This event has ended.

JUN
09

Aragon Meetup @ BlueYard

Sold Out

DESCRIPTION
Aragon lets you manage entire organizations using the Ethereum blockchain. Aragon enables the borderless,

DATE AND TIME
Fri, June 9, 2017
6:00 PM – 9:00 PM CEST
Aragon is a project to empower freedom by creating tools to enable decentralized governance.
1.5 years ago...
The world’s first DAO
The DAO

Look how much I have.
Can I hold it?

---

---

"Ethereum" "Dogecoin"

"Look how much I have. Can I hold it?"

"Yes" "No"

"Ethereum" "Dogecoin"

"Ethereum has burned Dogecoin."
ARAGON NETWORK
A DECENTRALIZED INFRASTRUCTURE FOR VALUE EXCHANGE

Luis Cuende
luis@aragon.one

Jorge Izquierdo
jorge@aragon.one

Version 1.1
April 20th, 2017

Abstract

The Aragon Network is a token-governed digital jurisdiction that focuses on creating the best conditions for true global indiscriminatory economic growth. Essentially, the Aragon Network is an ecosystem where organizations, entrepreneurs, and investors can
Aragon v0.1

- Decentralized company
- Your own bank
Now
An opt-in digital jurisdiction for DAOs and sovereign individuals 

Aragon Network

Abstract 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.
World's best currency for economic development
Welcome to Aragon Research Discourse forum

Welcome to the Aragon Research forum! This is the space for long-form discussions about research topics related to Aragon, the Aragon Network and Governance. The first paragraph of this pinned topic will be visible as a... [read more]

<table>
<thead>
<tr>
<th>Topic</th>
<th>Category</th>
<th>Users</th>
<th>Replies</th>
<th>Views</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome to Aragon Research Discourse</td>
<td></td>
<td></td>
<td>0</td>
<td>42</td>
<td>17d</td>
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</table>

**Multi-chain contexts**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Category</th>
<th>Users</th>
<th>Replies</th>
<th>Views</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>dispute-resolution</td>
<td></td>
<td></td>
<td>2</td>
<td>22</td>
<td>1d</td>
</tr>
</tbody>
</table>

**TCR: MINORITY_BLOC_SLASH parameter**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Category</th>
<th>Users</th>
<th>Replies</th>
<th>Views</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>tcr</td>
<td></td>
<td></td>
<td>4</td>
<td>24</td>
<td>9d</td>
</tr>
</tbody>
</table>

**TCR: get the result from a vote**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Category</th>
<th>Users</th>
<th>Replies</th>
<th>Views</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>tcr</td>
<td></td>
<td></td>
<td>3</td>
<td>47</td>
<td>9d</td>
</tr>
</tbody>
</table>

**TCR: How to redistribute tokens after challenge is resolved**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Category</th>
<th>Users</th>
<th>Replies</th>
<th>Views</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>tcr</td>
<td></td>
<td></td>
<td>4</td>
<td>63</td>
<td>10d</td>
</tr>
</tbody>
</table>
Development
Introducing aragonOS 3.0 alpha, the new operating system for protocols and DApps
Smart contract codebase has been frozen, audit with WHG starts today and announcement for Aragon v0.5 release schedule
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.
app.aragon.one
Unstoppable Organizations

Create value without borders or intermediaries
Welcome to Aragon 0.5 – The Architect

What do you want to do?

- Assign Tokens
- Vote
- Check Finance
- New Payment

Connected to the network
DOM

Wrapper UI

App UI

JS

UI Framework

Aragon.js server

Cache

Msg handler

Web3

Messenger

UI Framework

Aragon Client

Aragon Client

Script

Messenger

EVM

Kernel

ACL

EVM Scripts

App 1

App 2

App 3
Aragon UI allows you to develop apps that look and feel like Aragon apps.
Aragon launches Survey app on Mainnet

First Aragon app launched on Ethereum Mainnet for community sentiment signaling.
Aragon Developer Portal
What you need to get started building with Aragon

Get started
Take the tutorial >

Build DAOs, protocols and dapps
Aragon is the most powerful and modular way to run DAOs. But in our journey creating DAOs, we discovered how to modularize individual components that can be used for creating any dapp or crypto protocol.
npm install -g @aragon/cli

$ aragon
aragon <command>

Commands:
  aragon apm <command> Publish and manage your APM package
  aragon contracts Execute any Truffle command with arguments
  aragon dao <command> Manage your Aragon DAO
  aragon deploy [contract] Deploys contract code of the app to the chain
  aragon devchain Open a test chain for development and pass arguments to ganache
  aragon init <name> [template] Initialise a new application
  aragon ipfs Start IPFS daemon configured to work with Aragon
  aragon run Run the current app locally

APM:
  --apm.ens-registry Address of the ENS registry
  [default: "0x5f6f7e8cc7346a11ca2def8f827b7a0b612c56a1"]
  --eth-rpc

APM providers:
  --apm.ipfs.rpc An URI to the IPFS node used to publish files
  [default: "http://localhost:5001#default"]
Aragon Package Manager

Web 3.0 package manager for arbitrary content:
- Smart contracts
- Websites
- Docker repos
- Git repos

with pluggable Aragon governance
Applause from Alberto Elias and 104 others

Luis Cuende
Project Lead @AragonProject. Cofounded & Advisory Board @StamperyCo. @Forbes 30under30. HackNow Winner. Former Advisor to the VP of the EU. Freedom lover
Feb 14 · 5 min read

Decentralizing Aragon’s development

Splitting the Foundation from the core devs, and kickstarting funding for other teams to work on Aragon
Introducing Aragon One
The first company contributing to Aragon’s development
Decentralizing Aragon’s development III: Onboarding new teams
Incentivizing new teams to work on common Aragon infrastructure
Community

- 8,000 members @ aragon.chat
- 20,000 token hodlers
- 60,000 twitter followers
Aragon Labs
Aragon Nest
Come hang out!
aragon.one
aragon.chat
github.com/aragon
Aragon One team
aragon.one/about
Aragon One team

aragon.one/about
Hiring

- React, UI Engineers  *(fulltime + contractors)*
- Developer Relations  *(fulltime)*

wiki.aragon.one/jobs
Aragon - The fight for freedom

https://www.youtube.com/watch?v=AqjlWmiAidw
The Architect, v0.5 Beta

izqui released this 21 days ago

Assets

- Source code (zip)
- Source code (tar.gz)
### Opened Votes

<table>
<thead>
<tr>
<th>Time Remaining</th>
<th>Question</th>
<th>Total Votes</th>
<th>Progress</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 D 23 H 58 M 14 S</td>
<td>Should we fund disaster relief for victims of hurricane Irma?</td>
<td>33.33%</td>
<td></td>
<td>View Vote</td>
</tr>
</tbody>
</table>

### Closed Votes

<table>
<thead>
<tr>
<th>Status</th>
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<th>Result</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved</td>
<td>Token Manager (ngo): Mint 1 tokens for 0xC43B0C4b6d227536238f071fBa7e624b2A632830</td>
<td>50%</td>
<td></td>
<td>View Vote</td>
</tr>
<tr>
<td>Approved</td>
<td>Should we help reimagine democracy in the United States of America?</td>
<td>50%</td>
<td></td>
<td>View Vote</td>
</tr>
<tr>
<td>Approved</td>
<td>Finance: Create a new payment of 753 BCC. It will be executed 1 times at intervals of 0 days</td>
<td>50%</td>
<td></td>
<td>View Vote</td>
</tr>
<tr>
<td>Approved</td>
<td>Token Manager (ngo): Mint 1 tokens for 0x15bdC6b651f5a5e9Cef07b2a981dd270BA505051</td>
<td>100%</td>
<td></td>
<td>View Vote</td>
</tr>
</tbody>
</table>
## Finance

### Token Balances

<table>
<thead>
<tr>
<th>Token</th>
<th>Amount</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCC</td>
<td>26</td>
<td>$340,358.69</td>
</tr>
<tr>
<td>ETH</td>
<td>3.14</td>
<td>$1,613.52</td>
</tr>
<tr>
<td>ZRX</td>
<td>453</td>
<td>$319.01</td>
</tr>
<tr>
<td>DNT</td>
<td>137</td>
<td>$9.26</td>
</tr>
<tr>
<td>ANT</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>MANA</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>SPANK</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>SNT</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>MKR</td>
<td>0</td>
<td>$0</td>
</tr>
</tbody>
</table>

### Transfers

<table>
<thead>
<tr>
<th>Date</th>
<th>Source/Recipient</th>
<th>Reference</th>
<th>Amount</th>
<th>Token</th>
</tr>
</thead>
<tbody>
<tr>
<td>13/04/18</td>
<td>0x61D463f2613F04053bc875C72aA9dA22348Da2b5</td>
<td>Food aid</td>
<td>-753 BCC</td>
<td>BCC</td>
</tr>
<tr>
<td>13/04/18</td>
<td>0x39a4D265db942361D92e2B0039cae73Ea72a2ff9</td>
<td>Requested airdrop (test tokens)</td>
<td>+453 ZRX</td>
<td>ZRX</td>
</tr>
<tr>
<td>13/04/18</td>
<td>0x772080b0D48Da808dbE0F4050083B0f9205F6D29</td>
<td>Ether transfer to Finance app</td>
<td>+3.14152 ETH</td>
<td>ETH</td>
</tr>
<tr>
<td>13/04/18</td>
<td>0x39a4D265db942361D92e2B0039cae73Ea72a2ff9</td>
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<td>Token Manager (ngo): Mint 1 tokens for 0xC43B0C4b6d227536e238F07Fba7e624b2A632B830</td>
<td>50%</td>
<td>✔️</td>
<td>View Vote</td>
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<tr>
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<td>Should we help reimagine democracy in the United States of America?</td>
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<td>Token Manager (ngo): Mint 1 tokens for 0x15b0C8b65f5a5e9Ce07b2a9b1b2d27bBA505301</td>
<td>100%</td>
<td>✔️</td>
<td>View Vote</td>
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Wrapper

Sandboxed app

Vote

Opened Votes

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</tbody>
</table>
webworker

script.js

script.js

script.js

webworker
DOM

Wrapper UI

App UI
Time to take a deep dive!
Introducing aragonOS 3.0 alpha, the new operating system for protocols and DApps

Smart contract codebase has been frozen, audit with WHG starts today and announcement for Aragon v0.5 release schedule
aragonOS
aragonOS

A framework for programming governance

github.com/aragon/aragonOS
Kernel

ACL  EVM Scripts

App 1  App 2  App 3
Out of the box

1. Upgradability
2. Complex permissioning
3. Transaction forwarding
contract DelegateProxy is ERCProxy {
    uint256 constant public FWD_GAS_LIMIT = 10000;
}

/**
 * @dev Performs a delegatecall and returns whatever the delegatecall returned (entire context execution will return!)
 * @param _dst Destination address to perform the delegatecall
 * @param _calldata Calldata for the delegatecall
 */

function delegatedFwd(address _dst, bytes _calldata) internal {
    delegatedFwd(_dst, _calldata, 0);
}

/**
 * @dev Performs a delegatecall and returns whatever the delegatecall returned (entire context execution will return!)
 * @param _dst Destination address to perform the delegatecall
 * @param _calldata Calldata for the delegatecall
 * @param _minReturnSize Minimum size the call needs to return, if less than that it will revert
 */

function delegatedFwd(address _dst, bytes _calldata, uint256 _minReturnSize) internal {
    require(isContract(_dst));
    uint256 size;
    uint256 result;
    uint256 fwd_gas_limit = FWD_GAS_LIMIT;

    assembly {
        result := delegatecall(sub(gas, fwd_gas_limit), _dst, add(_calldata, 0x20), mload(_calldata), 0, 0)
        size := returndatasize
    }

    require(size >= _minReturnSize);
/**
 * @dev Performs a delegatecall and returns whatever the delegatecall returned (entire context execution will return!)
 * @param _dst Destination address to perform the delegatecall
 * @param _calldata Calldata for the delegatecall
 * @param _minReturnSize Minimum size the call needs to return, if less than that it will revert
 */

function delegatedFwd(address _dst, bytes _calldata, uint256 _minReturnSize) internal {
    require(isContract(_dst));
    uint256 size;
    uint256 result;
    uint256 fwd_gas_limit = FWD_GAS_LIMIT;

    assembly {
        result := delegatecall(sub(gas, fwd_gas_limit), _dst, add(_calldata, 0x20), mload(_calldata), 0, 0)
        size := returndatasize
    }

    require(size >= _minReturnSize);

    assembly {
        let ptr := mload(0x40)
        returndatacopy(ptr, 0, size)

        // revert instead of invalid() bc if the underlying call failed with invalid() it already wasted gas.
        // if the call returned error data, forward it
        switch result case 0 { revert(ptr, size) }
        default { return(ptr, size) }
    }
}
Permissions

Access Control List (ACL)

```solidity
interface IACL {
    function initialize(address permissionsCreator) external;
    function hasPermission(
        address who,
        address where,
        bytes32 what
    ) external view returns (bool);

    /* Non-interface suggestions for implementations:
    function createPermission(address who, address where, bytes32 what) external;
    function grantPermission(address who, address where, bytes32 what) external;
    function revokePermission(address who, address where, bytes32 what) external; */
}
```

Interface: https://github.com/aragon/aragonOS/blob/dev/contracts/acl/IACL.sol
Implementation: https://github.com/aragon/aragonOS/blob/dev/contracts/acl/ACL.sol
Permissions

Using the ACL: auth()

```solidity
/**
 * @notice Create a new vote about "\_metadata"
 * @param _executionScript EVM script to be executed on approval
 * @param _metadata Vote metadata
 * @return voteId Id for newly created vote
 */

function newVote(bytes _executionScript, string _metadata) auth(CREATE_VOTES_ROLE) external returns (uint256 voteId) {
}
```
Transaction Forwarding
Transaction Forwarding

We’ll get to it.
Let’s make some governance happen!
contract DAOFactory {
    function newDAO(address root) public returns (Kernel) {
        Kernel dao = new Kernel();
        dao.initialize(root); // Assume this also creates an ACL for the DAO
    return dao;
    }
}
```solidity
contract DAOFactory {

    function newDAO(address root) public returns (Kernel) {
        Kernel dao = new Kernel();
        dao.initialize(root); // Assume this also creates an ACL for the DAO

        ACL acl = ACL(dao.acl());

        Vault vault = Vault(dao.newAppInstance("vault"));
        Voting voting = Voting(dao.newAppInstance("voting"));
        Finance finance = Finance(dao.newAppInstance("finance"));
        TokenManager tokenManager = TokenManager(dao.newAppInstance("token-manager"));

        acl.createPermission(finance, vault, vault.TRANSFER_ROLE());
        acl.createPermission(voting, finance, finance.CREATE_PAYMENTS_ROLE());
        acl.createPermission(voting, finance, finance.EXECUTE_PAYMENTS_ROLE());
        acl.createPermission(voting, tokenManager, tokenManager.MINT_ROLE());
        acl.createPermission(voting, tokenManager, tokenManager.ASSIGN_ROLE());

        return dao;
    }
}
```
Core design tenets

1. Primitives-focused
2. Default to opt-in
3. Interchangeable, malleable components
Moving back up the stack...
Toolkit for Aragon applications, including:

1. Messaging
2. Transaction forwarding
Sandbox RPC

↔ events
↔ call
↔ intent
↔ cache
→ notification
← context
Script

Action (Vote)
Event (Vote)
New state

Update state

EVM
New state
Update state

App UI
Aragon Client
Messenger

Wrapper UI
Aragon.js server
Msg handler
Web3
Messenger
Cache

App Script
Aragon Client
Messenger

EVM
**Transaction Forwarding**

---

**Sign Transaction**

- **Permission note:**
  You cannot directly perform this action. You do not have the necessary permissions.

**Action Requirement**

Here are some options that you can use to perform it:

- **Voting (ANT)**
  - The Voting (ANT) app will create a new voting for ANT holders to decide whether to perform this action or not.

- **Tokens (XVT) → Voting (ANT)**
  1. The Tokens (XVT) app will forward actions requested by XVT token holders.
  2. The Voting (XVT) app will create a new voting for ANT holders to decide whether to perform this action or not.

---

**Action to be triggered**

This transaction would eventually perform a payment to address 0x52b...1ka11

Estimated payment cost

---

**Sign Transaction**
And finally back to the DOM...
Aragon UI allows you to develop apps that look and feel like Aragon apps.
A real DAO, in use, right now
Aragon Package Manager

Web 3.0 package manager for arbitrary content:
- Smart contracts
- Websites
- Docker repos
- Git repos

with pluggable Aragon governance
Aragon Package Manager

Web 2.0 bridge:

aragonpm.com -> aragonpm.eth

testtest.rinkeby.aragonpm.com
Aragon Package Manager

**APM DAO**

- ACL app
- DAO main address
- APM DAO Kernel
- APMRegistry app
- Repo app

**Ensemble Subdomain Registrar app**

- Manages aragonpm.eth

**Dev**

- Create 'voting' repo
- Create voting.aragonpm.eth v2

**Kernel** relation means app uses the Kernel for access control and upgradeability.

**APM DAO Kernel**

- acl()
- kernel()

**APMRegistry app**

- createName('voting')
- pointed to repo

**Repo app**

- Depsy repo instance and assign permissions

**ACL app**

- acl()
- kernel()
Aragon is a project to empower freedom by creating tools to enable decentralized governance.