

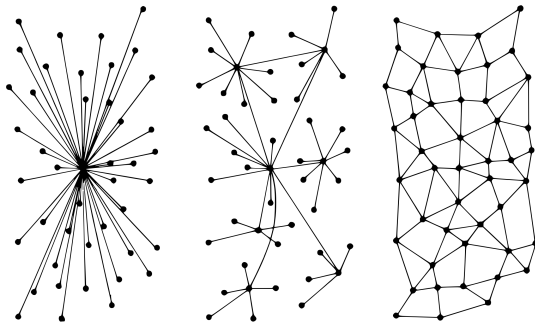
Communication & Technology

Decentralized Social Media

Comm. Studies 227
Aaron Shaw

Fall, 2025

Northwestern University





Protocols, Not Platforms

A Technological Approach to Free Speech

By Mike Masnick

- User control

- User control
- Logistics & feasibility

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- (Negative) Impacts on user experience

- User control
- Logistics & feasibility
- (Negative) Impacts on user experience
- Accountability

technical structure $\Rightarrow$ social structure

["implies" $\neq$ "causes"]

Decentralized social media?



If users had full autonomy over their content, and if we shifted from platforms to protocol systems, would that truly create healthier online spaces or create even stronger echo chambers and isolate people into viewing only a narrow minded view of their reality? How would shifting that power away from platforms and towards individuals affect our own perceptions of technology and media information?

–Jaeyeon

Usenet's problems seem to me like a tragedy of the commons scenario- with no clear business model or way to profitability early on, nobody really had any motivation to upkeep or start new Usenet servers, allowing its replacement by other centralized platforms like Reddit all the easier. While Masnick's proposition to decentralize platforms and reintroduce protocols is interesting, I don't believe this is feasible in the modern day of the Internet as users are now too adapted and situated to the norms and moderation that centralized platforms provide.

-Jeffrey

I think shifting to a protocol-based system offers a compelling way to decentralize platform power, strengthen user privacy, and give individuals more control. However, I'm unsure how viable it is in practice. For companies, it would disrupt their business models; for users, most people are deeply accustomed to the convenience and familiarity of current platforms. So any transition may need to start with lightweight changes that help users navigate the new system.

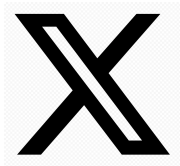
–Claire X.

Although I'm unsure how digital decentralized systems would work large scale, I love how its already implemented in email. I use Apple Mail because it works better for me I and I love having that choice. I could see how this similar framework could work for other platforms but I specifically wonder about AI. There are so many different AI platforms on the web that all basically do the same thing. How could this plan work for them?

–Maya V.

It all starts with a crisis...

Crises of social media



Crises of social media

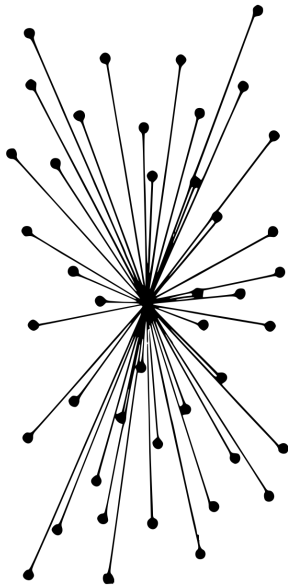


Masnick's answer: "Protocols not platforms"

To be clear, this is an approach that would bring us back to the way the internet used to be. The early internet involved many different protocols—instructions and standards that anyone could then use to build a compatible interface.

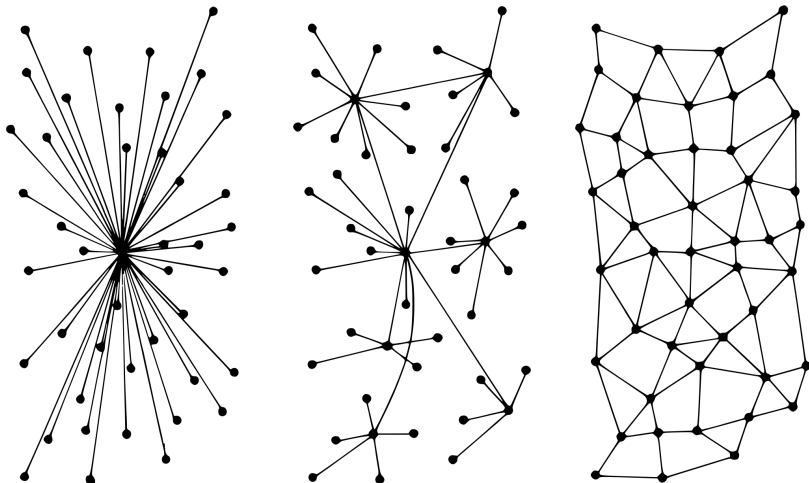
–Masnick, p. 5-6.

A visualization of communication



Exercise: Compare communication structures

<https://tinyurl.com/227protocols>



Communication structures

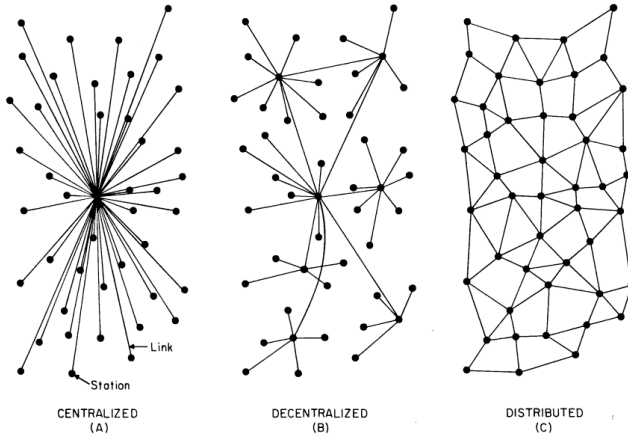
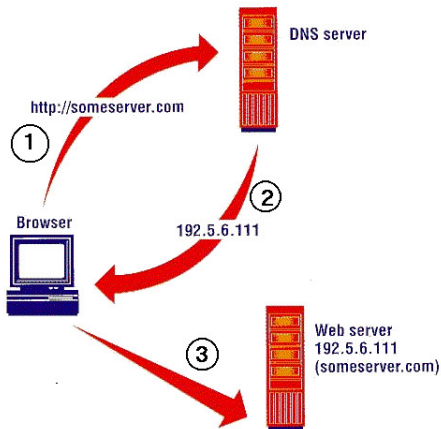
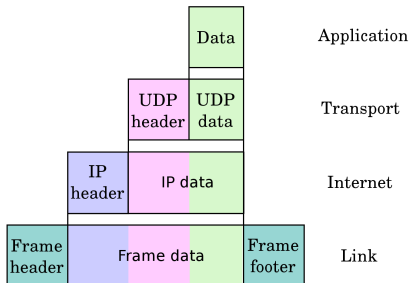


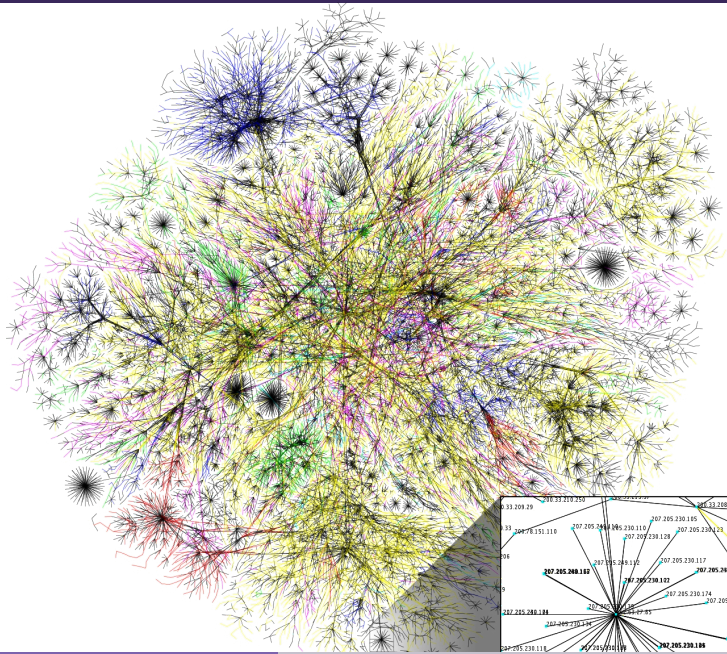
FIG. 1 — Centralized, Decentralized and Distributed Networks

Behind the scenes: Protocols!

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Behind the scenes: Protocols!



*A **communication protocol** is a system of rules that allows two or more entities of a communications system to transmit information. The protocol defines the rules, syntax, semantics, and synchronization of communication and possible error recovery methods. Protocols may be implemented by hardware, software, or a combination of both.*

–[Wikipedia \(accessed Nov 18, 2025\)](#)

Communication structures

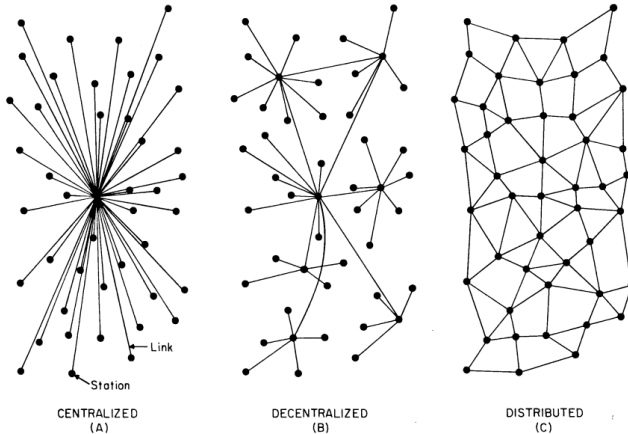


FIG. 1 — Centralized, Decentralized and Distributed Networks

there were other, earlier networks...

Protocols not platforms

Masnick's protocol-based social media utopia

...the best of all worlds: useful internet services, with competition driving innovation, not controlled solely by giant corporations, but financially sustainable, providing end users with more control over their own data and privacy—and providing mis- and disinformation far fewer opportunities to wreak havoc.

Masnick, "Protocols not platforms" (2019)

Upsides of centralized social media platforms?



Upsides of centralized social media platforms?

- Consistent UI/experience
- Accessibility, usability
- Efficient search
- Centralized content moderation
- Windfall (advertising) profits (to owners/investors)
- Control (for owners, regulators)

What changes with open protocols?

What gets decentralized?

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- **A. Hosting:** A place to store posts and make them available to other users.

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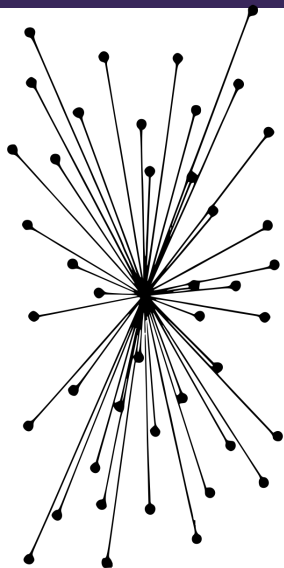
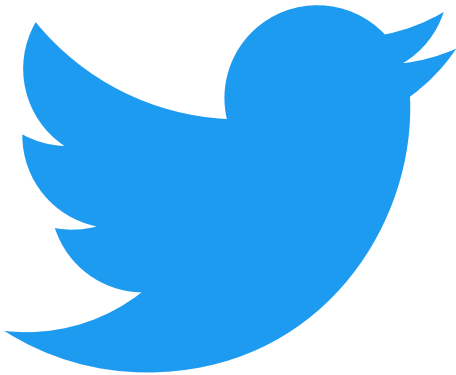
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Let's focus on content moderation

Twitter was *very* centralized



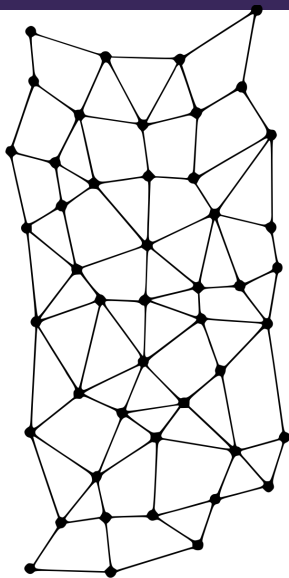
Content moderation on Twitter

Mix of automated and human systems operating at many levels, e.g.:

- Submission review and filtering (human/machine).
- “Trust & Safety” (T&S) team within the firm makes delete/ban decisions.
- Users “flag” content for review by T&S team.
- Users can “mute” or “block” others from their own feeds.

All moderation flows through company servers & decisions

Secure Scuttlebutt is *fully distributed*

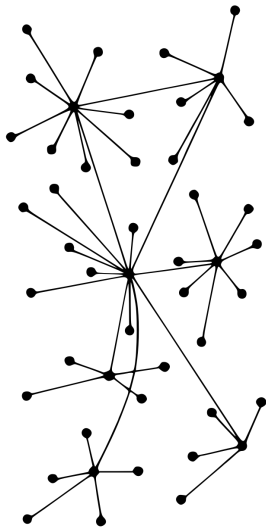
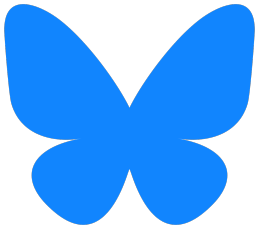


Entirely at user (node) level:

- Voluntary flagging of content by creators.
- Voluntary acceptance/responses to flags.
- Muting and blocking (at the individual level).

All moderation happens within individual nodes (no single node can decide what others (don't) see!)

Federated systems are *decentralized*



Content moderation in decentralized social media

Can happen in two ways:

1. **Content-level**: Content is flagged/moderated in similar ways, but *within server*. If content is flagged or deleted on one server, *it will need to be reviewed, flagged, or blocked again on every other server that receives that content!*.
2. **Server level**: Administrators can *defederate* to block, restrict, label all messages from an entire server. Also possible to accept moderation decisions from another server.

Some moderation at the content level, some at the server level (unbundles moderation actions; creates some coordination challenges and “frictions”)

So, how's it going?

Social networking, back in your hands

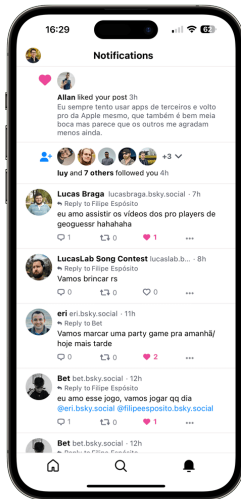
Follow friends and discover new ones among more than 4.4M people. Publish anything you want: links, pictures, text, video. All on a platform that is community-owned and ad-free.

[Get started](#)[▶ How it works](#)

Mastodon (ActivityPub protocol)

- Mastodon microblogging network (image from 2022)
- Software complies w the ActivityPub protocol
- Core network and software made by non-profit based in Europe
- Several apps, including one from the company
- 100,000s of servers! Some are...terrifying
- Biggest server: Mastodon.social
- You can create an account, follow others, "toot", like, etc.
- No single public timeline! experience depends on server!

Bluesky (AT Protocol)



Bluesky (AT Protocol)

- Bluesky microblogging network (~40M users)
- Software built on AT Protocol
- B-corp incubated in Twitter, now independent.
- So far, few apps, two viable servers (bluesky.social, blacksky.community)
- UI/affordances very similar to old twitter!
- Protocol allows federation/decentralization
 - User-generated labels (filters), feeds
 - Account portability (credible exit)
- in practice, nearly as centralized as twitter was.
- but the Blacksky example is powerful!

Some takeaways

Communication protocol

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Communication structures

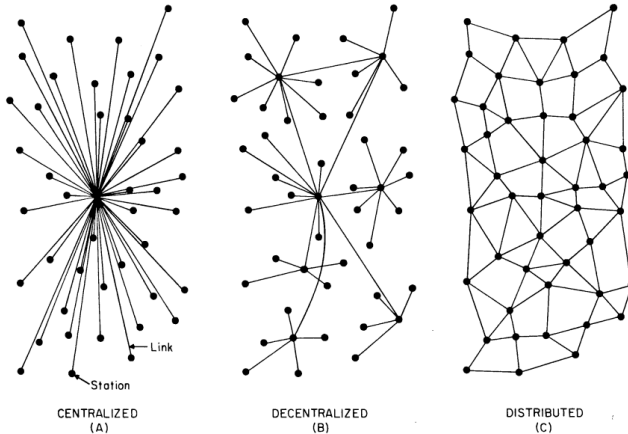


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technical structure $\Rightarrow$ social structure



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