Boundaries on freedom and copyleft in decentralized network environments

Christopher Lemmer Webber

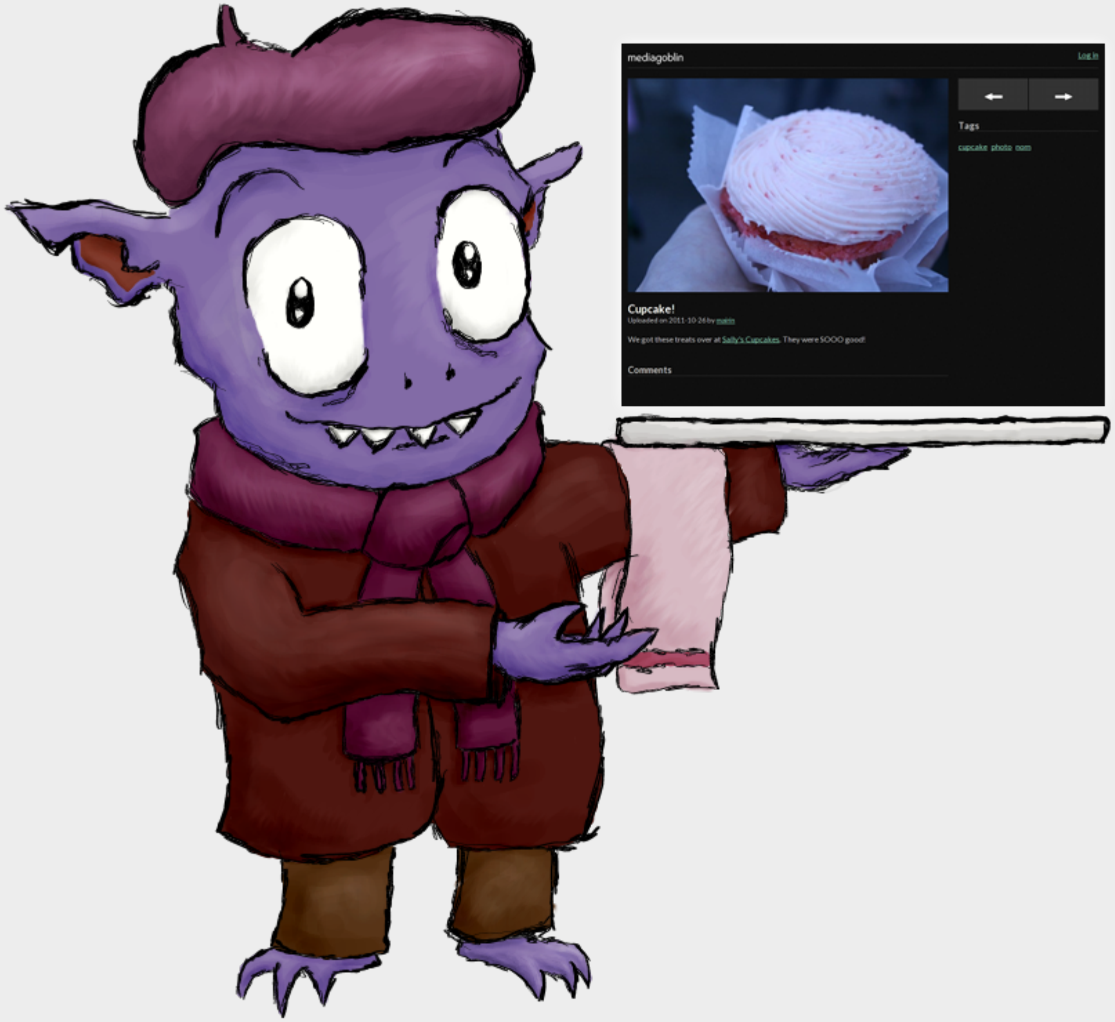
website: https://dustycloud.org/

email: cwebber@dustycloud.org

twitter: @dustyweb

fediverse: https://octodon.social/@cwebber

I’ve been doing network freedom stuff for a while



Cupcake!

Uploaded on 2011-10-26 by mairin

We got these treats over at Sally's Cupcakes. They were SOOO good!

mediagoblin

I’ve been doing network freedom stuff for a while

I’ve also been an advocate and fan of this thing

AGPLv3
Free Software
Free as in Freedom

I think AGPL has been historically a great fit

MediaGoblin, Mastodon, StatusNet all make sense to me as AGPL’ed projects (”Libre Web 2.0”)

I find the kinds of protections the AGPL provides desirable

But ...

... but?

- I’m starting to explore some ”next generation” network freedom software
- I’m not so sure the boundaries are the same here...
- Copyleft will remain useful / critical, but maybe we move the protection maxima

Let’s step back

Why do we want copyleft?

- User freedom!
- Protect the commons!

And that’s it... right???

The copyleft intentions split

	Libre Commoner	Proprietary Relicensor
Motivation	Protect the commons	Develop income
Mitigating	Tragedy of the commons	Free Rider Problem
Wants	Compliance	Non-compliance

Wanting noncompliance is a problem

- I’m highly sympathetic to reducing the free rider problem and funding FOSS... BUT
- Wanting non-compliance means wanting non-freedom
- Copyleft non-compliance has turned out to be insufficient anyway for this group; that’s how we got the SSPL
- We’ll come back to this...

Programs according to FOSS tradition

Let’s talk about something radically different

- Actors allow for massively distributing programs
- Object capabilities allow for massively distributed security

The actor model, eh?

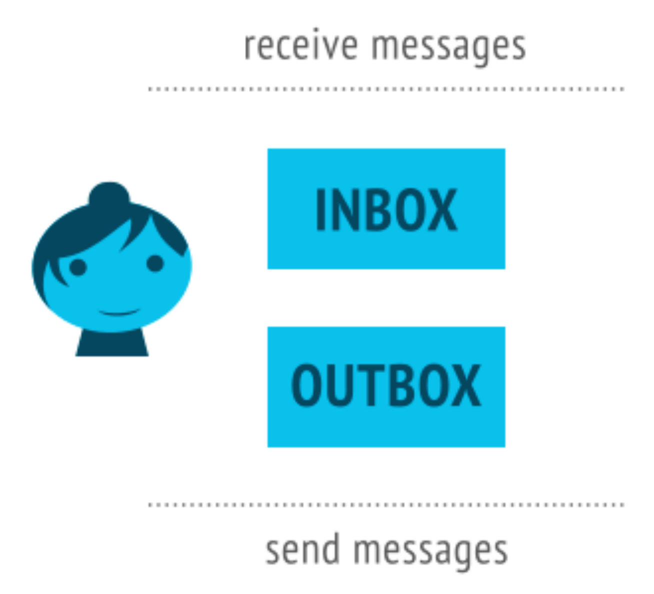
- Imagine *every* object on your program is a microservice
- *Any* of those objects can live anywhere
- Your program as a ”society” of experts sending messages to each other, not unlike sending email

Uhoh

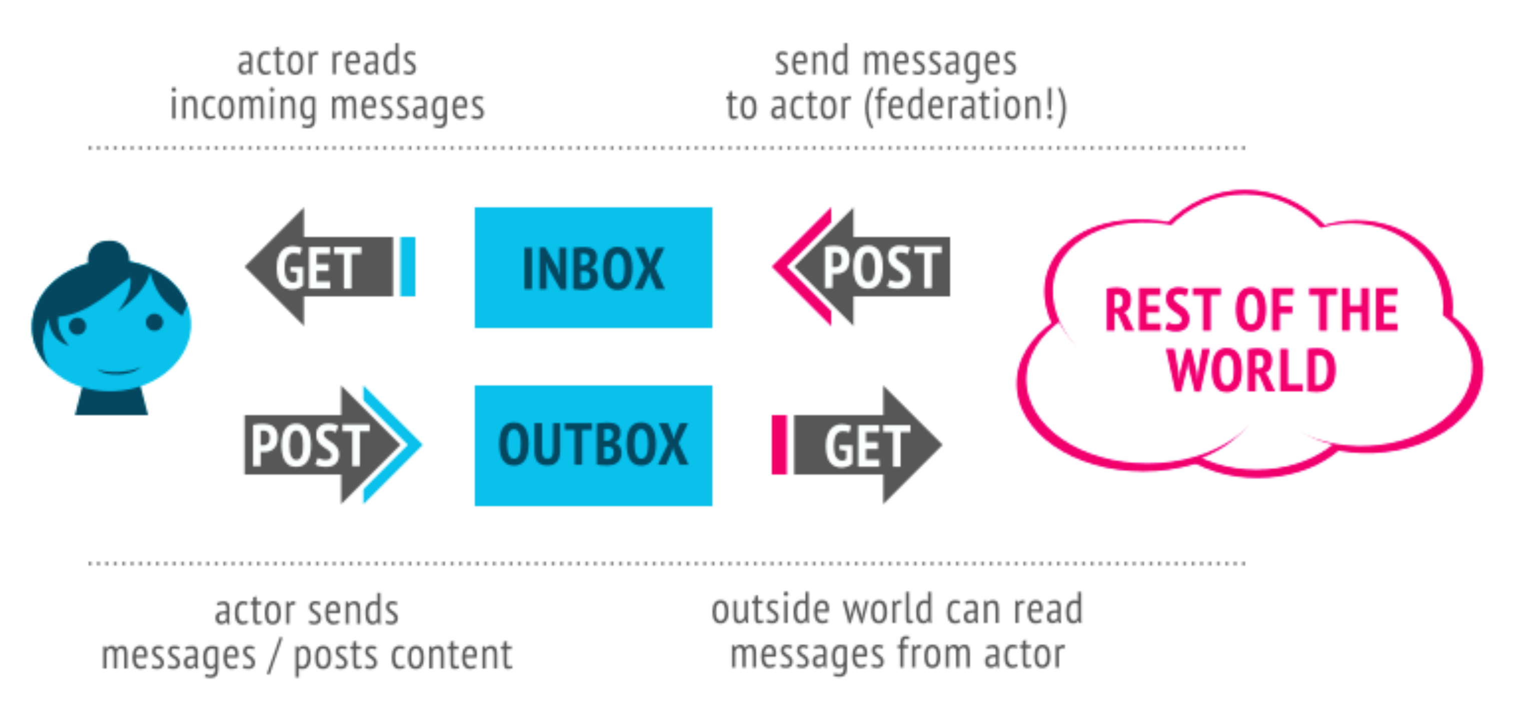
> *[...] However, in many cases you can distribute the GPL-covered software alongside your proprietary system. To do this validly, you must make sure that the free and nonfree programs communicate at arms length, that they are not combined in a way that would make them effectively a single program. [...] — GPL FAQ*

What happens when every object communicates with every other object at arm’s length?

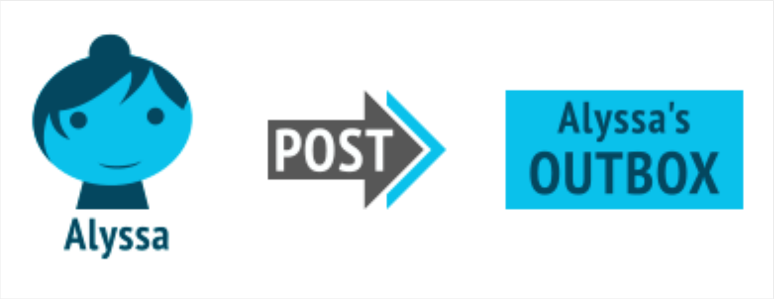
ActivityPub *is* an actor model specification



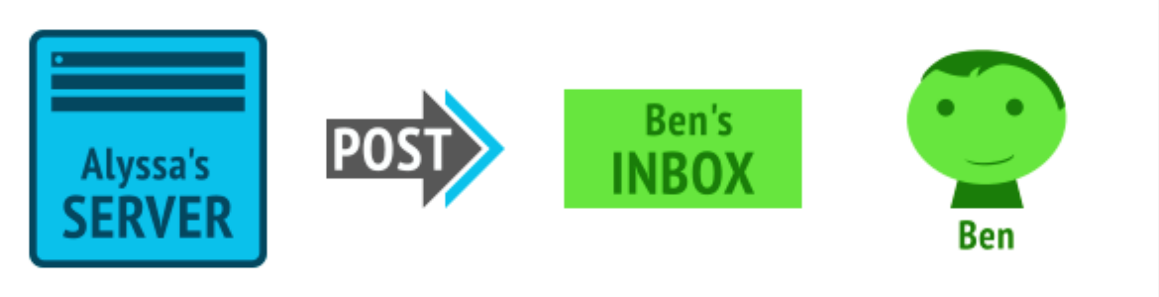
ActivityPub *is* an actor model specification


actor reads incoming messages
send messages to actor (federation!)
GET
INBOX
POST
REST OF THE WORLD
POST
OUTBOX
GET
actor sends messages / posts content
outside world can read messages from actor

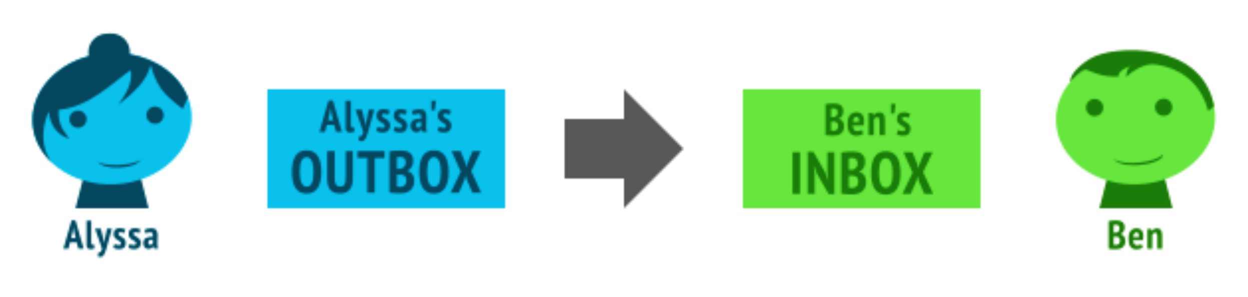
ActivityPub *is* an actor model specification



ActivityPub *is* an actor model specification



ActivityPub *is* an actor model specification



ActivityPub *is* an actor model specification

ActivityPub is a ”social protocol”. BUT...

We showed people sending each other messages

Why not parts of a computer program?

We can get as fine grained as we want

Pause!

Let's contextualize before things get harder.

Most ActivityPub implementations aren't taking the actor model this seriously

AGPL is fine/great for eg Mastodon

Ok time to get more complex!

Code or data?

```
(setq nnmail-split-fancy
      '(or ("X-Spam-Flag" "YES" "Spam")
           ("To" "depaul-lug@linux.depaul.edu" "DGLUG")
           ("To" "chicagolinux-discuss@chicagolug.org" "ChiGlug Discuss")
           ("To" "super-tux-devel@lists.sourceforge.net" "SuperTux")
           ("To" "supertux-team@lists.lethargik.org" "SuperTux")
           ("To" "gridlock@hafd.org" "BreakTheGridlock")
           ("From" "actforchange.com" "Political Campaigns")
           ("From" "ThePeaceAlliance.org" "Political Campaigns")
           ("From" "barackobama.com" "Political Campaigns")
           ("Subject" "Dipierro1" "CPP Class")
           ("To" "plans@pculture.org" "PCF Plans")
           ("To" "discuss@lists.autonomo.us" "Autonomo.us")
           ("To" "cc-staff@lists.ibiblio.org" "CC Staff")))
```

Code or data?

```
(setq  org-capture-templates
      '(("t"  "Todo"  entry
         (file+headline  "~/org/life.org"  "Various Tasks"  )
         "* TODO %?\n  %i\n  %a"   :prepend  t :empty-lines  1)
        ("e"  "Event"  entry
         (file+headline  "~/org/life.org"  "Events" )
         "* %^{Event}\n   %^t\n  %i\n  %a\n\n%?"    :prepend  t :empty-lines  1)
        ("W"  "Weigh-in (no table)"   entry
         (file+headline  "~/org/diet.org"  "Daily Logs"  )
         "* Diet for day %t\n%^{Weight}p"
         :prepend  t :empty-lines  1)
        ("b"  "Blood pressure"   table-line
         (file+headline  "~/org/bpressure.org"   "Blood pressure table"  )
         "| %U | %^{systolic} | %^{diastolic} | %^{pulse} | %^{note} |"      )
        ("cgt"  "Contracting general TODO"   entry
         (file+headline  "~/org/contracting/contracting.org"    "Various Tasks"  )
         "* TODO %?\n  %i\n  %a"   :prepend  t :empty-lines  1)
        ("co"  "Open Tech Strategies"  )
        ("cot"  "OTS Todo"  entry
         (file+headline  "~/org/contracting/opentechstrategies.org"     "Various Tasks"  )
         "* TODO %?\n  %i\n  %a"   :prepend  t :empty-lines  1)))
```

Code or data?

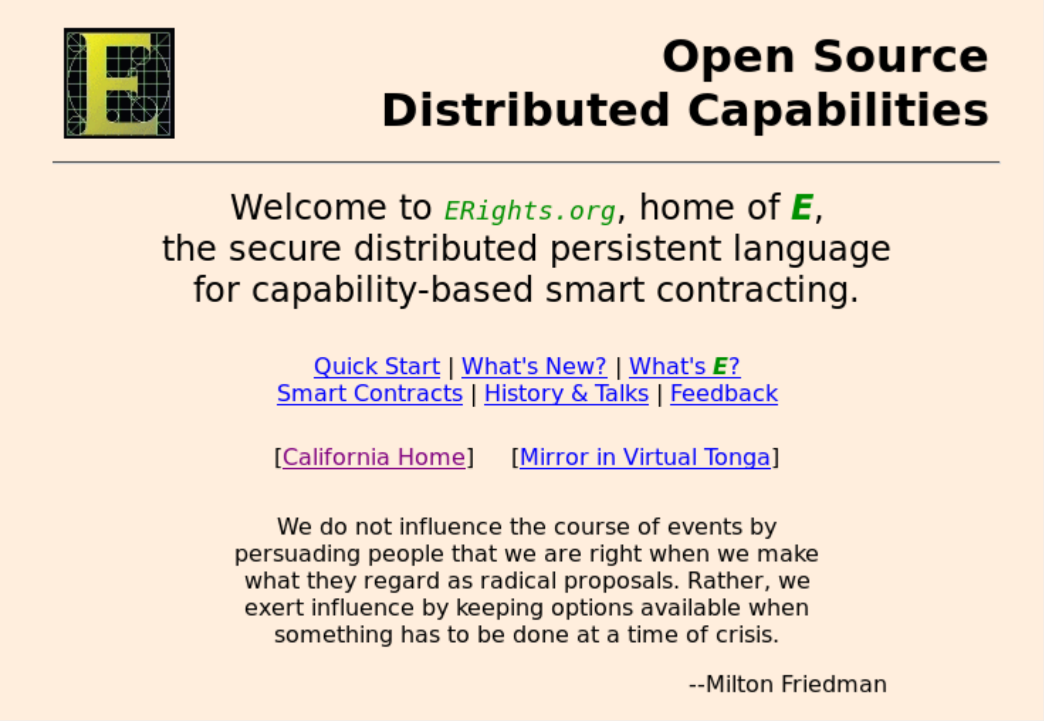
```
(defun org-diet-hacky-jump-to-today ()
  "Hackily jump to today in diet file"
  (interactive)
  (switch-to-buffer (get-file-buffer "~/org/diet.org"))
  (beginning-of-buffer)
  (search-forward-regexp "^| Total")
  (beginning-of-line)
  (previous-line))
```

Now consider the wants-noncompliance camp

Without the right for private, local modification can someone pressure me to revealing:

- My mail configuration?
- My org-mode setup, revealing my health history?
- My private blocklist?

Object capabilities for safe execution



Open Source
Distributed Capabilities

Welcome to *ERights.org*, home of ***E***,
the secure distributed persistent language
for capability-based smart contracting.

Quick Start | What's New? | What's ***E***?
Smart Contracts | History & Talks | Feedback

[California Home] [Mirror in Virtual Tonga]

We do not influence the course of events by persuading people that we are right when we make what they regard as radical proposals. Rather, we exert influence by keeping options available when something has to be done at a time of crisis.

--Milton Friedman

We can even share and run code safely across the network

This isn’t an abstract for me

Spritely will be exploring this

Is it time for the LAGPL?

What does that mean, what’s the exception?

A library exception? What does that mean for actors?

If you can’t see the remote object, how do you know whether they’re modifying the library or just using it?

But I still want to protect the commons!

Here’s an awful future for TNG networks, featuring lax/permissive licenses:

- I share some cool code on the network
- Someone else picks it up on their machine, modifies it
- They distribute it back to my computer, modified
- Bing! I get a notification that I’m not allowed to run or use or modify that code that came back to me

So we still want to protect the commons

In fact, the GPL protects against the previous scenario!

Is the best LAGPL for TNG networks the GPL?

- Private modification still possible
- Code passed around on network can still be protected

Conclusions

- Actually I’m not confident about my conclusions because I haven’t found enough people thinking about this space
- But AGPL feels good for Libre Web 2.0
- But maybe not for Libre Networks TNG?
- But GPL-level of copyleft still good, necessary

Thanks!

Christopher Lemmer Webber

website: https://dustycloud.org/

email: cwebber@dustycloud.org

twitter: @dustyweb

fediverse: https://octodon.social/@cwebber

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