

Massively Multiplayer Online Secure Environments

The only logical conclusion to our work!

Christopher Lemmer Webber

<https://dustycloud.org/>

Fediverse: <https://octodon.social/@cwebber>

Birdsite: <https://twitter.com/dustyweb>

DIDs for self-control!

But how can we make DIDs usable?

How can we incentivize humans to use them?

Actually rebooting the web of trust

Failed web of trust: keysigning parties

Actually rebooting the web of trust

Failed web of trust: keysigning parties

Successful almost-web-of-trust: social networks!

Actually rebooting the web of trust

Failed web of trust: keysigning parties

Successful almost-web-of-trust: social networks!

We have a distributed social network system...
ActivityPub!

Zooko's Triangle

- Decentralized/Secure
- Globally Unique
- Human Meaningful

Pick two!

Zooko's Triangle

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Pick two!

DIDs: Decentralized + Globally Unique

So how can humans use them?

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

- *Mark S. Miller*

Petnames

Petnames are like your contact list

Mom: 555-555-4151

Petnames

Petnames are like your contact list

Mom: 555-555-4151

Edge names are names your contacts recommend

Chris Webber => Manu Sporny

Petnames

Petnames are like your contact list

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Anyone can be a "naming hub"

DNS becomes an equal participant naming hub

Back to social networks!

- Follow a friend, that's establishing trust

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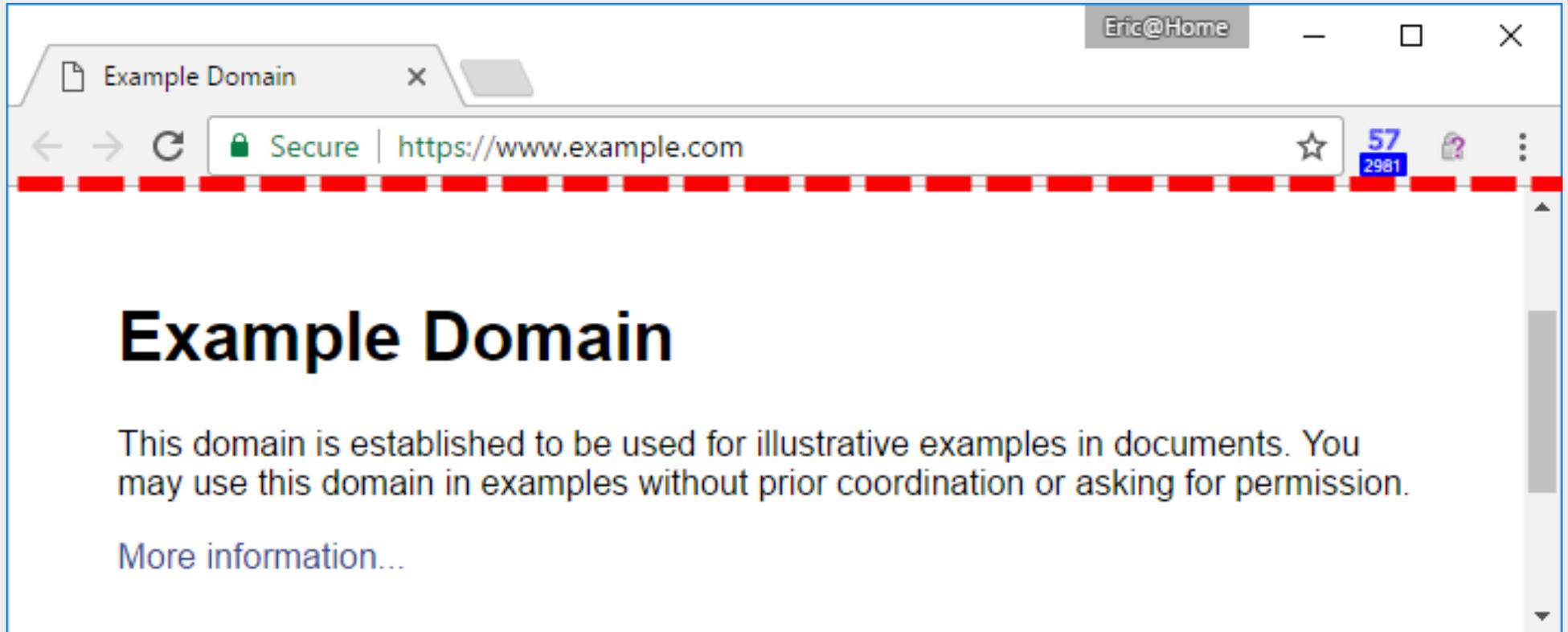
Back to social networks!

- Follow a friend, that's establishing trust
- Set a petname for them!
- Give an edge name to recommend them to others by!
- Build up your petnames contact list as a *natural side effect* of using a social network!

PROBLEM ONE: Browsers!

Browsers are the most desirable and worst target

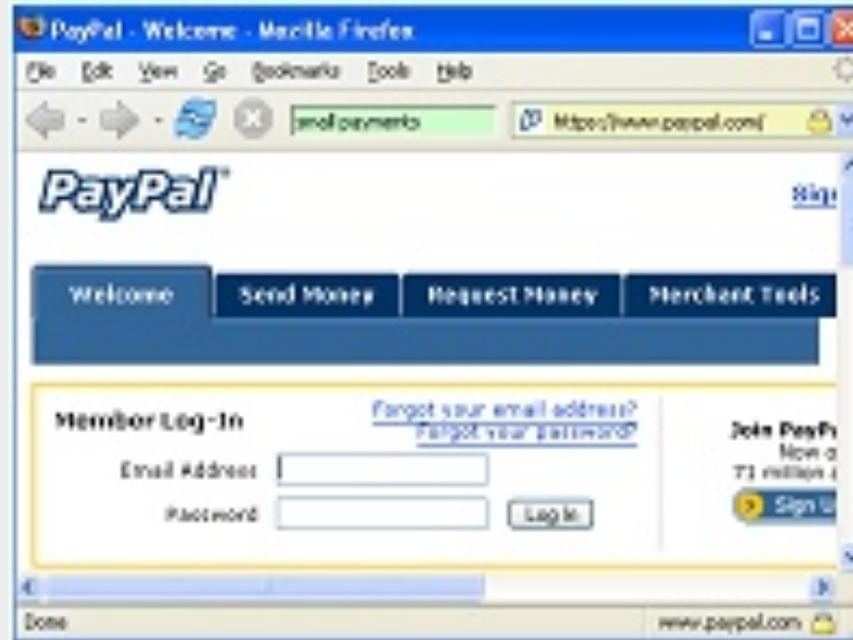
PROBLEM ONE: Browsers!



The line of death: you can't trust anything below the address bar

From <https://textslashplain.com/2017/01/14/the-line-of-death/>

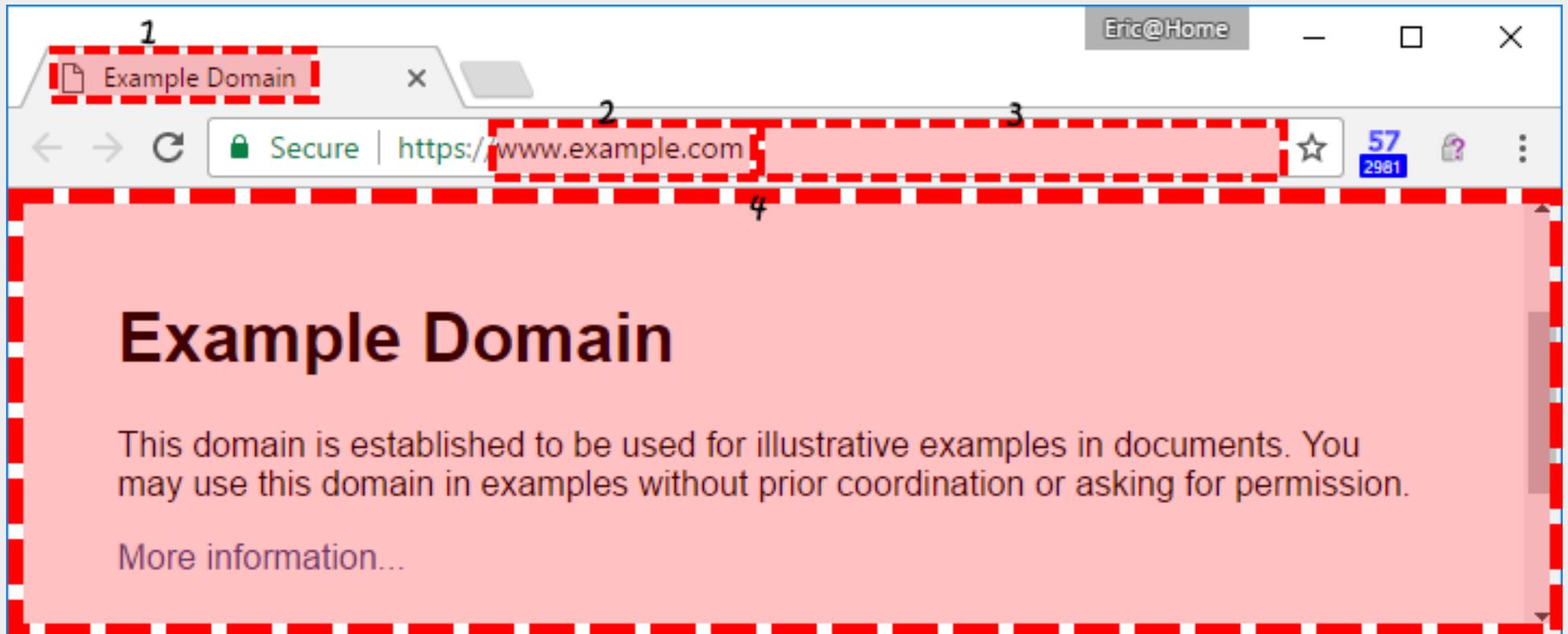
PROBLEM ONE: Browsers!



But we could treat bookmarks as petnames, put them to the left of the address bar

From <https://addons.mozilla.org/en-US/firefox/addon/petname-tool/>

PROBLEM ONE: Browsers!



This still sucks, HTML5 even broke the address bar

From <https://textslashplain.com/2017/01/14/the-line-of-death/>

PROBLEM TWO: Insufficient motivation

- "It's decentralized!" isn't sufficiently motivating of a feature to join a decentralized social network for most people

PROBLEM TWO: Insufficient motivation

- "It's decentralized!" isn't sufficiently motivating of a feature to join a decentralized social network for most people
- "Control yourself!" isn't enough of a motivation to put effort into self-sovereign identity

PROBLEM TWO: Insufficient motivation



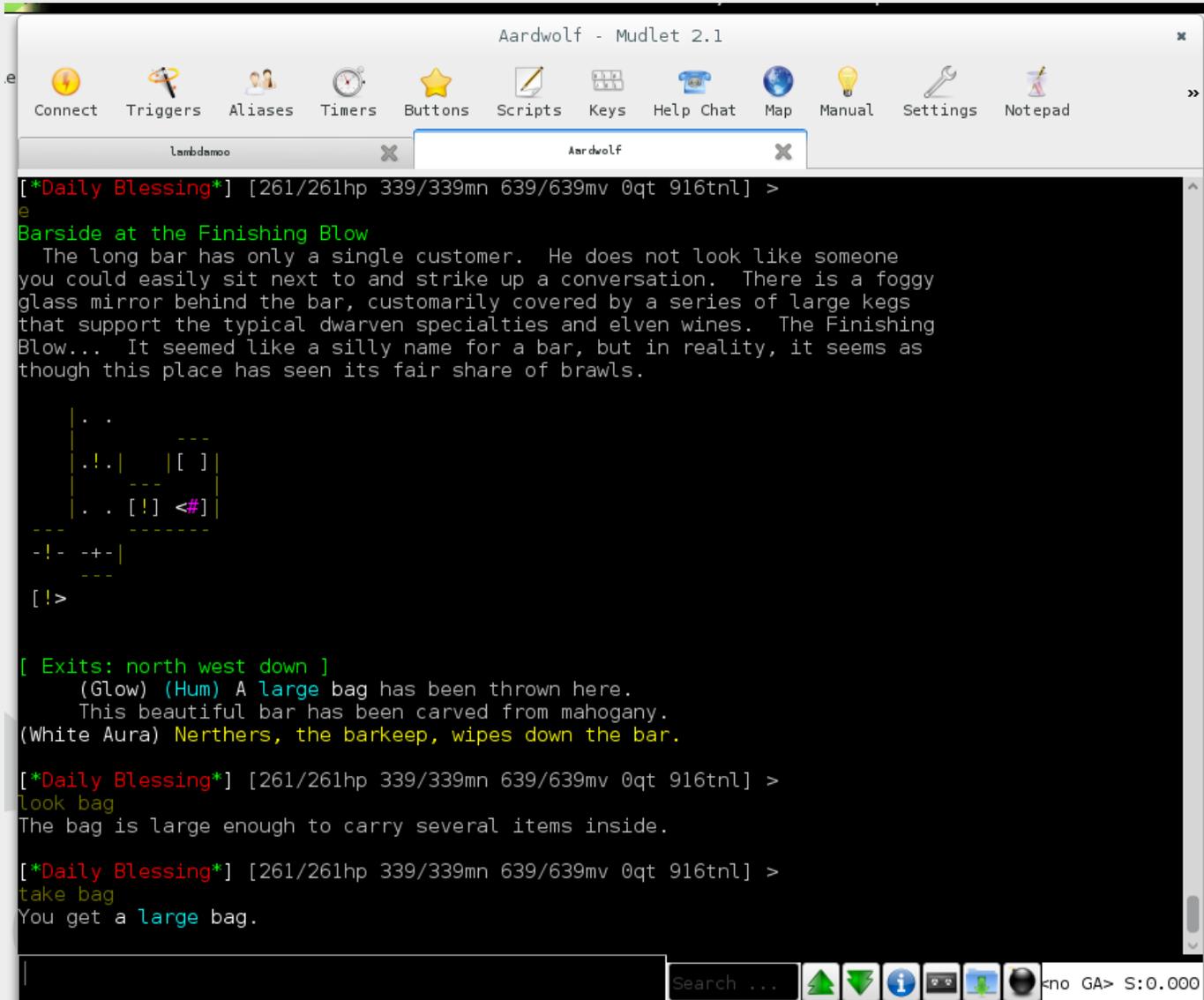
XKCD 191, CC BY-ND by Randall Munroe

PROBLEM TWO: Insufficient motivation

Can we "trick" users into joining by... having fun?

The lost cyberpunk world of social games

MUDs, MOOs, MUSHes: social spaces with a sense of place



The screenshot shows the Mudlet 2.1 interface. The title bar reads "Aardwolf - Mudlet 2.1". The menu bar includes: Connect, Triggers, Aliases, Timers, Buttons, Scripts, Keys, Help Chat, Map, Manual, Settings, and Notepad. There are two tabs: "Lambdamoo" and "Aardwolf". The main window displays the following text:

```
[*Daily Blessing*] [261/261hp 339/339mn 639/639mv 0qt 916tnl] >
Barside at the Finishing Blow
The long bar has only a single customer. He does not look like someone
you could easily sit next to and strike up a conversation. There is a foggy
glass mirror behind the bar, customarily covered by a series of large kegs
that support the typical dwarven specialties and elven wines. The Finishing
Blow... It seemed like a silly name for a bar, but in reality, it seems as
though this place has seen its fair share of brawls.

  . .
  .!.|  | [ ]
  . . [!] <#]
-----
-!- +-|
-----
[!>

[ Exits: north west down ]
(Glow) (Hum) A large bag has been thrown here.
This beautiful bar has been carved from mahogany.
(White Aura) Nerthers, the barkeep, wipes down the bar.

[*Daily Blessing*] [261/261hp 339/339mn 639/639mv 0qt 916tnl] >
look bag
The bag is large enough to carry several items inside.

[*Daily Blessing*] [261/261hp 339/339mn 639/639mv 0qt 916tnl] >
take bag
You get a large bag.
```

At the bottom of the window, there is a search bar and a system tray with icons for network, volume, and other system functions. The system tray shows "<no GA> S:0.000".

The lost cyberpunk world of social games

Habitat: massively multiplayer graphical game... in 1985!



https://web.stanford.edu/class/history34q/readings/Virtual_Worlds/LucasfilmHabitat.html

The lost cyberpunk world of social games

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[Shared,](#)
[extensible](#)
[virtual worlds](#)
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<mailto:vijay@saraswat.o>

Converted to HTML:

Sun Oct 5 1997

Last modified: Wed Apr
23 1997

Started work: Mon Apr 21
1997

Design requirements for network spaces

[Vijay Saraswat](#)

[AT&T Research](#), 180 Park Avenue, Florham Park NJ 07932

April 1997

Introduction

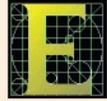
A wide variety of network communities exist today, supported by many different computational platforms. As the need for new architectures for these platforms arises, so does the need to articulate what exactly should these platforms provide, abstracted from the many (and somewhat diverse and divergent) concrete realizations of these ideas (e.g. in MOO, MUSH, MUD etc).

This note presents my analysis of the desiderata for *network spaces*, my generic term for the computational platforms underlying network communities. My analysis is not driven by any attempt to understand a "least common denominator" for these different approaches. Rather it is driven by my experience starting, administering and participating in several such communities since 1994 and from my desire to find a coherent and consistent conceptual framework (e.g. one that resolves issues of objects, persistence, identity, change etc) within which system development may proceed interlinked with, and yet somewhat decoupled from, the diversity of network communities that may arise atop such spaces.

I believe this task (of articulating the desiderata of network communities) is of some urgency. Conditions are now ripe for an appropriately designed architecture and implementation to provide the basis for the development of tens of thousands of interlinked network communities all over the globe. On the side of social sciences research the extraordinary interest of these spaces as both a synthetic and analytic tool for the study of communities is now rapidly becoming evident. On the computational side the development of MOO as a basis for such spaces has come to a halt with the disintegration of groups working on this technology at PARC. On the other hand, the rapid maturation of Java and CORBA technology, and widespread deployment of networked personal computers is finally(!) providing the ubiquitous basis on which large-scale end-user populated distributed systems may be realized. Therefore this task is both timely and important.

1. In a nutshell, a network space provides an [object-oriented](#), [networked](#), [multi-person](#), [persistent](#), [programmable](#), [multi-interface](#), [distributed](#) infrastructure for the construction of [administered](#), [shared](#), [extensible virtual worlds](#). (The LambdaMOO server, running, say, with JHCore, is an example of such a system, and should be kept in mind in the following discussion.) In this, network

Most of our tech is rooted in games!



Open Source Distributed Capabilities

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

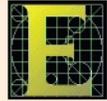
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We do not influence the course of events by
persuading people that we are right when we make
what they regard as radical proposals. Rather, we
exert influence by keeping options available when
something has to be done at a time of crisis.

--Milton Friedman

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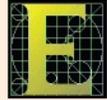
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- Object capabilities

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- Object capabilities
- Smart contracts

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- Object capabilities
- Smart contracts
- Virtual currencies

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- Object capabilities
- Smart contracts
- Virtual currencies
- Many reinventions of the actor model

People want to create



CC BY-SA 3.0, Minetest Team

People want to create

- How many people host a federated social network?

People want to create

- How many people host a federated social network?
- How many people host a minecraft server?
(How many kids?)

Could a game be an entry point?

Game	Social	Ben	Browser
------	--------	-----	---------

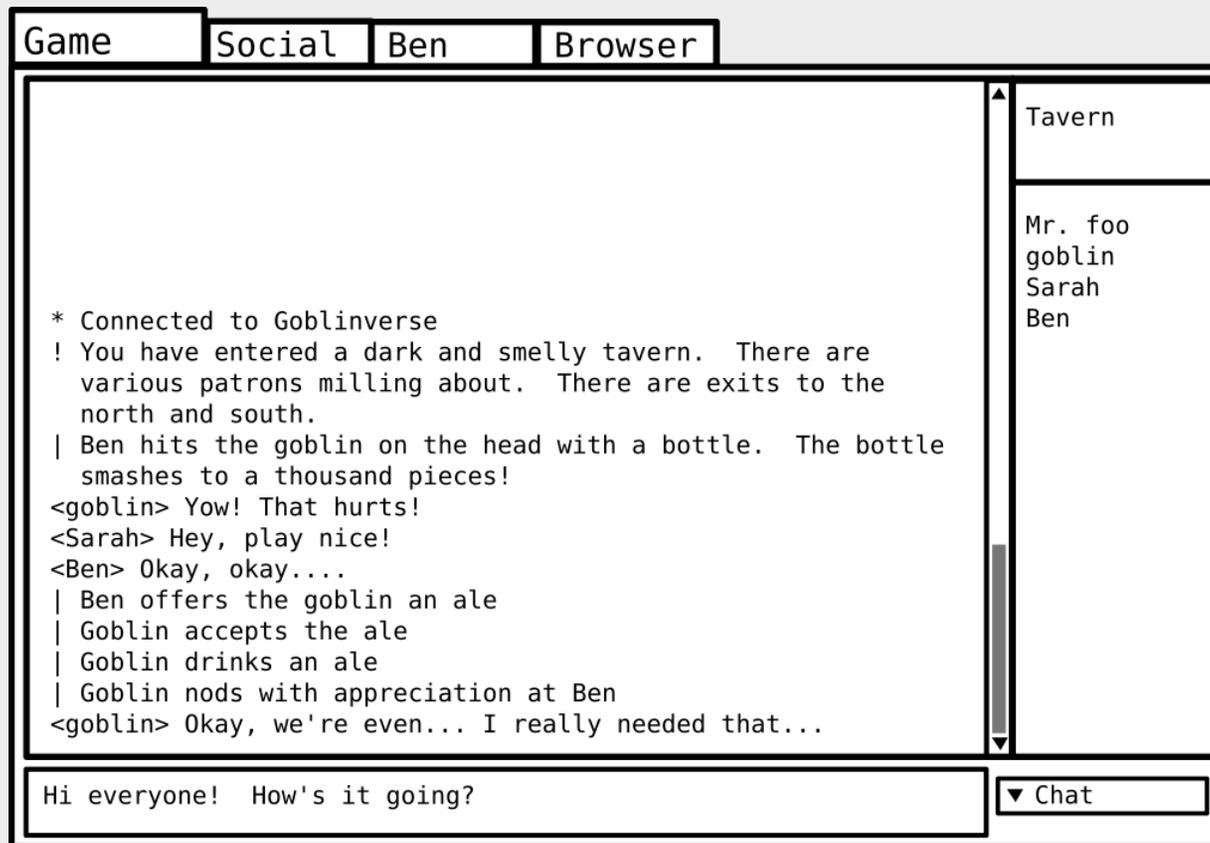
* Connected to Goblinverse
! You have entered a dark and smelly tavern. There are various patrons milling about. There are exits to the north and south.
| Ben hits the goblin on the head with a bottle. The bottle smashes to a thousand pieces!
<goblin> Yow! That hurts!
<Sarah> Hey, play nice!
<Ben> Okay, okay....
| Ben offers the goblin an ale
| Goblin accepts the ale
| Goblin drinks an ale
| Goblin nods with appreciation at Ben
<goblin> Okay, we're even... I really needed that...

Tavern

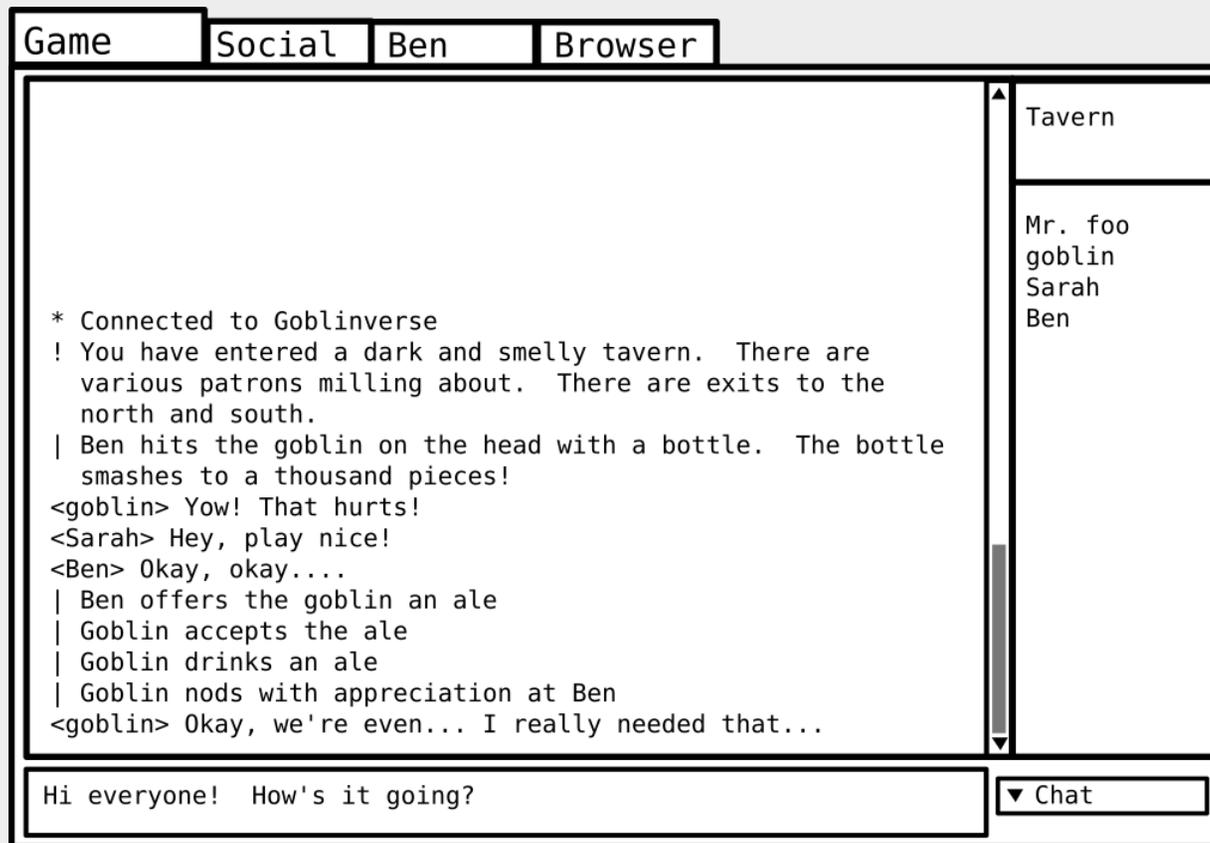
Mr. foo
goblin
Sarah
Ben

Hi everyone! How's it going?

▼ Chat



Game tab: Multiplayer games as social networks with a sense of place (though you could connect to multiple realms)



Social tab: Why not put an ActivityPub social timeline right in this same interface?

Game Social Ben Browser

Tavern

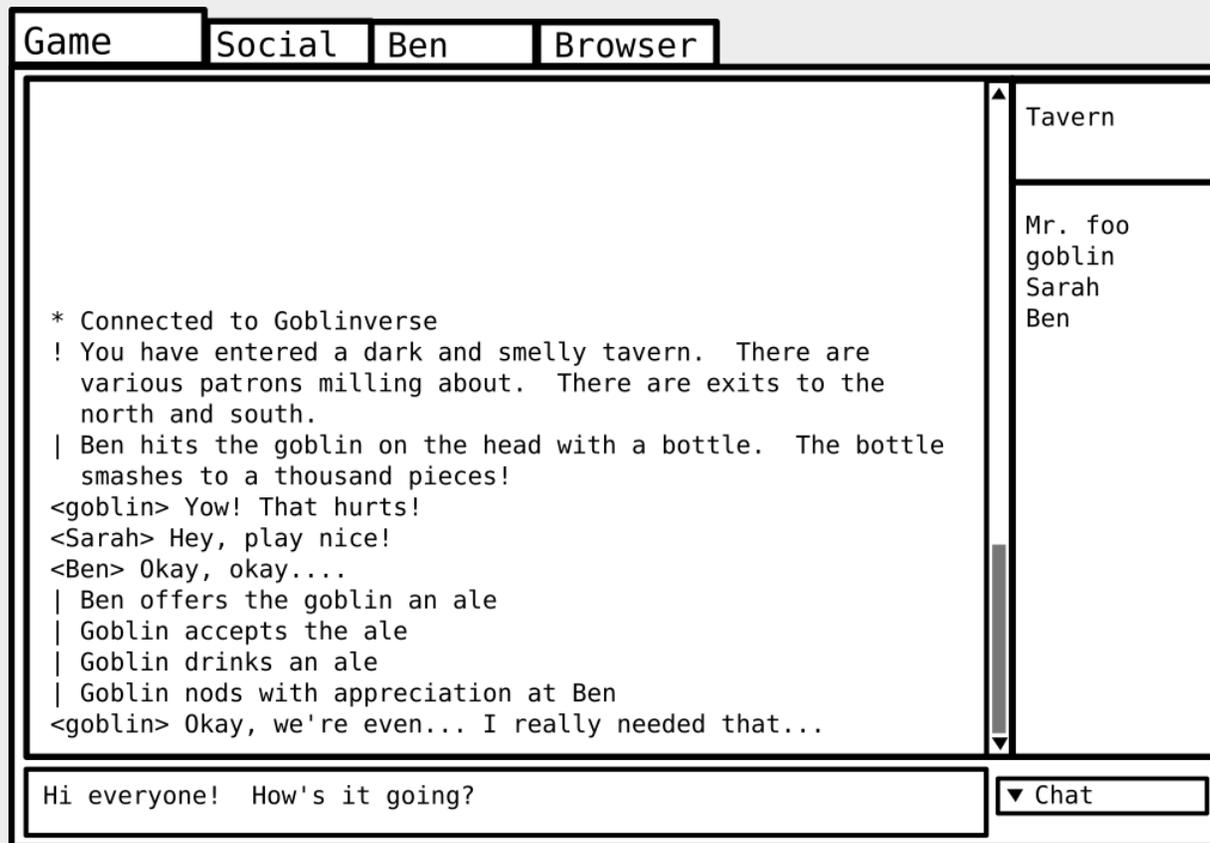
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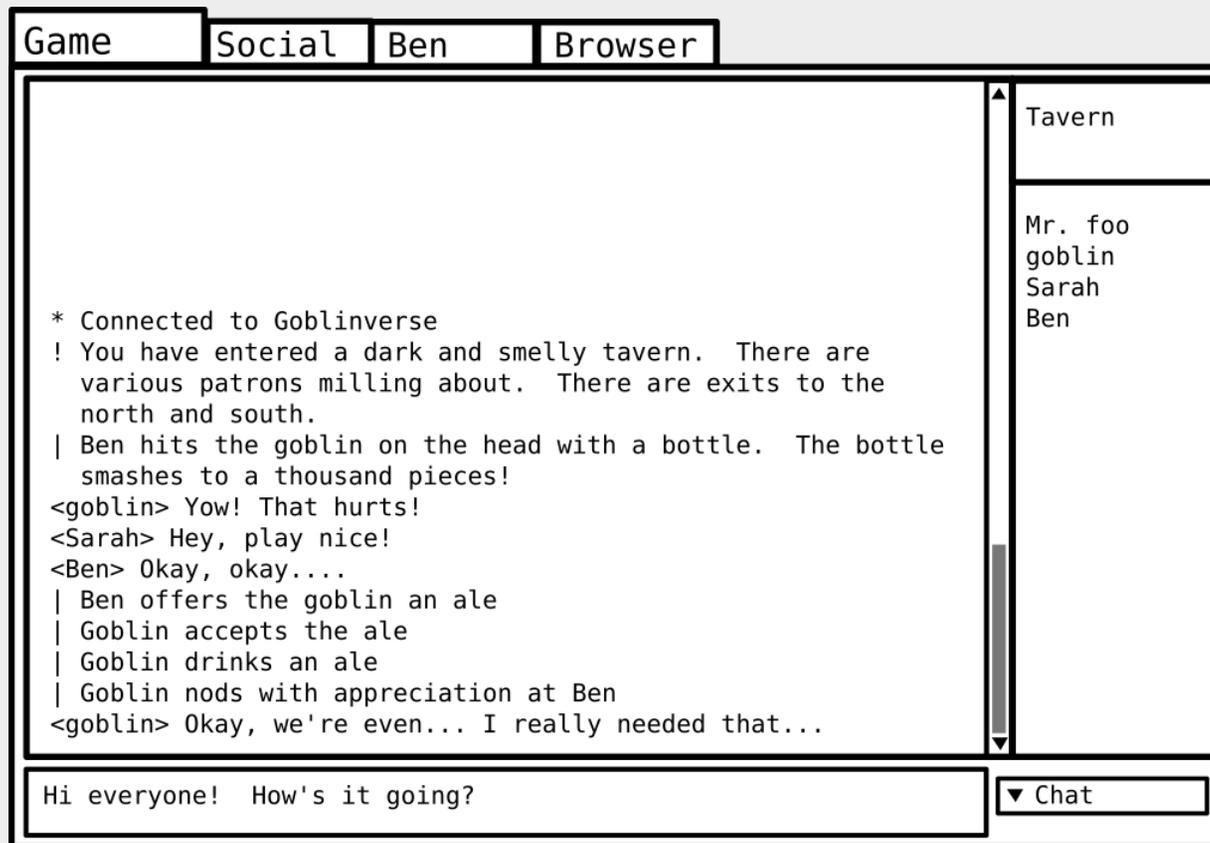
Hi everyone! How's it going?

▼ Chat

Ben tab: Direct message with another player



Can build up a contact list style petnames system in this application



Browser tab: A paired down lynx-style browser and why you'd want it

Thanks! This talk CC BY-SA 4.0