

A distributed, open source, social network

NLLGG – Utrecht – 16/5/2015

diaspora*

Introduction

*Who am I: meneer@

*pod.readme.is

*joindiaspora.org

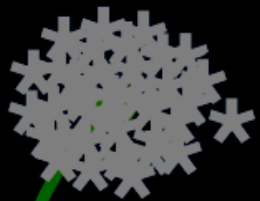
*pod.orkz.net

*@meneer



Agenda

- *Concepts
- *Start
- *Security
- *Open Source
- *Joining



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Concepts



The decentralised concept

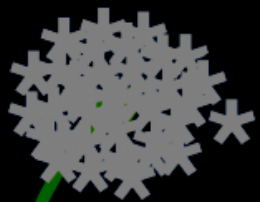
- * The internet according to Tim Berners-Lee
 - * No hierarchy
- * Eben Moglen
 - * Prof @ Columbia Law School
 - * FSF



Eblen Moglen

*Freedom versus the Cloud

- * *“In the Web the social harm done by the client-server model arises from the fact that logs of Web servers become the trails left by all of the activities of human beings, and the logs can be centralised in servers under hierarchical control.”*
- * *“The services are centralised for commercial purposes.”*



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Freedom

- * Vision

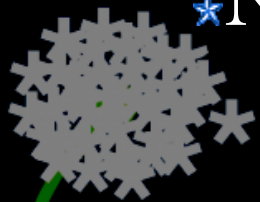
 - * Privacy

 - * Decentralisation

- * Non commercial

- * Freedom = No censorship

- * Not one owner



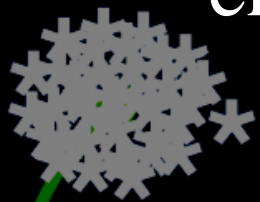
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Start

- ★ 4 students from New York University's Courant Institute of Mathematical Sciences

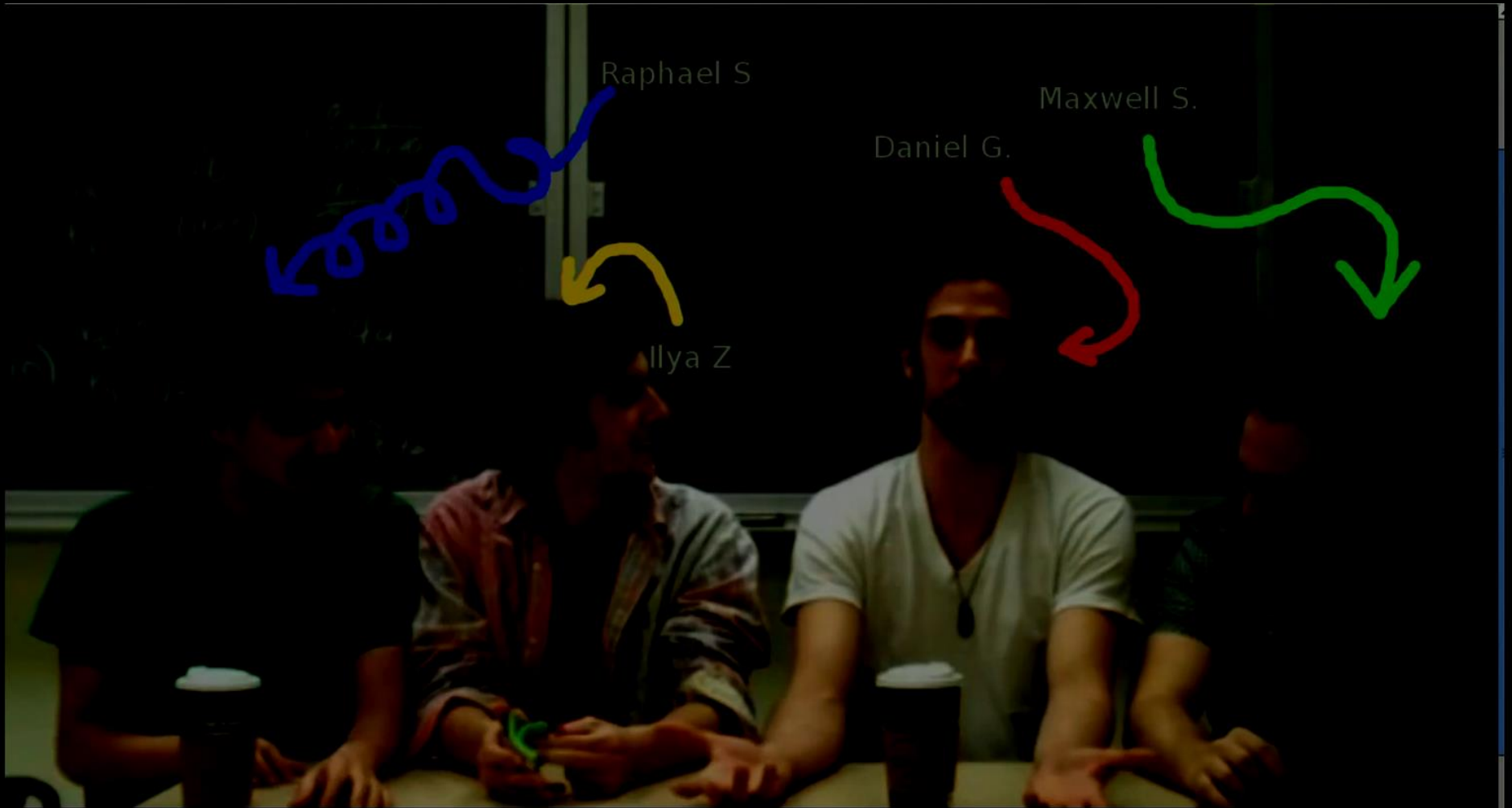
- ★ Ilya Zhitomirskiy, Dan Grippi, Max Salzberg, and Raphael Sofaer

- ★ The word diaspora is Greek in origin and refers to a scattered or dispersed population. (src: en.wikipedia.org)



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Start



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Start

KICKSTARTER

Discover
great projects

Start
your project



BLOG HELP



Me ▾

Decentralize the web with Diaspora

An Open Software project in New York, NY by Daniel G. Maxwell S. Raphael S. Ilya Z. · [send message](#)

PROJECT HOME

UPDATES

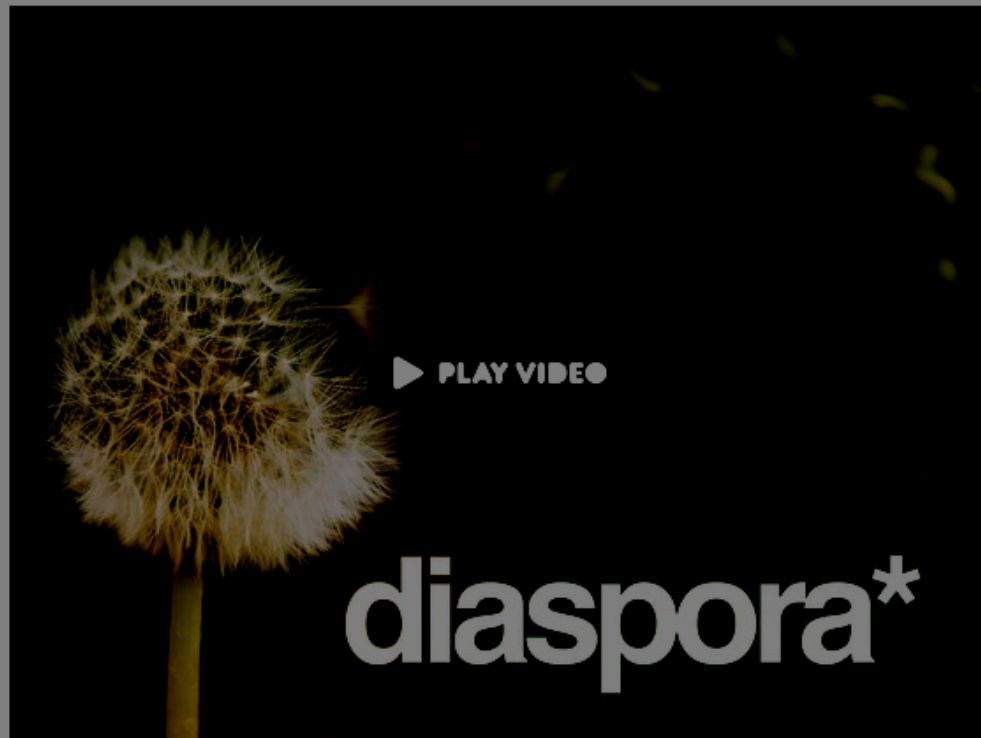
17

BACKERS

6479

COMMENTS

909



6,479

BACKERS

\$200,641

PLEGDED OF \$10,000 GOAL

0

SECONDS TO GO

FUNDING SUCCESSFUL

This project successfully raised its funding goal on June 2, 2010.



PLEDGE \$5 OR MORE

1473 BACKERS

Once the software is released as open source, we will send you a CD with diaspora all set up and ready to go, with a note from our team!

Like

7,279 people like this.

Tweet

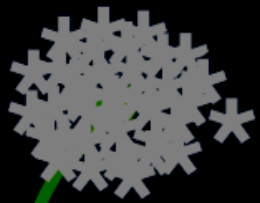
EMBED

<http://kck.st/9QC2zk>

ABOUT THIS PROJECT

Growing pains

“The interactions on other networks are built around the assumption that you are addressing people you actually know – your ‘friends’, or people who are interested in everything you say – your ‘audience’. Something entirely different is happening on Diaspora*, and that’s why the metaphors from those networks don’t fit.”



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Growing pains

- *Suicide Ilya
- *Transferred to community
- *The network is not yet stable
 - * pods come and go as they please



d* Concept implementation

*Stream

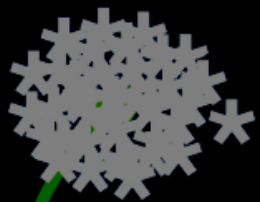
- * What you like, or could like

*Aspects

- * The people

*Hashtags

- * The things



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d* Concept implementation

- *Ownership

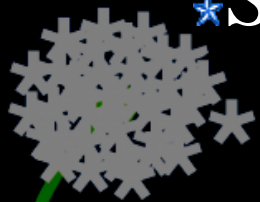
 - * You own your data

- *No censorship beyond rules

 - #nsfw

- *Podmins

- *Sharing is not Following



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Sharing

*Symmetric

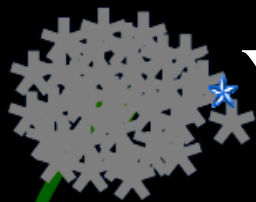
- * One only sees posts if both sides share

*Asymmetric

- * You send to the other person
- * You can only see the other person's post if the other person shares with you

* You can always see public posts

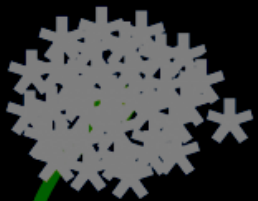
- * if you know how to find them (> #hashtags)



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Facebook, G+

- *Derived from diaspora* aspects
 - * G+ Circles
 - * Facebook Groups



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Snowden

- *Prism

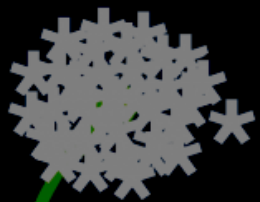
- * NSA-infected corporations

- *(Mass) Surveillance

- *Decentralisation is the answer

- * Noone can control the network

- * Governments think centrally



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Security



D* Security

- *Federation
- *Cross-pod traffic SSL encrypted
- *PGP keypair
 - * When a user is created on the pod, the pod MUST generate a pgp keypair for them. This key is used for signing messages.

* Distributed databases not yet encrypted

* Private messaging

The logo for Diaspora, featuring a stylized dandelion seed head on a green stem.

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D* federation architecture

- *Distributed concept
- *No central server
- *Discovery





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Open source



Software based on Ruby on rails

*Free Software – Affero GPL

*<http://github.com/diaspora>

This program is free software: you can redistribute it and/or modify it under the terms of the GNU Affero General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version.



Installation

- *Manual

- *Bitnami

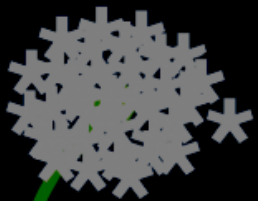
- *Next: apt-get install...

- *Update manually...



D* github stats

- ★ Globally ranked in Github 107th most starred project
 - ★ 15914 commits
 - ★ 36 releases
 - ★ 311 contributors
 - ★ 352 open issues
 - ★ 3331 closed



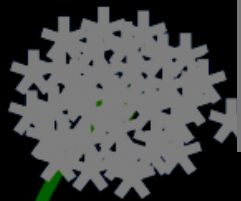
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Manual Installation



Linux

Ubuntu	Debian	Fedora	CentOS	Gentoo	Arch	openSUSE	Hamara
		Fedora 20					
Ubuntu 14.04 (Trusty)	Debian 8 (Jessie)	Fedora 19	CentOS 7	Gentoo 12.1	2015.05.01	OpenSUSE 13	Hamara
Ubuntu 12.04 (Precise)	Debian 7 (Wheezy)	Fedora 18	CentOS 6				
	Debian 6 (Squeeze)	Fedora 17					



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Manual Installation



Mac OS

Mac OS X 10.9 (Mavericks)
Mac OS X 10.8 (Mountain Lion)
Mac OS X 10.7 (Lion)
Mac OS X 10.6 (Snow Leopard)



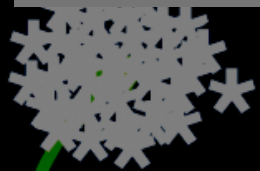
BSD

FreeBSD
OpenBSD
NetBSD



Windows

Currently unsupported



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Packaged Installation



Platform as a service

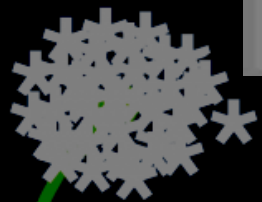
Heroku
OpenShift
Ninefold
EngineYard
BitNami



Automation

Automate deployment of diaspora* onto your own servers.

Vagrant, Puppet and Capistrano
Ansible



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apt-get Installation

```
pravi@savannah: ~/forge/debian/git/pkg-ruby-extras/diaspora-installer
File Edit View Search Terminal Tabs Help
pravi@savan... x pravi@savan... x [mosh] prave... x pravi@savan... x pravi@savan... x
Package configuration

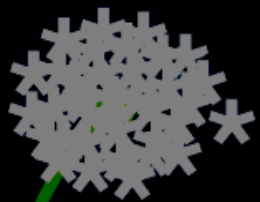
Configuring diaspora-common

If you enable https, you require at least a self-signed SSL certificate
to access this diaspora instance (as Nginx is configured to respond only
to https requests). Such a certificate (which can be generated using,
for instance, the package easy-rsa) is enough for local testing, but
will not be accepted for federation with other Diaspora pods.

You may also disable https if you want to access diaspora only locally,
via unicorn on port 3000. If you disable https, nginx configuration will
be skipped.

Some certificate authorities like StartSSL (startssl.com), WoSign
(buy.wosign.com/free) offer free SSL certificates that works with
diaspora; however, certificates provided by CAcert will not work with
diaspora.

[OK]
```



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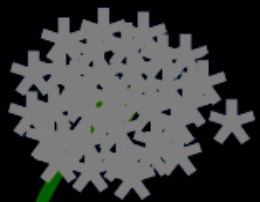
Installer .deb

*<https://wiki.debian.org/Diaspora#Jessie>



App?

- * Web client
- * Pustebelume (android)



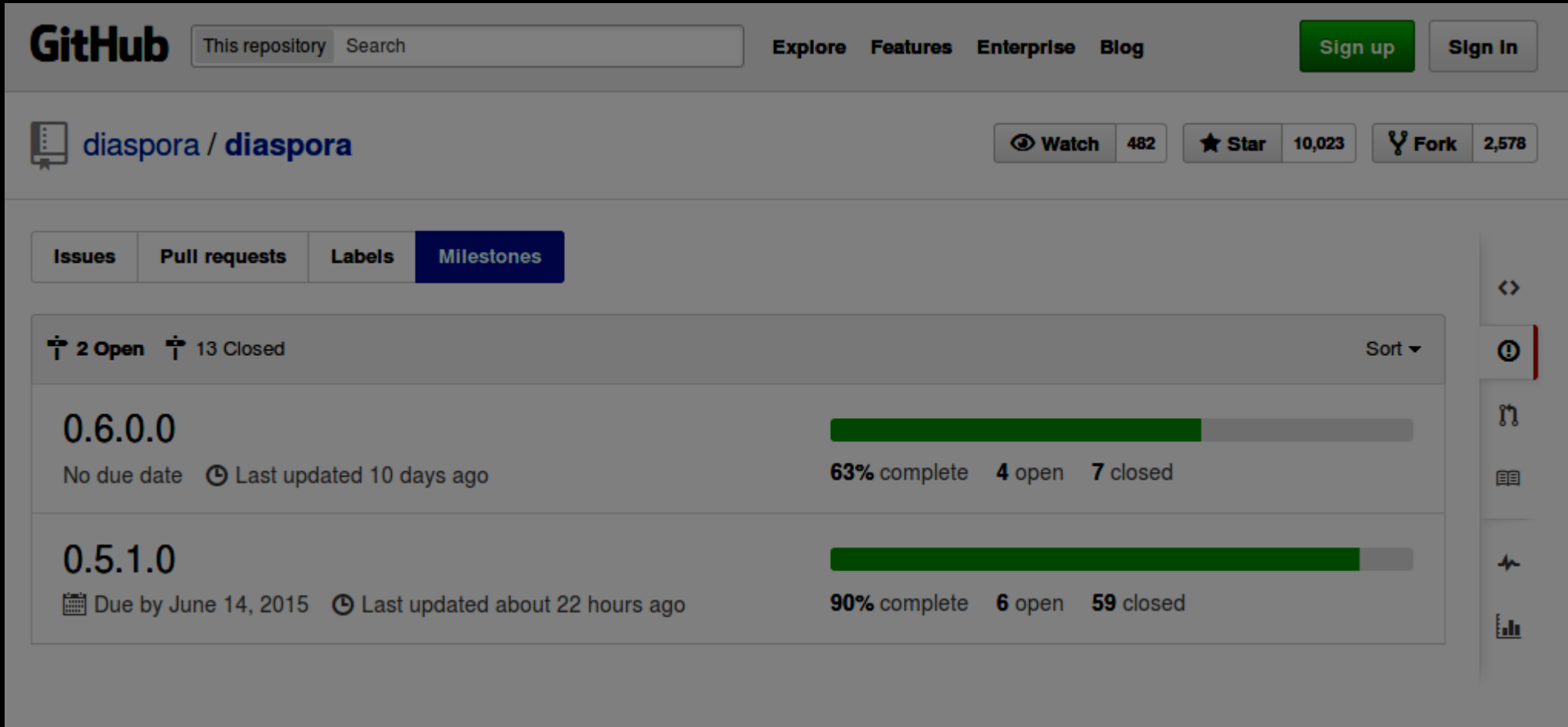
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Hosting your own pod?

- *Our experience: 700 member pod
 - * 4 core cpu min
 - * 2 GB min
 - * Storage and networking not a big issue, even if your users post a lot of images



Roadmap



The screenshot shows the GitHub interface for the repository `diaspora / diaspora`. The top navigation bar includes the GitHub logo, a search box, and links for Explore, Features, Enterprise, and Blog. On the right, there are buttons for Sign up and Sign in. Below the repository name, there are statistics for Watch (482), Star (10,023), and Fork (2,578). The main content area is divided into tabs for Issues, Pull requests, Labels, and Milestones. The Milestones tab is active, showing a summary of 2 Open and 13 Closed issues. Two milestones are listed:

Milestone	Progress	Open Issues	Closed Issues
0.6.0.0	63% complete	4 open	7 closed
0.5.1.0	90% complete	6 open	59 closed

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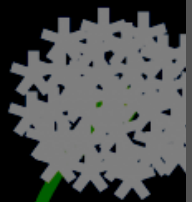
Alternatives

*RedMatrix

*Friendica



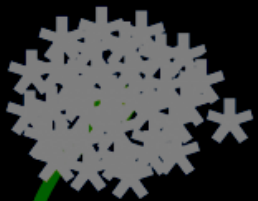
Getting on board



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Account

- *Seed on a pod
- *Server based
- *No migration – yet
 - * Export



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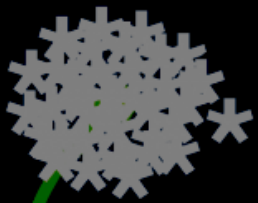
Login

- *Present yourself
 - * Create a public message
 - * Say #newhere
- *Search and follow #hashtags
- *Find and connect to other diasporians



Posting messages

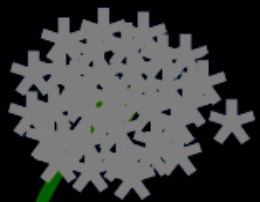
- *Markdown
- *Add media
 - * Images
 - * Videos (Youtube)
 - * Tweets
 - * ... etc



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Interact

- *React and interact
- *Personal messaging
- *Secure chat, photo gallery – soon
- *Notifications
- *Cross-posting to
 - * Facebook, twitter, tumblr, wordpress



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Pod.readme.is

- *3 Dutch infosec & privacy expert (one ethical hacker)

- *Mission, Vision, Strategy

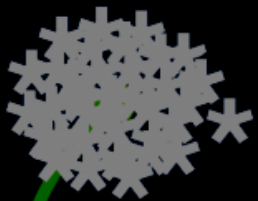
- *Offer extra privacy to seduce security tweeps

 - * VPS in Iceland

 - * Hidden service on tor:

 - * i2f4wczq2mzghx11.onion

 - * A+ SSL-labs testresult



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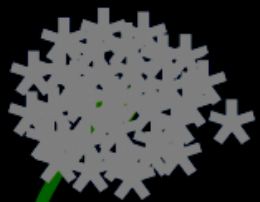
Links

*<https://diasporafoundation.org/>

*<https://github.com/diaspora/diaspora>

*<https://www.loomio.org/g/EseV9p4X/diaspora-community>

* —



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Resources

*Links

* Presentation by Eben Moglen

* <https://www.youtube.com/watch?v=QOEMv0S8AcA>

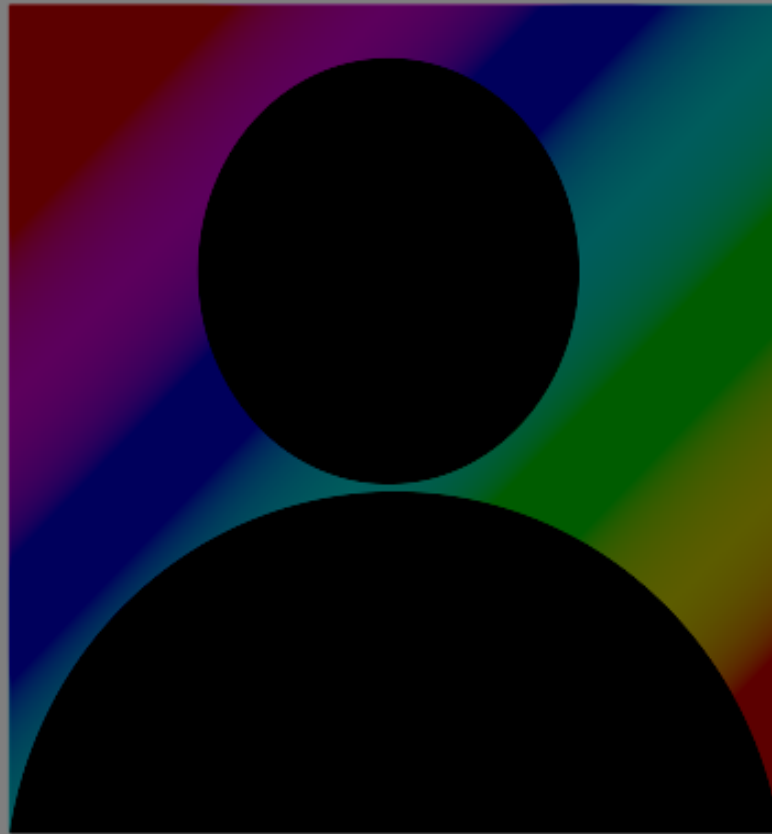
* Interview with Moglen

* <http://www.h-online.com/open/features/Interview-Eben-Moglen-Freedom-vs-the-Cloud-Log-955421.html>

A stylized dandelion seed head on a green stem, with several seeds blowing away.

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WANTED



We need y*u!

Diaspora* is a decentralized network driven by the community. Are you a Ruby on Rails/HTML/CSS/JS developer? Contact us at github.com/diaspora and join us.



Attribution

- ★ We want you: Dennis (theradialactive@pod.geraspora.de)
- ★ The Diaspora Story A presentation by Praveen
- ★ d* Arch: Antoine Duparay - Gaetan Boismal - Stéphane Roicomte (CC-BY)
- ★ Background by @Bartimeo (Creative Commons)

