DECENTRALIZED SOCIAL NETWORKING WITH WORDPRESS

November 7, 2018 – WordPress Meetup Vienna – Alex Kirk

DECENTRALIZED?

▸ Centralized = control is with a single entity

▸ If you use Facebook, the servers are all controlled by Facebook Inc.

▸ Facebook can draw conclusions by the aggregate data: who is friends with whom, how much do they communicate?

▸ Decentralized = No one entity has knowledge of the whole network → more private and uncensored

SOCIAL NETWORKING

1. You create your account at a service
2. Become friends with someone, or follow them
3. You see your personal selection of posts
4. Your data is stored on their servers 😞

TOP 5 REASONS FOR SOCIAL NETWORK USAGE[1]

1. Stay in touch with what friends are doing
2. Because my friends are there
3. Stay up to date with news & events
4. Share photos & videos
5. Fill up spare time

[1]https://blog.globalwebindex.com/chart-of-the-day/social-media/

WORDPRESS AND SOCIAL NETWORKS

1. Publish on WordPress
2. Share to a social network
3. Discussion happens there as the potential audience is much bigger

‣ That's ok and viable

‣ There's also the Indieweb initiative, we'll touch on that briefly later

BLOGGING IN THE 2000S

▸ Consumed using an RSS Reader or manually visit the blogs

▸ Responses to blog posts via pingbacks / trackbacks

▸ Linked friends via Blogroll

▸ Spam in comments and pingback

BLOGGING TODAY

▸ Still relevant but a niche, RSS readers are nerdy

▸ Public by default means it's not suitable for "private" content

    ▸ i.e. things only relevant to resp. to friends and family, such photos of your child growing up, your medical story, etc.

▸ Higher effort to publish vs. signing up at Facebook or Twitter

MISSING PUZZLE PIECE: TRUSTED CONNECTIONS

YOUR WORDPRESS AS YOUR DIGITAL BASE

YOUR WORDPRESS AS YOUR DIGITAL BASE

▸ Publish privately to your own WordPress means that you can control the audience

▸ You can upload and delete media as you like it

▸ You decide who can be your friend

▸ You decide where you host your data

(THIS IS NOT AN INDIEWEB TALK)

▶ **Connects (public) social services back to your personal website**

  ▶ `<link rel="me" href="https://twitter.com/akirk" />`

▶ <u>POSSE</u>: Publish (on your) Own Site, Syndicate Elsewhere

▶ <u>PESOS</u>: Publish Elsewhere, Syndicate (to your) Own Site

▶ → Everything needs to be public; <u>https://indieweb.org/</u>

FRIENDS PLUGIN FOR WORDPRESS

▸ Establishes connections between WordPresses

▸ Pulls in your friends' (private) posts

▸ Shows them aggregated in a single feed, i.e. an "RSS Reader"

▸ https://wordpress.org/plugins/friends/

BUILDING UP YOUR SOCIAL NETWORK

IS HARD, TAKES TIME, AND NEEDS CONVINCING

MAYBE YOU DON'T NEED TO

WORDPRESS + FRIENDS IS USEFUL BY ITSELF

▸ Rule based RSS reading: filter what you (don't) care about

▸ RSS Notifications via e-mail

▸ You can subscribe to any RSS feed, e.g. news sites, blogs

▸ Read via RSS Reader (OPML or aggregated feed)

▸ Storing full-text bookmarks (WIP); No Ads

THINKING BIGGER:
TRUSTED CONNECTIONS
THE REAL ASSET

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TRUSTED CONNECTIONS

▸ Reading friend posts "Facebook style" is just one use case

▸ Authentication on your friend's blog: only comments from established relationships allowed

▸ In general: ideally it's a person you know or trust, so they can be pre-trusted in other realms

HOW DOES A FRIEND REQUEST WORK?

▸ You enter the URL of your friend's WordPress

▸ The Friends Plugin communicates with the other WordPress and requests friendship

▸ The other WordPress owner will receive a notification about the request and can accept or ignore it

▸ Friendship is established: secret keys were exchanged

DEMO

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	Username	Name	Role
☐	Username	Name	Role
☐	**alex**	Alex	Administrator
☐	**matt.blog** Delete | View | Accept Friend Request	—	Friend Request
☐	Username	Name	Role

	Username	Name	Role
☐			
☐	**alex**	Alex	Administrator
☐	**matt.blog**	—	Friend
	Username	Name	Role

SECRET KEYS

▸ A proof for each side that friendship has been established

▸ For each friend in and out keys exists

▸ Used to request a personalized RSS feed from your friend that will include private posts

▸ Used to log in at your friend's site for commenting

IMPLEMENTATION

▸ A friend (request) is a low privileged user on the remote WordPress

▸ Your friends' posts are retrieved by a cronjob via RSS and cached

▸ You'll get notified of new posts by e-mail (if you want)

▸ Unfriend = delete their user

TRUSTED CONNECTIONS
WHAT TO DO WITH THEM?

DECENTRALIZED INSTAGRAM

▸ Post photos to your WordPress (with a Custom Post Type)

▸ Use a mobile app "clone" Instagram that talks to your WordPress instead of the Instagram servers

▸ Your WordPress will fetch your friends' photos (not all posts, just the photos), displayed in the app

▸ Photo optimized presentation but you host=own your images

DECENTRALIZED TWITTER

▸ Publish tweet-style, short posts to your WordPress

▸ Use a Twitter client that talks to your WordPress instead of the Twitter servers (maybe a plugin could implement the Twitter API?)

▸ Your WordPress will fetch your friends' "tweets" and display them in the app

DECENTRALIZED WHATSAPP

▸ Even instant messages could go through your WordPress

▸ Your WordPress sends and receives your friends' messages

▸ A mobile chat app that syncs with your server and gets notified by it for new messages

OTHER DECENTRALIZED ALTERNATIVES

▸ <u>Mastodon</u> (ActivityPub protocol → federation)

▸ <u>Solid</u> by the founder of the web Tim Berners-Lee (Linked Data)

▸ <u>IndieWeb</u> by Tantek Çelik (microformats)

WHY WORDPRESS?

▸ WordPress is easy to set up, lots of hosting options

▸ RSS protocol baked in and the common way to spread blog posts

▸ People know how to use WordPress

▸ = Established software, no new, fancy protocol

SECURITY

▸ WordPresses get hacked: has your friend's WordPress become evil?

▸ Todo? Security assessment of your friends

▸ Todo? Enable/disable based on your friend's security status

  ▸ Has their server IP suddenly changed?

  ▸ Has their domain changed owner?

PRIVACY

▸ Attachment URLs are accessible without authentication

  ▸ Todo: don't publish the real attachment URL, proxy it with authentication

▸ Remember: as the data leaves your server, it could be exposed

▸ Remember: already as data leaves your device, it could be exposed

RESTRICTIONS / DESIGN DECISIONS

▸ No user-level friendships: whole sites form friendships

    ▸ This is meant for personal blogs / WordPresses

▸ Friend segregation needs to happen through separate blogs

▸ No federation → everyone needs their own WordPress install → decentralized

FUTURE

- It's well usable but it hasn't been tested by many people to understand what people need, I personally enjoy it

- Things are still moving quite a bit, see the open issues at https://github.com/akirk/friends/issues

- Open Source, no pro or paid version, it's my contribution to how we might use the web in future

HOW YOU CAN HELP!

▸ Write about it, record screencasts

▸ Help with better explanations, graphics, and diagrams

▸ Audit the "friendship protocol," ideally we'll want this standardized across platforms

▸ Better CSS for the /friends/ page, currently some themes interfere

▸ Test and file issues, and fixes: https://github.com/akirk/friends

TECHNICAL RECAP

▸ Establishes friends connections between WordPresses

▸ Private Posts are accessible between friends

▸ You own Friends Page is where you read all your friends (and subscription) posts (or in your feed reader)

▸ Get it at https://wordpress.org/plugins/friends/

CONCLUSION

▸ The Friends plugin can make blogging more attractive again by allowing you to choose the audience for each post

▸ Bonus: A pretty nice way to stay up to date with your friends' blogs as well as RSS news

▸ Bonus: Store full-text bookmarks for sharing or keeping

THANKS

https://wordpress.org/plugins/friends/

https://github.com/akirk/friends

Friend me at https://alexander.kirk.at/