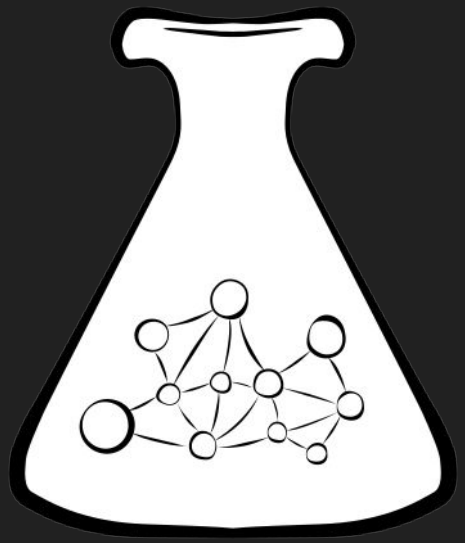


Spritely Networked Communities Institute

Plurality Research Network Conference

January 13th-15th 2023

This is a lightning talk, so it is given that:

1) Centralized Social Media is Busted

2) We are all here looking forward to individual-empowered safe online communities.

We formed a non-profit to help with just that!

Spritely Institute Founders

- **Christine Lemmer Webber - Open & Social**
  - ActivityPub, The Spritely Project, MediaGoblin

Spritely Institute Founders

- **Christine Lemmer Webber - Open & Social**
  - ActivityPub, The Spritely Project, MediaGoblin
- **Randy Farmer - 40+yrs Social Platforms**
  - Electric Communities, Avatars, E, JSON

The ActivityPub standard
is *great* for
federated message sharing.

The ActivityPub standard
enables
"follow" networks, like Mastodon.

ActivityPub Alone Isn’t Enough

- Content survival
- Identity migration
- Better privacy & security
- Stronger anti-abuse & anti-harassment
- Context confusion
- Richer interactions

Disclaimer

What this talk is NOT about:

- Changing the ActivityPub standard
- "Fixing" Mastodon, or other social apps

Our Focus:
Re-Decentralize
Networked Communities

A new foundation:

Secure and distributed is the *default*

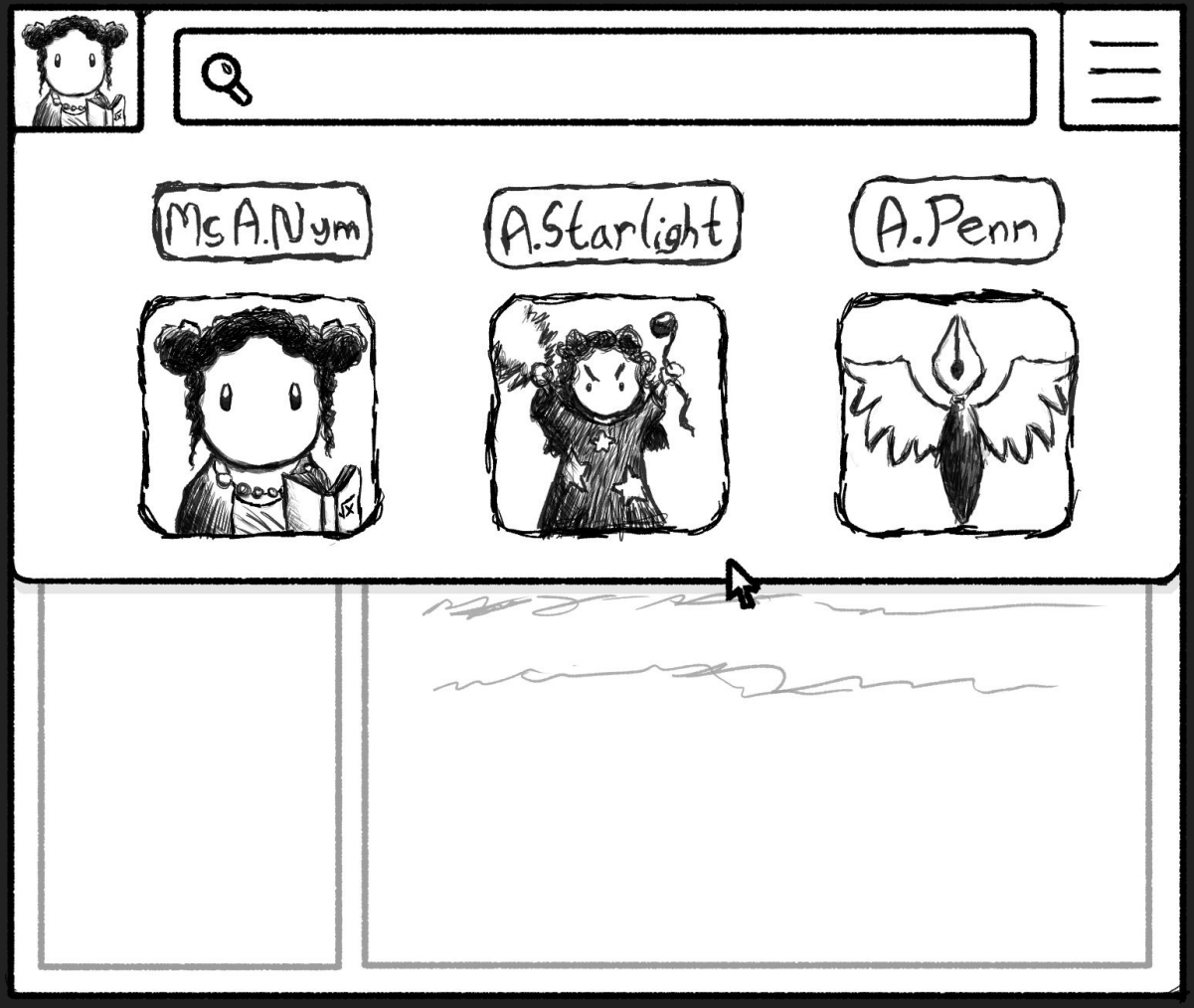
Your applications *represent you*

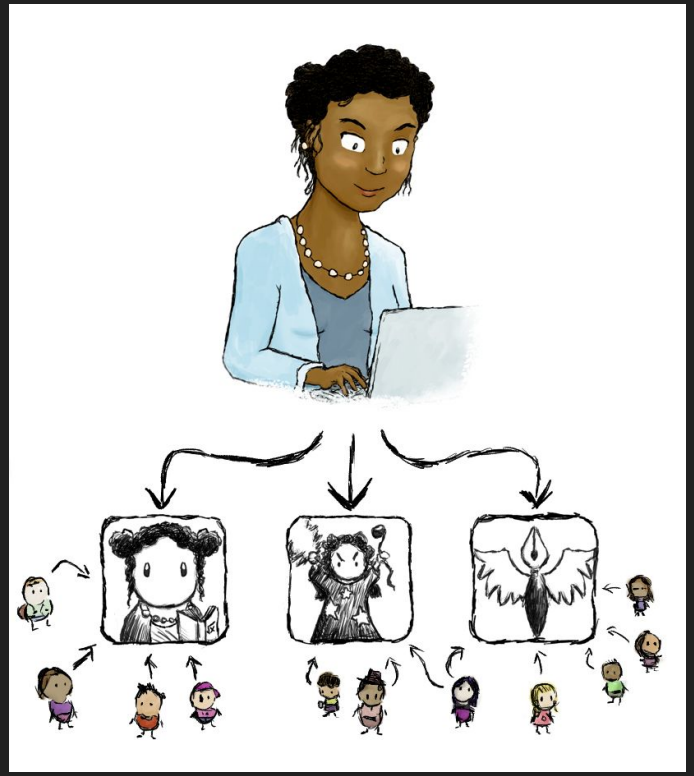
Our social-stack of objects:

- **People**
  - Identity, Relationships, Connections
- **Communities**
  - Contexts, Memberships, Moderation
- **Applications**
  - Security, Trust, Consent -> Commerce

No Gatekeepers Required

Mock Demonstration


Ms A. Nym
A. Starlight
A. Penn



Chat > Ben's Gaming Hangout

Ben

Hey AStarlight, I'm heading over to my friend ?Carol's place for board games and pizza, want to come?

?Goblin

I wish I had pizza...

AStarlight

Sure! Hello ?Carol, I'd love to join if that's ok!

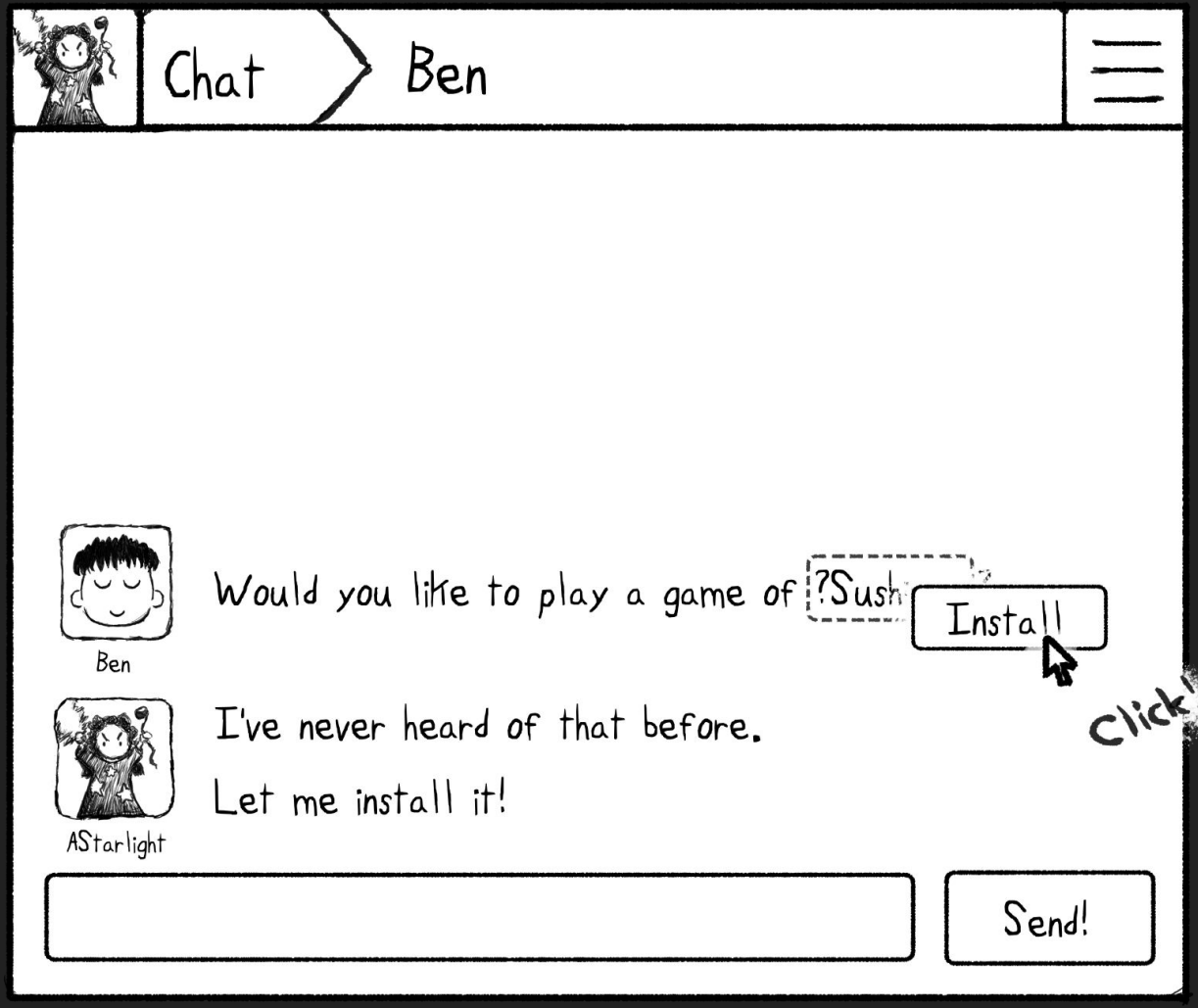
?Carol

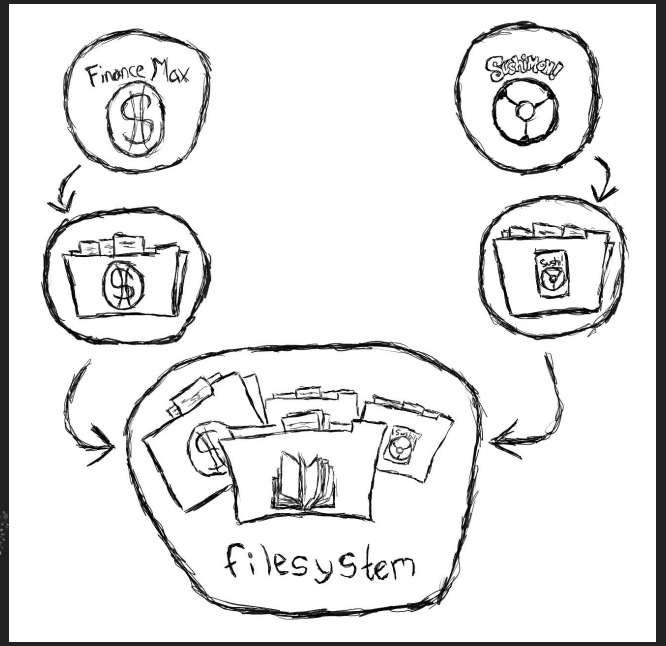
I'd love for you to join us, AStarlight!

A friend of Ben's is a friend of mine!

Looking forward to it!

Send!


Chat
Ben
Would you like to play a game of ?Sush
Install
Ben
I've never heard of that before.
Let me install it!
AStarlight
Click!
Send!


Finance Max
filesystem

Chat

Ben

I've never heard of that before.

Let me install it!

AStarlight

Okay, installed!

AStarlight

Great, now you need a starter deck!

Ben

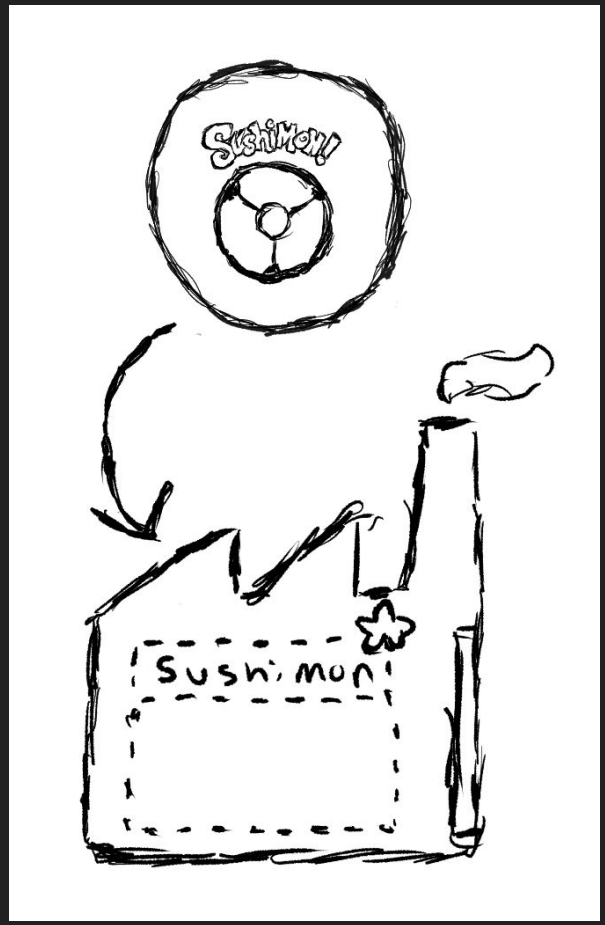
Sushimon

Starter Deck!

Claim your gift!!

Ben

Send!




Chat
Ben
I've never heard of that before.
Let me install it!
AStarlight
Okay, installed!
AStarlight
Great, now you need a starter deck!
Ben
Sushimon
Starter Deck!
Claim your
Claim
Ben
Click!
Send!

What does the agency do for Alisha?

- Contexts and personas
- Mechanisms of consent
- Decentralized naming
- Robust commerce and trade
- Safe, cooperative apps

(progress report)

Papers, Platforms, Developers (Oh My)


The Heart of Spritely: Dis ×

https://spritely.institute/static/papers/spritely-core.html 120%

The Heart of Spritely: Distributed Objects and Capability Security

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A Scheme Primer

Table of Contents

The following is a primer for the Scheme family of programming languages. It was originally written to aid newcomers to techno developed at The Spritely Institute but is designed to be general enough to be readable by anyone who is interested in Scheme.

This document is dual-licensed under Apache v2 and Creative Commons Attribution 4.0 International and its source is publicly a

1. Introduction

In all the world of computer programming, there are few languages as simple, clean, comprehensive, powerful, and extensible as introduction to the R5RS edition of Scheme's standardization[1] explains its philosophy well:

> Programming languages should be designed not by piling feature on top of feature, but by removing the weaknesses and restrictions that make additional features appear necessary.

This minimalism means that the foundations of Scheme are easy to learn. The R5RS introduction continues with:

> Scheme demonstrates that a very small number of rules for forming expressions, with no restrictions on how they are comp suffice to form a practical and efficient programming language that is flexible enough to support most of the major program paradigms in use today.

Petnames: A humane approach to secure, decentralized naming

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"If we ever show a DID to a user we have failed."

Names must be human-readable in order to be widely used. Unfortunately, while DIDs and Tor .onion addresses are decentralized and globally unique, they are not human readable. How can we build user interfaces that real users might actually use? In this paper we provide an overview of petname systems, a way of mapping human readable names to cryptographically secure names, and describe changes to two user interface designs that we believe that are compatible with intuitive user expectations. We first discuss the smartphone contact list as already approximating petnames to some degree and discuss how to augment it with secure introduction. We then walk through several changes to browsers (which may be provided natively or as an extension) which add the functionality of a petname system. By utilizing petname systems we are able to collectively support individual naming definitions, community curated directories of names, as well as exiting naming authorities such as certificate authorities and the domain name system, government agencies such as trademark offices, and decentralized systems such as Namecoin.

1. The what and why of petname systems

Papers, Platforms, Developers (Oh My)

NLnet grant bootstraps OCapN protocol standardization effort!

Spritely Institute -- Wed 19 October 2022

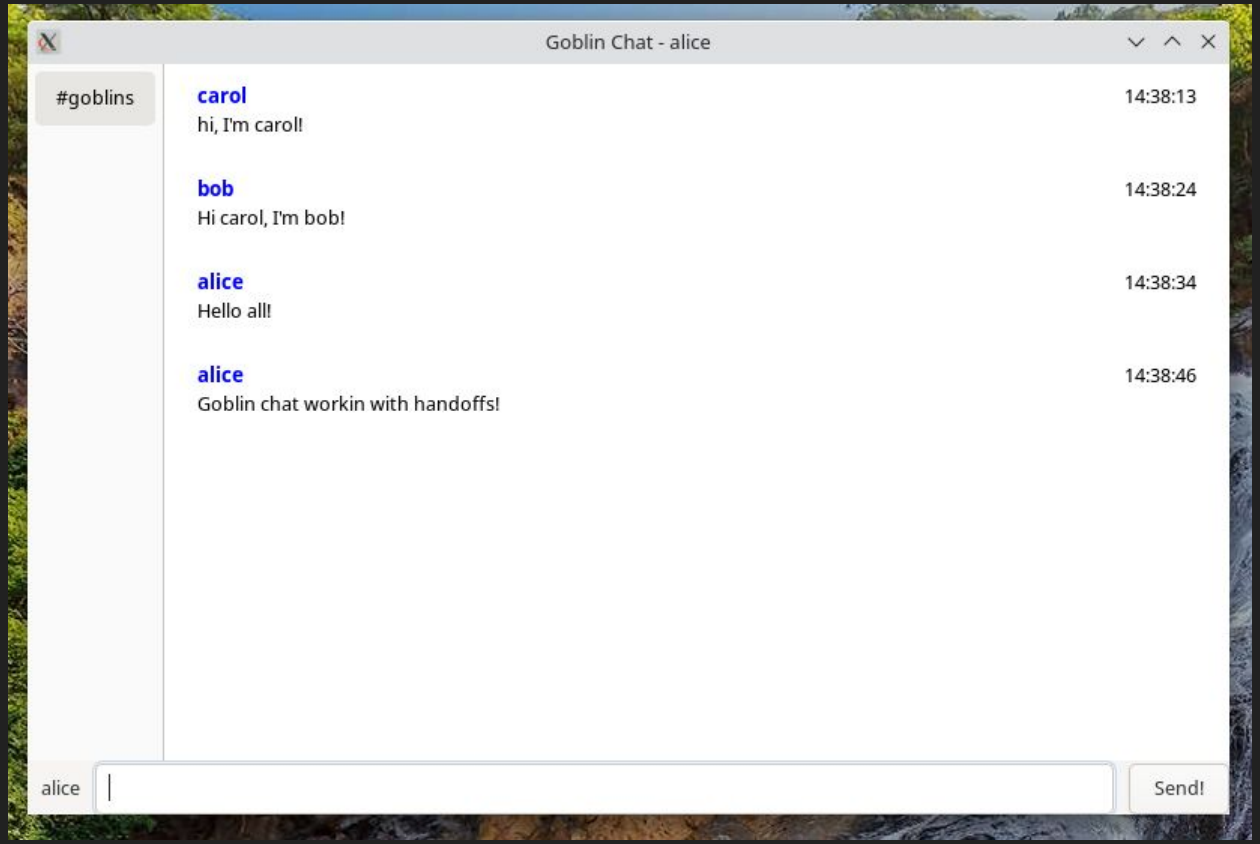
Jessica Tallon received a grant from NLnet to bootstrap the standardization process of OCapN (Object Capability Network). Jessica has worked with us on previous Spritely projects, including previous NLnet grants related to implementing petnames. Spritely Institute's role will be providing direction and support to Jessica, who will leading the effort.

We want to thank NLnet for funding this important work as standardization is critically important for the wider adoption and implementation of OcapN.

Steps:

- Initial Draft Specs
- Form a Community Group (preceding the standards Working Group)
- Compliance & Test Suite
- Implementers Guide
- Submit/Transform to [TBD] standards body

Papers, *Platforms*, Developers (Oh My)



Papers, Platforms, *Developers* (Oh My)

WORDS

Essays, etc.

My name is Diana. I make things but generally not very well. I put thoughts here.

ME, ELSEWHERE:

- Mastodon
- GitHub

> A Conceptual Introduction to Spritely Goblins

A Conceptual Introduction to Spritely Goblins

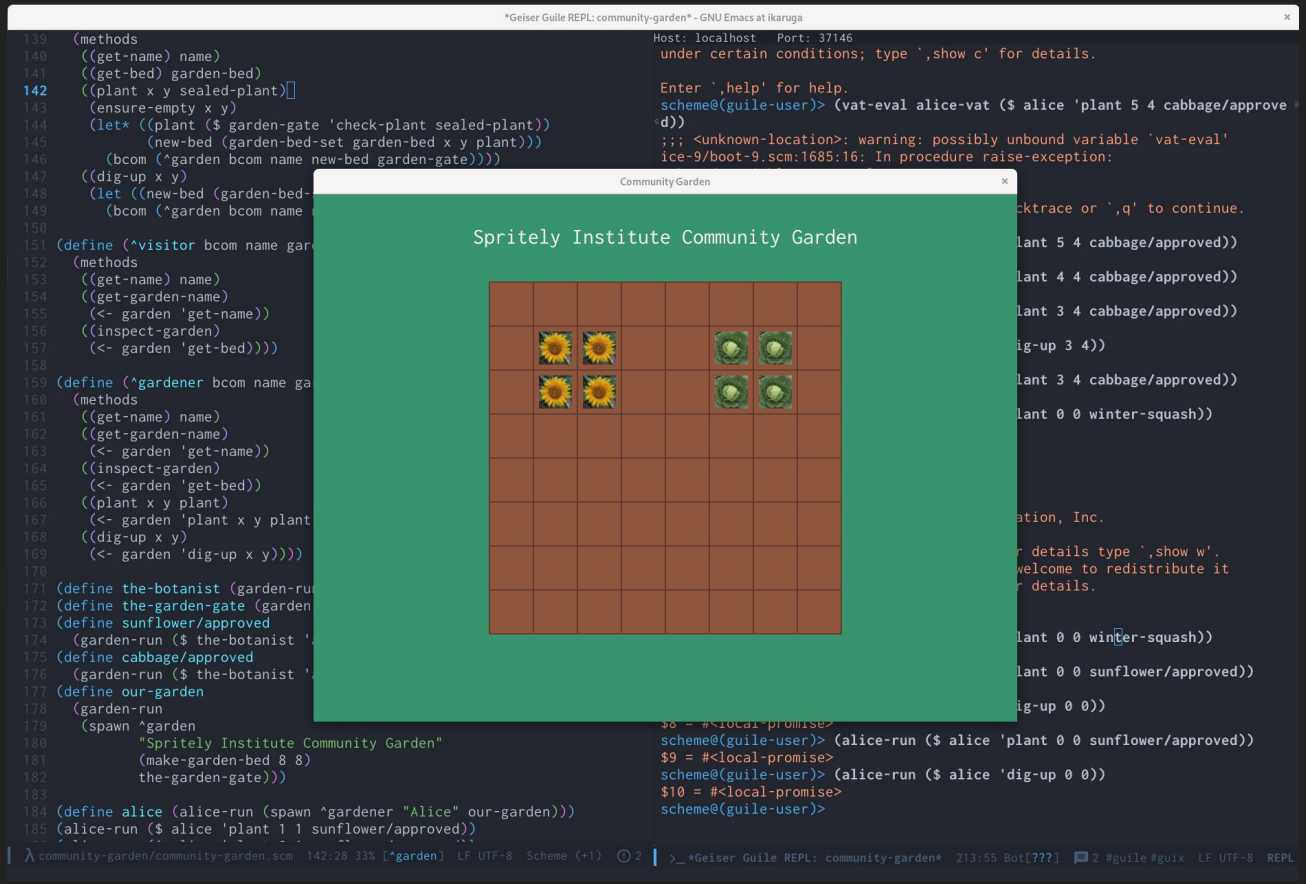
I have recently been fascinated by Goblins, of Spritely fame. It is, at present, a library in Guile and Rackets which provides a model of programming for peer-to-peer applications that makes permissions a kind of first-class object. In this essay I try to explain what that means, but I'll admit I've had some trouble with it so far. It's just... alien. It seems like a different order of sorcery than the likes to which I have grown stubbornly accustom. What it makes easy should be a decade of work. The principle of least authority -- an asymptote! -- made as practical as a parameter.

Goblins articulates a security paradigm of *object capabilities* which I find to be an apt name. In this paradigm, you construct objects that have capabilities, which are functions. If someone in the network can access a function in an object on your machine, it is only because you gave them permission. *If a function runs, it is because it is authorized to do so.*

That is the model Goblins hands down, not one of peers or users or identities, but of capabilities. You write object capabilities as stateless functions, and can call upon those capabilities that you can access. Applications can gather such capability-functions to create complex communal systems built upon consent. *If a function runs, it is because it is authorized to do so.*

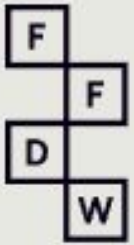
This is not some cryptocoin ledger. There is no append-only constraint or proof-of-work friction to contend with. The magic at work here is subtle rather than costly; its promises are thus paradigmatic

Papers, Platforms, *Developers* (Oh My)



We're an Institute!

Let's share research!



Filecoin
Foundation for the
Decentralized
Web

Agoric

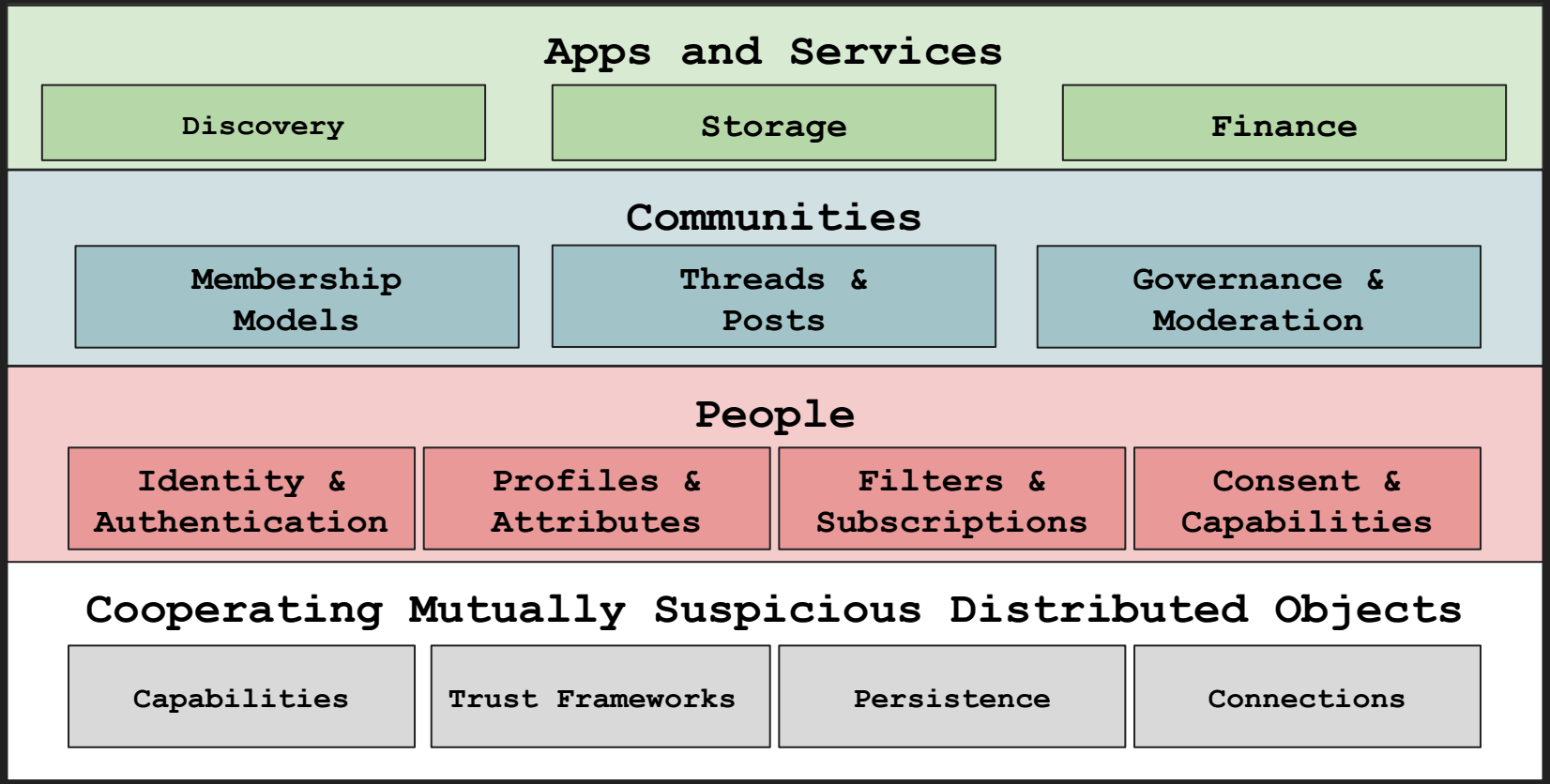
Our Supporters

Let's Re-Decentralize Community Together!

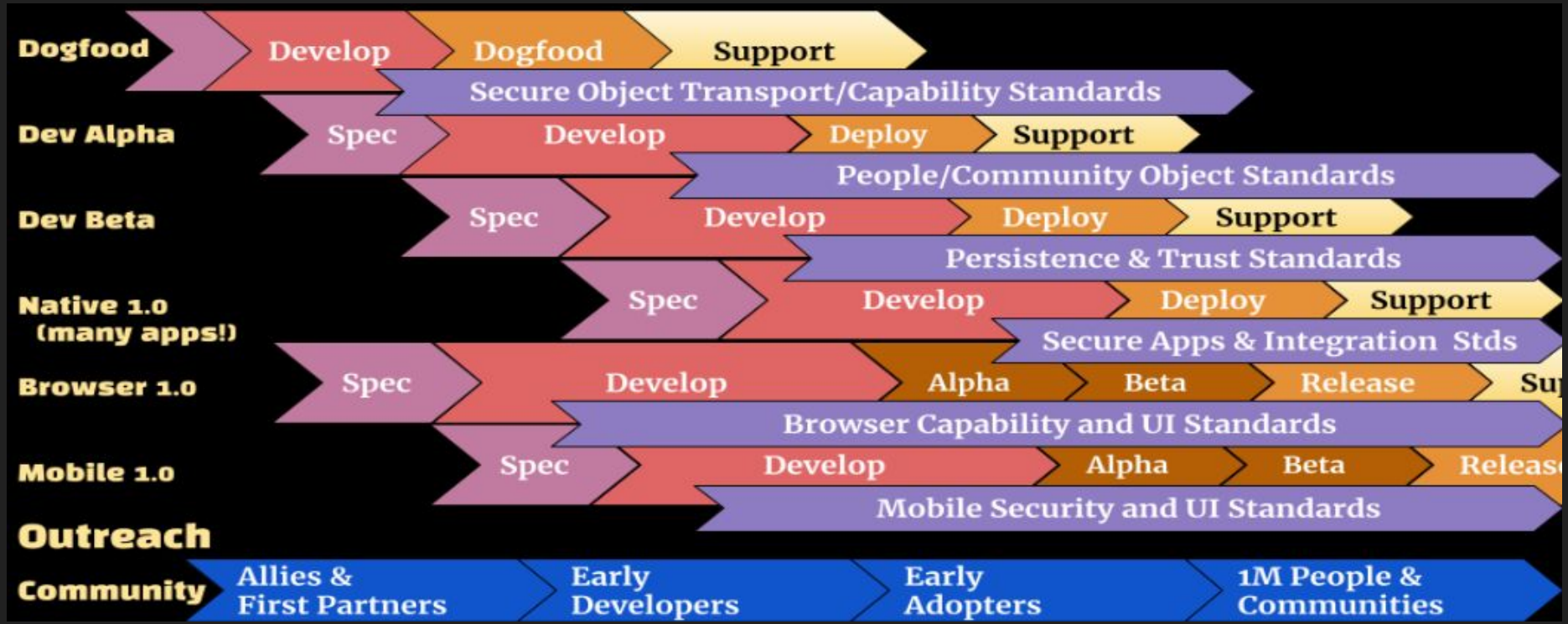
randy@spritely.institute
christine@spritely.institute

Papers, Platforms, *Developers* (Oh My)

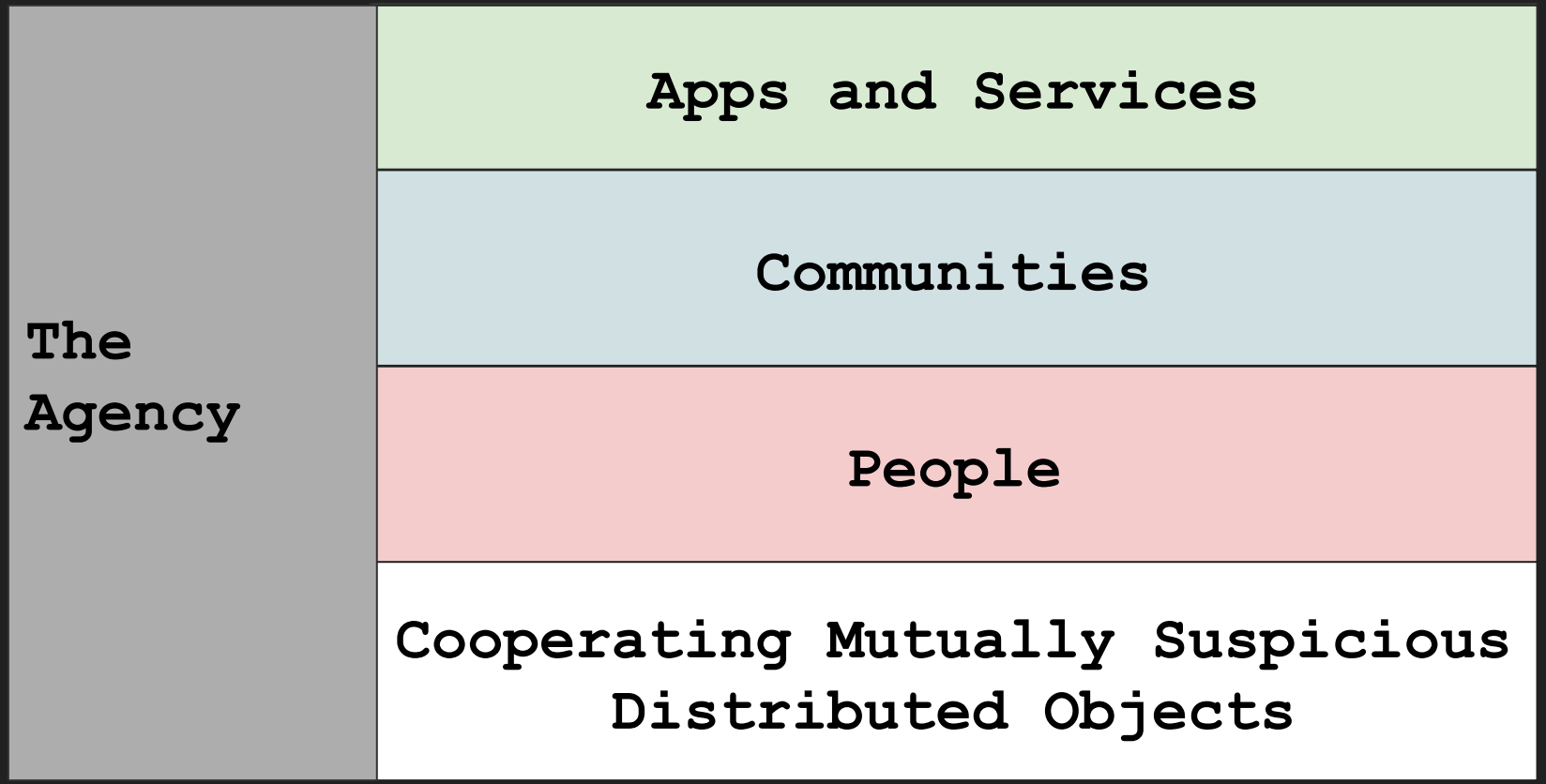
Distributed Network Architecture



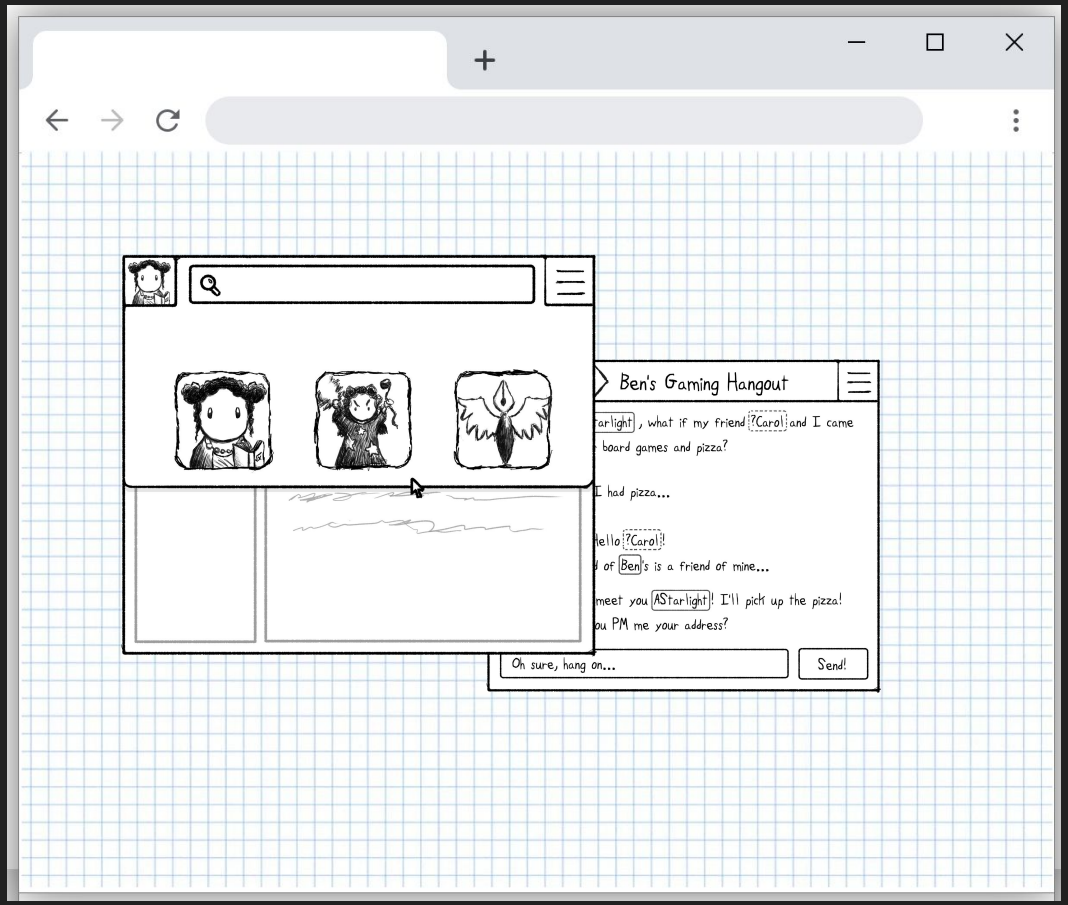
SNCI Milestones (Fully Funded) 2022-2025

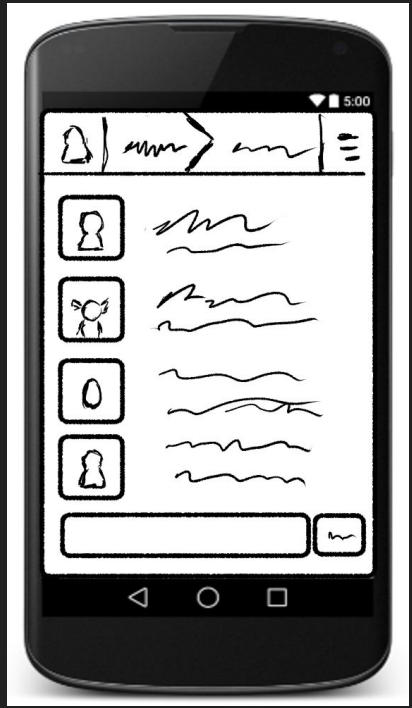


The Agency: Client & Server



The Agency


Ben's Gaming Hangout
, what if my friend ?Carol and I came
board games and pizza?
I had pizza...
Hello ?Carol!
of Ben's is a friend of mine...
meet you AStarlight! I'll pick up the pizza!
ou PM me your address?
Oh sure, hang on...
Send!


5:00

But what we need to enable fully-user controlled secure communities requires so much more than federated messaging.

Papers, Platforms, Developers (Oh My)