

# Decentralised and Distributed Social Networks

Diogo Peralta Cordeiro

XMPP: [diogo@im.undefinedhackers.net](mailto:diogo@im.undefinedhackers.net)

Email: [mail@diogo.site](mailto:mail@diogo.site)



Lead Developer

<https://GNUsocial.rocks>

March 28, 2021



The IndieWeb

GNU social

The Free Network

Cultural onboarding for Fediverse newcomers

Next steps



Figure 2: A people-focused alternative to the "corporate web".

- ▶ When you post something on the web, it should belong to you, not a corporation;
- ▶ Your articles and status messages can go to all services, not just one, allowing you to engage with everyone;
- ▶ You can post anything you want, in any format you want, with no one monitoring you.

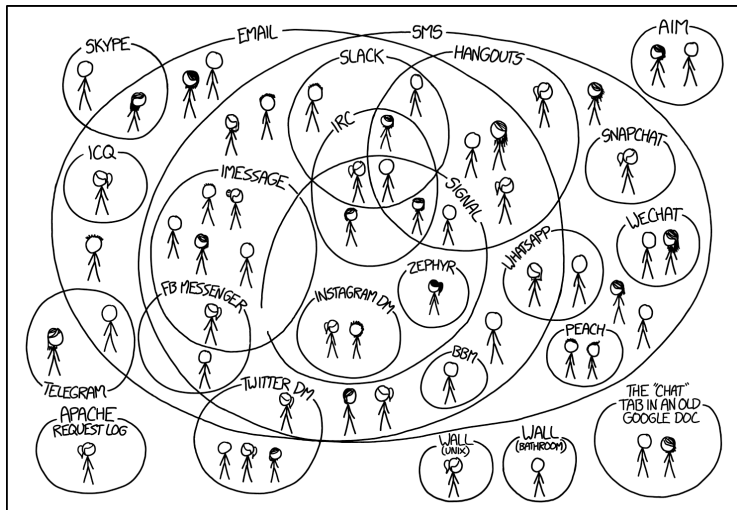
# Why is this movement so important?



*We're in danger of losing what's made the Internet the most important medium in history – a decentralized platform where the people at the edges of the networks – that would be you and me – don't need permission to communicate, create and innovate.*

— Gillmor

# Instant Messaging Hell



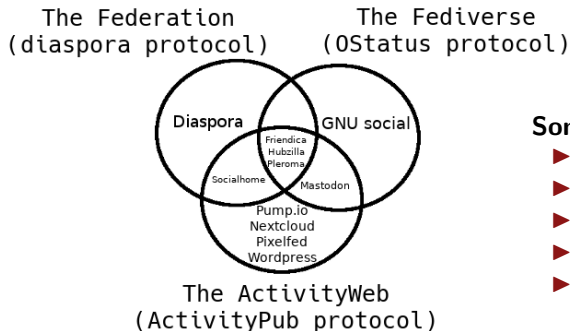
I HAVE A HARD TIME KEEPING TRACK OF WHICH CONTACTS USE WHICH CHAT SYSTEMS.

from XKCD.



True to the Unix-philosophy of small programs to do a small job, GNU social is a social communication software used in **federated social networks**. It is widely supported and has a large userbase. It is already used by the **Free Software Foundation**. As the GNU operating system, is built around privacy and trustworthy technology based on free software (free as in freedom, specifically to run, study, change and distribute your software as you please). GNU social is technology for communities to run and host their own social media.

Currently, we're working on adding features to easily and flexibly create groups and improve tags, allowing easier content filtering and connecting with anyone that shares your interests, all under your own control and without infringing your privacy.



## Some general statistics

- ▶ **Nodes:** 4400+
- ▶ **Users:** 2,930,700+
- ▶ **Platforms:** 30+
- ▶ **Protocols:** 14
- ▶ **Statuses:** 267,740,000+

Figure 3: Software Distribution



These selfish business practices continuously raise fundamental societal questions: how do we feel about social media being used by foreign state actors to influence democratic elections through very personalised (and misguided) political campaigns? And how do we contain the algorithmic pressure towards global extremes, rather than brings people together as one would expect from a social network?



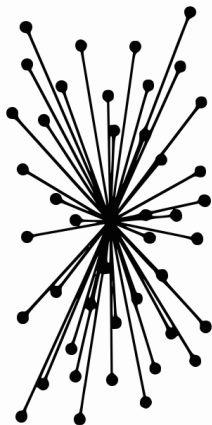
Another problematic issue to address is mono-culture. Social networks do not allow to cross the boundary of their service in an easy way, leading to social lock in and a "winner takes all" scenario. This limits choice, but also exposes users to legal dangers. Confidential discussions through "private" messages for instance turn out to be not so private, such as the case where a United States got the social network Twitter to hand over the personal communication from European human rights activists and a member of the Icelandic parliament over a severe human rights violation by the USA military. The European Court of Human Rights would certainly not have allowed this, but it happened outside of our jurisdiction - even if all the actors never left Europe.



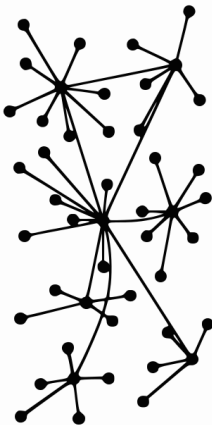
The federated universe, abbreviated to fediverse, wants to offer social media users a more transparent, ethical and decentralised environment to talk, find and connect. This is done through a plethora of completely independent servers hosted by organisations and individuals around the world. Each has their own policy, each has their own community and reputation. But they can all inter-operate. If you don't like any of the existing options, or want to do something different or innovative, you download some open source software and start your own. If you feel some server is toxic, or misbehaves, it just takes one click to stop listening to what is being said. And there is no need to share data with anyone, if you want to. Every node can essentially be a complete social network in itself.



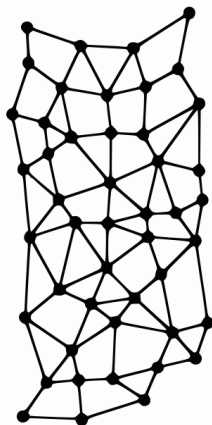
The fediverse is not confined to what a single company wants to do - in every way. That means a broader offering in terms of design, usability and user experience, in terms of technology, ethics and culture. Essentially every server is a full-fledged social network in itself, able to talk to other social networks when it wants. People can use the fediverse for traditional social networking, but they can also integrate it with other services such as online video sharing, all without the fear of having their data being monetised or their activity profiled. Switching from closed social networks to the fediverse contributes to privacy and trust, by enabling users to understand and control who sees their data. The fediverse as a network of social networks, is also more resilient than a single network could ever be.



Centralized



Decentralized



Distributed



**Centralised Network** - Belongs to a single central power point (a host). Connected to all satellite nodes.

**Decentralised Network** - Belongs to many different hosts. Each with their own satellite nodes.

**Distributed Network** - Contains neither a host or satellite nodes. They just contain these self determining end point systems which connect with any node they want.



- ▶ There isn't a single culture
- ▶ People have multiple interests
- ▶ Focus on Your Self

The following slides on this topic are based on emsenn's notes.



Despite your best or worst efforts, you wouldn't be able to do more than skew the culture of your part of the Fediverse: there's no unified culture to the Fediverse, due to the distributed way in which instances network.

A lot of people come to the Fediverse because they've become untenably frustrated with their experience on legacy social media, like Twitter or Facebook.

Moving to the Fediverse is a really great solution to that frustration! Some platforms, like Friendica, are similar to Facebook. Others, like GNU social, are like Twitter.

So before you post, think about the problems you remember from the platforms you came from, and give some thought to if you might be recreating the culture that led to those problems here.



Some pieces of software like mastodon don't support groups, this lead to a huge number of mastodon instances that are interest-strict, there is a technology-only instance, music-only, etc.

We don't find this ideal as it limits the variety of posts in the user's feed. Furthermore, it leads the user to create different accounts in different instances, which defies a key purpose of federation.

GNU social's solution for this issue was to implement groups. Groups are not that different of hashtags other than in concept and usage. You can subscribe to a !group but not to an hashtag. Hashtags are idealised for momentaneous episodes while groups are more of a long-term thing.



The culture that will have the strongest effect on your sense of identity is the one you build inside your head, and that's determined mostly by what you're exposed to.

Make the culture of the Fediverse something you want to be exposed to - follow people who will bring you to that goal, share and write posts that fulfil that goal, and disregard the rest.



- ▶ *#UseCapsInYourHashtags* so people who have their screen-text read to them hear it sensibly;
- ▶ If you use emoji or weird unicode in your display name or change it too often, I don't like you.



- ▶ A briefing on the history of the fediverse
- ▶ Understanding the technology underneath decentralised social networks
- ▶ Why should I join the IndieWeb?
- ▶ Getting started with the IndieWeb
- ▶ Instant Messaging Hell
- ▶ Some notes on CloudFlare



- [1] D. Gillmor, *Why the indie web movement is so important*, 2014. [Online]. Available: <https://dangillmor.com/2014/04/25/indie-web-important/>.
- [2] XKCD, *Chat systems*, 2017. [Online]. Available: <https://xkcd.com/1810/>.
- [3] emsenn, *Cultural onboarding for fediverse newcomers*, 2017. [Online]. Available: <https://emsenn.net/com/cultural-onboarding-for-fediverse-newcomers.html>.



- ▶ Preferred Chat System (1254)
- ▶ Standards (927)