DAOs and the Web3 vision

Decentralized Autonomous Organizations

DAOs operate **without** clear individual liability

DAOs completely **break** the traditional **legal system**

DAOs may be **operated by machines**, not only humans

DAOs **destroy nation state's monopoly** on governance

Aragon is a project to **empower freedom** by creating tools for **decentralized governance**

wiki.aragon.org/jobs

Aragon 0.5, The Architect

New Vote

APPS

Home
Token Manager
Voting
Finance
Permissions
Apps   SOON
Settings

Closed Votes

STATUS	QUESTION	TOTAL VOTES	RESULT	ACTIONS
✕ Rejected	Token Manager (ngo): Mint 1 tokens for 0xC43B0C4b6d227536238f071fBa7e624b2A632830	0%		View Vote
✕ Rejected	ACL: Grants 0x214E3A17a5522Cad09B188e3677F3E2006b3E6C6 the ability to perform actions of role 0xf5a08927c847d7a29dc35e105208dbde5ce951392105d712761cc5d17440e2ff on 0xda3bAdbb5DdED870874efC72E2C81FA73AdB87dA	0%		View Vote
✓ Approved	Token Manager (ngo): Mint 3 tokens for 0x772080b0D48De808dbE0F4050083B0f9205F6D29	78.57%		View Vote
✓ Approved	Token Manager (ngo): Mint 1 tokens for 0x3bD60bafEa8A7768C6f4352AF4Cfe01701884Ff2	76.92%		View Vote
✓ Approved	ACL: Revokes 0xf9CE13a26E5859E4F22654a86946098680595802 the ability to perform actions of role 0xf5a08927c847d7a29dc35e105208dbde5ce951392105d712761cc5d17440e2ff on 0xda3bAdbb5DdED870874efC72E2C81FA73AdB87dA	33.33%		View Vote
✕ Rejected	Token Manager (ngo): Mint 1 tokens for 0x772080b0D48De808dbE0F4050083B0f9205F6D29	33.33%		View Vote
✓ Approved	Token Manager (ngo): Mint 10 tokens for	33.33%		View Vote

Permissions

- Home
- Token Manager
- Voting
- Finance
- Permissions
- Apps SOON
- Settings

Add permission

Browse by app

Kernel	ACL	EVM Script Registry	Token Manager	Voting	Finance	Vault
0x06f6...afc1	0x64c1...0a87	0x3069...d805	ngo	0xf9CE...5802	0x61D4...a2b5	0x214E...E6C6
View	View	View	View	View	View	View

Browse by entity

ENTITY	TYPE	ROLES	
Any account	Account	Create new votes	View details
0x0E02...02C9	Account	Create permissions	View details
0x6d05...98f2	Account	Create permissions	View details
0x344b...Dc7A	Account	Create permissions, Manage apps, Mint tokens	View details
Voting 0xf9CE...5802	App	Create permissions, Manage apps, Modify quorum, Create new payments, Execute payments, Disable payments, Assign tokens, Revoke vesting, Mint tokens	View details

aragonPM

```
Maintainer --Uploads--> Data --Hosted--> IPFS/Swarm/...
Data --Includes URI--> Package
Maintainer --Pushes--> Package
Package --If approved--> Package repo
User --Downloads--> Package repo
Package repo --Belongs--> Registry --Hosted--> Ethereum
```

```solidity
import "@aragon/os/contracts/apps/AragonApp.sol";

contract Counter is AragonApp {
    // ...
    function increment() auth(INCREMENT_ROLE) external {
        value += 1;
        Increment(msg.sender);
    }

    function decrement() auth(DECREMENT_ROLE) external {
        value -= 1;
        Decrement(msg.sender);
    }
}
```
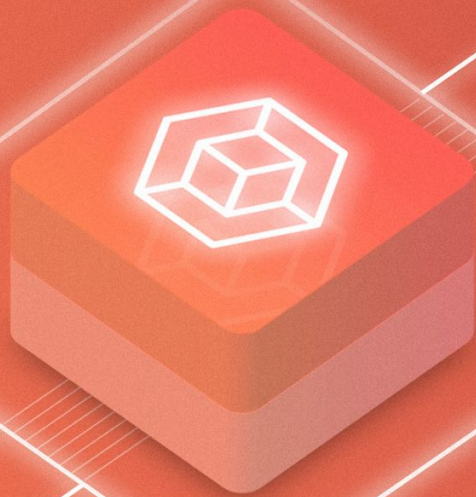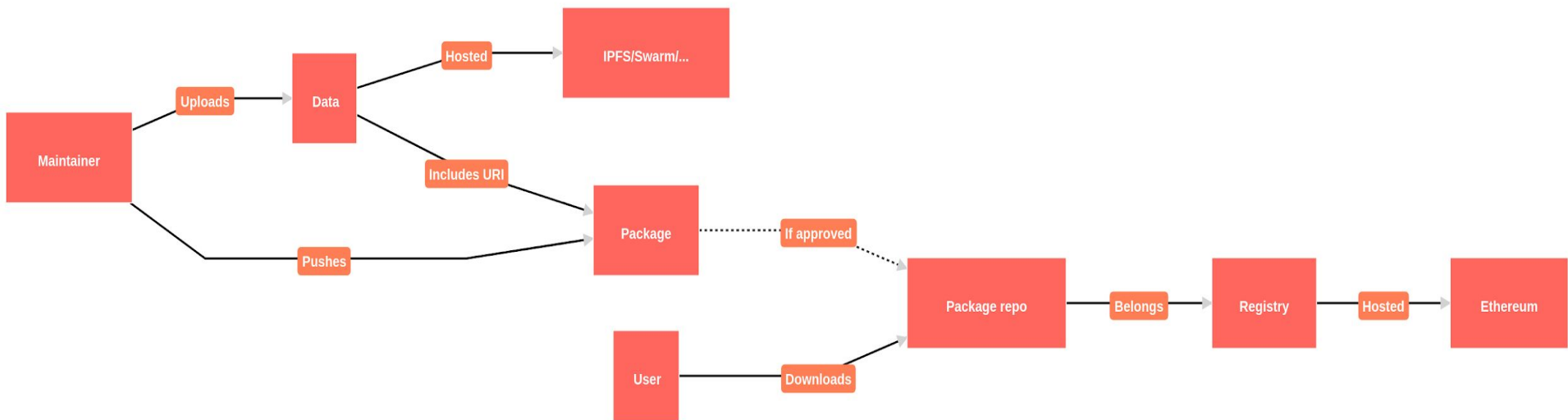
aragonOS

```
[li@linux test]$ 
```

Smart accounts

Smart accounts (personal DAOs)

- Represents you + supports ENS
- Can have multiple apps (vault, fund recovery)
- Can have rich permissions between apps
- Multi-sig, two factor auth, etc. can be used for **much more than moving funds** around

Smart accounts: Example 1

A **Key Split** app that gives **permission** to a set of people
to **progressively** access your funds if:

    a) You haven't transacted for a month

    b) People can send valid signatures to the app

Smart accounts: Example 2

A **Finance** app that gives **permission** to a set of keys to **progressively** access your funds. Example:

- Key A (MetaMask) can access up to 1ETH/month.

- Key A + Key B (MetaMask + Parity Signer) can access up to 10ETH/month.

- Key A + Key B + Key C (MetaMask + Parity Signer + Ledger) can access all of your funds and change permissions in the DAO.

Smart accounts: Example 3

An **Identity** app that can forward posts to Peepeth on your behalf.
You can **re-use any governance mechanism** and give it **permission** over the Identity app.

Organization-controlled social media accounts. Boom!

```
osarrouy@macbook:test2 ➜ pando init
[initialized][/Users/osarrouy/test2]
osarrouy@macbook:test2 ➜ pando config
? IPFS node URL:  http://localhost:5001
? Ethereum node URL:  http://localhost:8545
? Account type Unlocked account
? Account:  0xB8B6ccf6DbF56a51f04Ceee5c88ba7F0eBF783bB
[updated]
osarrouy@macbook:test2 ➜ pando remote add origin 0x623c73ebcf1fededea302f728989d8631feccf76
[added]
osarrouy@macbook:test2 ➜ pando pull origin master
[pulled]
osarrouy@macbook:test2 ➜ ls
test.md
osarrouy@macbook:test2 ➜ nano test.md
osarrouy@macbook:test2 ➜ pando stage test.md
[staged]
osarrouy@macbook:test2 ➜ pando commit -m 'Modifications here'
[snapshot][zdq6yFZ5Ehe511y51r4Jd9WRtVYj5D47mPLUHogbSCV97Jf1D]
osarrouy@macbook:test2 ➜ pando push origin master
[error][You do not own PUSH role over remote 'origin']
osarrouy@macbook:test2 ➜ 
```

Aragon Network

An opt-in jurisdiction that facilitates more efficient interactions between blockchain-native digital entities using economic incentives. Users are required to stake digital assets in order to participate in governance and to collateralize subjective agreements. In the event of a dispute a decentralized court serves as an oracle to resolve and enforce agreements between participants. An algorithmic monetary policy manages reserves and issuance of ANT to incentivize participation and healthy growth of the network.

github.com/aragon/whitepaper

Semi-automated voting

> In February, Aragon asked us to do a code Review for the aragonOS framework as well as the Finance, Voting and Token Holder applications. We were very impressed with quality of the code. It is without question one of the most advanced smart contract systems in the space and makes extensive use of many new functionalities within Solidity and at the EVM level. Especially notable is the secure way to deploy a core controller that adds upgradability, the access control pattern (ACL) and its flexible execution engines. "

aragonOS audit by the Whitehat Group

(The guys who hacked The DAO hacker)

Experiment with governance
at the speed of software

aragon.org