

Decentralized file storage and delivery  
network

# Team



Kevin Truong  
CEO and Tech



Eric Wang  
COO and Finance



Sam Suh  
CMO and Legal



# Detailed description

Kevin Truong - CEO and CTO. Kevin is the visionary behind Archon's core technology. He has been developing Archon's proprietary algorithm over the past 7 months. Kevin is the founding engineer of Diffbot (Series A \$10M, 20+ employees), where he created architecture that handles big data at the scale of the entire internet (billions of web pages, hundreds of millions of images). Kevin graduated from Stanford 2014 with a BS in Computer Science.

Eric Wang - COO. Eric has helped grow Archon from an algorithm to a fleshed out proposition for the new decentralized internet for the past four months. Eric graduated from Stanford with a MS in Chemistry, leaving his PhD program to make Archon a reality. He is also a partner at a Chinese blockchain fund, Cipher Epoch Capital (币咖资本), which was seed investors in projects such as VeChain and QTUM. Eric is in charge of leading the company's operations and finance.

Sam Suh - CMO. Sam is a bar admitted attorney, developer and marketing consultant. Prior to joining Archon, Sam worked as the marketing lead at Bodhi. He received his first bitcoin payment in 2014, and consulted for various blockchain projects since 2016. Sam is a speaker at blockchain conferences and events primarily in the SF Bay Area. He is in charge of marketing and legal at Archon. Sam holds a JD from the Pace University School of Law and a Bachelor's degree in business management and marketing from Northeastern University.

# Glossary of terms

**Byzantine Fault Tolerance** - a measurement of how well the network handles any arbitrary error, including benign errors (servers crashing, network lag), and malicious errors (hackers, or a rich person bribing a group of servers to coordinate an attack together).

**Erasure Codes** - a data format that is resistant to erases of bytes. A file is encoded into erasure codes, many bytes can be removed, and it can still be decoded back into the original file perfectly intact.

**Sharding** (data) - splitting a database into pieces where each server holds a piece, so together the entire network recreates the original database.

**Erasure Sharding** - converting the database into erasure codes, then sharding it, so the network is resistant to erases of shards.

**Polynomial Interpolation** - the process of finding a unique polynomial that passes through all given points. For example, given 2 points, it is the process of finding the one unique line that crosses them. Given 3 points, the process of finding the one unique parabola.

**GZIP** - a very fast compression library. Over 70% of all web pages in the internet is sent through your browser with GZIP compression, and your browser decompresses it in real time. One of the reasons GZIP is the de-facto compression algorithm for the internet is its fast speed for such a good compression ratio..



# Centralized internet has problems



- **Low fault tolerance**
  - Speed and reliability not guaranteed during failures or catastrophes.
- Prone to powerful entities' control and content deletion
- Creates monopolies: dangerous for small businesses, and ideologically dangerous.

# Decentralized internet doesn't work well yet



**They have low fault tolerance.** Does not ensure file availability against byzantine attacks.



**Websites go down.** Important data can be inaccessible, or lost forever;



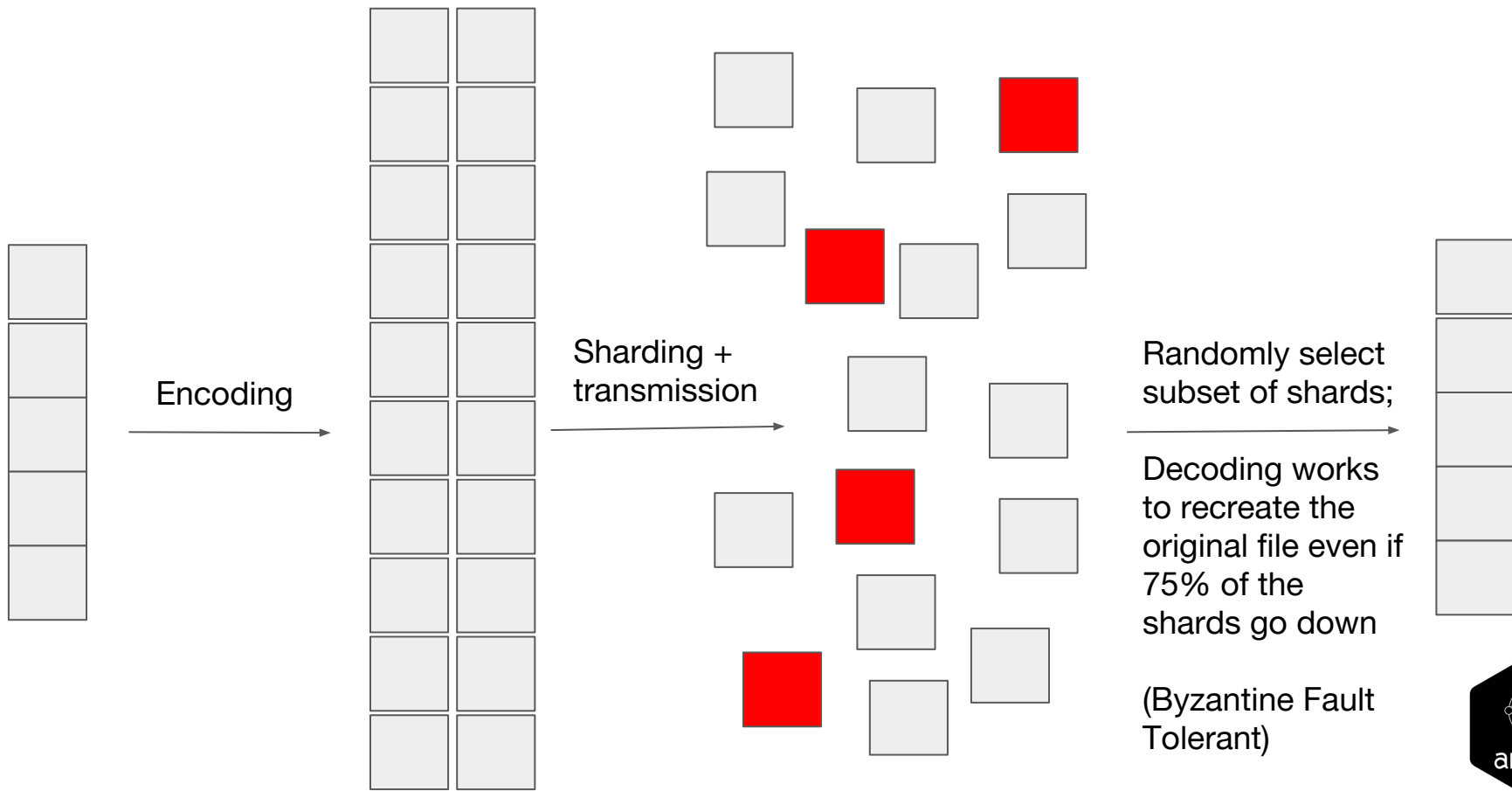
**Slow;** can't be used for streaming.



**We still need a fast, byzantine fault tolerant solution that can scale to the entire internet.**



# Erasure Shards



This is how we're different

~256

# of shards w/ traditional Reed-Solomon codes

16,000,000

# of shards w/ our Large-Scale Reed-Solomon codes

Archon sharding allows for file distribution on  
the scale of the entire internet

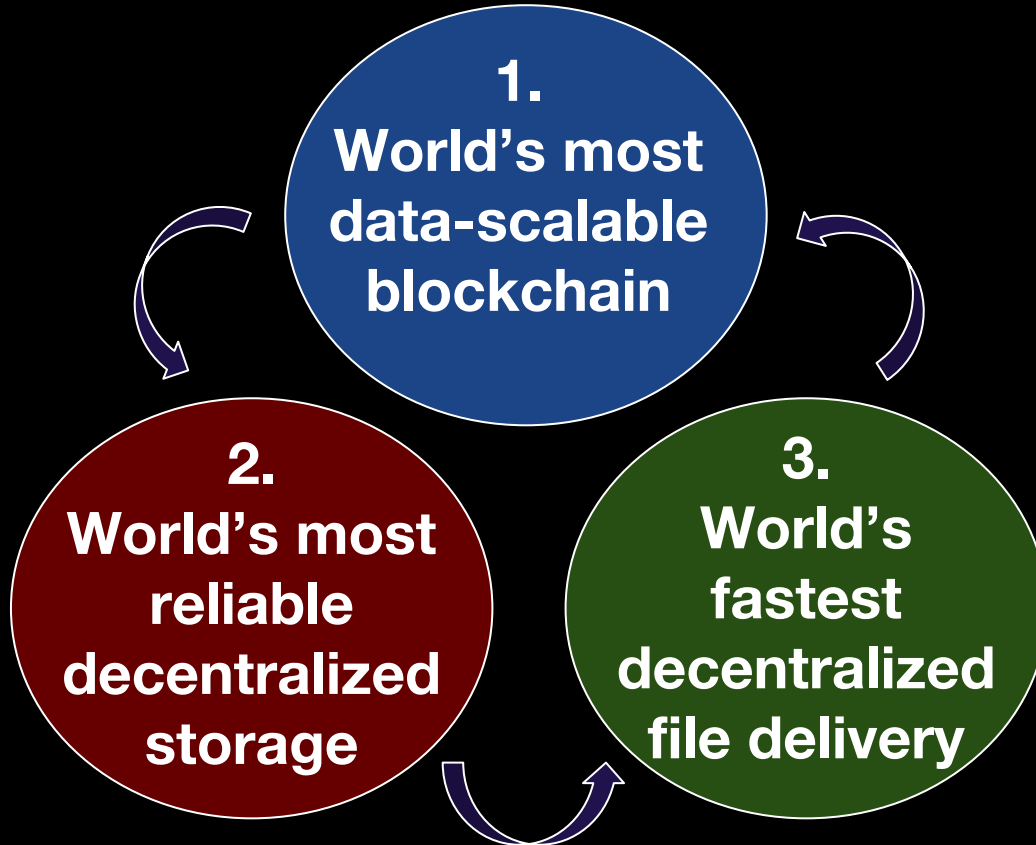




# The vision for Archon



# The Archon Cloud

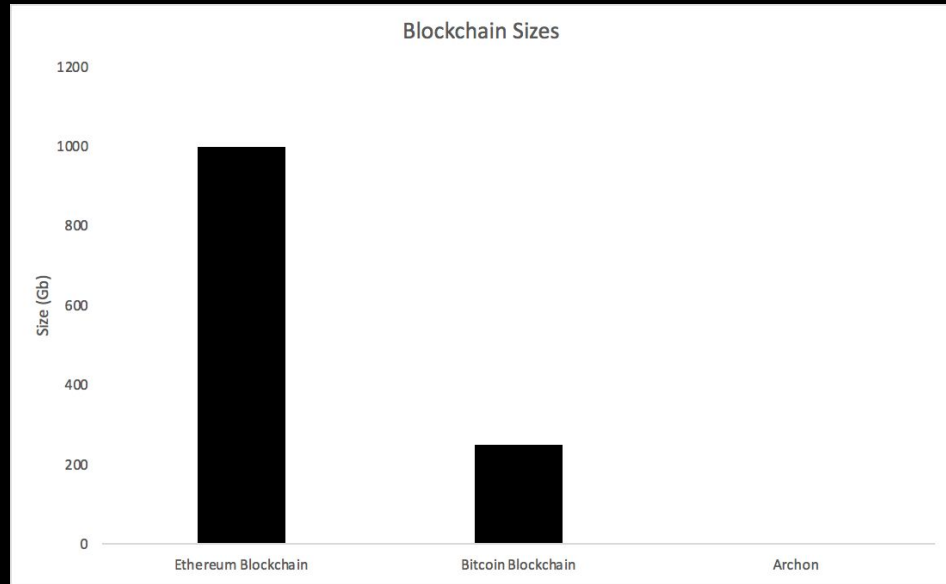


# World's most data scalable blockchain

Problem: Blockchain sizes are huge, causing centralization and inefficiencies.

Our patent-pending blockchain:

- 50,000x Smaller
- Grows 50,000x slower

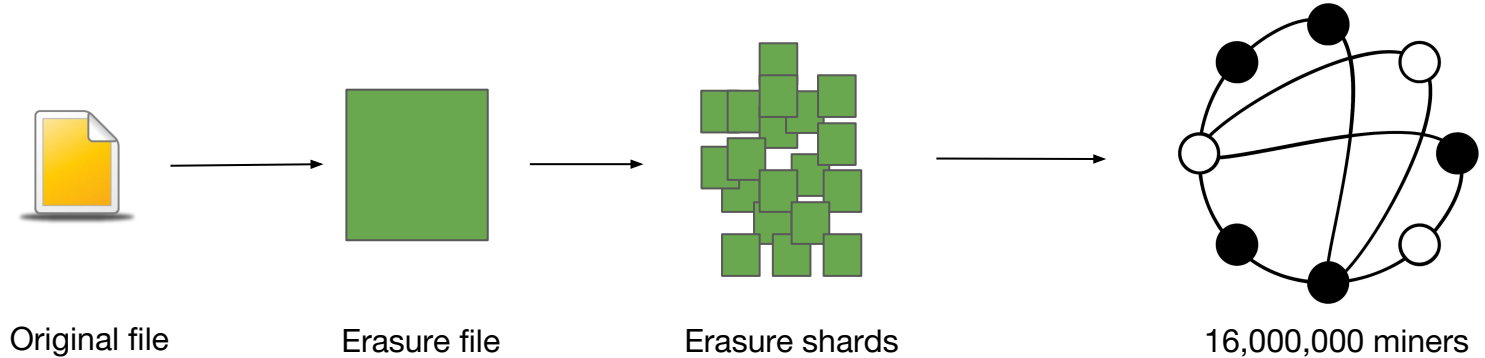


\*Archon file size at comparable Tx counts to Eth



# Decentralized storage

**Problem:** Current decentralized storage solutions are **not permanent** and **do not scale**.

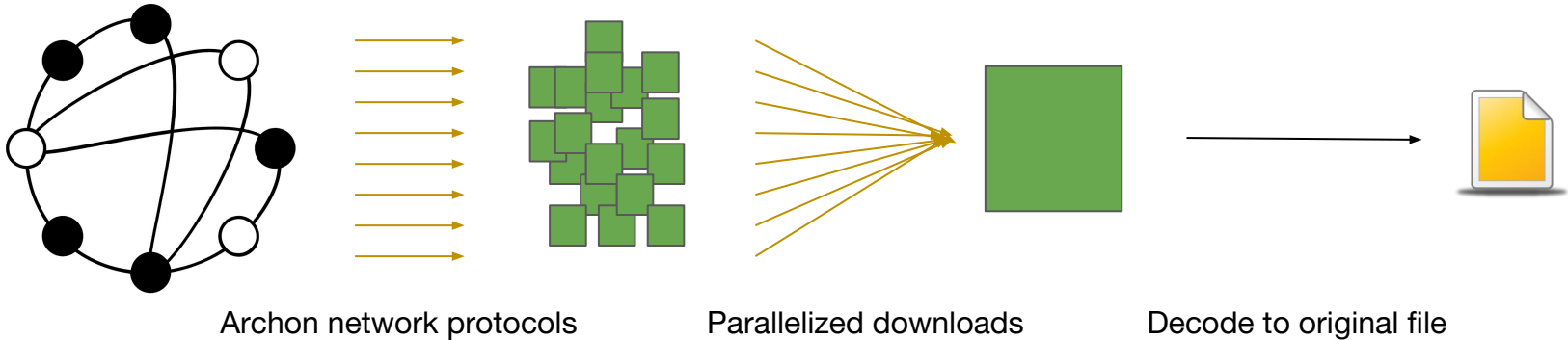


Our patent-pending decentralized storage:  
**12,000,000 fault tolerance.** Internet-Scale.



# Decentralized data transfer

**Problem:** Current decentralized CDNs are **unreliable, slow, and/or centralized**



Our patent pending CDN: faster network protocols, parallelized downloads. **Speed capped only by your ISP**, not uploader bandwidth.





Robust enough to  
survive nearly anything



Decentralized  
streaming 4k video



# Market size

1. World's most scalable blockchain
  - Protocol blockchains: \$200B+ in 2017
2. World's most reliable decentralized storage
  - Cloud storage: \$30B in 2017 -> \$88B in 2022
3. World's fastest decentralized file delivery
  - CDN: \$7B in 2017 -> \$30B in 2022



# Compared to our competitors...

	Filecoin, Siacoin, etc.	Google Drive, Amazon S3	CDNs	IPFS, BitTorrent, P2P CDNs	Archon Cloud
<b>Decentralized</b>	Yes	No	No	Yes	Yes
<b>Storage capacity</b>	Petabytes (1000 TB)	Exabytes (1,000,000 TB)	Petabytes (1000 TB)	Petabytes (1000 TB)	Exabytes (1,000,000 TB)
<b># servers/file</b>	16-100	3-10	3-10	Depends. Servers decide to store file.	Up to 1,000,000's
<b>Reliability of servers</b>	Unreliable	Very reliable	Very reliable	Unreliable.	Unreliable, but can tolerate 75% server faults.
<b>Accelerated downloads</b>	No	No	Partially	Partially	Yes. Download speed capped by your ISP
<b>Upload latency</b>	~1 minute	5 seconds	5 seconds	Depends. 5 seconds to 1 minute	Depends. 15 seconds to 1 minute
<b>Decoding speed</b>	Fast (decryption)	Instant (none)	Instant (none)	Fast (decryption)	Slower, but still faster than GZIP decompression (60mb/s)





# Use Case 1: Decentralized projects needing storage solutions



Blockchain companies want decentralized and fast solutions for data storage and delivery.



Applications

File Infrastructure: Archon



# Use Case 2: Archon Enterprise Solution

Storage



Baidu Cloud



CDN



ChinaCache



License performance optimized proprietary algorithms



# Use Case 3: Storing private data

Store any information privately in the world's most secure, decentralized **private file storage system**. Like your **private keys to protect your crypto investments**.

Up to

**64,000,000**

Secret shares across miners  
based on our **large-scale  
Shamir's secret sharing  
algorithm**.

42.84.236.230  
31.2.162.15  
208.94.31.4  
252.10.113.184  
101.181.81.239

Select who stores  
your secrets.



Only you can  
unlock it



# Our pending patents

1. Data-shardable blockchain
2. Parallelized download management and optimization
3. High performance off-chain file storage with massive sharding
4. 0-1 hop DNS using generator functions
5. Prepaid blockchain wallets; blockchain token gift-cards
6. Sampled Quorum Consensus
7. Private data storage with large-scale Shamir's secret sharing

Plus 7 more not yet submitted as well as 4 proprietary algorithms



# To grow, we want to:

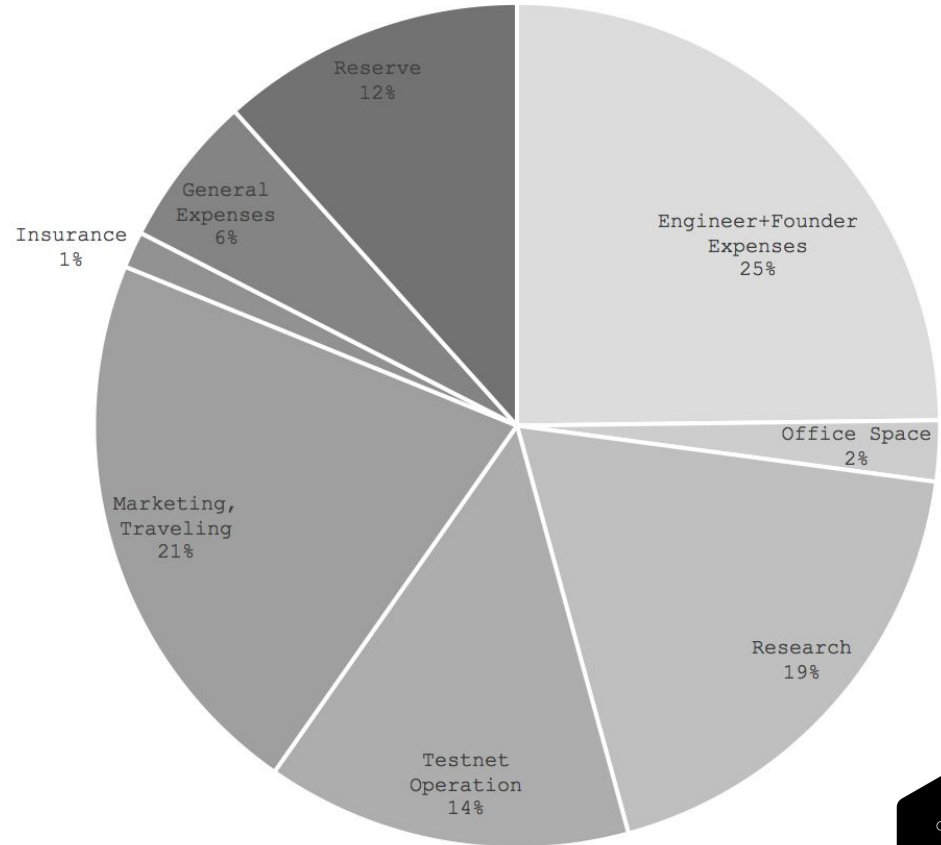
1. Build a testnet to prove it works at scale. Focus on engineering.
2. Integrate into existing businesses (centralized or decentralized) through testnet; users become miners
3. Market to and partner with:
  - a. content producers,
  - b. content consumers,
  - c. content delivery platforms
4. Community Building: Both Traditional and Crypto



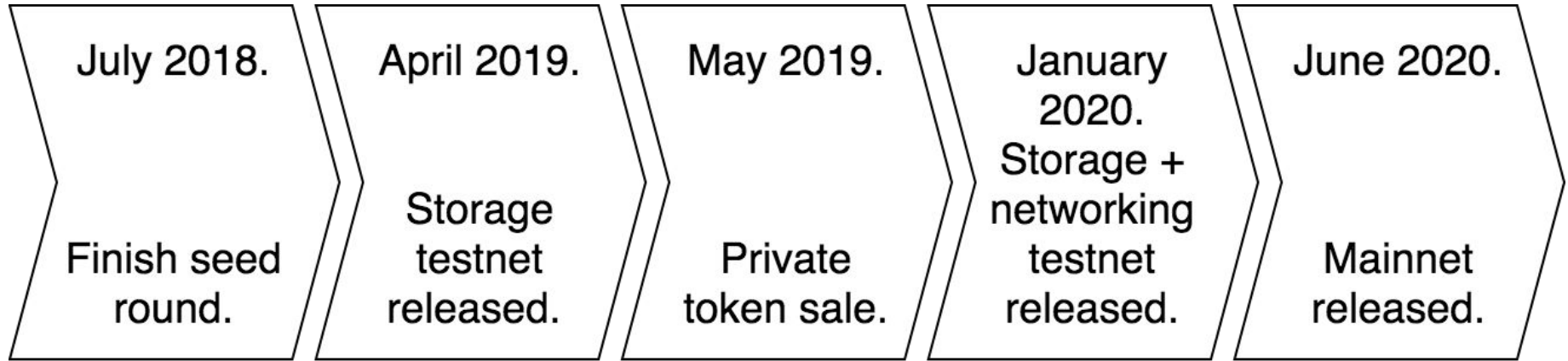
We are asking for:

**\$4.6M** seed round  
at a **40%** discount from  
the next round

For equity,  
convertible to tokens  
(SAFTE or similar)



# Roadmap



June 2019-January 2020. Public SEC-registered ICO.



# The internet protocols

ftp -> http -> https -> archon

