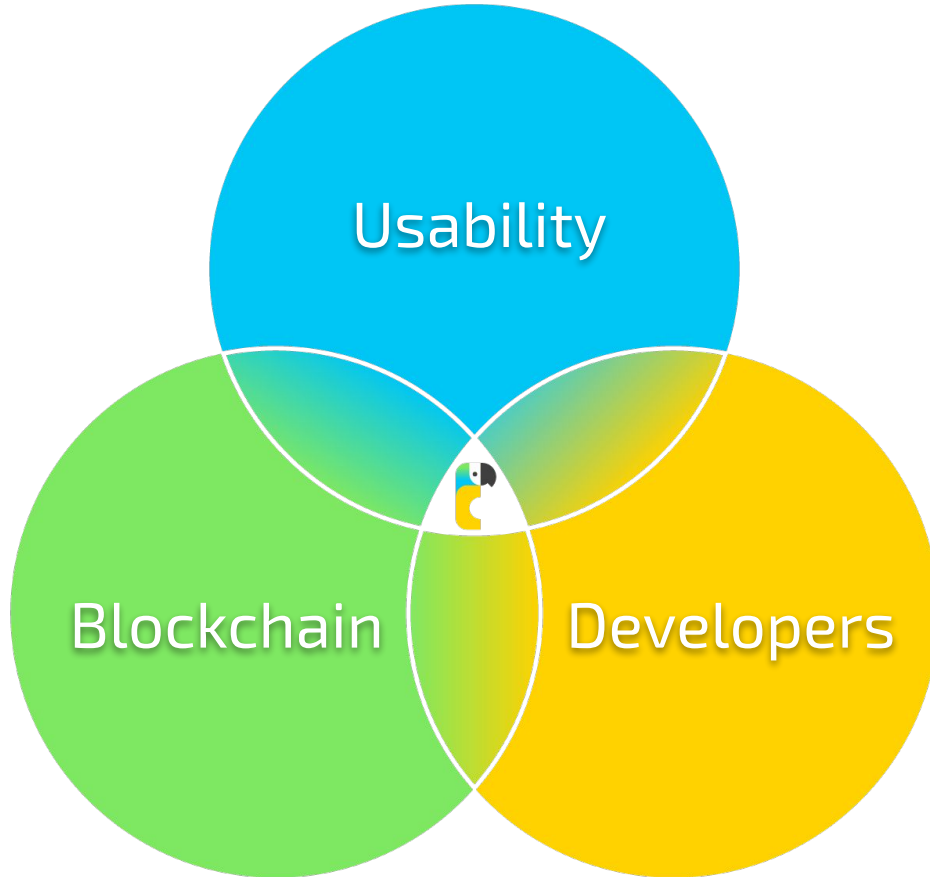TRYCRYPTO

Decentralized tech is changing our world

TryCrypto makes it usable

Vision

To improve **usability** of **blockchain** products for end-users by empowering **developers** with better tools

Problem

75%

of decentralized app developers say user onboarding is the number one barrier to adoption

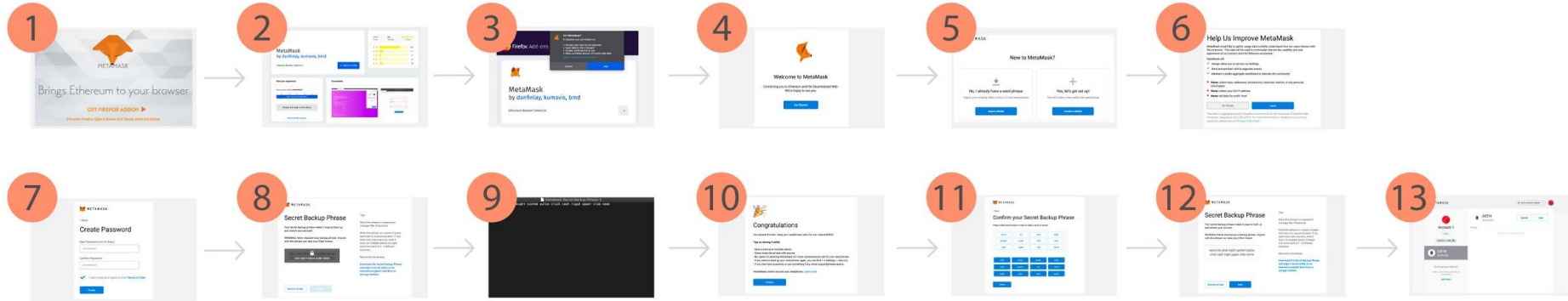**Decentralized app developers struggle to build great user experiences**

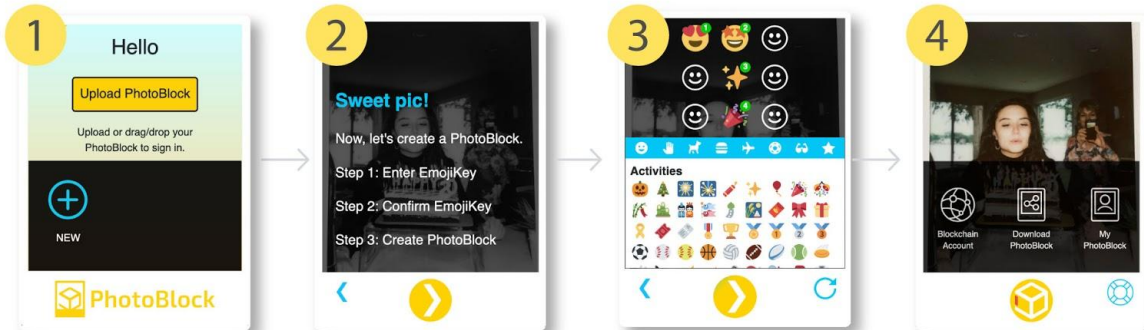➡️ Each blockchain requires users to download and install their software

➡️ Wallets conflate login and payments and are very confusing for users
– *"I just want to use this dapp, not trade cryptocurrency."*

MetaMask Account Creation Workflow

PhotoBlock Account Creation

Solution

Software that works on any blockchain to make user onboarding and dapp development simple

→ Split login and payments for Web 2.0-like experience.

→ Use OpenID Connect for blockchain accounts (like "Login with Google" or "Login with Apple" buttons).

→ Make it easy for web developers to get started building dapps with customizable starter kits that integrate login.

One button for user login on any blockchain

One platform for developer quickstart on any blockchain

Sign in with
PhotoBlock

DappStarter

Why Now

First-mover advantage

First product offering web and mobile authentication for users, and starter kits for developers on every blockchain.

Significant pain point

Dapp usability and development are significant pain points. We solve both problems.

Ride the wave

New blockchains are emerging to challenge existing players. We can piggyback off their marketing.
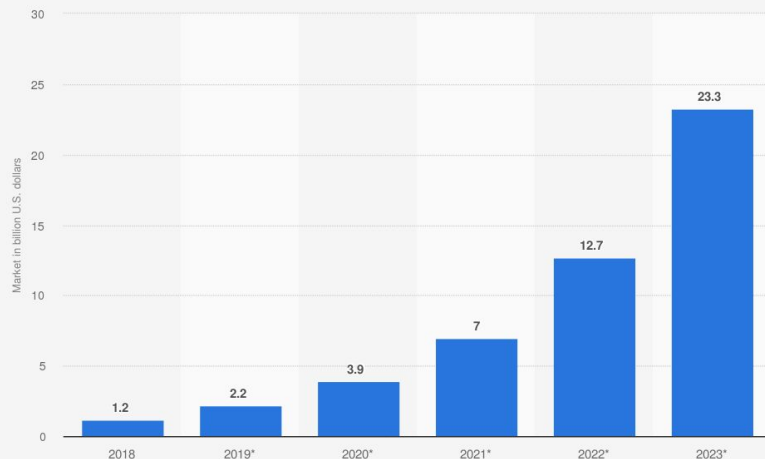
Industry trend validated

Recent release of "Sign in with Apple" validates OpenID Connect (same technology we use) as the preferred approach for user authentication.

Market Size

The global blockchain market size is expected to grow from USD 1.2 billion in 2018 to USD 23.3 billion by 2023, at a Compound Annual Growth Rate (CAGR) of 80.2%.

A Deloitte survey of 1,386 global blockchain-savvy senior executives reported that 45% of the organizations use public blockchains and 23% use dApps.

Size of the blockchain technology market worldwide from 2018 to 2023 (in billion U.S. dollars)
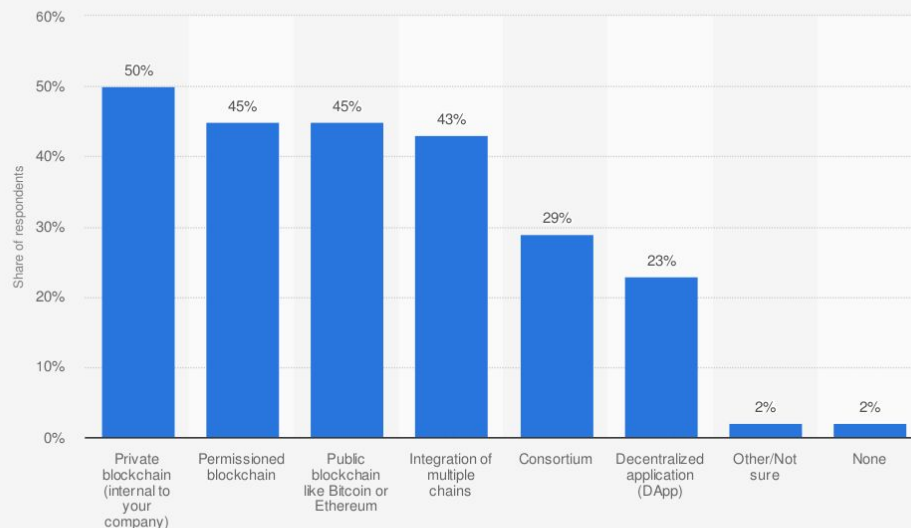
Year	Market in billion U.S. dollars
2018	1.2
2019*	2.2
2020*	3.9
2021*	7
2022*	12.7
2023*	23.3

Blockchain models deployed in organizations worldwide as of 2019*

Model	Share of respondents
Private blockchain (internal to your company)	50%
Permissioned blockchain	45%
Public blockchain like Bitcoin or Ethereum	45%
Integration of multiple chains	43%
Consortium	29%
Decentralized application (DApp)	23%
Other/Not sure	2%
None	2%

Competition

Decentralized

PhotoBlock

Dapper

METAMASK

MyCrypto

3 BOX

MEW

Scatter

Blockchain-specific

Blockchain-agnostic

Groundhog

BLOCKSTACK ID

crypto.com

civic

portis

TRUST WALLET

Centralized

There is no web-based, blockchain-agnostic authentication service

Competitive Advantage

Blockchain-agnostic

Every blockchain account managed in one simple interface

➡️ No need to keep track of multiple accounts and private keys

➡️ No need to learn a different user interface for every blockchain

Web-based

No downloads or installations, frictionless user onboarding

➡️ Nothing to download or install

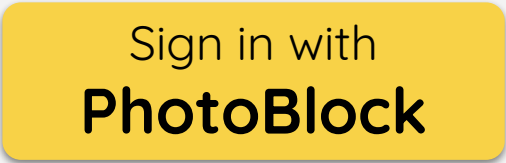➡️ Works with your browser on desktop, mobile and tablet devices

Fully decentralized

Secure and persistent, enabling trust

➡️ High availability – works from any IPFS gateway

➡️ No central server or hosting platform dependency

Products

TryCrypto brings the proven **simplicity and familiarity** of the current web to the decentralized web.

	Authentication	Development
Web 2.0	Sign in with Google Sign in with Facebook	METEOR WEB TEMPLATE STUDIO BY Microsoft Create React App
Web 3.0	Sign in with **PhotoBlock**	**DappStarter**

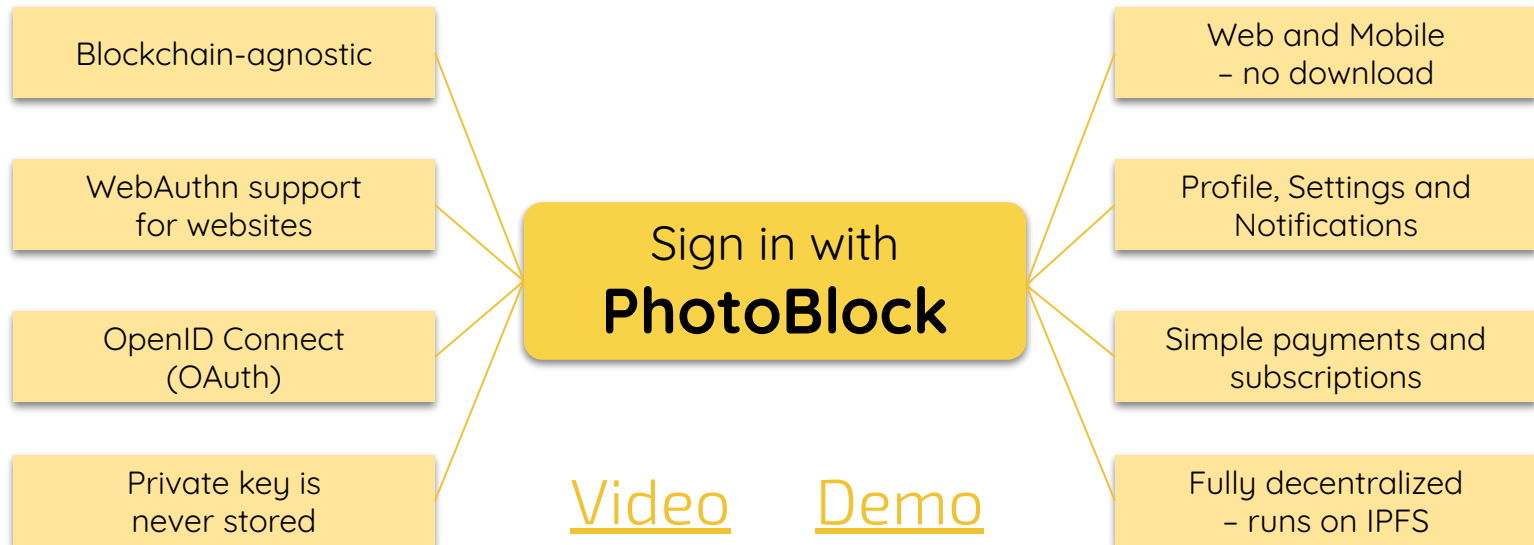# Authentication: PhotoBlock

Visual authentication solution for websites and blockchains

Using only a photo and emojis, users can securely authenticate to any blockchain, website or mobile app that supports PhotoBlock

Developers can add PhotoBlock support to any web or mobile app with **only a few lines of code**

Blockchain-agnostic

WebAuthn support for websites

OpenID Connect (OAuth)

Private key is never stored

Sign in with
PhotoBlock

Web and Mobile – no download

Profile, Settings and Notifications

Simple payments and subscriptions

Fully decentralized – runs on IPFS

Video   Demo

PhotoBlock – How it Works

Sign in with PhotoBlock
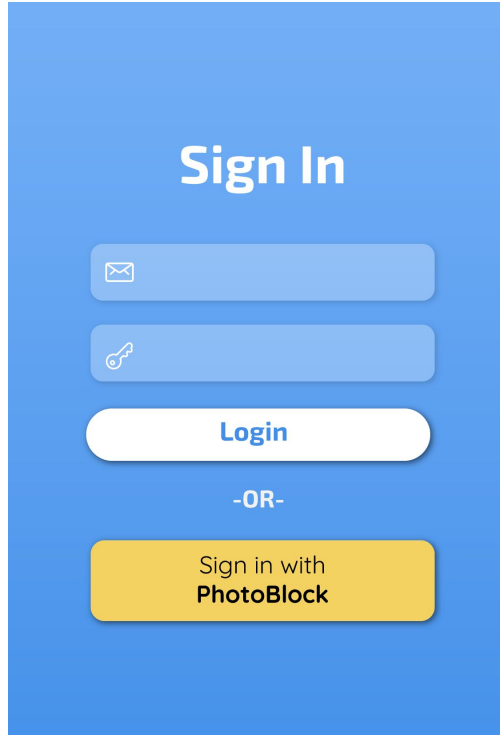
Enter EmojiKey

You're logged in!
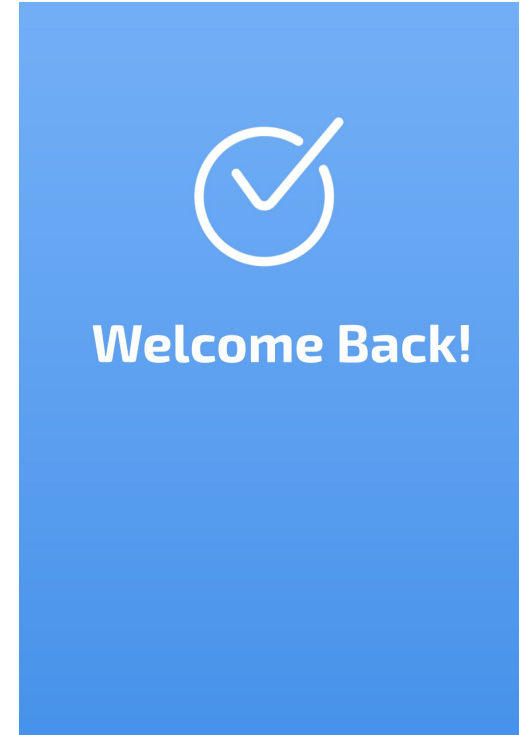
Sign In

Login

-OR-

Sign in with
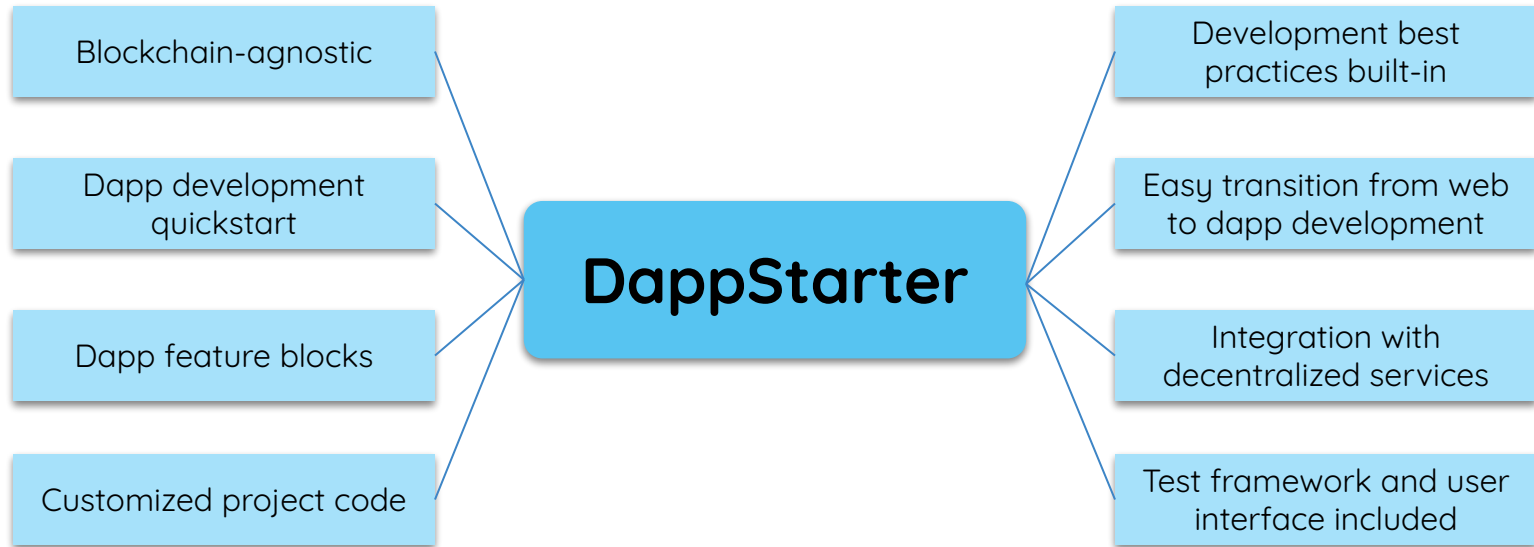**PhotoBlock**

Sign in

with **PhotoBlock**

Welcome Back!

Development: DappStarter

Dapp Starter gives developers a ready-to-use Open Source starter kit with full PhotoBlock integration. It saves developers significant time as they can download a complete, customized front-end user-interface for the blockchain of their choice with Authentication, Payments, Subscription, Testing and User-interface pre-built.

Blockchain-agnostic

Dapp development quickstart

Dapp feature blocks

Customized project code

DappStarter

Development best practices built-in

Easy transition from web to dapp development

Integration with decentralized services

Test framework and user interface included

DappStarter – How it Works

Select blockchain and features

Blockchain

- ◯ Ethereum
- ◯ Harmony
- ◯ Klaytn

Features

- ☑ PhotoBlock Authentication
- ☐ Payments
- ☐ Subscriptions
- ☐ Custom token
- ☑ IPFS storage

Customize dapp

Dapp Name

Doculus

Front-end Framework

- ◯ React
- ◯ Vue
- ◯ Angular

Download dapp code

Excellent!

Your dapp **Doculus** is ready on GitHub. Start coding now!

Let's Go

Business Model

PhotoBlock	Authentication	Decentralized Profile	Premium PhotoBlocks
	FREE	FREE	Per use micropayments

Premium PhotoBlocks will enable businesses to offer PhotoBlocks that are pre-loaded with premium functionality that is unlocked in dapps. Additional premium features include free or discounted transactions, multisig capabilities and automatic device sync.

DappStarter	Basic	Paid Subscriptions
	FREE	Tiered subscription model for individuals, teams and businesses

DappStarter will enable developers to greatly reduce the time it takes to get started with dapp development. We will offer paid subscriptions that include advanced dapp features, integration with backend services provided by TryCrypto and others, development support and advanced documentation.

Go-to-Market Strategy

Partner with blockchains to drive developer adoption

147 blockchains with market cap above $5M

- ➡️ Include PhotoBlock and DappStarter in developer documentation and toolkits

- ➡️ Engage existing blockchain communities to drive support for products

Use dapp developers to drive user adoption

$19M daily transaction volume for dapps

- ➡️ Account creation for PhotoBlock driven by convenience in DApp

- ➡️ DApps offer subscription option with DappStarter, drive user adoption of DappStarter

Partner with exchanges to drive user adoption

120 exchanges with daily volume above $5M

- ➡️ Sign in to exchange accounts with PhotoBlock, drive user adoption of PhotoBlock with crypto early adopters (exchange users)
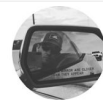
Traction

Business

→ Harmony Partnership

→ NEAR Beta Program

→ Won Klaytn (Kakao) Hackathon – S. Korea

→ Won Wanxiang Hackathon – Shanghai

→ Talks with four top exchanges to use PhotoBlock

Product

→ PhotoBlock support for five blockchains

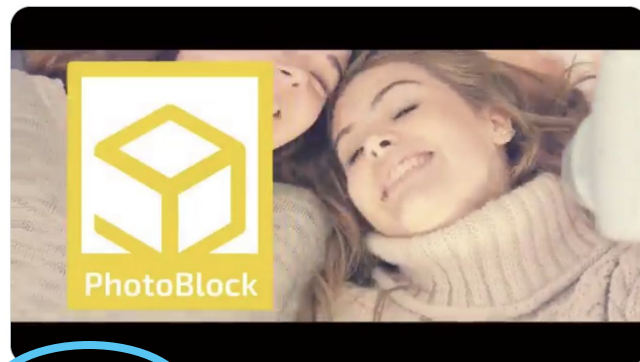→ PhotoBlock and DappStarter beta releases

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Max Thyssen
@maxthyssen

It all starts with $ONE…

One Idea, One Innovation, One Click…

PhotoBlock

261K views

9:07 PM · 9/7/19 · Twitter Web App

413 Retweets **7,162** Likes

Team

Nik Kalyani
Co-founder/ Chief Executive Officer

→ Co-founder of WhenHub
→ Co-founder DotNetNuke (acquired 2017)
→ Creator of Walkstarter
→ Udacity Blockchain SME
→ Microsoft MVP (12 years)

Chase Chapman
Co-founder/ Chief Experience Officer

→ Business Student University of Michigan
→ Medium blockchain writer
→ Blockchain curriculum education lead

Jonathan Sheely
Lead Software Architect

Traci Fong
Front-end Engineer

Funding

18-month funding requirement is **$1.25 million**

Months 1-6: **$343K**	Months 7-12: **$452K**	Months 13-18: **$461K**

Primary use of funds is for **Product Development**

Product Development (66%)	Marketing (16%)	Operations (18%)

Our focus for the first 18 months is product-market fit and user acquisition. We expect to close on a Series A funding round prior to Month 18. Series A funds will be used to expand business development and sales with the goal of generating our first $1 million in revenue.

Decent Function, Inc. d/b/a TryCrypto is a Public Benefit Corporation incorporated in Delaware with headquarters at 1601 Morgan Street, Mountain View, CA 94043

For more information, please contact:

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Chase Chapman – Co-founder   chase@trycrypto.com   +1.650.335.8063

https://www.trycrypto.com
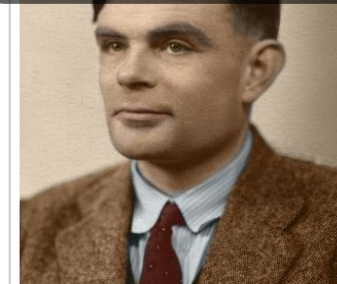
Additional Reading

Reference Materials

All Aboard Web 3.0: Why Onboarding New dApp Users is a Titanic Task
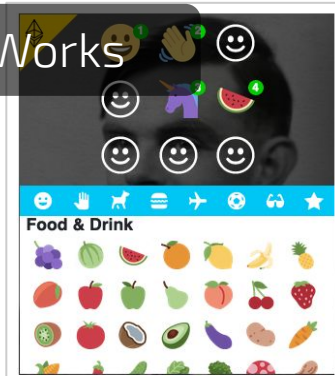
September 26, 2019 – [Hackernoon](#)

"The majority of web 2.0 applications have developed easy ways for users to sign up and login. Many sites now feature third-party integrations with the likes of Facebook and Google accounts, providing one-click access and demanding negligible attention from their users – **a stark contrast to the current state of dApps**."
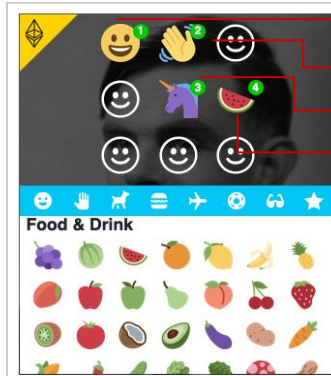
How PhotoBlock Works

(1) 1F600	**8950 4E47 0D0A**	(1)
(2) 1F44B	**1A0A 0000 000D**	(2)
(3) 1F984	4948 4452 0000	
(4) 1F349	0190 0000 006A	
	0806 0000 0092	(5)
	C107 0700 000A	(6)
	4369 4343 5049	
	4343 2070 726F	
	6B48 DB48 2DA4	

Emoji Positions

1	2	3
4	5	6
7	8	9

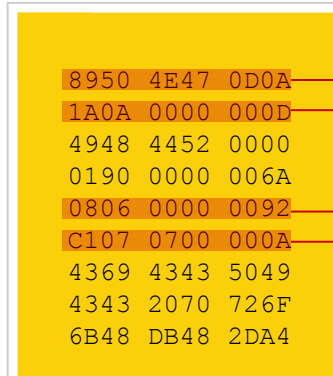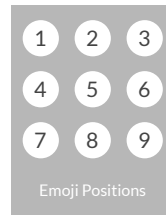**1** — User uploads their photo

2 — User creates EmojiKey by choosing emojis at each of nine positions in sequence.

3 — PhotoBlock gets the byte value for each emoji in sequence, ignoring empty positions.

4 — PhotoBlock divides photo bytes into nine segments and extracts bytes for each emoji position.

H1 = blake2s("1F600", "89504E470D0A")
H2 = blake2s("1F44B", "1A0A0000000D")
H3 = blake2s("1F984", "080600000092")
H4 = blake2s("1F349", "C1070700000A")

Seed = blake2s(H1, H2, H3, H4)

5 — PhotoBlock uses the Blake2s algorithm to hash emoji bytes with photo bytes for each position, and finally, produces an aggregate hash of the positional hashes. This is the high-entropy seed for keygen.

Seed → UserId / Username
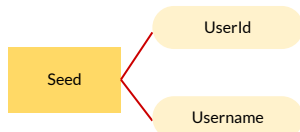
6 — The seed is used to deterministically generate a UserId and Username in "adjective - phonetic word" format. Their hash is compared to the hash stored in the XMP (eXtensible Metadata Platform) photo section.

Seed → Ethereum / NULS / Klaytn

7 — If the hash matches, the same seed is used to deterministically generate a public key and account address for the blockchain where PhotoBlock is being used.

No private key or any other security information is ever stored in PhotoBlock!

Signing Request — Private Key / Message to be signed
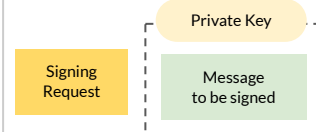
8 — The public key and account address are reported to the calling application. The private key is only generated for signing requests and not available to the application.