Nick Johnson
nick@ethereum.org

Ethereum Name Service

Overview

What ENS is & how it works

ENS resolvers in practice

Using ENS in DApps

Registrars & name registration

Deployment plans & the future

What is ENS?

Hello
my name is
0x112234455c3a32fd112
30c42e7bccd4a84e02010

What is ENS?

More than just names

ENS names contracts and accounts, but also…

- Swarm & IPFS records
- Legacy DNS records - IP addresses, mail exchangers
- Identity attestation
- Stores contract interfaces

What is ENS?

eth

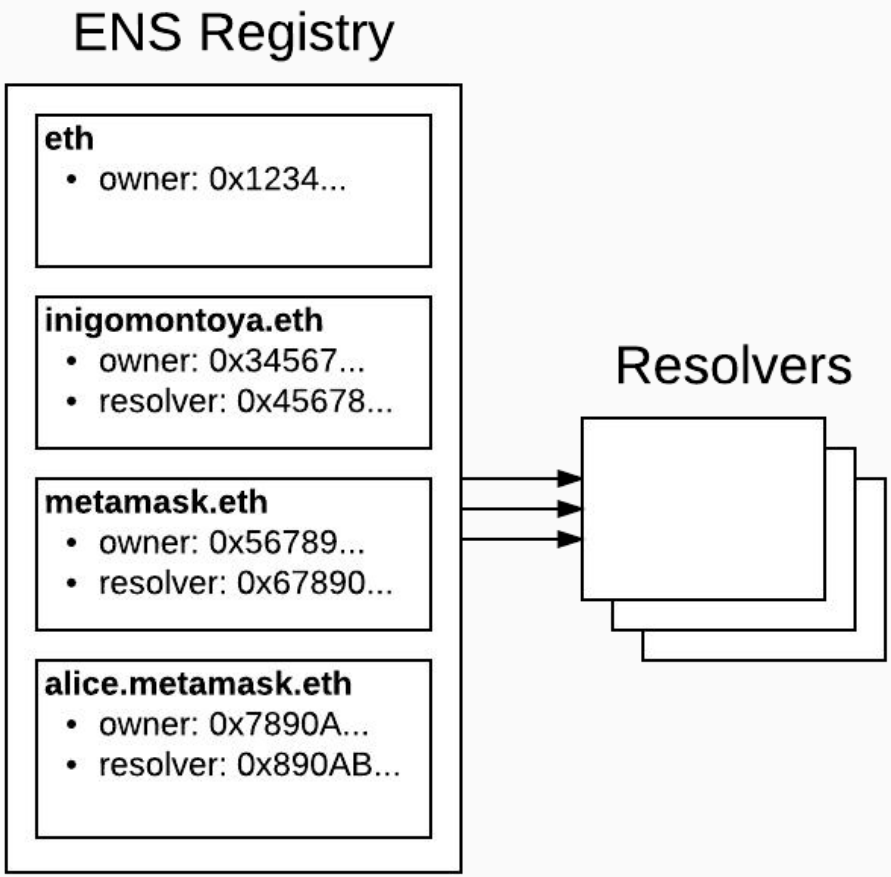
inigomontoya

wallet

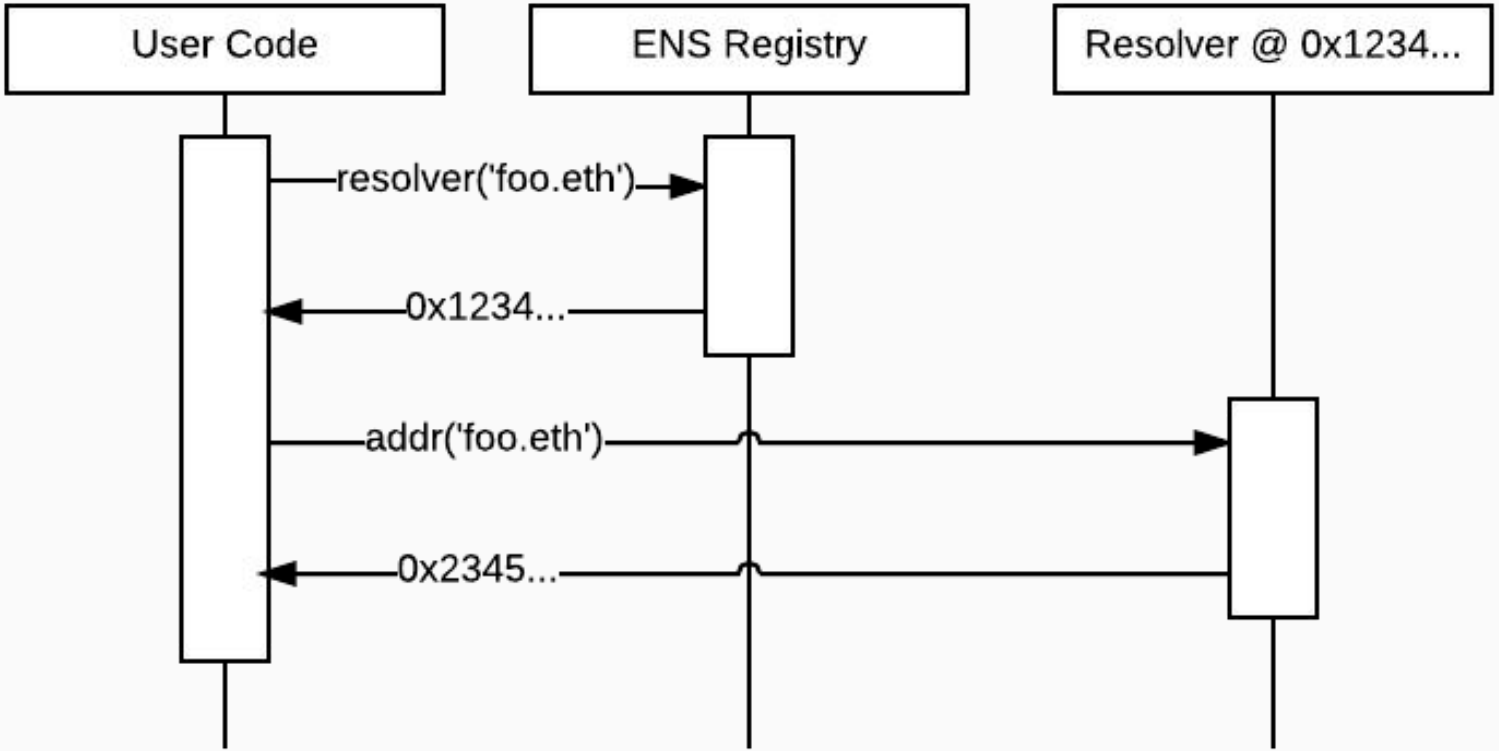
metamask

alice

ENS Architecture



Resolving a name



ENS by example: Resolvers

```
Contract MyResolver {
  address me;

  function MyResolver() {
    me = msg.sender;
  }

  function addr(bytes32 node) constant returns (address) {
    return me;
  }
}
```

Owned by ENS

```
contract OwnedByENS {
  ENS ens;
  modifier owned(bytes32 name) {
    if(ens.owner(name) != msg.sender) throw;
    _
  }
  function doSomething() owned(myname) {
    // …
  }
}
```

Using ENS from Javascript

```
var ENS = require('ethereum-ens');

var ens = new ENS(web3);
```

Looking up names

```
var address = ens.resolver('inigomontoya.eth').addr();
```

Reverse resolution

```
var name = ens.reverse(‘0x112234455...’).name();
```

Enabling reverse resolution for contracts

In JS:

```
reverseRegistrar.claim(eth.accounts[0],
                       {from: eth.accounts[0]});
```

In Solidity:

```
reverse.claim(msg.sender);
```

Contracts in web3

```
var testContract = web3.eth.contract(
    [{"constant":true,"inputs":...}])
var test = testContract.at("0x0904dac3347ea47d208f...");
```

Contracts in ENS

Storing:

```
ens.resolver('inigomontoya.eth')
  .setAddr(contract.address, {from: eth.accounts[0]});
ens.resolver('inigomontoya.eth')
  .setABI(contract.abi, {from: eth.accounts[0]);
```

Fetching:

```
var test = ens.resolver('inigomontoya.eth').instance();
```

Registrars in ENS

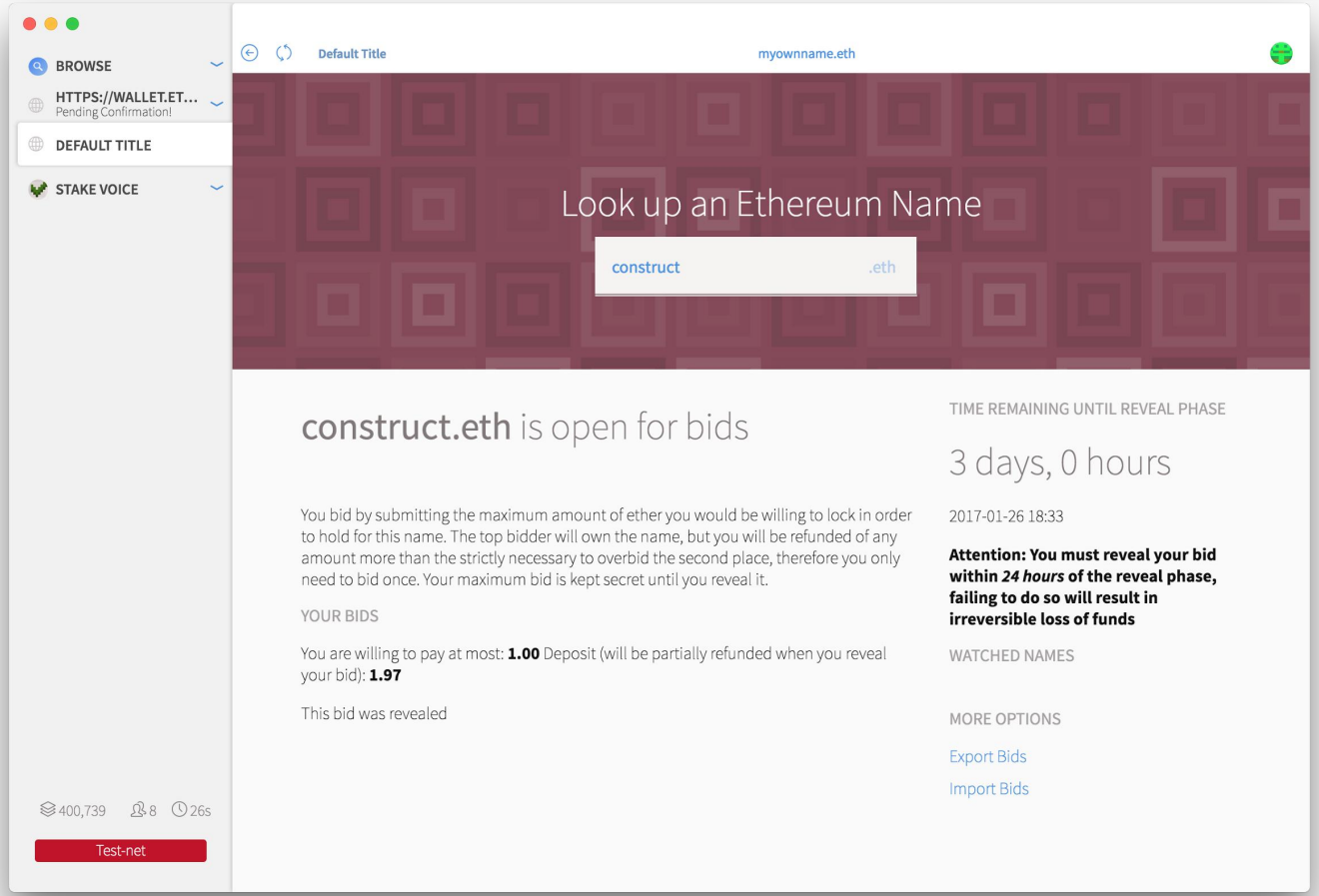
ENS by example: Registrars

```
contract SimpleRegistrar {
  ENS ens;
  bytes32 root;

  function claim(bytes32 label) {
    if(ens.owner(sha3(root, label)) != 0)
      throw;
    ens.setSubnodeOwner(root, label, msg.sender);
  }
}
```

The .eth registrar

The .eth registrar



ENS status

Deployed now on Ropsten testnet (.eth, .test)

Coming soon on Mainnet (.eth)

- 4 week initial auction period, reducing to 1 week

Ready for deployment

Ready for deployment

March 14

Any questions?