## uPort

universal identity platform







Christian Lundkvist Rouven Heck



#### Current Challenges

Key management

User experience for 'average Joe'

dApps via mobile

Identity and data ownership



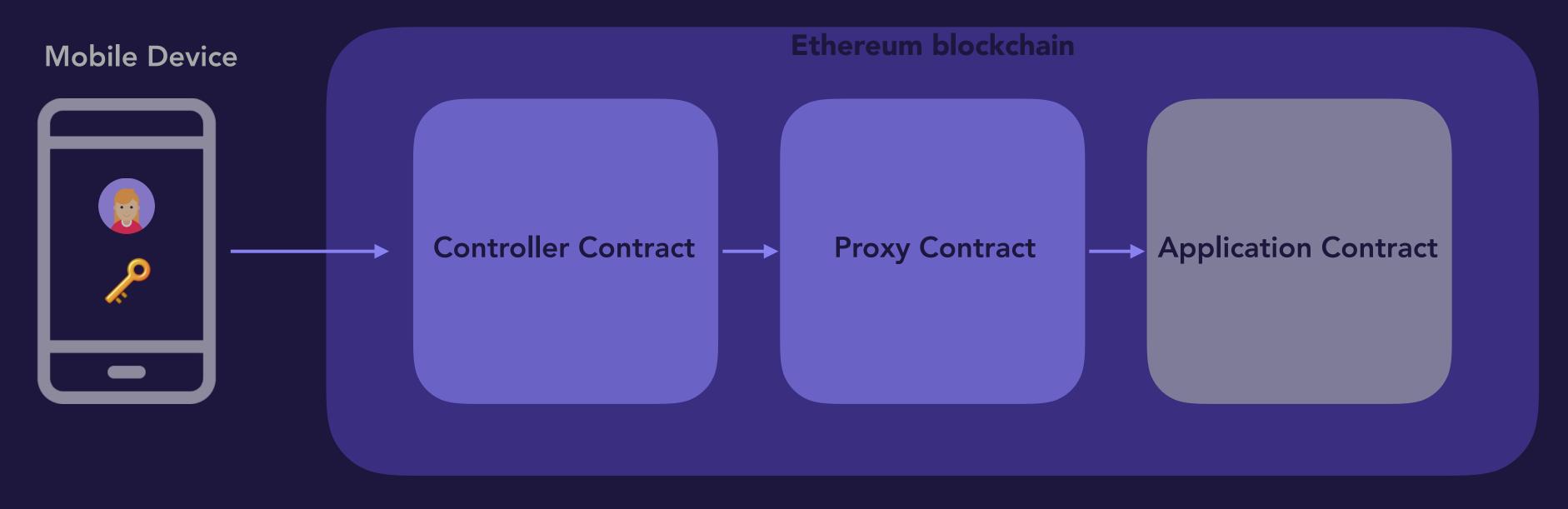
#### Design Goals

Build a form of universal identification that is self-sovereign, reputation-based, and easy-to-use.

- 1 Provide secure key management for everyday users
- 2 Provide a persistent identifier
- 3 Link attributes and attestations to identifier



#### Design Overview



deviceKey stored in secure enclave

Accessed by device key

Relays transactions to Proxy

Contains logic to do multi-sig key recovery Persistent uPort identifier

Address seen as msg.sender

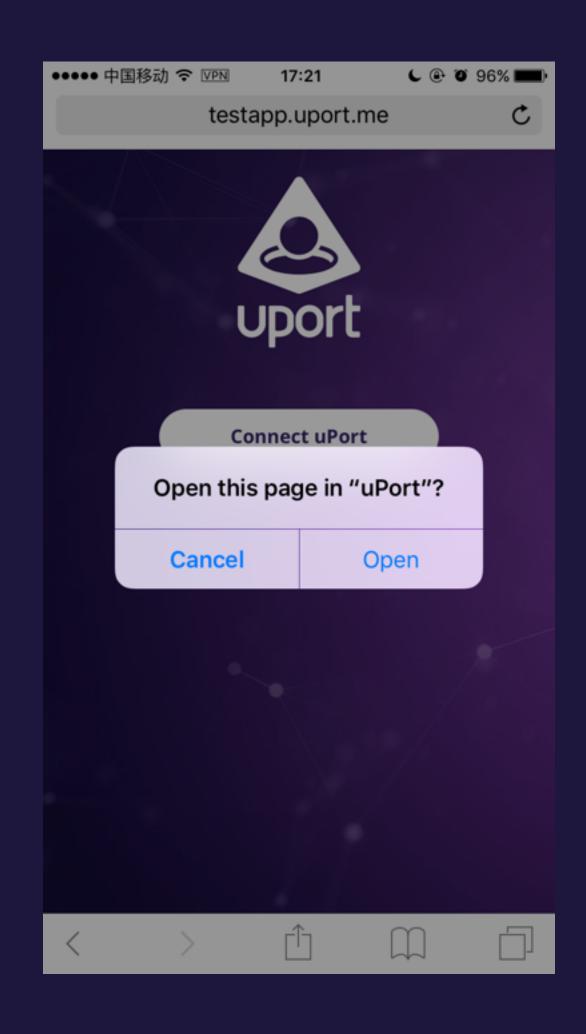
Receives transaction from msg.sender

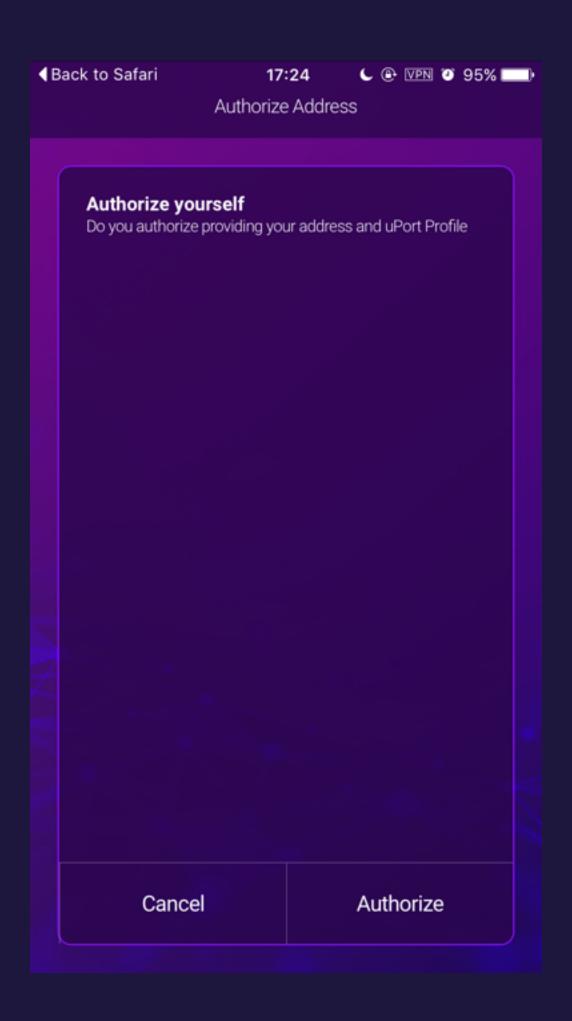
#### DEMO

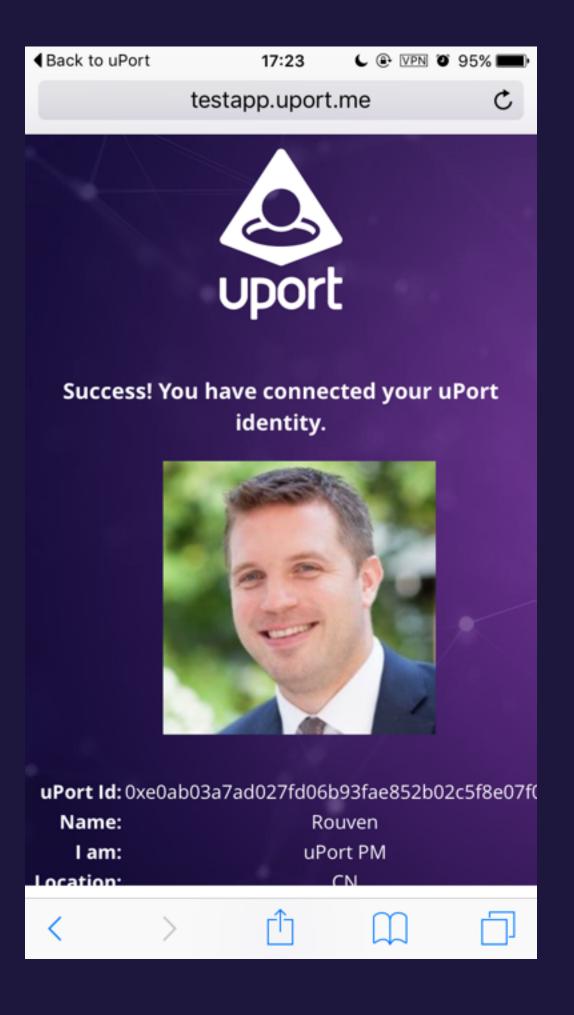




#### Mobile dApp integration

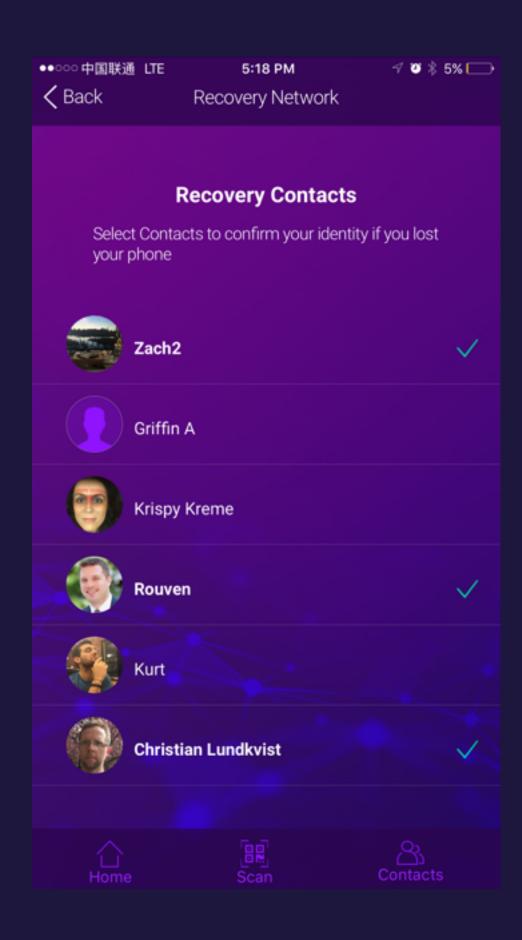






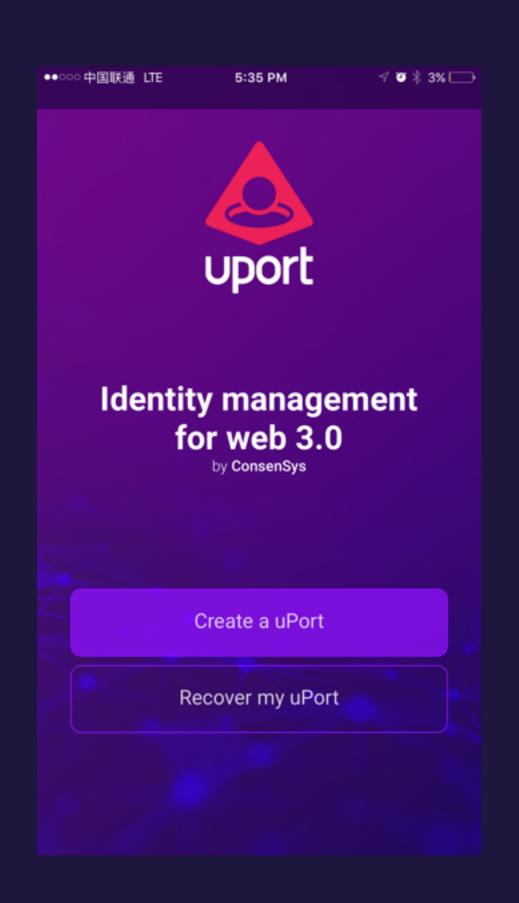


#### Social Recovery

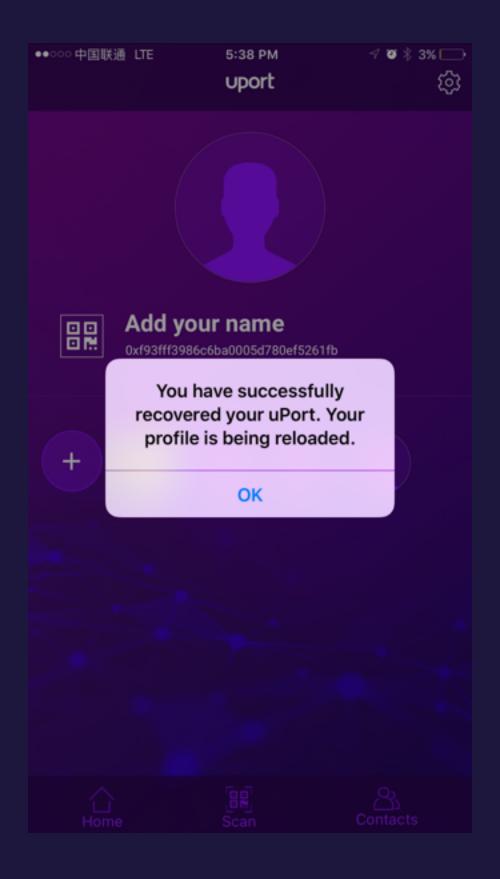


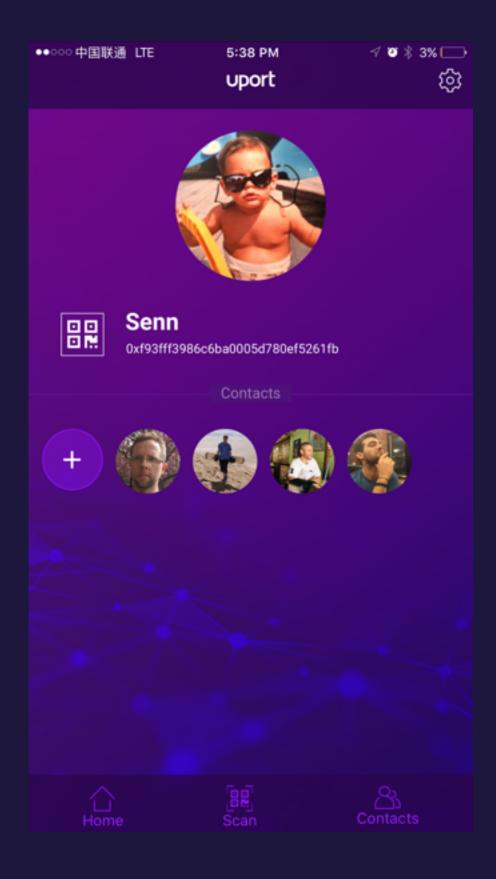


## Social Recovery











#### Vision and Roadmap

Privacy

Multiple personas, Selective disclosure,...

Protection

Recovery options, Hierarchical key access, Verified contracts...

Experience

Smart guidance, Automated signatures,...

Business

Integration, Entity identities,...



#### Simple developer integration

- Use standard web3 paradigm
- Drop in uport web3 provider
  - getAccounts triggers uPort Connect
  - sendTransaction triggers transaction signing
- Generates QR codes and interfacing with mobile
- Further customize for deeper integration

```
// App Setup
let rpcUrl = "https://consensysnet.infura.io:8545";
let Uport = window.uportlib.Uport;
let web3 = new Web3();
// App options
let options = {
 ipfsProvider: {
   host: 'ipfs.infura.io',
   port: '5001',
   protocol: 'https',
   root: ''
let uport = new Uport(appName, options)
let uportProvider = uport.getUportProvider(rpcUrl)
web3.setProvider(uportProvider)
```



#### Find us here

#### GitHub:

https://github.com/ConsenSys/uport-registry

https://github.com/ConsenSys/uport-lib

https://github.com/ConsenSys/uport-persona

Whitepaper (work in progress)

https://uport.me/whitepaper.pdf

Developer Beta - mobile app (Access code: devcon2)

iOS: <a href="https://uport.me/devbeta">https://uport.me/devbeta</a>
Android (soon): <a href="mailto:android@uport.me">android@uport.me</a>

Gitter

https://gitter.im/ConsenSys/uport-lib

#### talk to us @ DevCon

- Christian @ChrisLundkvist
- Pelle @PelleB
- Greg @gbugyis
- Joel @oed\_earth
- Michael @somemikesena
- Thessy @ThessyMehrain
- Andres @ajunge\_m
- Jeff @jeffscottward
- Zach @zachferland
- Zac @VoltzRoad
- Aldi @AGjoka
- Rouven @rh7

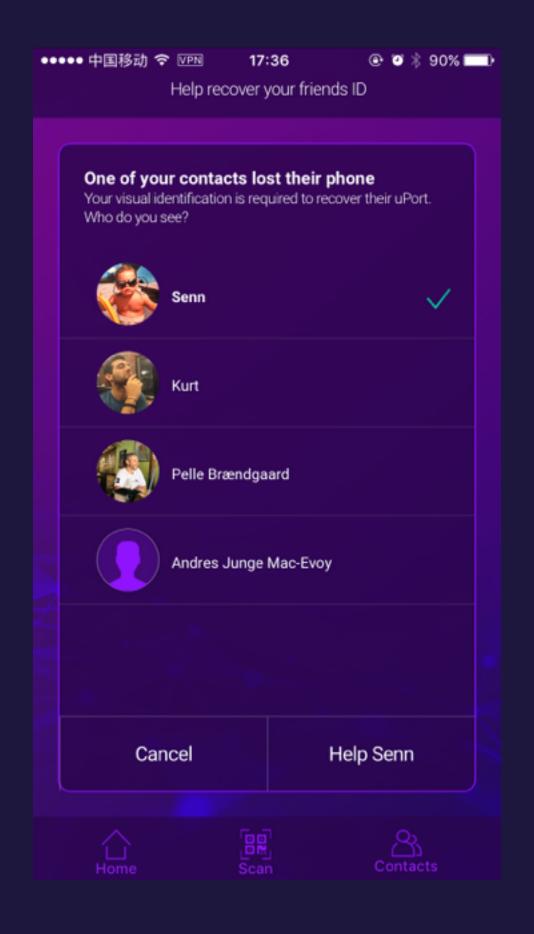


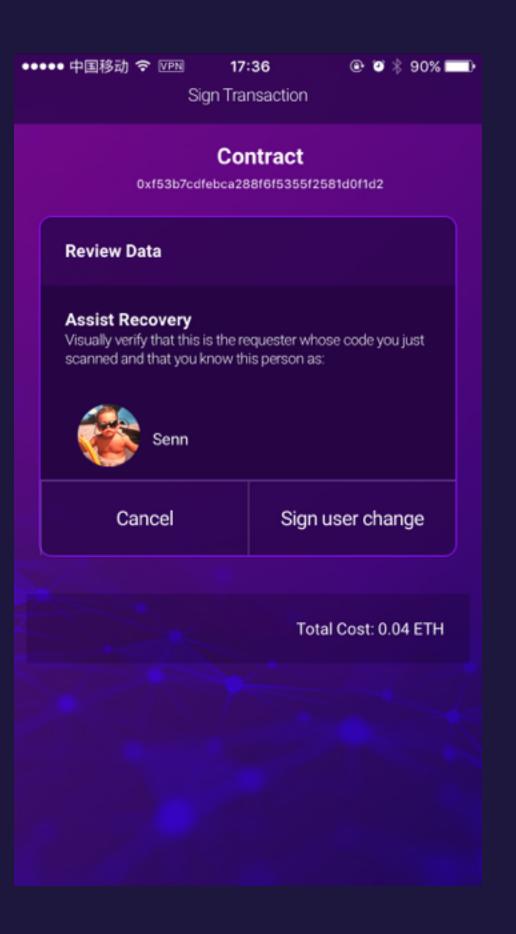
# Backup





## Social Recovery

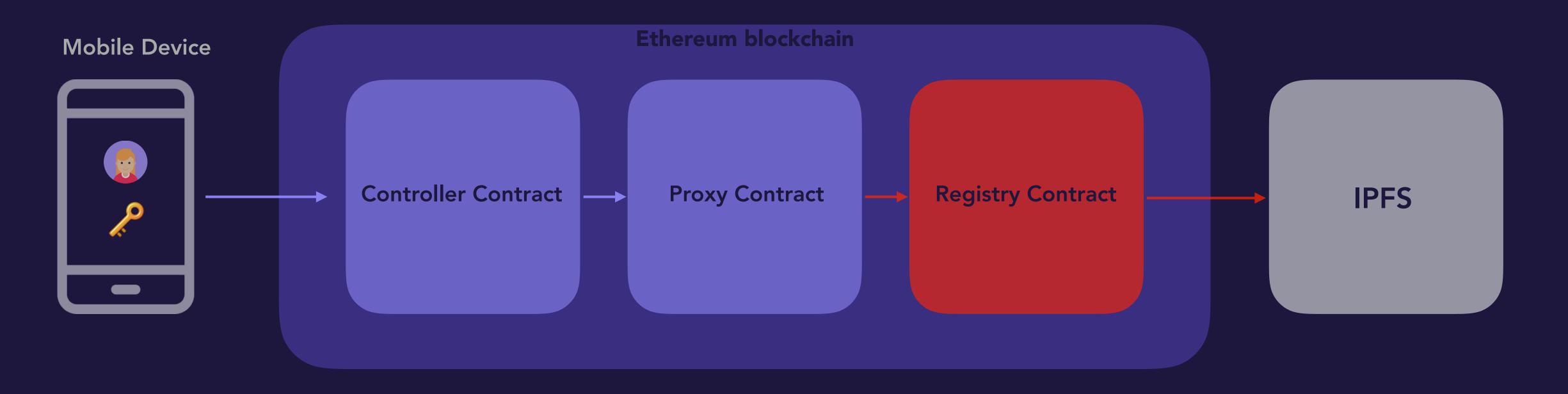






#### Registry Contract

ties off-chain attributes to the identifier



Maps Uport identifier to IPFS hash

Cryptographically binds
Uport identifier to profile
data

Permits selective disclosure of IPFS data

Data record can contain profile data, attestations, keys for other services, etc.

Follows data spec of Blockstack Profiles signed JSON Web Tokens, <u>schema.org</u>