

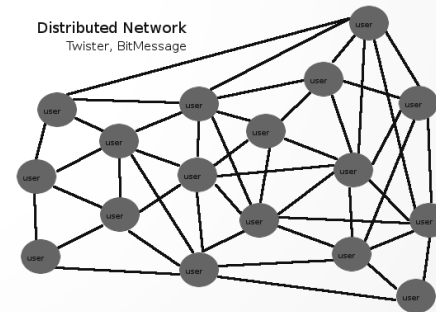
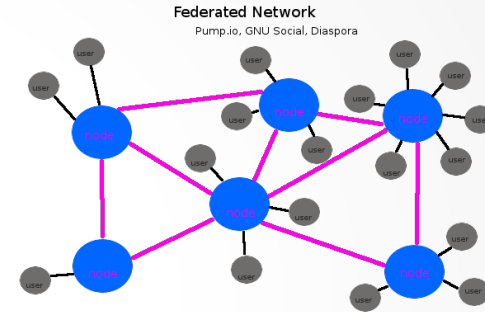
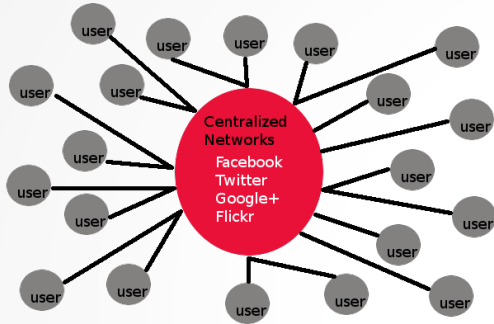
# Intro to Federated and Distributed Social Networking

Jon Robbins

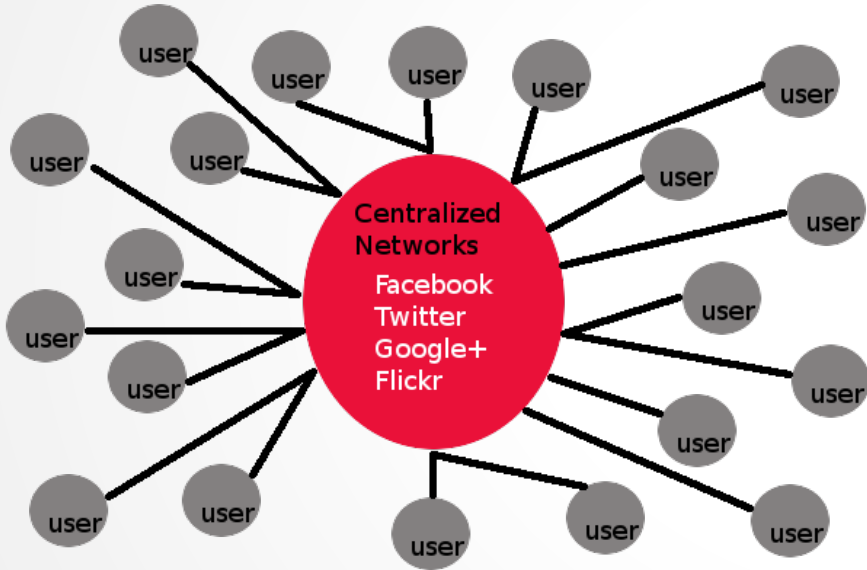
Centralized networks are not very concerned with user privacy. Luckily there are other options

2014.07.22

# Social Network Types

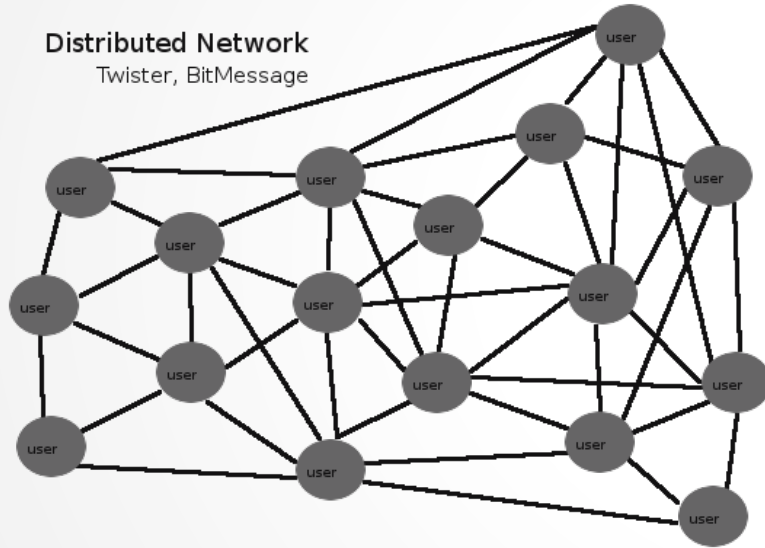


# Centralized Networks



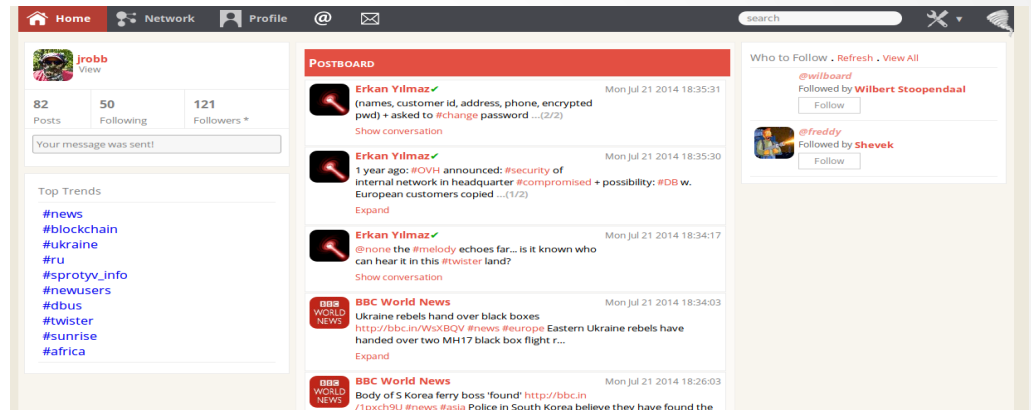
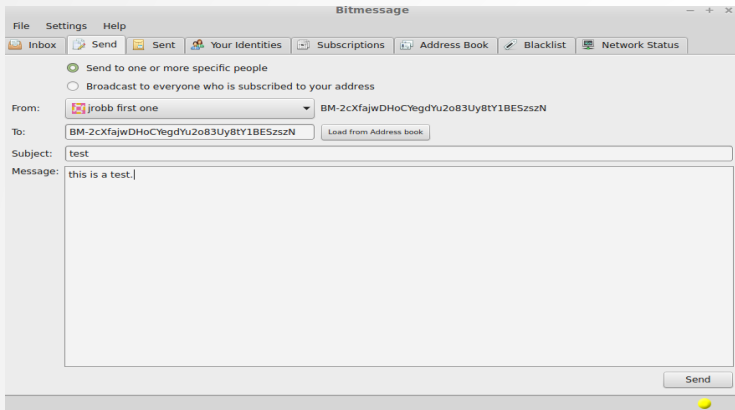
- Don't care (or care very little) about user privacy
- Probably freedom-hating
- Little or no control of your own data
- They are making money off of you (ads, see privacy above)
- Node failure affects whole network (ie fail whale)

# Distributed Networks



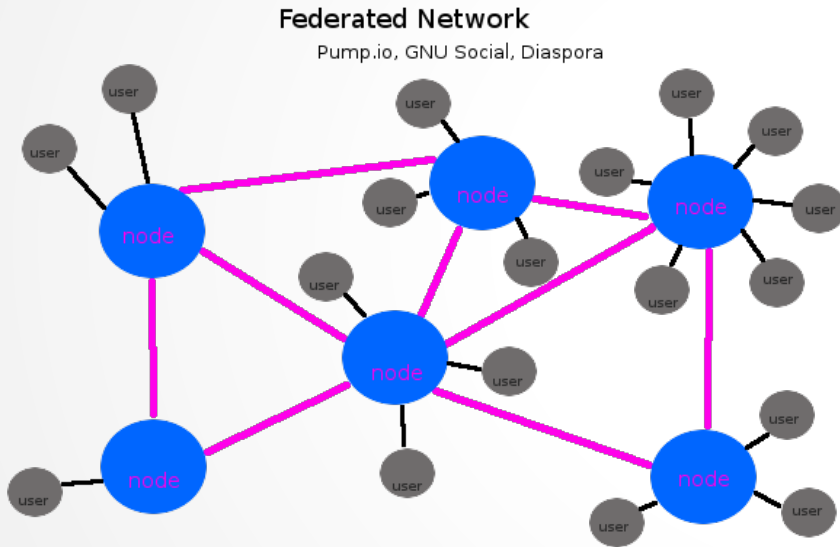
- No central servers
- Impossible to shutdown entirely
- Privacy-focused
- Everyone runs their own node

# Distributed Example: Twister/Bitmessage



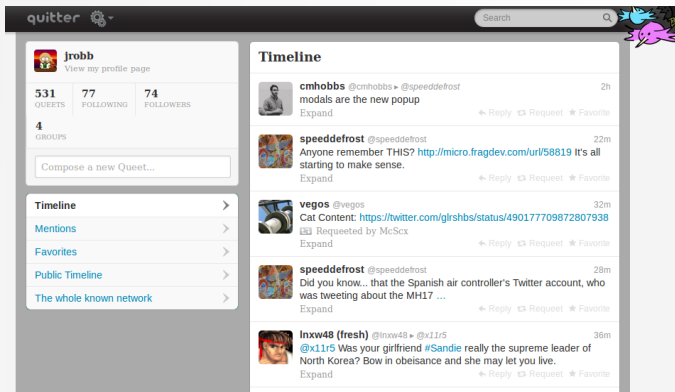
- Compile and run your own 'node' locally on your machine
- These examples both use the **BitCoin** protocol
- BitMessage uses BitTorrent for propagation-- **here's how**
- BM is very similar to encrypted email
- Twister is like a distributed twitter

# Federated Networks



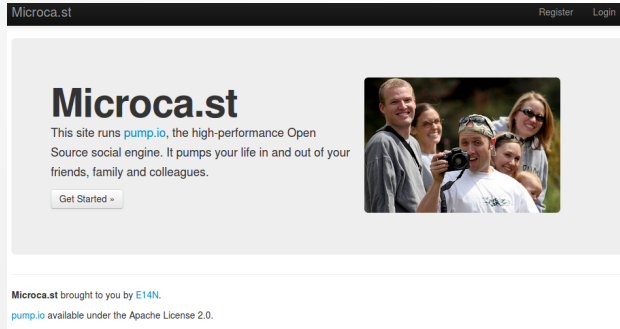
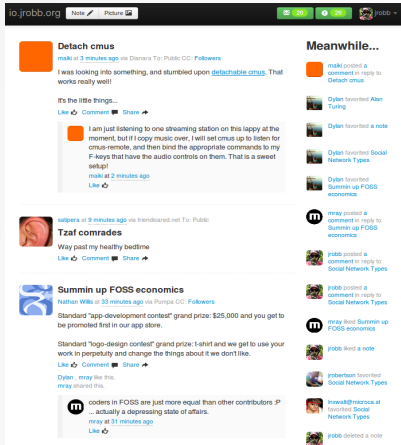
- Privacy-focused
- Run your own node
- Or join a public one!
- Free Software
- Single node failure does not affect whole network
- Pump.io, GNU Social, Diaspora, Friendica, Tent

# Federated Example: GNU Social



- Formerly StatusNet
- Runs on standard LAMP stack
- Written in PHP
- Can consume a lot (>2GB) of RAM without MySQL/MariaDB tweaking
- Free Software! (Affero GPLv3+)
- Public nodes include:  
[quitter.se](http://quitter.se)  
[micro.fragdev.com](http://micro.fragdev.com)

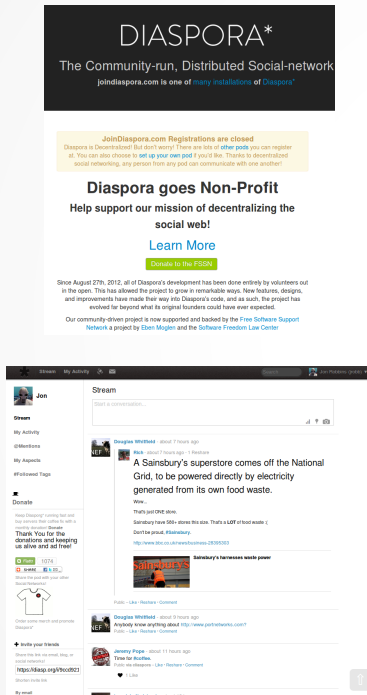
# Federated Example: Pump.io



- Written in Javascript/Coffeescript to run with **nodejs**
- Uses Databank module (mongoDB, Redis, etc)
- Runs well with ~1GB or > RAM
- Can run on a Raspberry Pi! (HPR #133 8) ...Sortof
- Focus on Developer-friendly API (allows for 3rd party clients, bridges to other networks, web services, games, etc)
- Still early in development
- Free Software! (Apache License 2.0)



# Federated Example: Diaspora



- Written in Ruby on Rails
- Uses MySQL/MariaDB/PostgreSQL backend
- Requires  $\geq 1$ GB RAM
- Ton of dependencies?
- Stable once installed

# Why a good API is important

- With a good open standard, can allow for interoperability with other networks (ie. Friendica can communicate to/from GNU Social via [OStatus](#))
- More flexibility with 3rd party clients ([pump.io has a few](#))
- Attracts developers – who wants to use a complicated API?
- GNU MediaGoblin is working on federation using the [pump.io API](#)
- If more networks adopt a solid API that uses a good open standard, it would be possible for more networks to communicate. This would provide true federation.

# Other Applications That I self-host

- **Mumble**
- **GNU Mediagoblin**--a FOSS replacement for Flickr or Youtube (and is easily self-hosted)
- **Owncloud**--FOSS dropbox replacement that is easily self-hosted (and is one of my favorite applications)
- **Ejabberd** XMPP server
- **Hastebin** – paste bin
- Minecraft (sometimes)

\* Some of these I run on a \$5/month VPS, others from my home

# Conclusion

Questions?

# Contact

- Pump.io : [jrobb@io.jrobb.org](mailto:jrobb@io.jrobb.org)
- GNU Social : [jrobb@quitter.se](mailto:jrobb@quitter.se)
- Diaspora : [jrobb@diasp.org](mailto:jrobb@diasp.org)
- Twister : @jrobb
- BitMessage : BM-2cXfajwDHoCYegdYu2o83Uy8tY1BESzszN
- Google+ : [+JonathanRobbinsNC](#)
- Email : GPG key 0xF69AB08C

# Afterthought: Wikipedia

- Wikipedia is amazing!
- However...

We don't really talk about it much, but the sum of human knowledge under one org, no matter how responsible, has many of the same issues that the other centralized networks have. That is a hard nut to crack, but something to get folks thinking about.

– quote from maiki

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