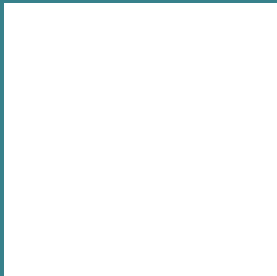**Atlanta Holochain Meetup 1/10/2018**

What does it mean to be digitally sovereign?

Why Digital Sovereignty Collective ?

Founders:

Micah

Sophia

- Aims to provide a forum for diverse individuals from the tech, arts, food, and social justice spheres to converge and discuss how decentralized p2p tech can facilitate the emergence of grassroots economic alternatives.
- To decentralize power and weaken the hold of the tech monopolies Facebook, Google, Amazon, & Apple.
- To facilitate individual & collective sovereignty over our own data. (i.e. control over who has access to it and for what purposes, and the capacity to use our own data for the empowerment of our own communities)
- To enable cross-sector collaboration between community organizers, developers, and academics, so that our our tech matches the needs of the people its intended to serve.

We see the accelerating change and adoption of technology to be happening on an evolutionary scale and we are here now to help facilitate the transition into a reality where the natural, spiritual and digital are in resonance and work together to manifest a diverse and resilient ecosystem of democratically-governed peoples.

Holochain Community's Purpose

"In a period that is getting more volatile, uncertain, complex and ambiguous, humanity is facing enormous challenges as a species. We need to level up our game in terms of our ability to adapt and coordinate if we are going to succeed in facing those challenges.
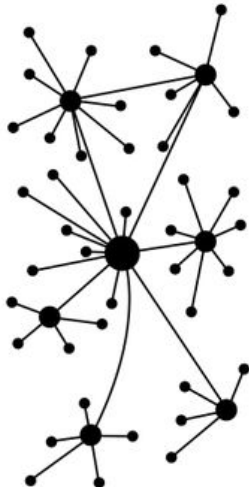
Holochain's ambition: to bring humanity's capacity for coordination to a whole new level. In our view, that requires all sorts of new bottom-up coordination patterns -- patterns that are opted into, and more importantly renewed through ongoing use -- by the participants themselves. We see this as nature's preferred pattern for collaboration at a biological level. Making use of that same pattern at a social level will enable individuals and communities to be more responsive to shifting challenges and opportunities." [Matt Schutte]
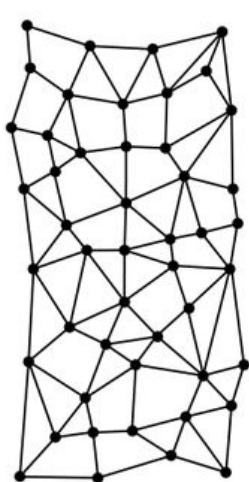
Issues with Centralized Systems
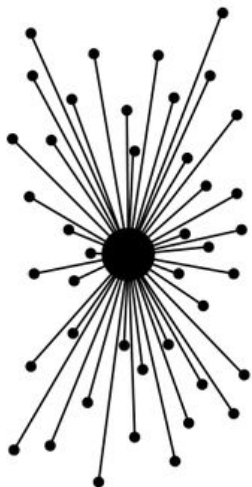
Centralized Network   **Decentralized Network**   **Distributed Network**

Which looks strongest and most resilient?

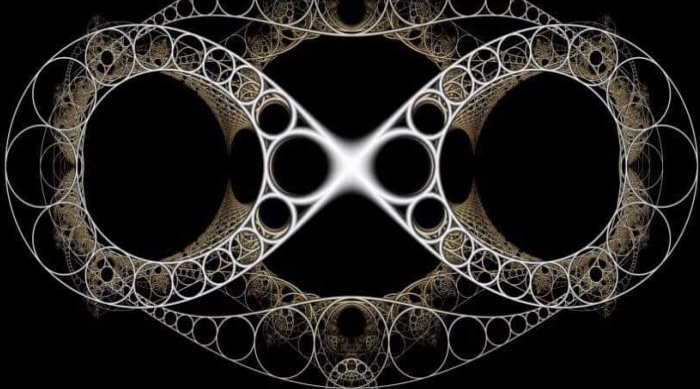| On a centralized system, YOU can be:	Example
✘ **HACKED**	• Equifax: 143 million Americans' financial and personal data stolen • Yahoo!: 3 billion users' identity data stolen • Ashley Madison: infidelity website's list of 30 million customers released publicly
✘ **TRACKED**	• Google, Facebook, Amazon, and the NSA regularly monitor your Internet activity
✘ **CENSORED**	• China's Great Firewall blocks a variety of sites and content • Spain blocked more than 140 political websites in attempt to disrupt the 2017 Catalonian independence election
✘ **SHUT DOWN**	• Egypt turned off Internet access for entire population in 2011 • In 2016, Turkey shut down the Internet completely in 11 Kurdish cities
✘ **SOLD OUT**	• Delicious, Myspace, Ning, and Skype each sold out to larger companies

Holochain vs Blockchain

Holochain vs Blockchain

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
Security/Trust	Database held "securely" by third party	Distributed Global Ledger of "Indisputable Truth"	Community-set rules to play by + social accountability
Governance	Oligarchy	"Consensus" & Smart Contracts	Pluralistic commons
Model	Dominance	Liberty	Holographic Coordination (Biomimicry)
Ontology	Corporation-centric	Token-centric	Agent-centric
Example (Jamie Klinger)	A **centralized app** like Snapchat offers you a small file (the app) to download that sends data through **centralized servers**.	A **decentralized app** like TenX runs on a **decentralized blockchain** (Ethereum).	A **decentralized app** like TenX runs on a **decentralized blockchain** (Ethereum).

Examples in Nature

Human 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.

Cells

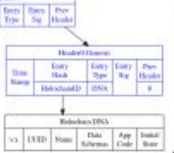- each cell carries a copy of their rules or instruction set (i.e. DNA)
- there is no global ledger about the state of trillions of cells
- Yet, our cells coordinate in a highly decentralized manner, without the latency or bottlenecks of central control

Holochain vs Blockchain

Arthur Brock
Co-Founder

Overview of Holochain Architecture

Overview of Holochain Architecture

What
are
D.H.Ts ?

Overview of Holochain Architecture

PRIVATE SOURCE CHAIN

HOLOCHAIN DNA					
v.x	UUID	NAME	DATA SCHEMAS	APP CODE	INITIAL STATE

HEADER 0: GENESIS				
TIME STAMP	PREV HEADER	ENTRY TYPE	ENTRY HASH	ENTRY SIG
	0	DNA	HOLOCHAIN ID	

AGENT ID		
ID STRING	PUBLIC KEY	ID DESCRIPTION

HEADER 1				
TIME STAMP	PREV HEADER	ENTRY TYPE	ENTRY HASH	ENTRY SIG

ENTRY (STRUCTURED BY TYPE)		
FIELD 1	FIELD 2	FIELD 3

HEADER 2				
TIME STAMP	PREV HEADER	ENTRY TYPE	ENTRY HASH	ENTRY SIG

ENTRY (STRUCTURED BY TYPE)		
FIELD 1	FIELD 2	FIELD 3

HEADER 3				
TIME STAMP	PREV HEADER	ENTRY TYPE	ENTRY HASH	ENTRY SIG

SHARDED DHT SUPPORT

H3
E2
H2
E1
H1
USER ID
H0
DNA

PRIVATE SOURCE CHAIN

DHT

Holochain vs Holo

- Architecture vs Application
- Accessibility to a beginning user
- First launch of a full scale application
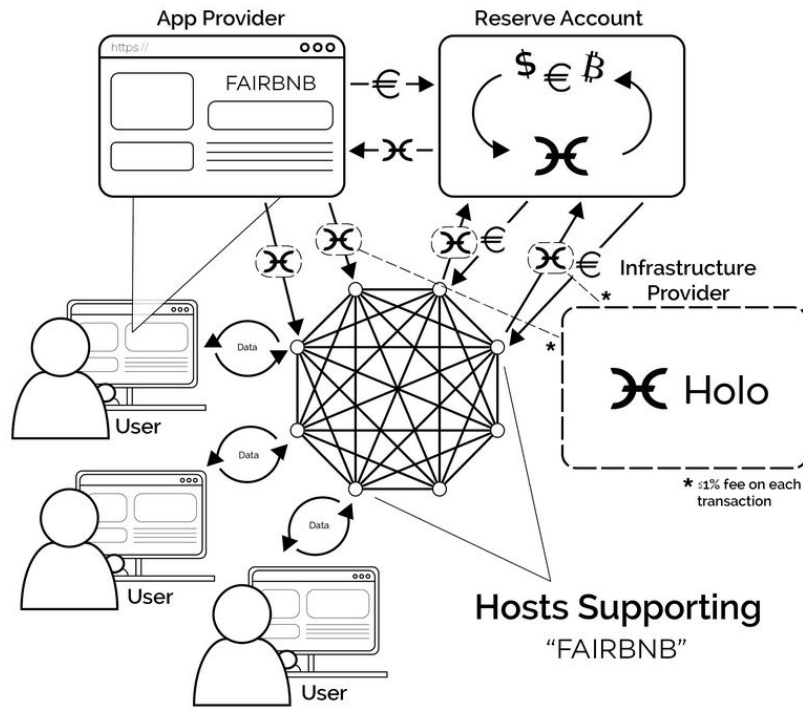- First launch of a token-less, mutual credit currency back by a real asset (computing power)

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?

Let's talk about it. What do you think?

- How do we want to organize future meetups?
- How can we co-learn?
- What are you excited about?
- How do you want to be involved?

Connect with Community

Holochain Public Mattermost Chat: https://chat.holochain.net

- The Holochain Dev community is very responsive! Please ask questions here for more information about how Holochain works.

Digital Sovereignty Collective [website URL?]

➔ facebook.com/digitalsovereigntycollective
➔ instagram.com/digitalsovereignty/

Resources

For Developers: https://developer.holochain.org/

Github

➔ Alpha release of holochain: bit.ly/githolochain
➔ Current Holochain apps github.com/holochain

For Currency (Current-See) Geeks: https://medium.com/@artbrock

Papers:

➔ holo.host/whitepapers
➔ holochain.org/whitepaper