harden security and privacy and without a sincere commitment from protocol designers to revise their collective assumptions, the push back from incumbent power will leverage each and every socio-technical flaw in each and every network. [...] If there is no collective worldview reset, **the peer-to-peer movement will remain a historical novelty, a technological bauble and thought experiment for detached technologists unable to understand the political gravity of their tools, and whose life work will never withstand the attacks against it.**"

This is Fine: Optimism & Emergency in the P2P Network
newdesigncongress.org/en/pub/this-is-fine

P2P COMMERCIALISATION

BAD

p2p may be leveraged to take the next twist down the [financial / atom / individual]-ization spiral of the digital realm. Namely: now we're not even providing people the basic service of hosting and managing software in return for their trust and money. **Instead we're charging them for the opportunity to do the hosting and managing themselves.** Or, more, fiendish: taking a fee to let others do so. The gig economy beckons across the chasm to application developers and software users alike.

GOOD

However: employed thoughtfully, p2p can also be the next step in a redemption arc for the digital. **Decoupling people, their communities and livelihoods from the constant boom & bust cycle of tech.** Where, one year sees you relying on an app for your basic communication needs, and in the next it has been disappeared (bought up, closed down, deprecated in favor of a new product, made incompatible with your device) or changed beyond recognition, its usefulness shriveled.

cblgh.org/p2p-commercialization/

POLITICAL PROJECTS NOT COMPANIES

INCOMPLETE LIST WARNING



قول qaul

Internet Independent Wireless Mesh Communication App

Scuttlebutt

social network

a decentralised platform



Cabal

cabal is a chat platform for friends and communities that works offline.

private and peer-to-peer, by volunteers and without owners.



MUTUAL AID

LoRes Mesh

a Resilient, Local internet for the Climate Crisis

LoRes Mesh is a project to provide digital services at local community facilities that meet genuine human needs.

It's designed to be powered by **renewables**, run by local **volunteers**, and to stay up **even when the grid goes down**.

6 Neighbourhood-first principles

Offline
Nearby



Federated
Collaboration



Community
stewardship



Regionally
resilient



Decentralisation
agnostic



Zero
emissions



MUTUAL AID

Incremental sync

Partial sync

Access control

Private area overlap detection

Resource control

Transport independence

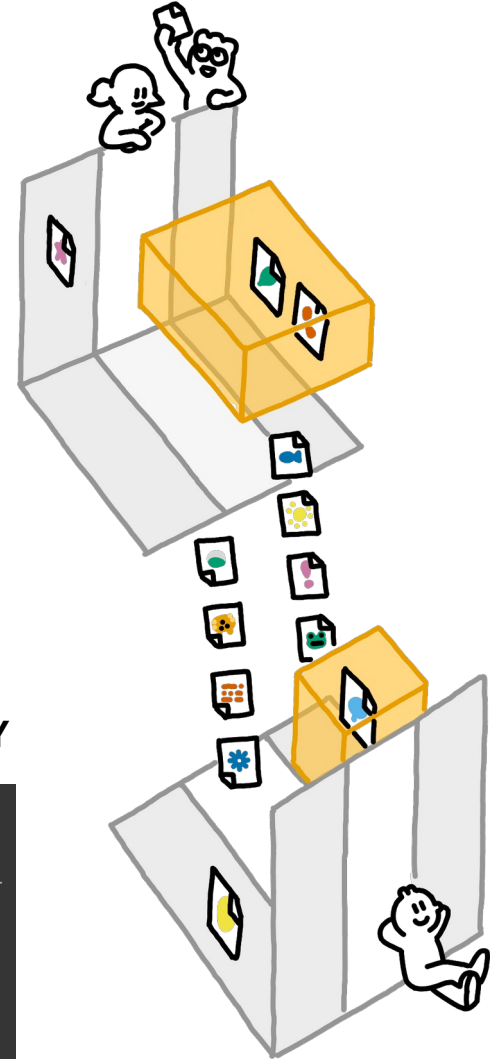
General efficiency

WILLOW
CONFIDENTIAL
SYNC

P2PANDA DISCOVERY

Inspiration

To use Private Equality Testing in this “category” of peer-to-peer protocols was (to our knowledge) first suggested by Willow and we believe that this is the only way towards “more fine” peer-to-peer systems.



P2PANDA

APPROACHING STABLE v1

PANDAS FOR EVERYONE (FFI)

MODAL.CX & GNOME MOBILISING

IROH v1 IS KIND OF A BIG DEAL

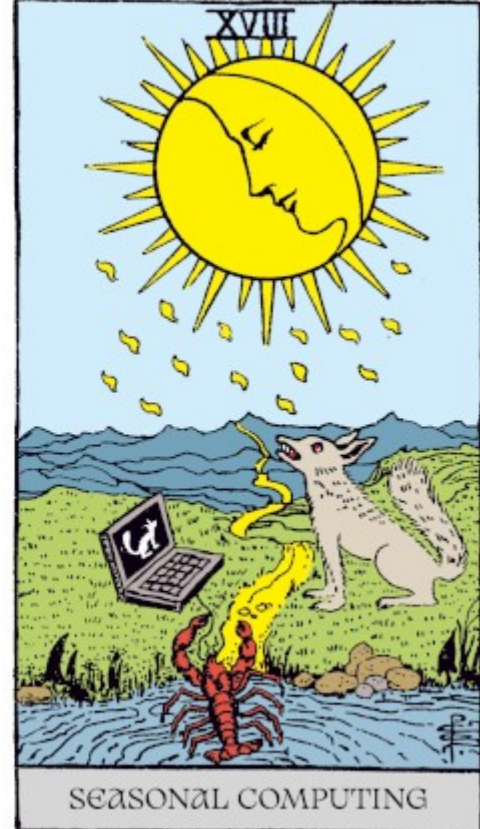
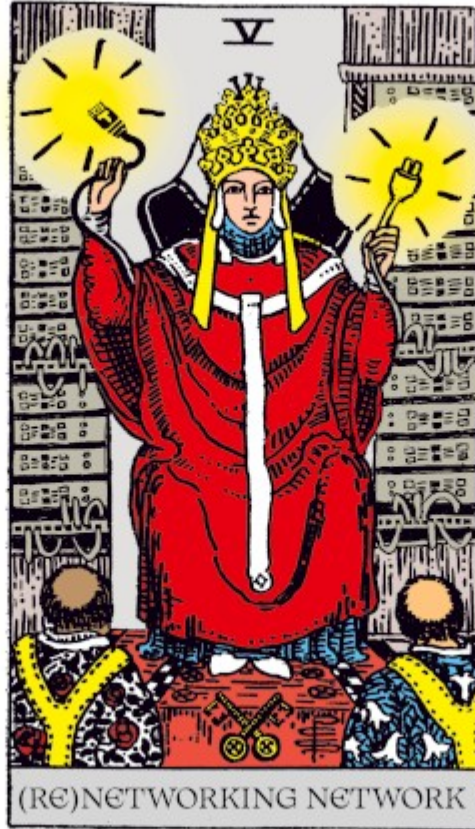
ITS A GOOD TIME TO DIVE (BACK) IN



p2panda.org

DEMO TIME

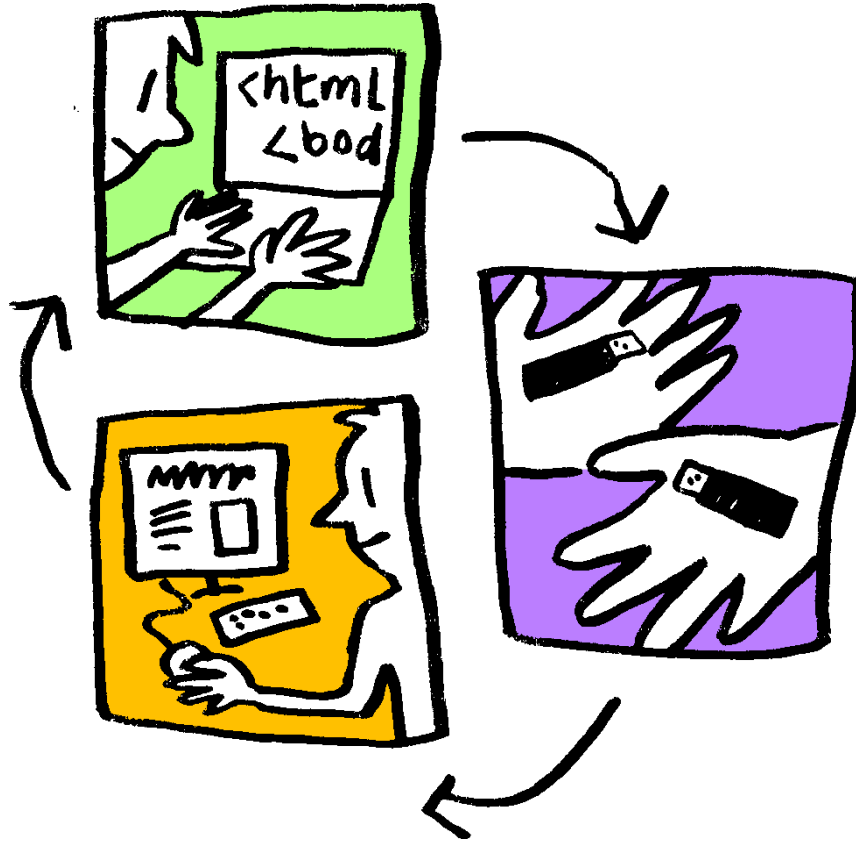
PANDADRAW



git.coopcloud.tech/decentral1se/pandadraw

DEMO TIME

SNEAKERWEB



sneakerweb.org

DOEIII

PANDADRAW

git.coopcloud.tech/decentralise/pandadraw

REFLECTION

modal.cx/reflection

SNEAKERWEB

sneakerweb.org

