

# Bay Area Dive into Holochain Meetup



# Holochain Community

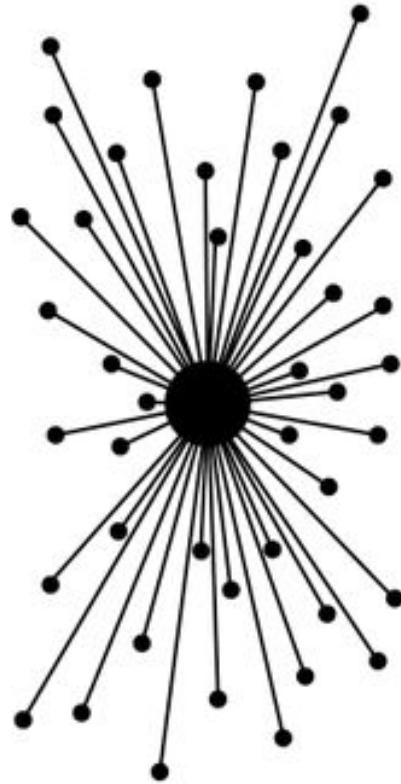
We are a community of passionate humans building a distributed cloud, owned and run by users like you and me.



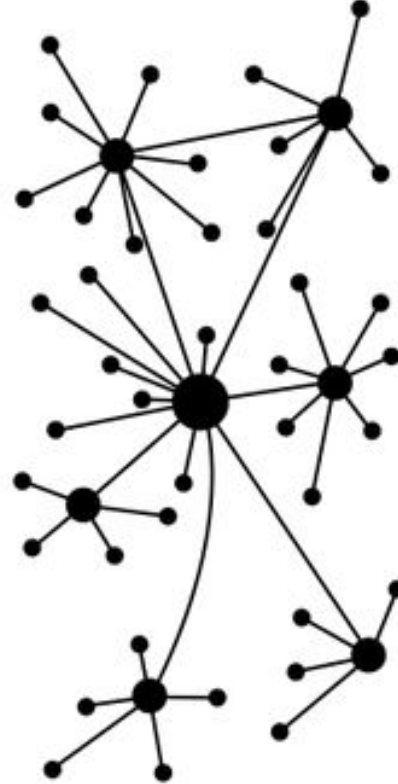


# Issues with Centralized Systems I/II

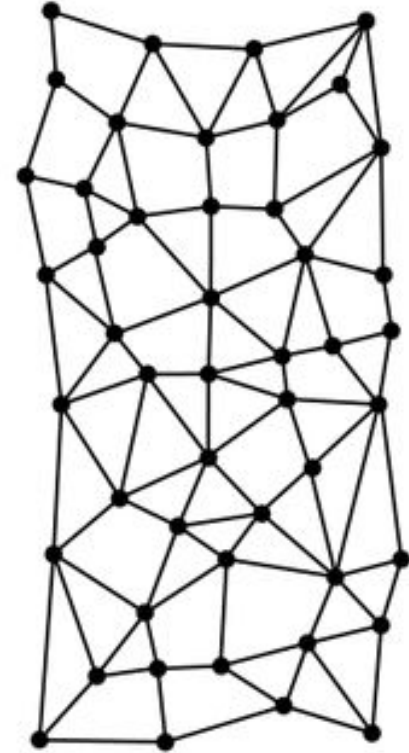
Centralized Network



Decentralized Network



Distributed Network

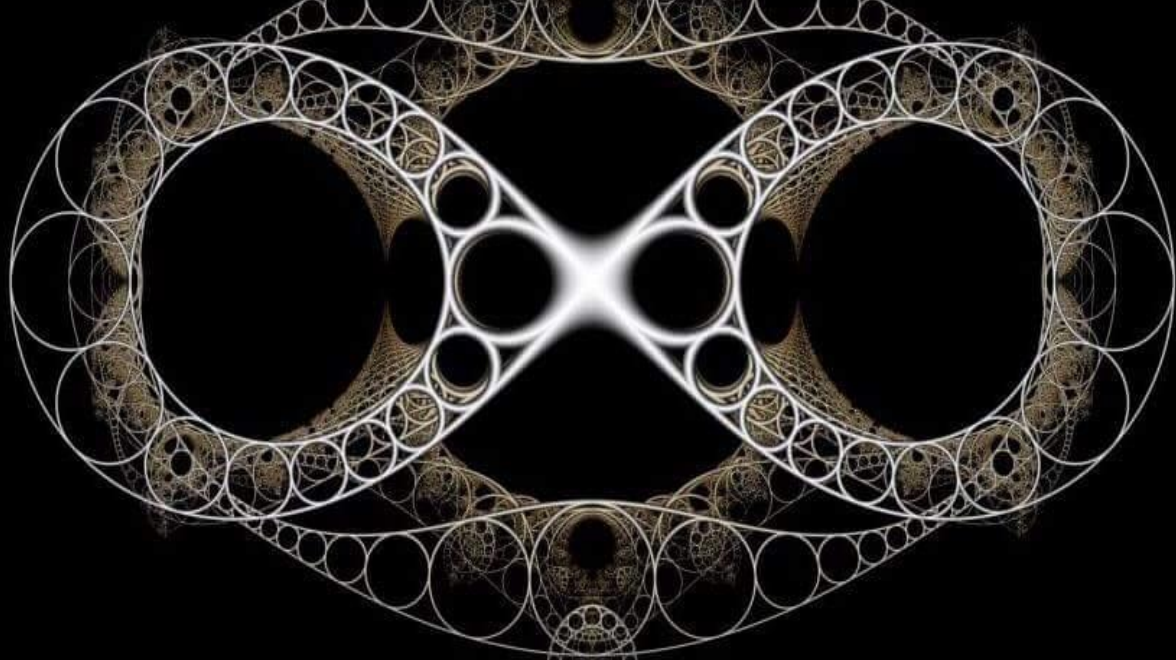


Which looks strongest and most resilient?

# Issues with Centralized Systems II/II

On a centralized system, YOU can be:	Example
<b>X HACKED</b>	<ul style="list-style-type: none"><li>• Equifax: 143 million Americans' financial and personal data stolen</li><li>• Yahoo!: 3 billion users' identity data stolen</li><li>• Ashley Madison: infidelity website's list of 30 million customers released publicly</li></ul>
<b>X TRACKED</b>	<ul style="list-style-type: none"><li>• Google, Facebook, Amazon, and the NSA regularly monitor your Internet activity</li></ul>
<b>X CENSORED</b>	<ul style="list-style-type: none"><li>• China's Great Firewall blocks a variety of sites and content</li><li>• Spain blocked more than 140 political websites in attempt to disrupt the 2017 Catalanian independence election</li></ul>
<b>X SHUT DOWN</b>	<ul style="list-style-type: none"><li>• Egypt turned off Internet access for entire population in 2011</li><li>• In 2016, Turkey shut down the Internet completely in 11 Kurdish cities</li></ul>
<b>X SOLD OUT</b>	<ul style="list-style-type: none"><li>• Delicious, Myspace, Ning, and Skype each sold out to larger companies</li></ul>

# holochain



**for people who find explaining blockchains to  
their friends and family to be too easy**

**Blockchain** is about  
managing a  
consensus about  
what was “said.”

**Holochain** is about  
distributing a  
consensus about  
how to “speak”  
[Art Brock]







## Examples in Nature I/II: Language

- We are a speaker of a language when we know how to use the rules of that language properly
- We don't have to know all the same words (because we can use the rules to explain unknown ones)
- We don't need to have the same experiences
- We certainly don't need some global ledger of everything that's ever been said, or require consensus about what has been said
- Yet there are infinite possibilities for how we may communicate with one another within the boundaries of this language.





## Examples in Nature II/II:

### Cells

- Each cell carries a copy of their rules or instruction set (i.e. DNA)
- There is no global ledger about the state of trillions of cells
- Yet, our cells coordinate in a highly decentralized manner, without the latency or bottlenecks of central control





## Holochain

	Holochain	Ethereum/ Blockchain	IPFS	Relational Databases
Decentralized architecture	●	●	●	x
Distributed app environment	●	●	x	x
Secure hash chains	●	●	x	x
DHT (Distributed hash table)	●	x	●	x
Data integrity	●	●	x	●
Custom data validations	●	x	x	●
Scaling	●	x	●	●
Load required by client	Variable (<<100%)	100% (for full client)	Variable	0%

# Holochain vs Blockchain

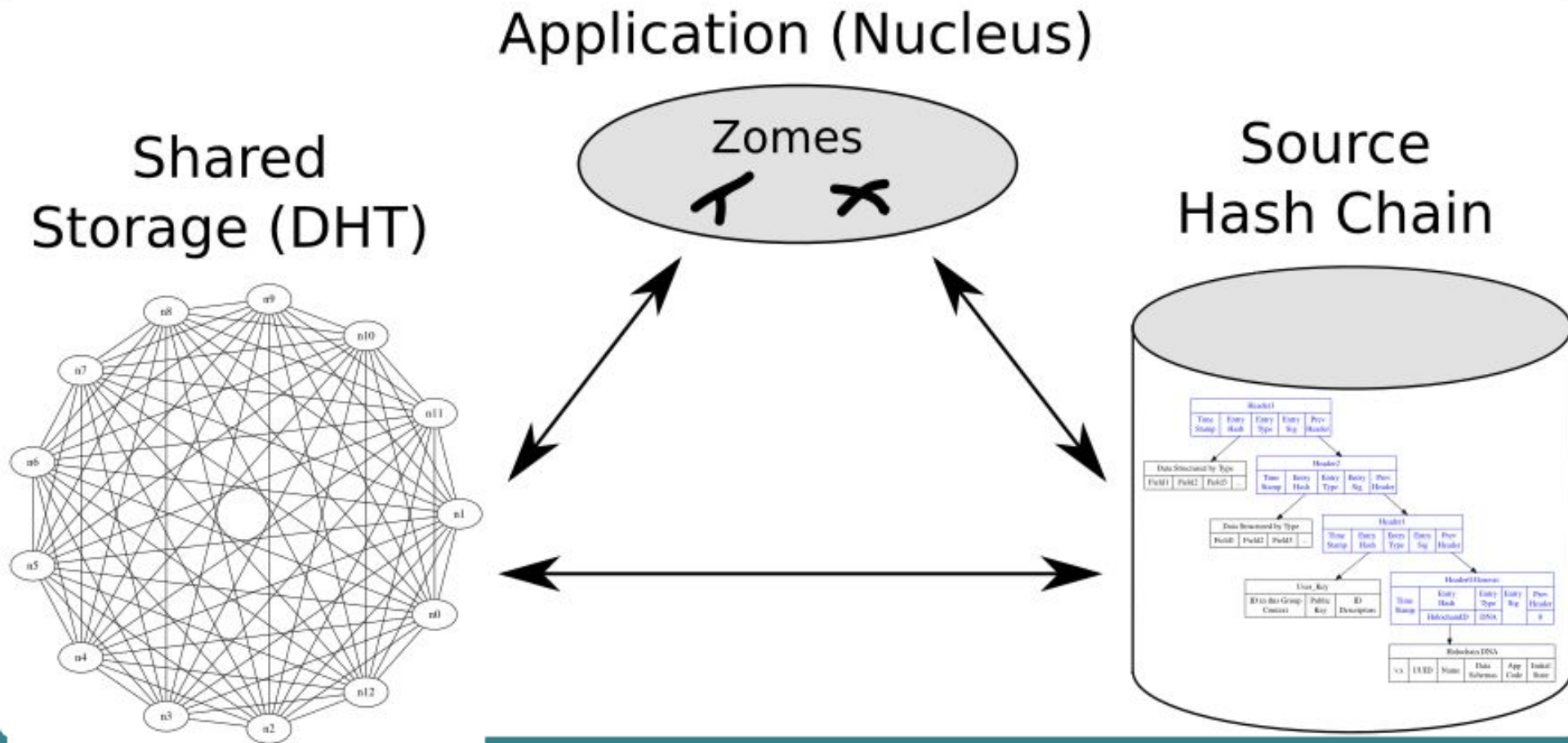
	Current System	Blockchain	Holochain
<b>Security/Trust</b>	Database held “securely” by third party	Distributed Global Ledger of “Indisputable Truth”	Community-set shared rules to play by + social accountability through validation
<b>Governance</b>	Oligarchy	“Consensus” & Smart Contracts	Pluralistic commons
<b>Model</b>	Dominance	Liberty	Holographic Coherence (Biomimicry)
<b>Ontology</b>	Corporation-centric	Token-centric	Agent-centric
<b>Example</b> (Jamie Klinger)	A <b>centralized app</b> like <a href="#">Snapchat</a> offers you a small file (the app) to download that sends data through <b>centralized servers</b> .	A <b>decentralized app</b> like <a href="#">TenX</a> runs on a <b>decentralized blockchain</b> ( <a href="#">Ethereum</a> ).	A distributed app run locally on your personal device and coordinates through peer-to-peer connections.

# Holochain vs Blockchain





# Overview of Holochain Architecture



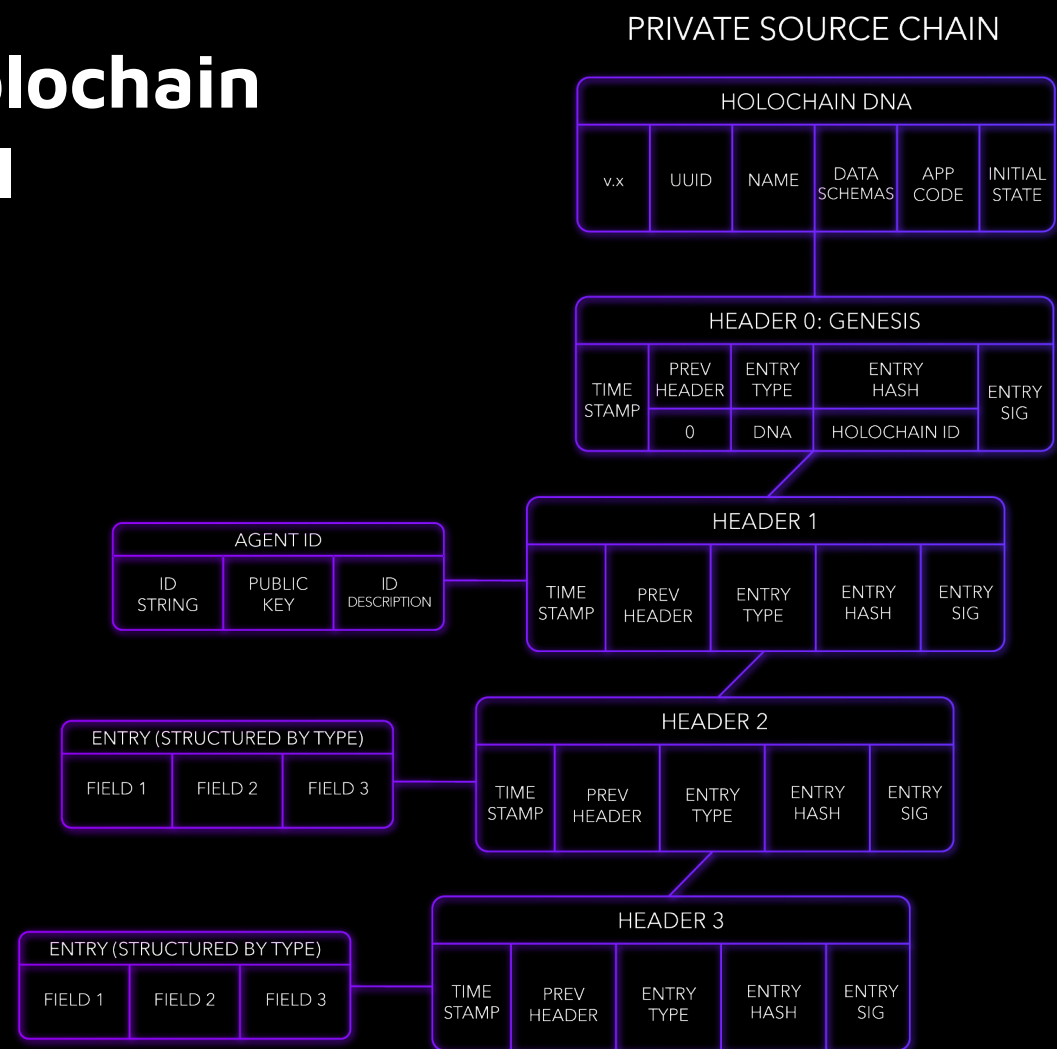
# Overview of Holochain Architecture



## What are Distributed Hash Tables [D.H.Ts]

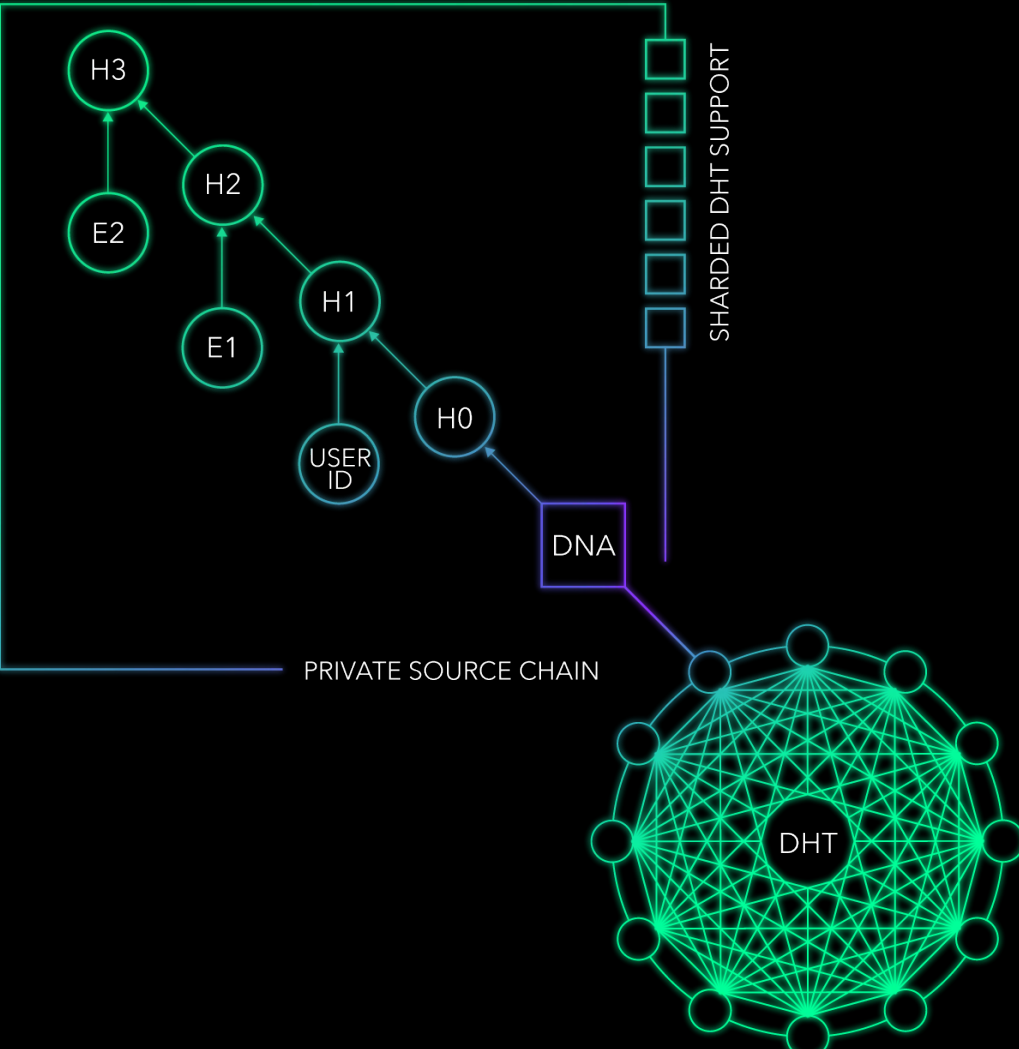
# Overview of Holochain

## Architecture I/II





# Overview of Holochain Architecture II/II



# Holochain and Holo

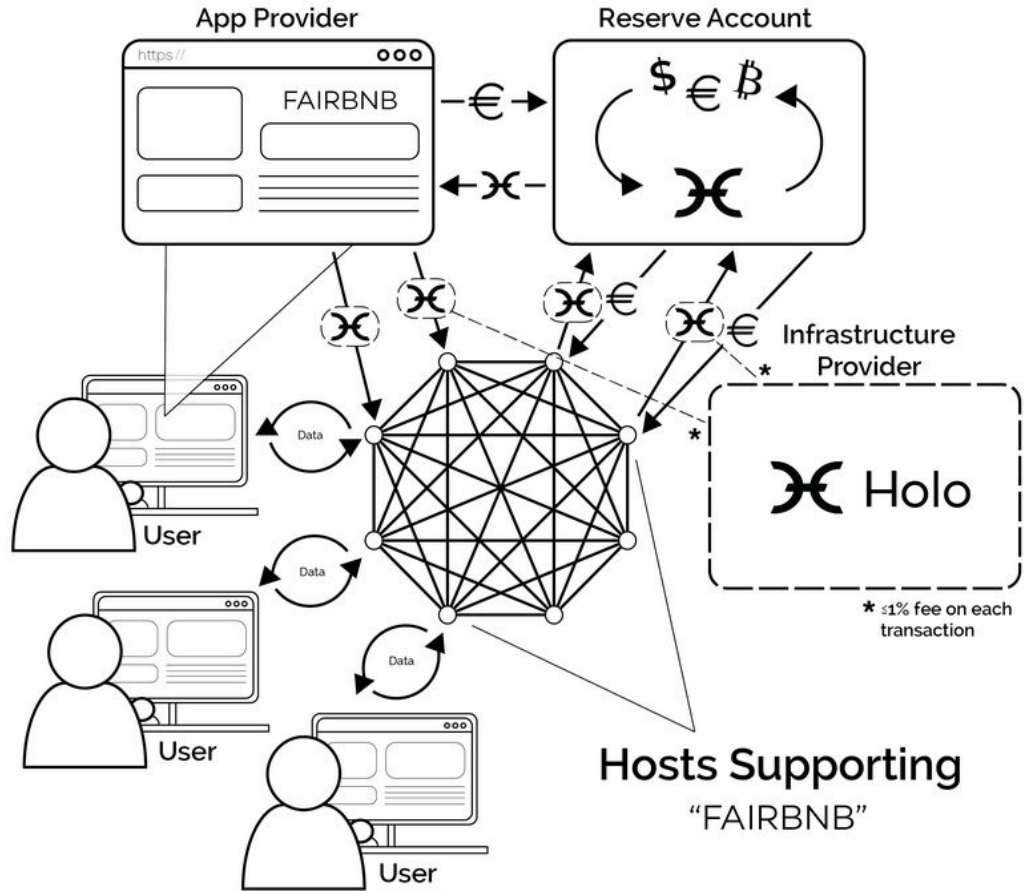
- Holochain = Distributed Architecture

## Holo

- Application on Holochain
- Enables accessibility to a Beginning User
- First Launch of a Full Scale Application
- First Launch of a Token-less, Mutual Credit Currency backed by a real asset (computing power)



# Overview of Holo Ecosystem







## What Are Holochain Applications Best Suited For?

- Governance, Collaboration, and Organizational Tools
- Social Networks and Social Media
- Platform Cooperatives
- Directly p2p sharing economy apps
- Community Resource Management (the Commons)
- Tokenless, mutual-credit cryptocurrencies and reputation systems
- Individual controlled data collection (e.g. in the Health sphere)
- Supply Chain & Open Value Networks

# Timeline

## Holo Ecosystem

- Crowdfunding campaign launches to distribute Holo hosting devices
- ICO raises capital for Holo, grows Holo network, and attracts developers for Holochain
- First HoloPorts ship to 600+ hosts
- First test transaction on Holo using Holo fuel
- Approaching 5,000 hosts
- 100 test transactions per hour on Holo using Holo fuel
- Test net of Holo running on 15,000 host devices
- Test net of Holo running on 30,000 host devices

Q4 2017

Q1 2018

Q2 2018

Q3 2018

Q4 2018

## Holochain Core and Apps

- Holochain Alpha 0 and Alpha 1 Release
- Prototype voting and decision-making apps
- Holochain Alpha 2 Release: High level application development framework and pluggable governance
- Holochain Alpha 3 Release: Security audit and the ability to adjust DHT parameters and behavior
- Core app services available: Package manager, Identity Services, Holochain Index, Smart Caching
- Holochain Beta Release: Continued backward compatibility and more security audits
- Holochain approaching production-level sophistication



**Where do we  
go from here?**



**Connect with  
Community**

**Holochain Public Mattermost Chat**

<https://chat.holochain.net>

**Holochain** <https://holochain.org/>

**Holo** <https://holo.host/>

**Resources**

**Developers**

<https://developer.holochain.org/>

**Github** Alpha release of holochain:

[bit.ly/githolochain](https://bit.ly/githolochain)

**Currency (Current-See) Geeks**

<https://medium.com/@artbrock>