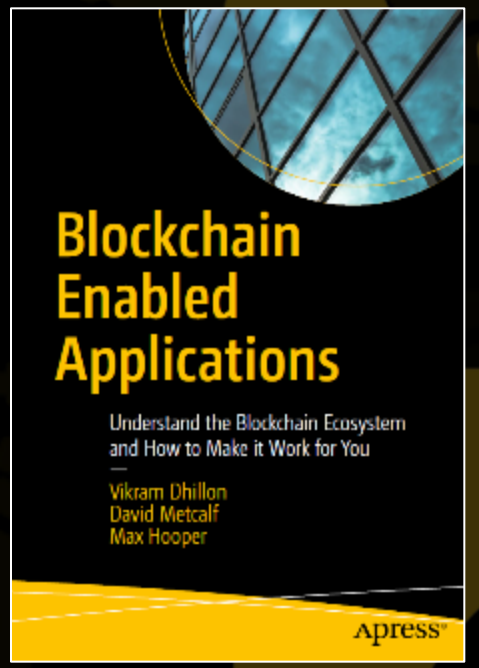
Blockchain for Games:

The Global Impact on Health, Finance and Media

David Metcalf
University of Central Florida
Institute for Simulation and Training
Metil.org



UNIVERSITY OF CENTRAL FLORIDA

Summary and Objectives

Blockchain is changing many industry segments and our society as a whole. It is not just cryptocurrencies and sources of value/ exchange- healthcare, finance, media and more are being disrupted by systems of distributed trust (blockchain) and automation (smart contracts). Games and gaming constructs are beginning to be combined in unique ways.

We'll explore: a short history, benefits and liabilities of using blockchain in games, game frameworks and examples and potential uses for serious games that impact sectors of society

The University of Central Florida

- Orlando, FL
- Largest Undergrad pop in U.S.
- 2nd highest number of CS grads
- 3x Cyberdefense National Champs
- 1st in Game Design (Princeton Review)
- 2015-16 enrollment exceeds 63,000
- 12 Colleges
- 216+ degree programs

New College of Medicine launched in 2009

The Institute for Simulation and Training

Research Institute, 35 years, $250M, 280 Employees


UCF Institute for Simulation & Training
Many federal agencies and 150+ companies involved in MST
National Center for Simulation
240+ members
$5B+ in Sim and Training in CF Research Park


Lake Nona
Town Center
University of
Central Florida
Medical School
Laureate
Park
Nemours
Children's
Hospital
Veterans
Administration
Medical
Center
University of Florida
Research & Academic
Center
Sanford-Burnham
Prebys Medical
Discovery Institute

Innovation Life Cycle

Center for Innovation and Entrepreneurship

Office of Technology Transfer
Find & Innovative UCF research to commercialize

Center for Entrepreneurial Leadership
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras molestie arcu libero, quis

Blackstone LaunchPad
A place for student entrepreneurs to be creative and receive coaching

Venture Accelerator
Startup research, business planning and development, coaching

National Entrepreneur Center
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras molestie arcu libero, quis

Small Business Development Center
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras molestie arcu libero, quis

I-CORPS
Lorem ipsum dolor sit amet consectetur adipiscing elit. Cras molestie arcu libero, quis

Business Incubation Program
Lorem ipsum dolor sit amet consectetur adipiscing elit. Cras molestie arcu libero, quis

UCF Mentor Network
Lorem ipsum dolor sit amet consectetur adipiscing elit. Cras molestie arcu libero, quis

Florida Angel Nexus
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras molestie arcu libero, quis

Starter Studio
Lorem ipsum dolor sit amet consectetur adipiscing elit. Cras molestie arcu libero, quis

GrowFL
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras molestie arcu libero, quis

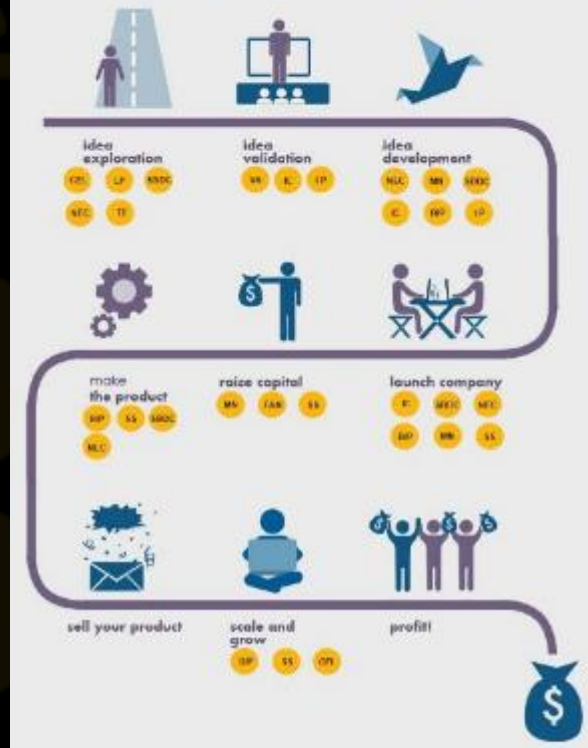
to access these services:

cie.ucf.edu

powered by Piktochart

Innovation Road Map

Center for Innovation and Entrepreneurship



UCF Center for Entrepreneurial Leadership
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras molestie arcu libero, quis fermentum urna pellentesque a. Etiam vulputate, arcu quis condimentum vestibulum, ipsum nulla porttitor elit, at tincidunt

Small Business Development Center
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras molestie arcu libero, quis fermentum urna pellentesque a. Etiam vulputate, arcu quis condimentum vestibulum, ipsum nulla porttitor elit, at tincidunt

Florida Angel Nexus
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras molestie arcu libero, quis fermentum urna pellentesque a. Etiam vulputate, arcu quis condimentum vestibulum, ipsum nulla porttitor elit, at tincidunt

UCF Blackstone LaunchPad
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras molestie arcu libero, quis fermentum urna pellentesque a. Etiam vulputate, arcu quis condimentum vestibulum, ipsum nulla porttitor elit, at tincidunt

UCF Office of Technology Transfer
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras molestie arcu libero, quis fermentum urna pellentesque a. Etiam vulputate, arcu quis condimentum vestibulum, ipsum nulla porttitor elit, at tincidunt

UCF Business Incubation Program
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras molestie arcu libero, quis fermentum urna pellentesque a. Etiam vulputate, arcu quis condimentum vestibulum, ipsum nulla porttitor elit, at tincidunt

I-CORP
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras molestie arcu libero, quis fermentum urna pellentesque a. Etiam vulputate, arcu quis condimentum vestibulum, ipsum nulla porttitor elit, at tincidunt

UCF Venture Accelerator
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras molestie arcu libero, quis fermentum urna pellentesque a. Etiam vulputate, arcu quis condimentum vestibulum, ipsum nulla porttitor elit, at tincidunt

Starter Studio
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras molestie arcu libero, quis fermentum urna pellentesque a. Etiam vulputate, arcu quis condimentum vestibulum, ipsum nulla porttitor elit, at tincidunt

National Entrepreneur Center
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras molestie arcu libero, quis fermentum urna pellentesque a. Etiam vulputate, arcu quis condimentum vestibulum, ipsum nulla porttitor elit, at tincidunt

UCF Mentor Network
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras molestie arcu libero, quis fermentum urna pellentesque a. Etiam vulputate, arcu quis condimentum vestibulum, ipsum nulla porttitor elit, at tincidunt

powered by Piktochart

UCF | Applied Research Institute

UNIVERSITY OF CENTRAL FLORIDA

Early NSF Award for HealthShares 2013-14

METIL

INDUSTRY

GOOGLE

Johnson & Johnson

MovingKnowledge™

LOWE'S

DAU

Defense Acquisition University

Microsoft

MILITARY

COMBAT MEDIC
PLAYING CARDS

USMC
COMBAT HUNTER

mobile
WEB 2.0
TECHNOLOGIES

SIMULATION

cognition

collaboration

learning

KNOWLEDGE

HEALTH

REALITY MEDS

VIRTUAL FAMILY

SOCIAL

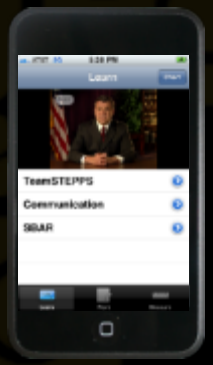
HADR

HUMANITARIAN ASSISTANCE
DISASTER RELIEF

Mixed Emerging Technology Integration Lab (METIL

Microsoft
Mobile SCORM-conforming courses

McGraw-Hill
Interactive medical iPad apps



TeamSTEPPS
Patient Safety Mobile App

Learning, Performance & Well-being

Mobile

Games and Simulations

Virtual Worlds

Collaborative Technologies

Web 2.0 and beyond

SuperNutrition

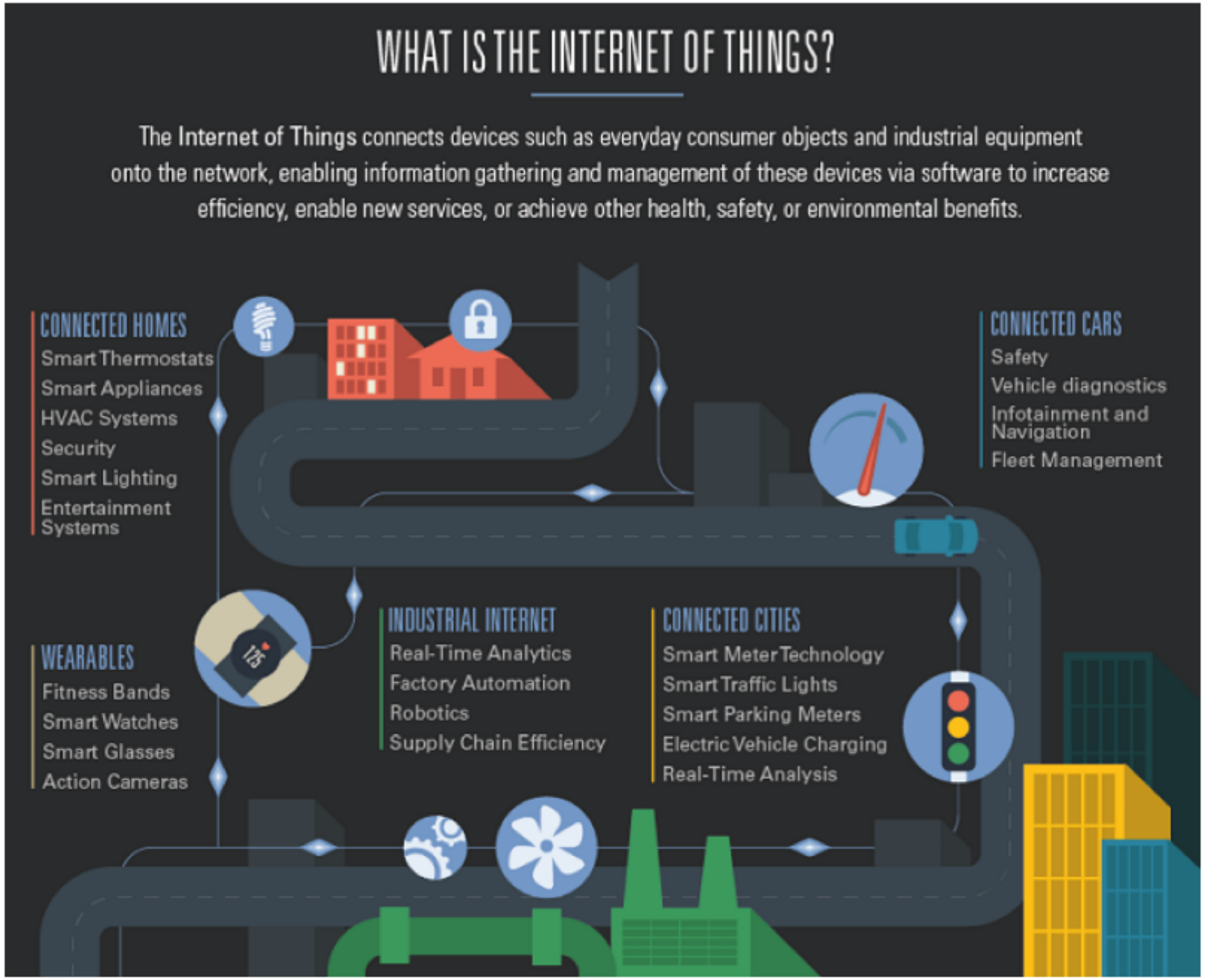
Multi-platform Facebook-style social game for teaching 9-12 year-olds about nutrition and energy

Combat Medic

Multi-modal game-based training for Army field medics (physical cards and mobile app)

Johnson & Johnson PRD
3D University

Corporate Mobile Learning, Virtual Worlds and KM/Collab


WHAT IS THE INTERNET OF THINGS?
The Internet of Things connects devices such as everyday consumer objects and industrial equipment onto the network, enabling information gathering and management of these devices via software to increase efficiency, enable new services, or achieve other health, safety, or environmental benefits.
CONNECTED HOMES
Smart Thermostats
Smart Appliances
HVAC Systems
Security
Smart Lighting
Entertainment Systems
CONNECTED CARS
Safety
Vehicle diagnostics
Infotainment and Navigation
Fleet Management
WEARABLES
Fitness Bands
Smart Watches
Smart Glasses
Action Cameras
INDUSTRIAL INTERNET
Real-Time Analytics
Factory Automation
Robotics
Supply Chain Efficiency
CONNECTED CITIES
Smart Meter Technology
Smart Traffic Lights
Smart Parking Meters
Electric Vehicle Charging
Real-Time Analysis

https://www.youtube.com/watch?v=ywvTIM_eOVI

GDC

https://www.youtube.com/watch?v=Az9xG3l8-0g

The Evolution of Blockchain Games and a Peek at What's to Come

The following is a guest post by Vincent Niu from DAppReview.
The original Chinese article was published on May 11th.

With so many opportunities looking us straight in the face over the past decade or so, we still seem to be looking into an unclear future.

As an in-depth participant in blockchain technology and gaming, I'm going to walk you through the development of blockchain games over the past six months. I'll explore the value that blockchain brings to games, the challenges they bring to developers, and then circle back around to the essence of games.

First, Let's Talk About Cognitive Thresholds.

The screenshot on the left, below, is a WeChat conversation of mine from 2013. I was amazed that Bitcoin's price had already gone up to more than 200 RMB (about US$30), and even th

t short-selling it at 250 RMB.

No Service 9:00 AM 92%
A Medium Corporation
Follow Sign in Get started
HOME ABOUT DAPPCHAINS | LOOMX.IO
Follow

Is "Blockchain Game" a Pseudo-Statement?

A lot of people, including professional gaming media outlets and companies, view "blockchain + game" as having the following:

1. **Unclear Underlying Ecosystem** – A lot of public game chains and sidechains are still in the early stages, so there's no universal standard.
2. **Unsatisfying Performance** – Ethereum has a transaction capacity of less than 20 transactions per second and charges a gas fee for every action.
3. **No Real Gameplay** – Current blockchain games all suffer from having a simple mechanism and a short life cycle.
4. **A Lack of Professional Talent** – There aren't that many people who are knowledgeable in both blockchain and gaming.

Intrigued, I then searched for some early opinions on mobile games. Here is a news report on Sohu back in 2005:

手机游戏产业发展瓶颈

在手机游戏的发展过程中，诸多存在的瓶颈也在一定程度上制约着这一产业的发展。

一是手机终端。没有一个统一的无线游戏操作平台和无线游戏型手机标准，无线游戏开发商推出的游戏只能在特定的手机终端和运营商平台上运行，大大削弱了无线游戏的市场潜力，而有限的手机性能也限制了高性能游戏的开发。

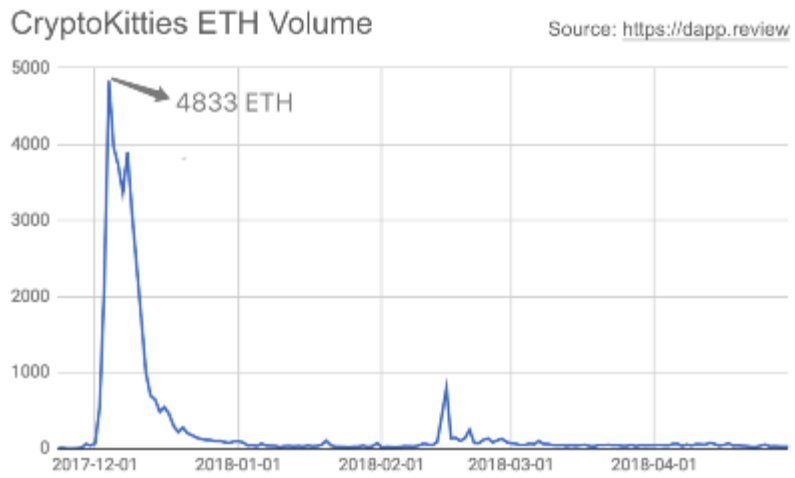
二是网络服务。由于手机内存有限，不能随时向服务器存取数据，目前中国移动的JAVA游戏仍然依赖2.5G网络，尚不足以支持手机游戏在线运营的需求，并且由于无线网络的带宽限制，中国移动规定在其平台上运营的手机网

大小不能超过100kB，这对图片的精美度及游戏的复杂程度会有一定影响。

The Blockchain Game 1.0 Era You Didn't Know About

November 2017: CryptoKitties Opened the Door to DApp Games

CryptoKitties was the first viral DApp, and also the longest living game DApp. Holding the record of over 14,000 daily active users (December 9th, 2017), it succeeded in paralyzing the Ethereum network. As of April 30th, the total transaction amount equaled 43067.04 ETH, or about 32 million USD.



From the perspective of conventional video game players, CryptoKitties was not really a "game", but a novelty [Open in app] the "transaction attributes" and "unique private assets" of the blockchain. At the same time, this was the first

No Service 9:00 AM 92%
A Medium Corporation
Follow Sign in Get started
HOME ABOUT DAPPCHAINS | LOOMX.IO Follow

As of writing this, there are still about 4,000 transactions and 300–500 active users every day on CryptoKitties.

In early December, my partner TZ and I began to study the genetic synthesis of CryptoKitties, and tried to deduce the logic inside this black box. Eventually, we were able to synthesize a mistletoe cat (which was super rare at the time) and three of the top ten Christmas cats in the entire game.

February–March 2018: Popular Financial Games During the Bear Market

The coin market started to go down starting at the end of January, so coin holders were unable to profit from speculation. This led to the popularity of two types of games. There were, on average, five new game DApps coming out every day in the first quarter of 2018. The first thing I would do every morning is look for these new games and test them out.

Gambling DApps

Open in app

T-Mobile 9:00 AM 92%

A Medium Corporation

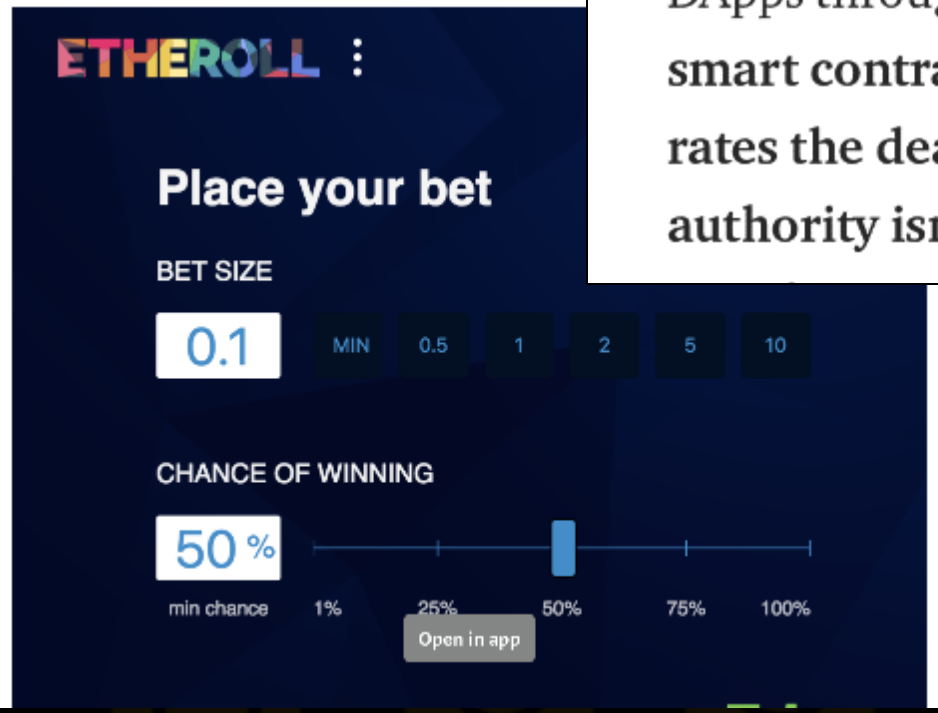
Follow

Sign in Get started

HOME ABOUT DAPPCHAINS | LOOMX.IO

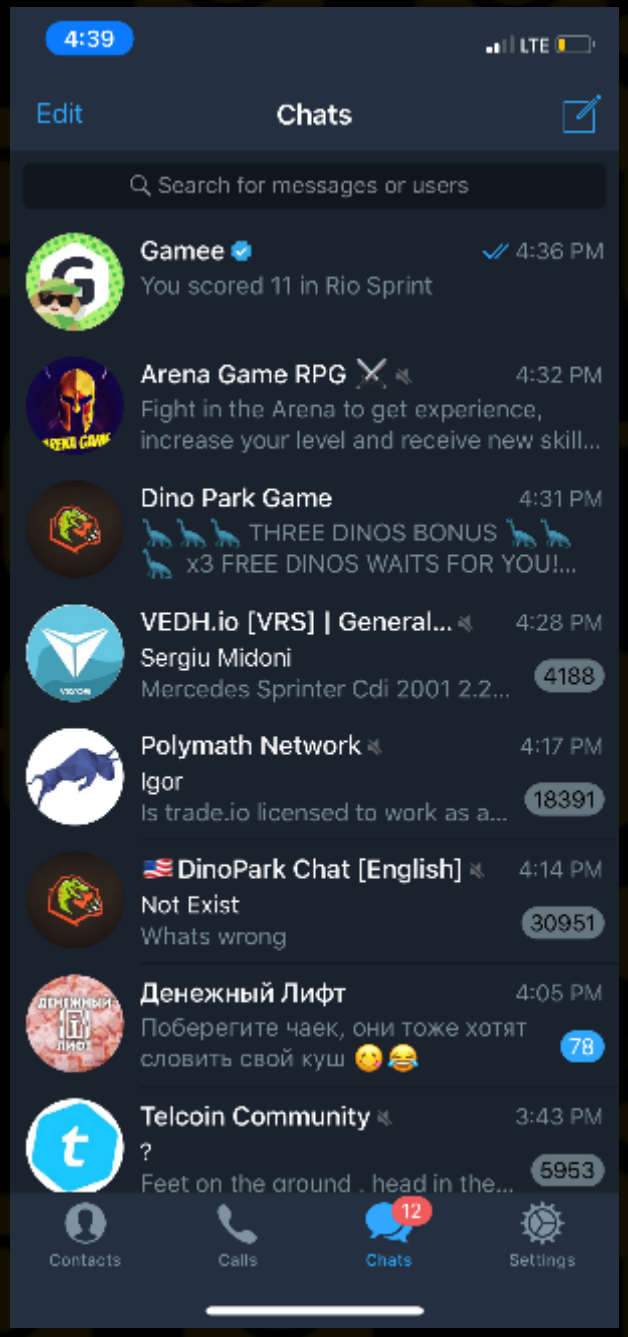
Follow

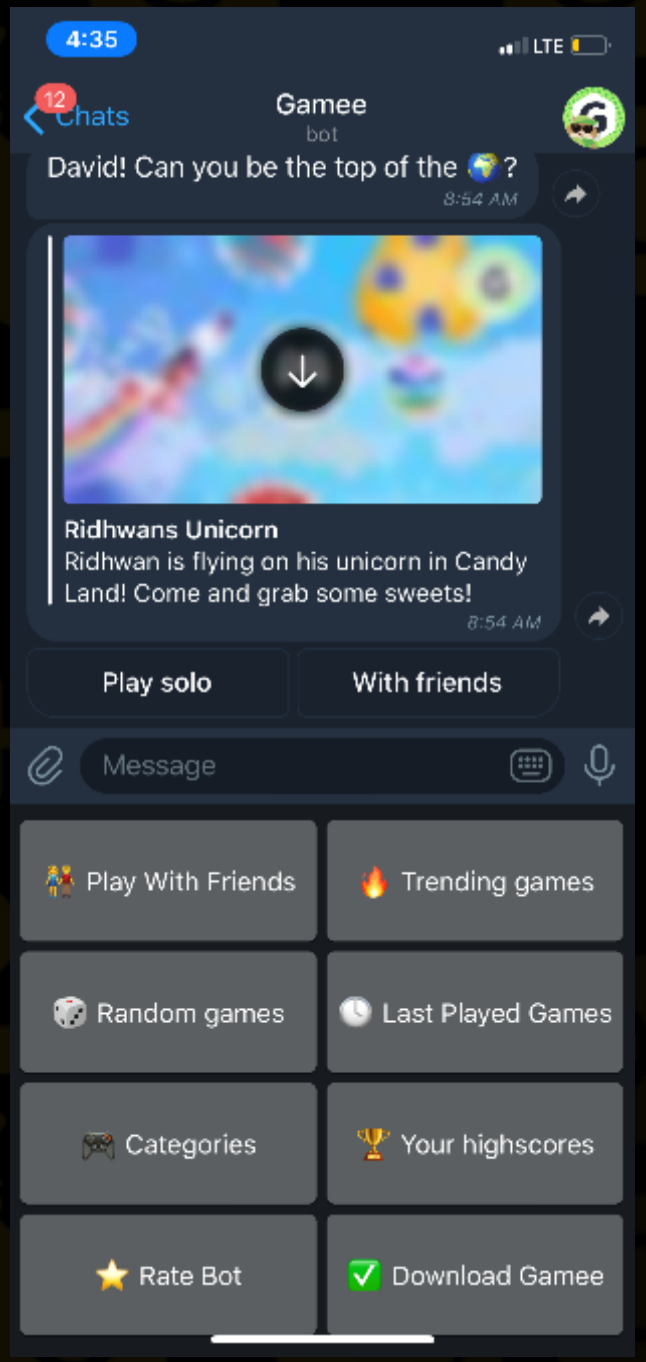
Etheroll is a simple number betting game, in which players can place bets and have different chances of winning. It was one of the top five most active DApps throughout February. **Because of the transparency provided by smart contracts, we can check the code to find out exactly what winning rates the dealer has. In other words, we can be sure that a centralized authority isn't taking advantage of us.** In fact, the Etheroll dealer only has a 1% edge over the players. (So dope.) Other adventurers were placing their bets in the bear market with similar games—well, we can't blame them for trying.

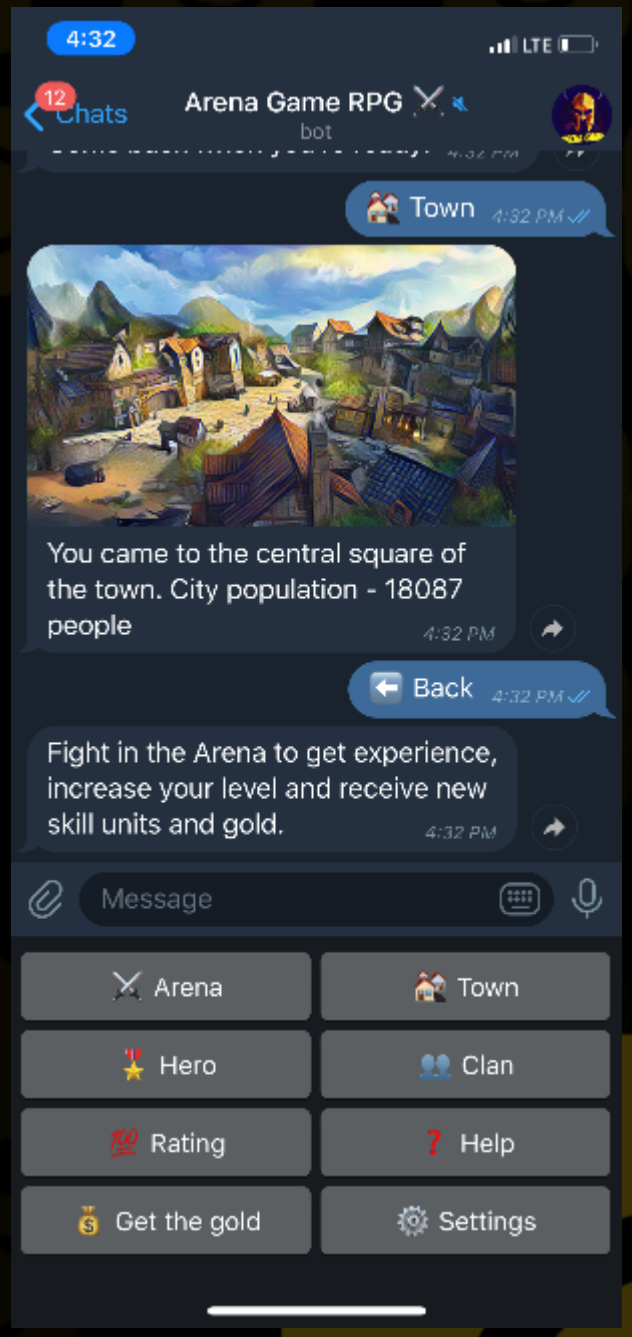


DApps throughout February. **Because of the transparency provided by smart contracts, we can check the code to find out exactly what winning rates the dealer has. In other words, we can be sure that a centralized authority isn't taking advantage of us.** In fact, the Etheroll dealer only has a

Telegram


4:39
LTE
Edit
Chats
Search for messages or users
Gamee
4:36 PM
You scored 11 in Rio Sprint
Arena Game RPG ⚔️
4:32 PM
Fight in the Arena to get experience, increase your level and receive new skill...
Dino Park Game
4:31 PM
THREE DINOS BONUS
x3 FREE DINOS WAITS FOR YOU!...
VEDH.io [VRS] | General...
4:28 PM
Sergiu Midoni
Mercedes Sprinter Cdi 2001 2.2...
4188
Polymath Network
4:17 PM
Igor
Is trade.io licensed to work as a...
18391
DinoPark Chat [English]
4:14 PM
Not Exist
Whats wrong
30951
Денежный Лифт
4:05 PM
Поберегите чаек, они тоже хотят словить свой куш
78
Telcoin Community
3:43 PM
?
Feet on the ground . head in the...
5953
Contacts
Calls
Chats
12
Settings


4:35
LTE
12
Chats
Gamee
bot
David! Can you be the top of the 🌍?
8:54 AM
Ridhwans Unicorn
Ridhwan is flying on his unicorn in Candy Land! Come and grab some sweets!
8:54 AM
Play solo
With friends
Message
Play With Friends
Trending games
Random games
Last Played Games
Categories
Your highscores
Rate Bot
Download Gamee


4:32
LTE
12
Chats
Arena Game RPG ⚔️
bot
Town
4:32 PM
You came to the central square of the town. City population - 18087 people
4:32 PM
Back
4:32 PM
Fight in the Arena to get experience, increase your level and receive new skill units and gold.
4:32 PM
Message
Arena
Town
Hero
Clan
Rating
Help
Get the gold
Settings

4:28 LTE

12 Chats

Dino Park Game
bot

Unread Messages

Today

3 0 0 0

🔥 3000% BONUS ACTIVE. JUST TOP UP YOUR BALANCE!
Multiply the deposit x30 times!

Message

Dinosaurs | Farm
Balance | Referrals
Marketplace | Games
Settings | Bonus!!!

4:28 LTE

12 Chats

Dino Park Game
bot

Number: 0
Mined: 0 💎

Triceratops
Number: 0
Mined: 0 💎

Dilophosaurus
Number: 0
Mined: 0 💎

Stegosaurus
Number: 0
Mined: 0 💎

Spinosaurus
Number: 0
Mined: 0 💎

Total: 30 420 💎

Collected last time: 2018/07/05 01:09:13 GMT
4:28 PM

💎 Collect diamonds

🌟 VIP dinosaurs

Message

4:29 LTE

12 Chats

Dino Park Game
bot

Loading...

Total: 30 420 💎

Collected last time: 2018/07/05 01:09:13 GMT
4:28 PM

💎 Collect diamonds

🌟 VIP dinosaurs

👍 Diamonds have been collected!

You have collected: 30 420 💎

You can exchange the collected diamonds for 💰 in the **Marketplace**
4:28 PM

Message

Dinosaurs | Farm
Balance | Referrals
Marketplace | Games
Settings | Bonus!!!

4:29 LTE

12 Chats

Dino Park Game
bot

Loading...

withdraw funds from the game and send it to your BitCoin Wallet!

Current exchange rate:
100 💎 = 1 💰

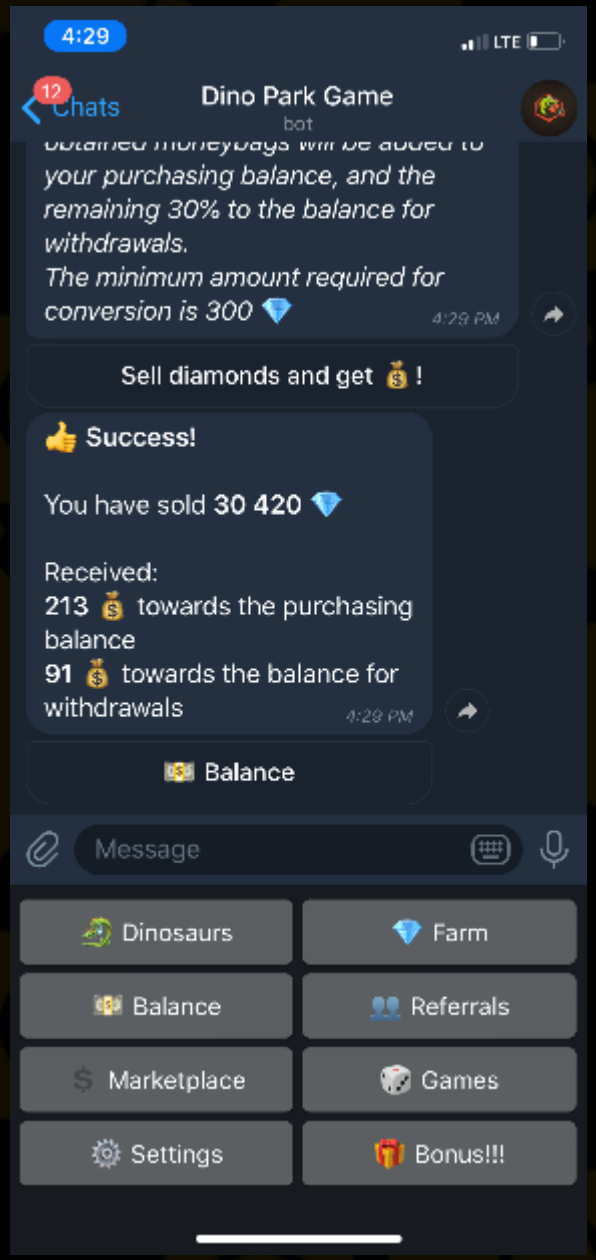
In your storehouse, you have **30 420** 💎

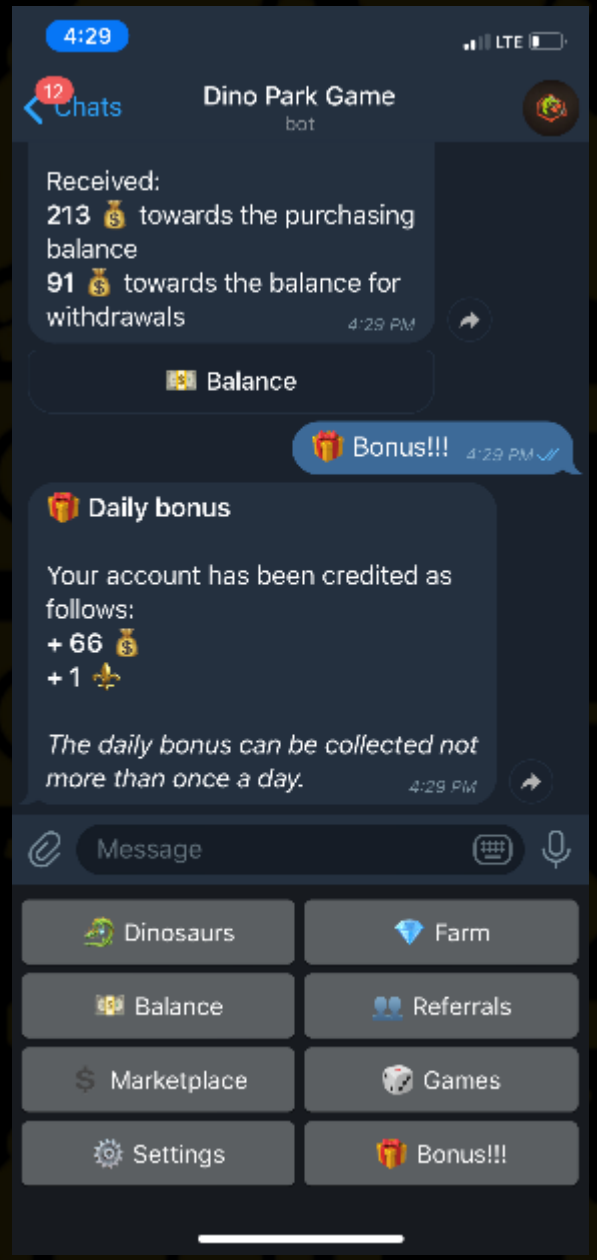
After the conversion, 70% of the obtained moneybags will be added to your purchasing balance, and the remaining 30% to the balance for withdrawals.
The minimum amount required for conversion is 300 💎
4:29 PM

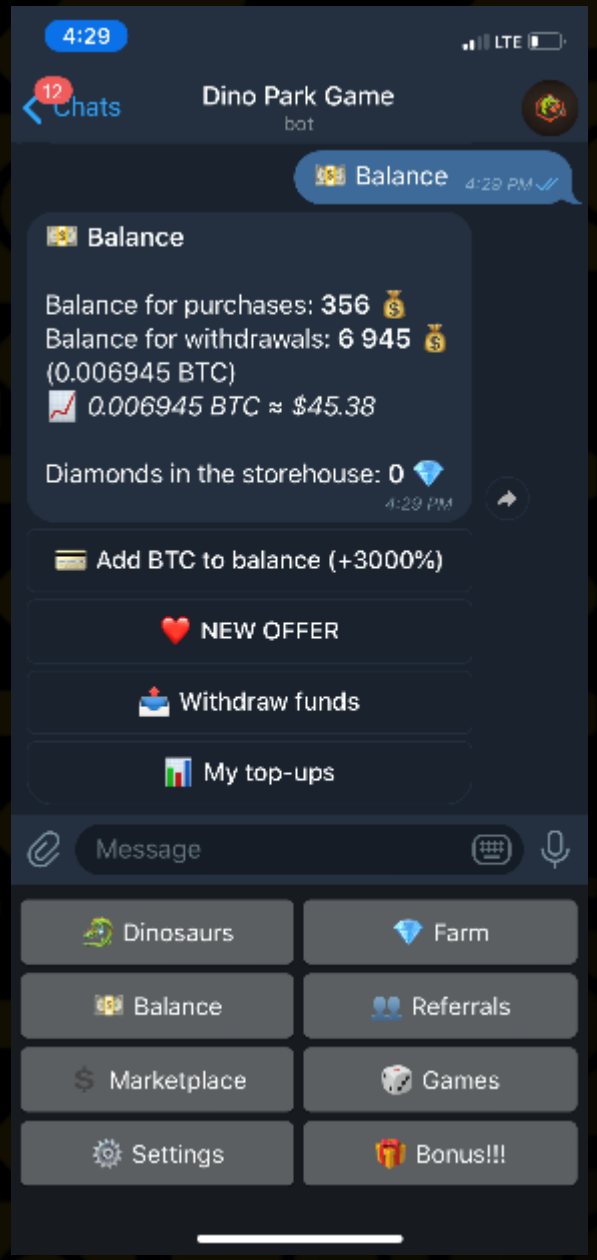
Sell diamonds and get 💰 !

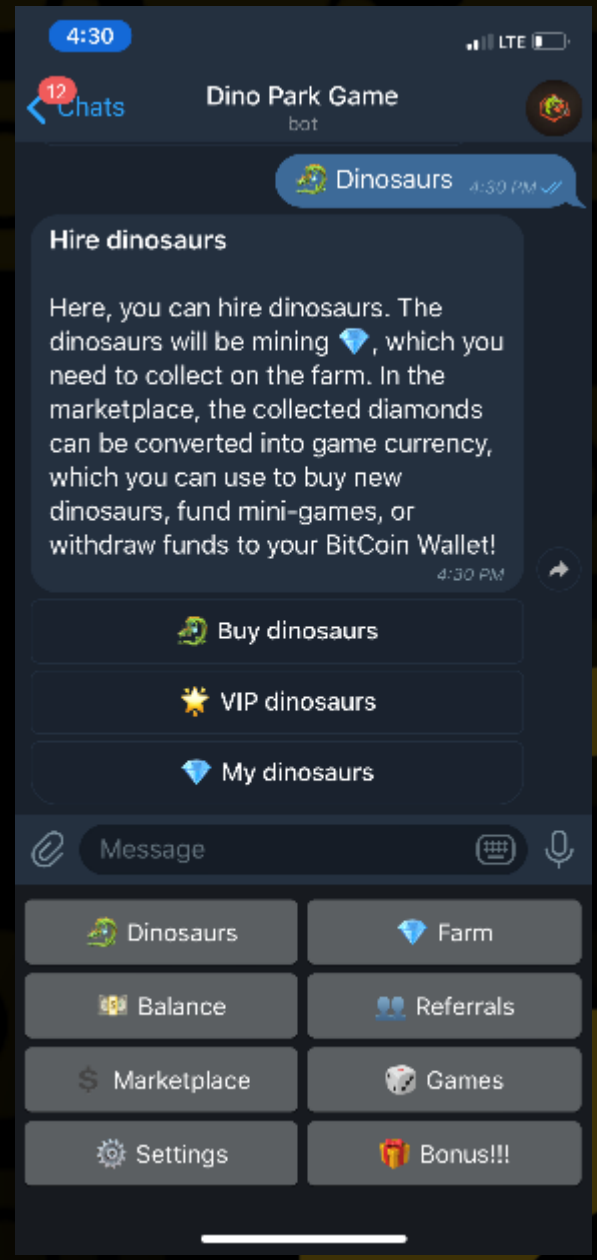
Message

Dinosaurs | Farm
Balance | Referrals
Marketplace | Games
Settings | Bonus!!!


4:29
LTE
12
Chats
Dino Park Game
bot
your purchasing balance, and the remaining 30% to the balance for withdrawals.
The minimum amount required for conversion is 300 💎
4:29 PM
Sell diamonds and get 💰!
👍 Success!
You have sold 30 420 💎
Received:
213 💰 towards the purchasing balance
91 💰 towards the balance for withdrawals
4:29 PM
💵 Balance
Message
🐊 Dinosaurs
💎 Farm
💵 Balance
👥 Referrals
$ Marketplace
🎲 Games
⚙️ Settings
🎁 Bonus!!!


4:29
LTE
12
Chats
Dino Park Game
bot
Received:
213 💰 towards the purchasing balance
91 💰 towards the balance for withdrawals
4:29 PM
💵 Balance
🎁 Bonus!!!
4:29 PM
🎁 Daily bonus
Your account has been credited as follows:
+ 66 💰
+ 1 ⚜️
The daily bonus can be collected not more than once a day.
4:29 PM
Message
🐊 Dinosaurs
💎 Farm
💵 Balance
👥 Referrals
$ Marketplace
🎲 Games
⚙️ Settings
🎁 Bonus!!!


4:29
LTE
12
Chats
Dino Park Game
bot
💵 Balance
4:29 PM
💵 Balance
Balance for purchases: 356 💰
Balance for withdrawals: 6 945 💰
(0.006945 BTC)
📈 0.006945 BTC ≈ $45.38
Diamonds in the storehouse: 0 💎
4:29 PM
💳 Add BTC to balance (+3000%)
❤️ NEW OFFER
📤 Withdraw funds
📊 My top-ups
Message
🐊 Dinosaurs
💎 Farm
💵 Balance
👥 Referrals
$ Marketplace
🎲 Games
⚙️ Settings
🎁 Bonus!!!


4:30
LTE
12
Chats
Dino Park Game
bot
🐊 Dinosaurs
4:30 PM
Hire dinosaurs
Here, you can hire dinosaurs. The dinosaurs will be mining 💎, which you need to collect on the farm. In the marketplace, the collected diamonds can be converted into game currency, which you can use to buy new dinosaurs, fund mini-games, or withdraw funds to your BitCoin Wallet!
4:30 PM
🐊 Buy dinosaurs
🌟 VIP dinosaurs
💎 My dinosaurs
Message
🐊 Dinosaurs
💎 Farm
💵 Balance
👥 Referrals
$ Marketplace
🎲 Games
⚙️ Settings
🎁 Bonus!!!

4:30 LTE

12 Chats — Dino Park Game — bot

Dimetrodon

Worth 499 💰
Mining yield: 35 💎 per hour 4:30 PM

➕ Buy

3

Message

Dinosaurs | Farm
Balance | Referrals
Marketplace | Games
Settings | Bonus!!!

4:30 LTE

12 Chats — Dino Park Game — bot

Farm

The dinosaurs you have purchased reside here. They produce 💎 on the farm, which you then need to collect and sell in the marketplace.
Below, you can see the amount that your dinosaurs have mined since last time and collect diamonds for sale.

Dimetrodon
Number: **45**
Mined: **45** 💎

Raptor
Number: **0**
Mined: **0** 💎

Triceratops
Number: **0**

Message

Dinosaurs | Farm
Balance | Referrals
Marketplace | Games
Settings | Bonus!!!

4:31 LTE

12 Chats — Dino Park Game — bot

Balance 4:31 PM

Balance

Balance for purchases: **356** 💰
Balance for withdrawals: **6 945** 💰
(0.006945 BTC)
0.006945 BTC ≈ $45.43

Diamonds in the storehouse: **0** 💎
4:31 PM

💳 Add BTC to balance (+3000%)
❤️ NEW OFFER
📤 Withdraw funds
📊 My top-ups

Message

Dinosaurs | Farm
Balance | Referrals
Marketplace | Games
Settings | Bonus!!!

4:31 LTE

12 Chats — Dino Park Game — bot

⚡ Hurry up, offer is limited!

More info:
https://t.me/dinopark/168

Telegram
DinoPark Game Channel
🦕🦕🦕 x3 FREE DINOS WAITS FOR YOU!
🔫 Top up your balance and get free Dinosaurs. Kind of Dino you get depends on your deposit amount.

⚡ Hurry up, offer is limited!

💳 Add BTC to balance (+3000%)

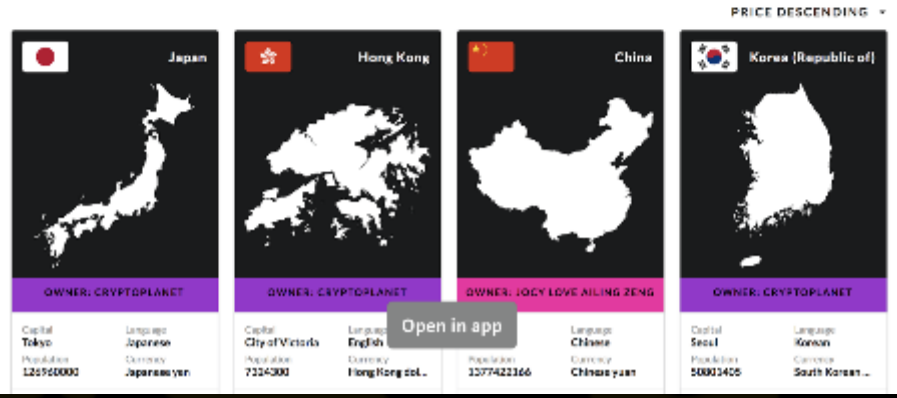
Message

CryptoCountries. **In early 2018, it only took seven days for this monster to accumulate 45,000 ETH worth of transactions—exceeding what CryptoKitties had in 4 months. This was absolutely mind blowing, even to the creator himself!**

Hot Potato DApps

These types of games revolve around the buying and selling of digital tradable assets (ERC721 tokens), ranging from countries to cities, from colors to emojis, and from celebrities to Lamborghinis. Nearly anything you can think of can become an ERC721 token that you can launch and trade on Ethereum. Out of everything, the one game that most people were crazy about was CryptoCountries. **In early 2018, it only took seven days for this monster to accumulate 45,000 ETH worth of transactions—exceeding what CryptoKitties had in 4 months. This was absolutely mind blowing, even to the creator himself!**

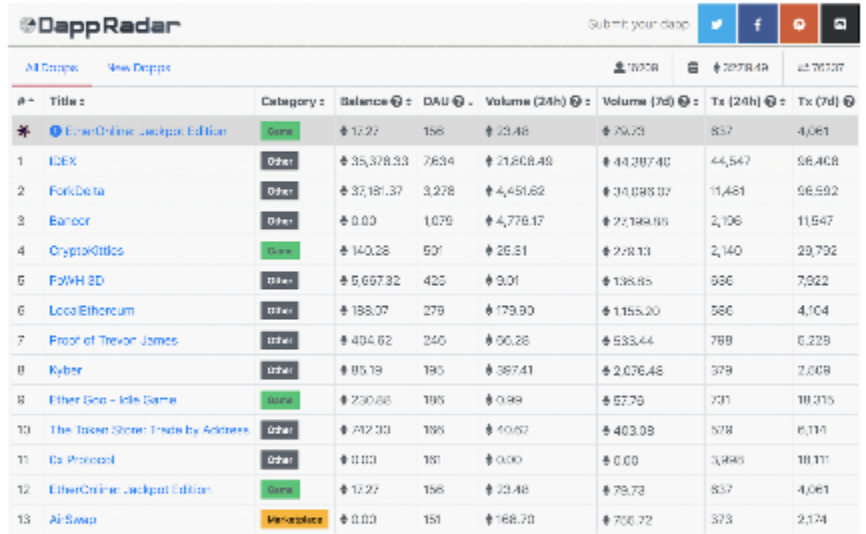
In CryptoCountries, every country is an individual ERC721 token that any player can purchase. However, the next player must pay a higher price (1.2x) to buy it. The seller takes the difference in price, except for 2–5% of the transaction, which goes to the developer.



Here, we have the lucky player who faded into the dark with more than 600 ETH and a big smile on his face, as well as the "warrior" who dropped over 700 ETH and stayed there.

Gradually, everyone realized the downside of such games: forced trade, a single mechanism, and digital assets with no long-term value. The number of transactions of similar games that came after just plummeted—a few hundred transactions is all they would see.

So far, on Ethereum, I still own two "countries", two "paintings by Van Gogh", and "Benedict Cumberbatch" from CryptoCelebrity. Collectively, I lost about 20 ETH in these games.



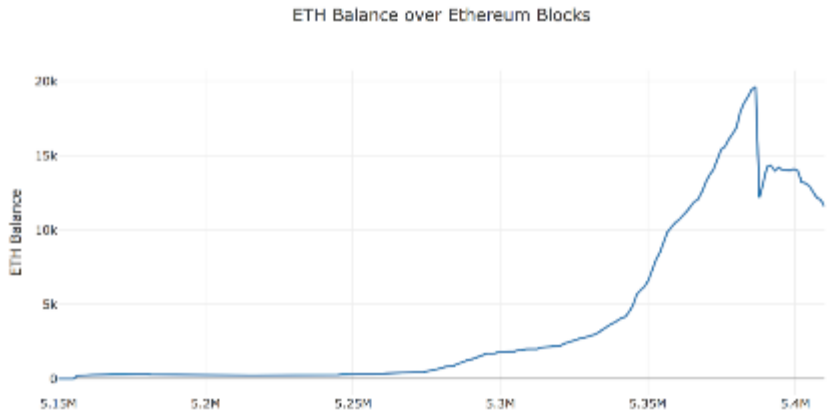
DappRadar.com — the first Dapp-analytics site

On February 3rd, a young Lithuanian man named Skirmantas Januškas registered the dappradar.com domain. In two weeks, he built the first navigation web DApp. From mid-February to early March, I visited DappRadar, as well as the Discord game forum and various crypto games every day. I realized that DappRadar wasn't user-friendly enough, especially for new DApp gamers.

April 2018—Ponzi Schemes Start to Flourish, but Innovative Games Break Through

As the market picked up, gambling games became less attractive. The life cycle of the hot potato games went from two weeks to just a few days due to their single game mechanism.

During this time, a Ponzi-investment game called "PoWH 3D" quietly climbed to the top of DAppReview rankings. Its contract balance reached a maximum of nearly 20,000 ETH (about 8 million USD) in early April, and the number of daily active users peaked at 3,000.



PoWH 3D was born out of the early PoWH project, and its gameplay mechanism goes like this:

Surrounded by all of these money-driven peers, an independent developer named James quietly built the first blockchain idle game: EtherGoo.

The fresh gameplay mechanism smashed all of those outdated trading and Ponzi games on the market and attracted lots of Ethereum game lovers to come and experience it firsthand. This resulted in Ethereum network congestion by accomplishing more than 40,000 transactions in just a little more than one day!

EtherGoo then ranked number one in the game section, with nearly 5,000 daily active users. James is constantly changing the dynamics of the game to extend its life cycle. Until now, EtherGoo still hangs around top three in the games section.

Ether Goo

Total Research Pot: 2 Ξ (10% distributed daily)

Global Goo Production: 4 (per second)

You currently have 83798 Goo

Your lab produces 3 Goo/s, roughly 75% of the Global Production
In 01:59:02, you will earn 75% of today's 0.2 Ξ research pot

Balance: 0 Ξ | Withdraw | Goo Leaderboards

x3

Intern Kitties
Makes: 1 (each)
Cost: 30

1x 10x MAX BUY
1x 10x ALL SELL

+100% Production
Cost: 100 BUY

+100% Production
Cost: 100 BUY

+100% Production
Cost: 100 BUY

Graduate Gerbils
Makes: 2 (each)
Cost: 50

1x 10x MAX BUY
1x 10x ALL SELL

+100% Production
Cost: 100 BUY

+100% Production
Cost: 100 BUY

+100% Production
Cost: 100 BUY

Lab Rats
Makes: 10 (each)
Cost: FREE

1x 10x MAX BUY

+100% Production
Cost: 100 BUY

+100% Production
Cost: 100 BUY

+100% Production
Cost: 100 BUY

Rare Item Raffle

Worth 0.5 Ξ
01:59:39 left
Ticket Cost: 1K
(You have 0 Tickets)

1x 10x MAX BUY

Game Tutorial:

Buy scientists and upgrades to increase your Goo production.
Some items cost Eth as well as Goo, but offer more production.
All scientists can be sold for 75% of their Eth/Goo buy price.
You can spend your Goo in the Barracks to attack other players!
Finally the raffle allows you to win Eth by spending Goo on tickets.

Switch to Barracks | Join Discord

What Value Can Blockchain Bring to Games?

Ownership and Liquidity of Game Assets

On the blockchain, players retain ownership of their in-game assets, and these assets have more extensive liquidity. The "karma", items, weapons, and characters in traditional video games are all owned by the game developers (i.e. the companies), and these centralized authorities have the power to make drastic changes to the assets or even get rid of them entirely.

Traditional in-game assets are limited to the built-in economies of a single game. It seems that they have no value outside of the game. It is also difficult to create use cases for them on a technical level.

> *In blockchain logic, once in-game assets are put on the blockchain, they can all be attributed to the player's blockchain address; that player has ownership of the address, hence ownership of the assets.*

Let's imagine the following use cases:

1. Assets Can Be Traded, Anywhere, Anytime

A large number of games don't hading features. Oftentimes, the reasons behind this are to avoid chaos in the in-game economic mechanism,

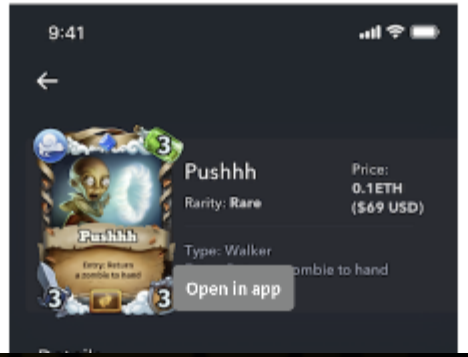
T-Mobile 9:05 AM 91%
A Medium Corporation
Follow Sign in Get started
HOME ABOUT DAPPCHAINS | LOOMX.IO
Follow

1. Assets Can Be Traded, Anywhere, Anytime

A large number of games don't have item trading features. Oftentimes, the reasons behind this are to avoid chaos in the in-game economic mechanism, extend users' gameplay time, and increase income for the developer (i.e. the company).

Assuming the above problems are not of the developer's concern, then "on-chain items plus a mobile wallet" can be implemented in on-chain and off-chain transactions between two users, anywhere, and at any time.

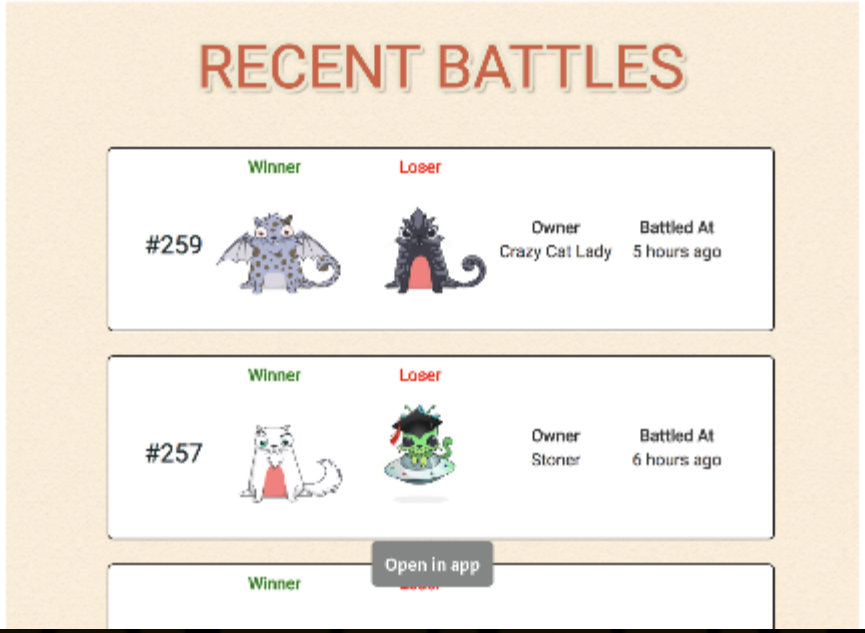
Say you are chatting with your friend about a recent PC game over dinner. Both of you open your mobile wallets, check out each other's weapons and armor, and you decide to buy his weapons. The transaction is as simple as using Apple Pay. And at the end of the night, when you go home and log in to your game, you will find your newly purchased weapons sitting in your item list.



2. Reuse of Game Assets

Since on-chain assets are saved under each player's address, it is easy for developers to reuse the game assets from other games in their own game, or to modify them.

CryptoCuddles is a cat battle game that's based on CryptoKitties. After a player logs in with their Ethereum addresses, the game will automatically import all of the CryptoKitties characters from that addresses. Only the battle logic is created by CryptoCuddles' developers.



3. A New Way to Get New Users

In the traditional video game world, new games often need to reacquire users, or use old games to divert traffic. The blockchain can make this user reacquisition cheaper and easier—like how CryptoKitties users are all potential CryptoCuddles game players.

If direct reuse of assets involves IP issues, then developers can also reward users who own kitties on CryptoKitties with in-game characters, treasure boxes, items, etc. They just need to use a player's login address to verify the on-chain data.

In this way, any game can take full advantage of popular games to divert traffic. Coin forking and airdrops use the same strategy—airdropping tokens 1:1 to all ETH or EOS holders, thereby, can help gain users at a very low cost.

DAppReview accumulates more than 100,000 users' information from more than 200 game DApps. If a new game needs to do a promotion, then the most efficient way would be to airdrop in-game assets to all of these addresses.

The Relationship Between Game Developers and Players

Most of the time, game players and developers often stand on opposite sides. One party wants to take advantage of the in-game dynamics to earn reputation and get more enjoyment out of it. The other party modifies the mechanism and parameters again and again to exploit players.

However, **the blockchain breaks this tension by changing the relationship**

This is an inevitable question. Game developers need to make a living and they need to increase the company's commercial value. Perhaps after reading the above four aspects, most people in the game industry will be like, "Whaaaaat?! How am I supposed to make a profit then?"

Due to the increased liquidity of in-game items, they might only be able to make x amount of money, instead of 100x, like before. The traditional locked-safe strategy allures players to continue spending money and testing their luck. Now that all of this will be open to the public, who's gonna be stupid enough to pay for that?

Indeed, from the standpoint of developers, these questions are very substantial. But the problem is, we are still applying such traditional logic to a new concept. We need to think out of the box and break some assumptions. Past experience will be a good reference, but it won't provide practical solutions.

With the Internet, we went from free access to premium services, and then to traffic monetization. We've all been there to witness the transition from buyout to regular subscription.

> *Each iteration of new technology will more or less have an impact on the monetization of the existing system. Similarly, the blockchai[illegible]ception.*

The Real Challenges

Numerical Game Design vs. Tokenomics

Numerical game design is a way to adjust parameters and algorithms, in order to ensure balance and extend game time in traditional games. The complexity increases exponentially when applied on the blockchain. **Because the economic system is no longer a closed loop, it is necessary to consider the interactions with the entire blockchain ecosystem.**

Once game assets are put on chain, we will need a token economy. That means the gold coin system in the game will be indirectly linked to a real world currency. If the asset tokens can be increased indefinitely, then the corresponding game assets may depreciate indefinitely.

The token economy requires careful design. This design must focus on the macro and micro perspectives, and must be combined with the gameplay mechanism. It should answer questions like:

How are the tokens generated? How are they distributed, consumed, and destroyed? How is the token value determined? How are they exchanged for other currencies like ETH?

Imagine for a second that ETH is USD, and imagine that a token issued by a game on Ethereum is the currency of some country. If the exchange rate between the two is not stable, or if there is an opportunity for exploitation, then **might we see an economic [illegible]at could be used to kill a game from the secondary market**, like George Soros short-selling Baht?

Back to the Essence of the Game

Modern gaming technologies and platforms have been around for decades, but **the essence of the game has never changed: fun.**

I spent a lot of time explaining the advantages of blockchain-based games, but even if you created a game on the blockchain, yet it's no fun, then you wouldn't get any players, let alone the community and consensus that give in-game assets their value.

There will still be a lot of people saying that the blockchain infrastructure is not capable of allowing games to be fun, but I don't agree with that.

There were fun games in the era of 2G mobile networks, the era of Win95, and the era of GameBoy. We still enjoy many of them to this day. You can't judge a book by its cover. **Likewise, you can't judge a game by its packaging.**

2. EtherWarfare

When it comes to collectibles on the internet, the fantasy and medieval genres provide a rich niche for scripting immersive and thoroughly engaging virtual collection storylines. This same concept is being applied to the blockchain network in the form of EtherWarfare, a medieval-themed virtual game that runs on the Ethereum blockchain. The game is another instalment in the cryptocollectibles ecosystem that thrives to create a marketplace for virtual items while enjoying a game at the same time. EtherWarfare builds upon much of what has been established by the Cryptokitties game. It even uses the same type of ERC-721 tokens that are used in the Cryptokitties game. ERC-721 tokens are non-fungible.

There are a number of attractions in the game that include collecting gear, unlocking chests, and trading in the game marketplace. No Medieval story is complete without a goodold fashioned battle and the game also involves a battle mode where players can battle each other. Players can also collect loot as well as forge new gear. Just like Cryptokitties, the items in this game also have unique attributes based on power, level and rarity. These attributes determine the value of an item in the marketplace. In order to play the game, users will have to install the MetaMask plugin on Chrome browsers.

3. CryptoCelebrities

Back in the day, people collected pictures of their favorite sports players or kept posters of their favorite of celebrities. These days, it is possible

3. CryptoCelebrities

Back in the day, people collected cards with pictures of their favorite sports players or kept posters of their favorite of celebrities. These days, it is possible to do all of that on the internet using the power of blockchain technology. CryptoCelebrities is another entry into the rapidly expanding world of cryptocollectibles. In less than 24 hours after the launch of the game, more than $1 million in ether had been traded in the game. Like many other cryptocollectibles, it is built to run on the Ethereum blockchain.

The game involves the buying, selling and trading of celebrity cards with pictures of celebrities on them. Just like many other collectible, the CryptoCelebrities cards are basically Ethereum smart contracts. With each purchase of a smart contract, it doubles in value, starting from an initial price of 0.0001 ether. By so doing, the marketplace is driven by demand just like with other cryptocollectibles. Donald Trump, President of the United States, Elon Musk, CEO of Tesla and Space X, and Vitalik Buterin, the Ethereum co-founder are the most expensive smart contractsin the game presently. They all cost 151.4362 ether. Other high-value smart contracts on the game are for Barack Obama, Kim Kardashian, Hillary Clinton, and Kim Jong-Un.

4. Spells of Genesis

The Ethereum blockchain isn't the only blockchain that supports games as there are also games built on the Bitcoin blockchain. One of such games is called Spells of Genesis which is a cross between a trading card game and a classic arcade feature. Spells of Genesis was developed by EverdreamSoft, a

I-Mobile 9:09 AM 90%
A Medium Corporation
Follow Sign in Get started
HOME THE MISSION DAILY THE STORY PODCAST PODCASTS TOP STORIES NEWSLETTER Follow

The Ethereum blockchain isn't the only blockchain that supports games as there are also games built on the Bitcoin blockchain. One of such games is called Spells of Genesis which is a cross between a trading card game and a classic arcade feature. Spells of Genesis was developed by EverdreamSoft, a Swiss-based company. It is touted as being the first card trading game built to run on the Bitcoin blockchain. It is a nod to the popular Yu-Gi-Oh and Magic the Gathering strategy card games.

The game allows players to collect and trade cards using the in-game cryptocurrency Bitcrystals (BCY). The game has many of the signature features of strategy card games like maps, cards with specific attributes, and the ability to combine cards to form high-power card variants.

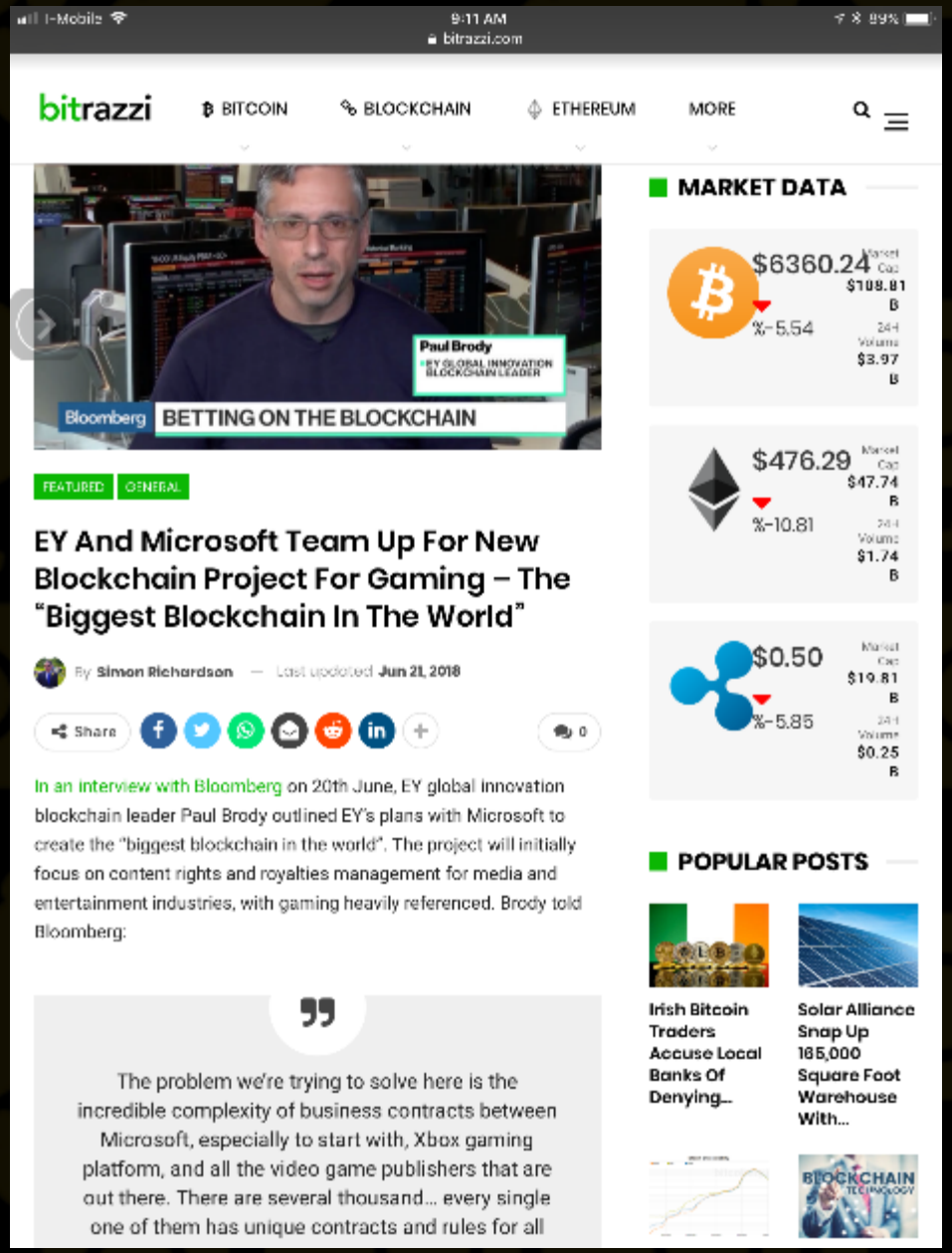
These are just a few of some of the popular blockchain games that are available to players and crypto enthusiasts alike. These games have the potential to open up the cryptocurrency and blockchain technology ecosystem to a wider audience. They also create a new marketplace for cryptocurrency tokens which leads to increased blockchain commerce.

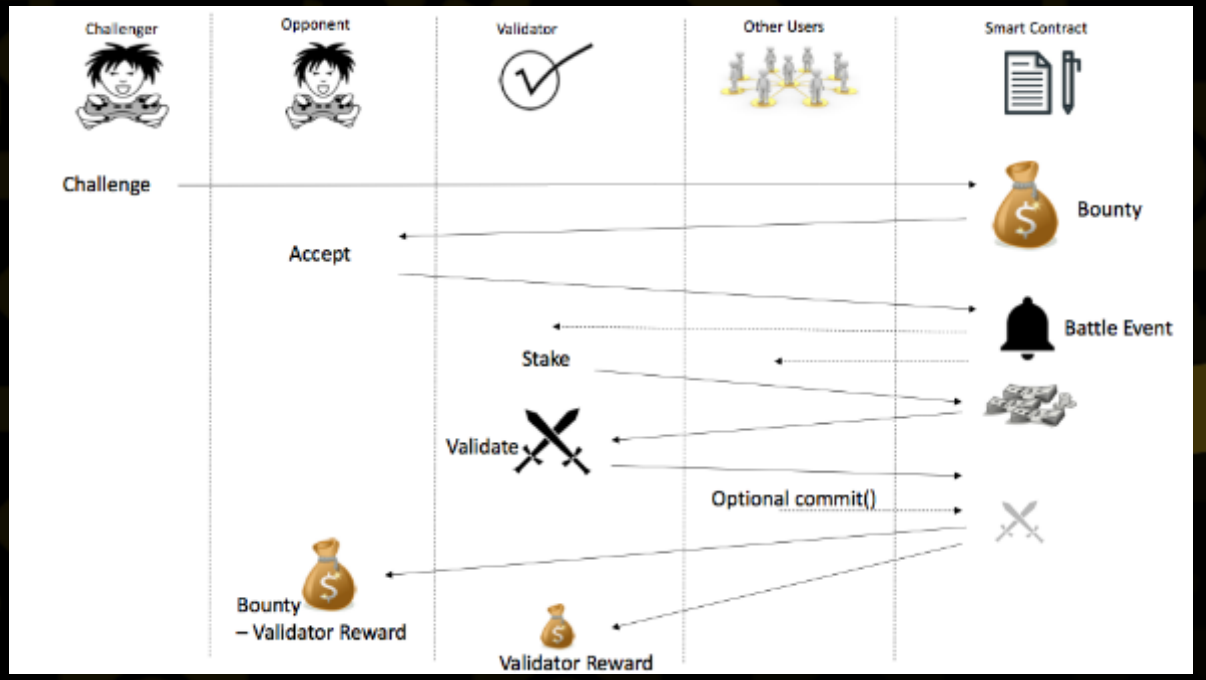
. . .

Keen t to find out more about FundYourselfNow? Join our crowdfunding revolution conversation on our Telegram group, or follow us on Twitter.

Blockchain Cryptocurrency Tech Bitcoin Games

Open in app


I-Mobile
9:11 AM
bitrazzi.com
bitrazzi
BITCOIN
BLOCKCHAIN
ETHEREUM
MORE
Paul Brody
EY GLOBAL INNOVATION BLOCKCHAIN LEADER
Bloomberg
BETTING ON THE BLOCKCHAIN
FEATURED
GENERAL
EY And Microsoft Team Up For New Blockchain Project For Gaming – The "Biggest Blockchain In The World"
By Simon Richardson
Last updated Jun 21, 2018
Share
0
In an interview with Bloomberg on 20th June, EY global innovation blockchain leader Paul Brody outlined EY's plans with Microsoft to create the "biggest blockchain in the world". The project will initially focus on content rights and royalties management for media and entertainment industries, with gaming heavily referenced. Brody told Bloomberg:
The problem we're trying to solve here is the incredible complexity of business contracts between Microsoft, especially to start with, Xbox gaming platform, and all the video game publishers that are out there. There are several thousand... every single one of them has unique contracts and rules for all
MARKET DATA
$6360.24
%-5.54
$108.81 B
$3.97 B
$476.29
%-10.81
$47.74 B
$1.74 B
$0.50
%-5.85
$19.81 B
$0.25 B
POPULAR POSTS
Irish Bitcoin Traders Accuse Local Banks Of Denying...
Solar Alliance Snap Up 165,000 Square Foot Warehouse With...
BLOCKCHAIN TECHNOLOGY


Challenger
Opponent
Validator
Other Users
Smart Contract
Challenge
Bounty
Accept
Battle Event
Stake
Validate
Optional commit()
Bounty
– Validator Reward
Validator Reward

Proof of Stake Battle Validation

The first solution is based on the same concept that is used in **proof of stake consensus algorithms** in some blockchains, namely, allowing participants to stake some of their wealth to correctly execute the battle algorithm off-chain. The result can be verified by anyone and if found fraudulent, the validator loses the staked amount. If validation is performed correctly, the validator is incentivized with a reward.

This works as follows: CryptoFights allows gamers to fight for a bounty in the arena. The bounty, paid in Ether, is paid to the winner of the battle. Therefore, in those battles in which gamers have decided to fight for a bounty, we can incentivize a third party that wishes to act as a validator with a percentage of this bounty for executing the battle contract.

The battle algorithm is implemented in a *pure* function, which on Ethereum means the function can be called in a gas-free local node call. The input to the battle algorithm is a random number seed, used for deciding the outcome of dice rolling. The future block method is used to provide the required seed, which is the only secure transaction-free on-chain solution for random number generation.

An outside validator executes the algorithm using the following steps:

1. The battle is requested by issuing a challenge and placing a wager.
2. The opponent accepts the cha

Blog Archives

Designing Games to affect Social Change

Posted on January 14, 2017 by Rik Eberhardt

Hosted by the MIT Game Lab Facilitated by Mack Cameron of MegaGames United and Sam Liberty from the Engagement Lab at Emerson College: Due to the current events, many gamers have been asking how they can be more involved in ...

Read more ›

Posted in Tagged with: games for change, serious games

What Playfulness Can Change: "Serious Game Co-design"

Posted on January 12, 2017 by Rik Eberhardt

Serious games are games that have another purpose than just pure entertainment. In this class, we will test a serious game about Blockchain, and try to assess it and find guidelines for when you're developing that kind of game. After that, I will share tips with you to design your serious game! Don't hesitate to come with a topic in mind.

WHAT

CAN CHANGE

Part of a serious of workshops about exploring playfulness and its business applications.

Playfulness is a very human value proposition that empowers people doing all kind of things. In this class, I'm offering to discover the Playful and all its possibilities: From the empowerment of your employees, your processes or your learning, the Playful design methodology can be a real leverage of empowerment.

Serious Game Co-design

> *Serious games are games that have another purpose than just pure entertainment. In this class, we will test a serious game about Blockchain, and try to assess it and find guidelines for when you're developing that kind of game. After that, I will share tips with you to design your serious game! Don't hesitate to come with a topic in mind.*

The class is open for all and divided in 3 workshops that are independent from each other but you are encouraged to follow all of them to have a better overview!

To attend, contact: Laure Dousset, +33661756009, LDOUSSET@MIT.EDU

+ GOOGLE CALENDAR + ICAL EXPORT

Details

Date:

Can You Use Cryptocurrencies In Serious Games

May 29, 2018 *The Golden boy* *Comments(2)*

Most experts agree cryptocurrencies are here to stay so this week will we look at cryptocurrencies and blockchain technology in the gaming industry and how they might be the future of microtransactions. This first article will focus on what the theoretical possibility can lead to and how we imagine a cross-game currency and trading system.

On, two, three

The benefit of using cryptocurrency as a form of payment is the possibility of affordable microtransactions. Today we see many games where you have the opportunity to buy extra stuff is either bundling it together so the package is more expensive or they have their own point towards a pay to play system. Suitable examples of the points system are massively multiplayer online games where you often buy in-game currency or points that can be exchanged for in-game items, and on the other hand we got EA games there are famous for selling extra in-game items and content in bundles. What is typical for both systems is that you have to commit to a purchase of $10, $20 or something like that and it is only for the one game even if the only thing you want is a new skin for an item which is worth $0,10. So now you have paid 100 times more than what the item you wanted is worth. And as we see it, there must be a smarter way to do these small transactions so we have looked at how cryptocurrencies, blockchain and smart contracts might be used to make this whole process smarter.

One currency

As a gamer I know I would use more money in games if I could get by one skin at the time I was not committed to buying a set amount of game currency. So if a couple of MMO games united accept one cryptocurrency, so I only had to buy that one currency we would go a long way to establish a system where you and I would be more inclined to purchase in-game items. This is because we would know that no money would be wasted on points that can not be used.

A functional currency for such transactions is something we value like dogecoin which is small in value. Low on transaction fees, there are missing some function on the dogecoin blockchain, so that is why we need something with more features.

Block by block

Blochain technology can be used in games, and online games will primarily benefit from the use of blockchain technology to secure the ownership of items and recurses. At the same time the players can

Secure | https://pineapplearcade.net

Welcome to the Pineapple Arcade!

Play arcade games, solve puzzles, and join the digital scavenger hunt.
Hidden within are more than 17.5 BTC, 15 ETH, and 1,000,000 COIIN in prizes!

Click anywhere to zoom and explore. All puzzles and games are free to play.
By playing, you agree to the Pineapple Arcade Terms.

Learn more or close this banner. Have fun!

Secure | https://pineapplearcade.net/about

Pineapple Arcade

Welcome to the Pineapple Arcade!

The Pineapple Arcade may look like a dream-induced arcade of the 80s, but there's more: the games, the furniture, and even the walls, hide puzzles and scavenger hunts leading to hundreds of thousands of cryptocurrency prizes!

Do you have what it takes? Stay sharp, Degen! Only the most untethered will discover the bounty that awaits.

The Arcade is free to play, and all puzzles are skill based. These puzzles will test your creative puzzle-solving mind! Information on how to claim your prizes is provided below. Metamask is required and must be logged in prior to playing Coiin-Man to receive Coiin prizes.

Good Luck!

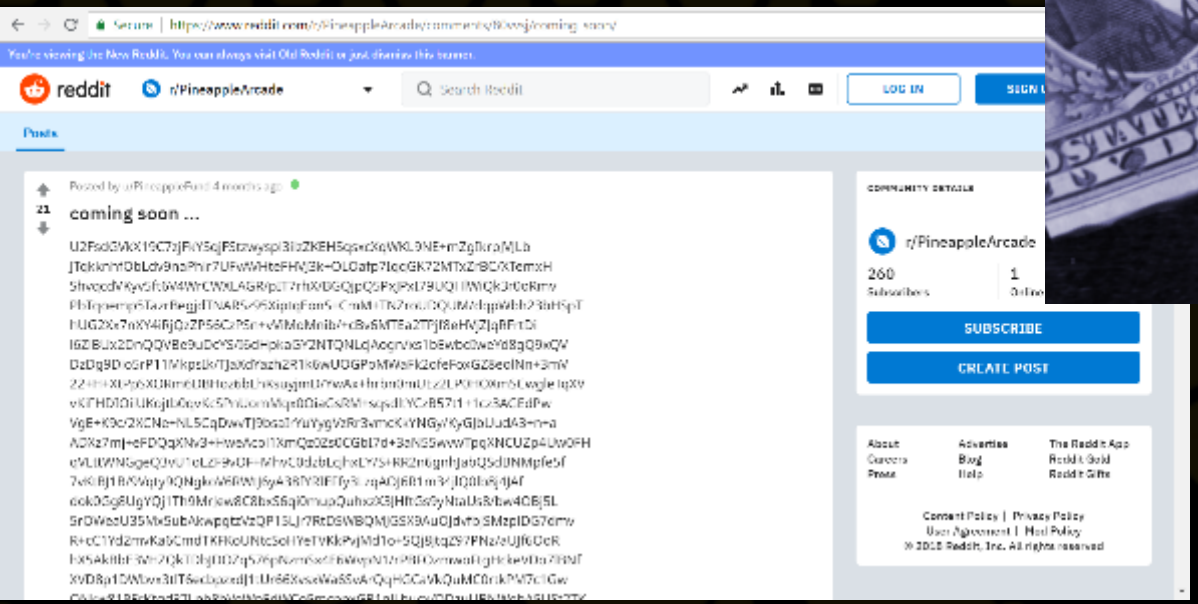
How to play

Play the games, explore the arcade, and take note of anything interesting or curious you see. Puzzles may be obvious, or they may be subtle.

Working as a team is encouraged - you'll increase your chances of being the first! Join the conversation on our discord https://discord.gg/quBUec

To help you, here's the starting point for some puzzle trails.


B 40091
WASHINGTON D.C.
YOUR
CONTROL
JOIN US FOR
FREEDOM
50
ATALIA CRYPTOBANK
Proudly Independent
IN OUR CUSTODY:
250 ETHEREUM
10 BITCOIN
1 BITCOIN
75 ND TROPHIES
1 MIL COIN
$100k CASH FOR CHARITY
****
THANK YOU FOR YOUR BUSINESS!
DUE TO COUNTERFEITING FROM 22 APR WE WILL NO LONGER EXCHANGE US DOLLARS
ATA-ND-031418


reddit
r/PineappleArcade
LOG IN
Posts
coming soon ...
r/PineappleArcade
260
1
SUBSCRIBE
CREATE POST

Start | Medical H | UCF Offic | UCF ARG | UCF Fede

coiin.io

coiin

OUR AIRDROP IS LIVE NOW!!
GO TO THE ARCADE AND WIN FREE

arcade

DIGITAL TRENDS

Menu

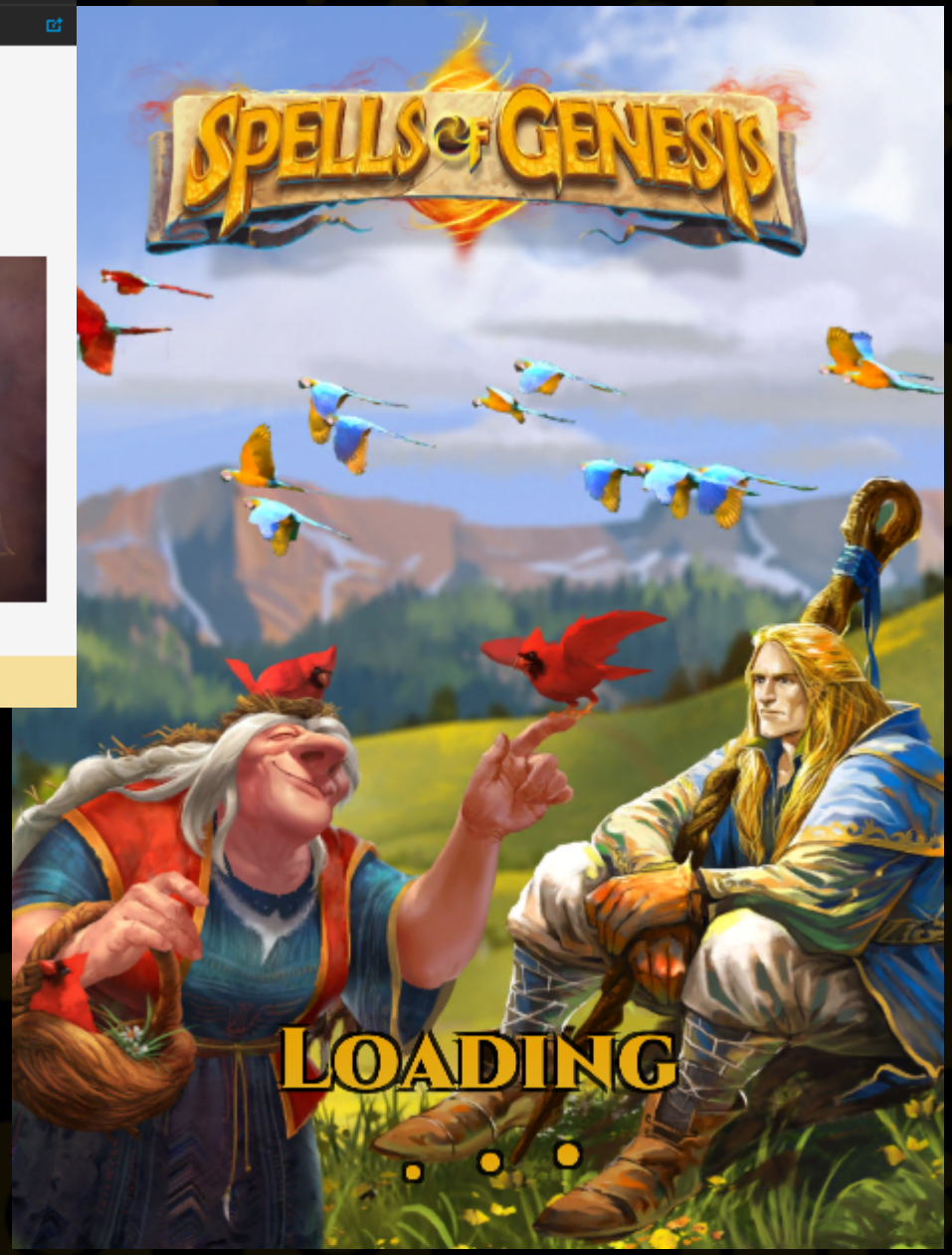
Now Reading: From gold to greatswords, blockchain lets gamers truly own their loot

From gold to greatswords, blockchain lets gamers truly own their loot

By Matthew S. Smith Posted on April 16, 2018 3:00AM

Spells of Genesis

Please take a moment to review our updated Privacy Policy and Terms of Use. CLOSE



Spells of Genesis 9:46 AM 82%

Back

IndieSquare Wallet

IndieSquare Inc.

2.6 ★★☆☆☆
7 Ratings

4+
Age

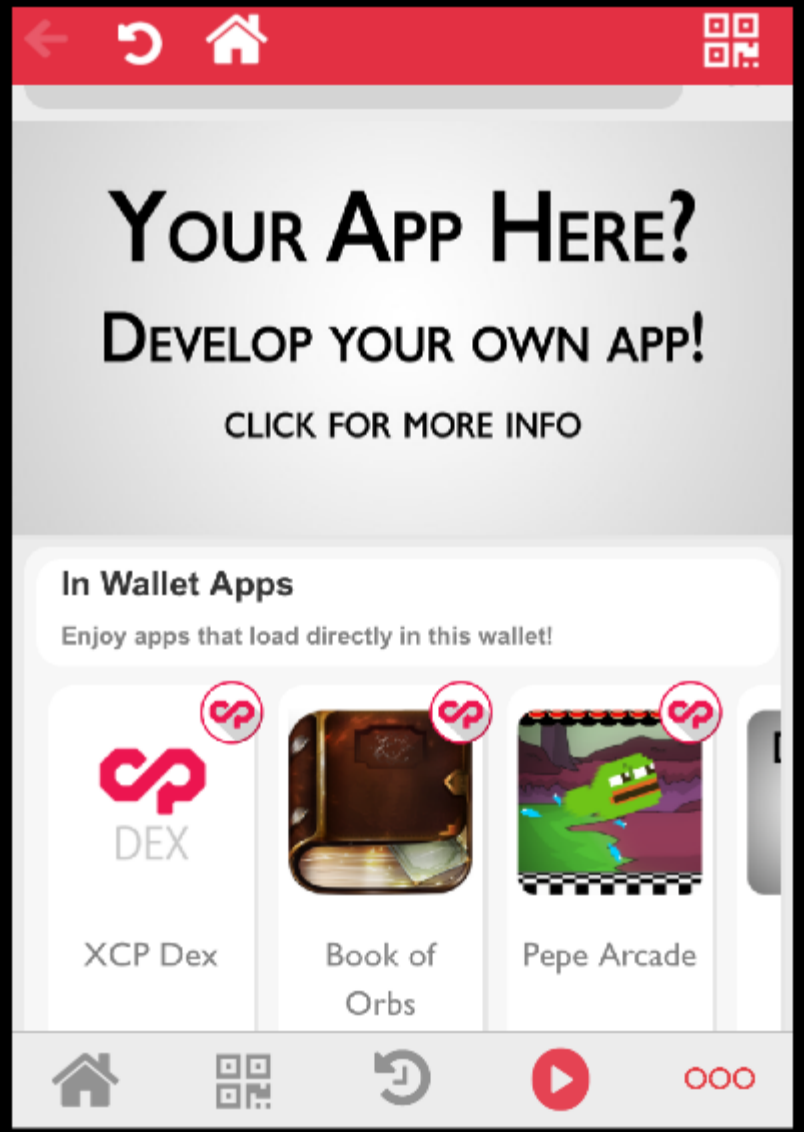
iPhone

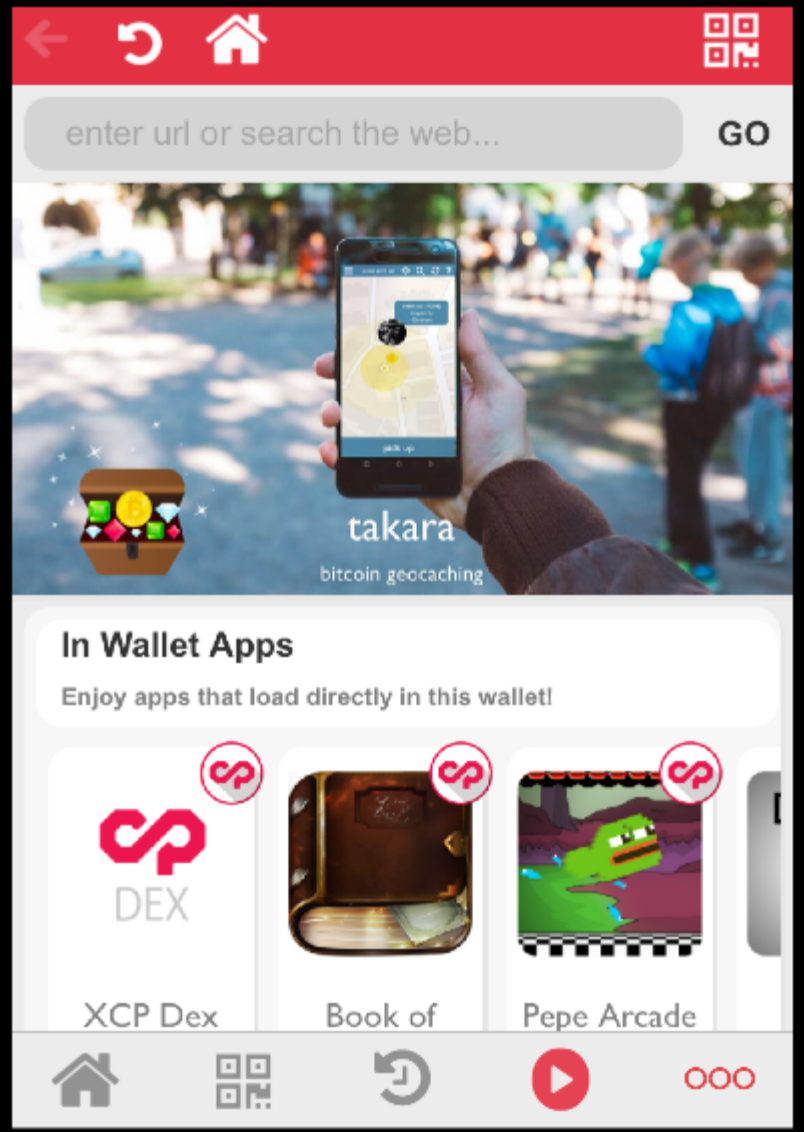
The token economy in the palm of your hand!
IndieSquare Wallet is the world's first crypto wallet and DApp browser that supports both Counterparty and Ethereum blockchains. more

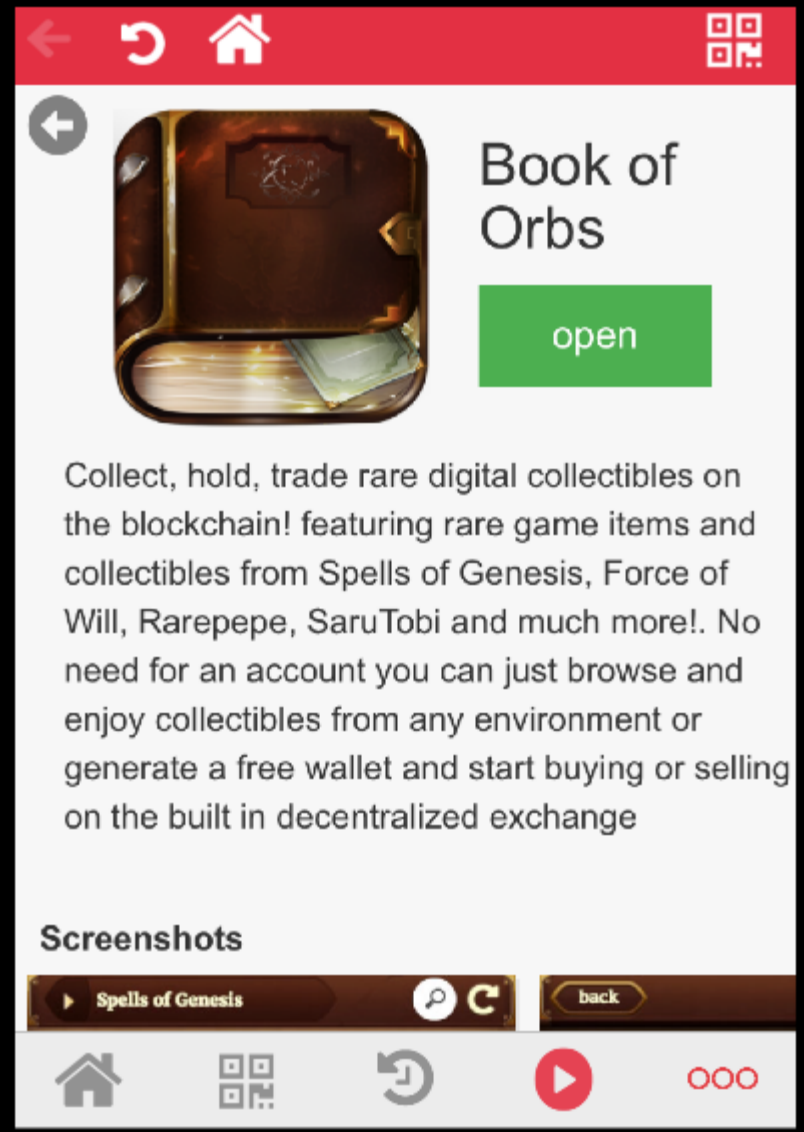
IndieSquare Inc.
Developer

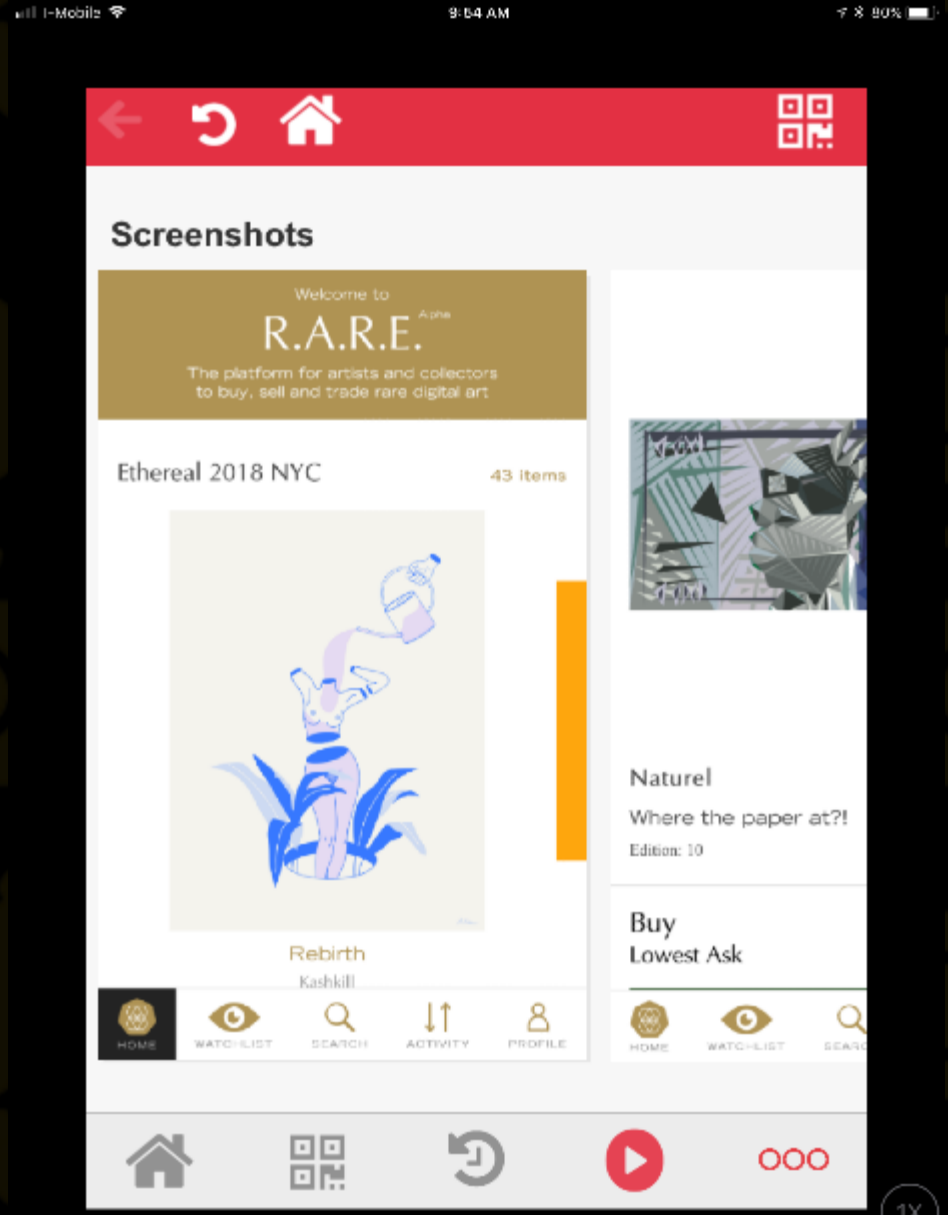
Today Games Apps 90 Updates Search

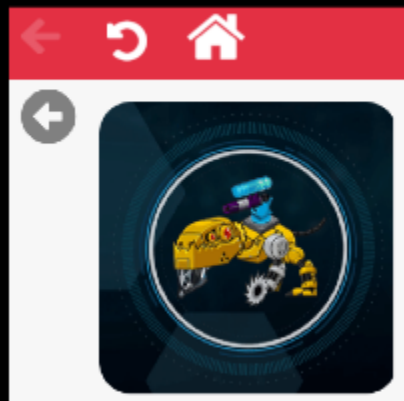

Receive
Current Wallet Address
13FJXbUmEbUpSveKbFeFSRNyNz65g63UdV
(receive your bitcoin and tokens)
Touch qrcode to copy


YOUR APP HERE?
DEVELOP YOUR OWN APP!
CLICK FOR MORE INFO
In Wallet Apps
Enjoy apps that load directly in this wallet!
DEX
XCP Dex
Book of Orbs
Pepe Arcade


enter url or search the web...
GO
takara
bitcoin geocaching
In Wallet Apps
Enjoy apps that load directly in this wallet!
DEX
XCP Dex
Book of
Pepe Arcade


Book of Orbs
open
Collect, hold, trade rare digital collectibles on the blockchain! featuring rare game items and collectibles from Spells of Genesis, Force of Will, Rarepepe, SaruTobi and much more!. No need for an account you can just browse and enjoy collectibles from any environment or generate a free wallet and start buying or selling on the built in decentralized exchange
Screenshots
Spells of Genesis
back


Screenshots
Welcome to
R.A.R.E. Alpha
The platform for artists and collectors
to buy, sell and trade rare digital art
Ethereal 2018 NYC
43 items
Rebirth
Kashkill
HOME
WATCHLIST
SEARCH
ACTIVITY
PROFILE
Naturel
Where the paper at?!
Edition: 10
Buy
Lowest Ask
1X

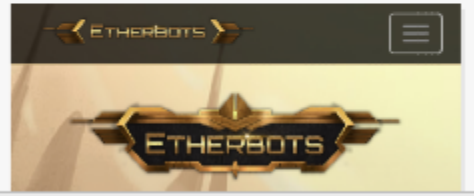


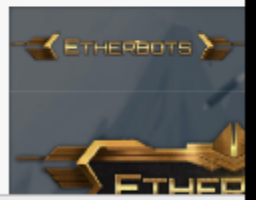
Ether Bots

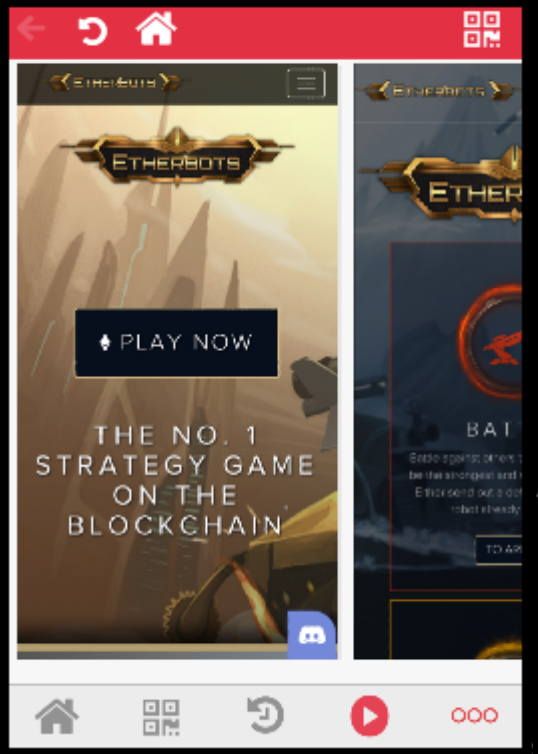
coming soon!

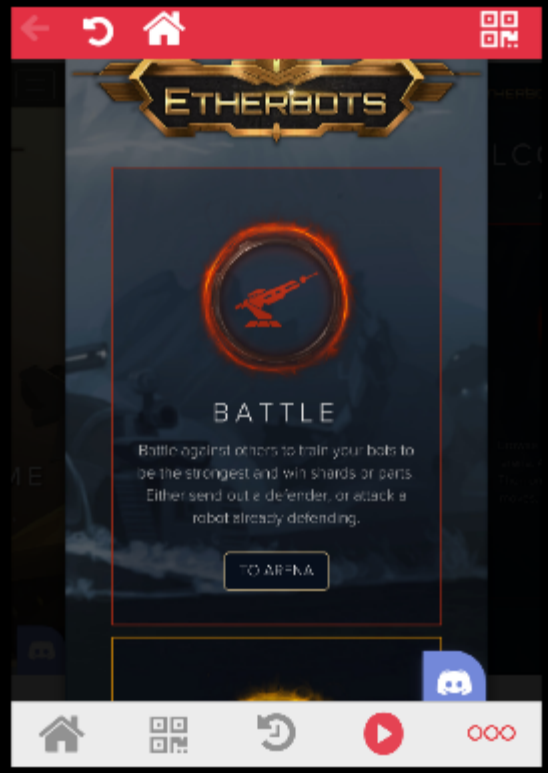
Etherbots is a decentralized application hosted on the Ethereum network. It's a Robot Wars inspired game where you collect parts and weapons, forge dynamic robots, and use them to battle others on the platform.

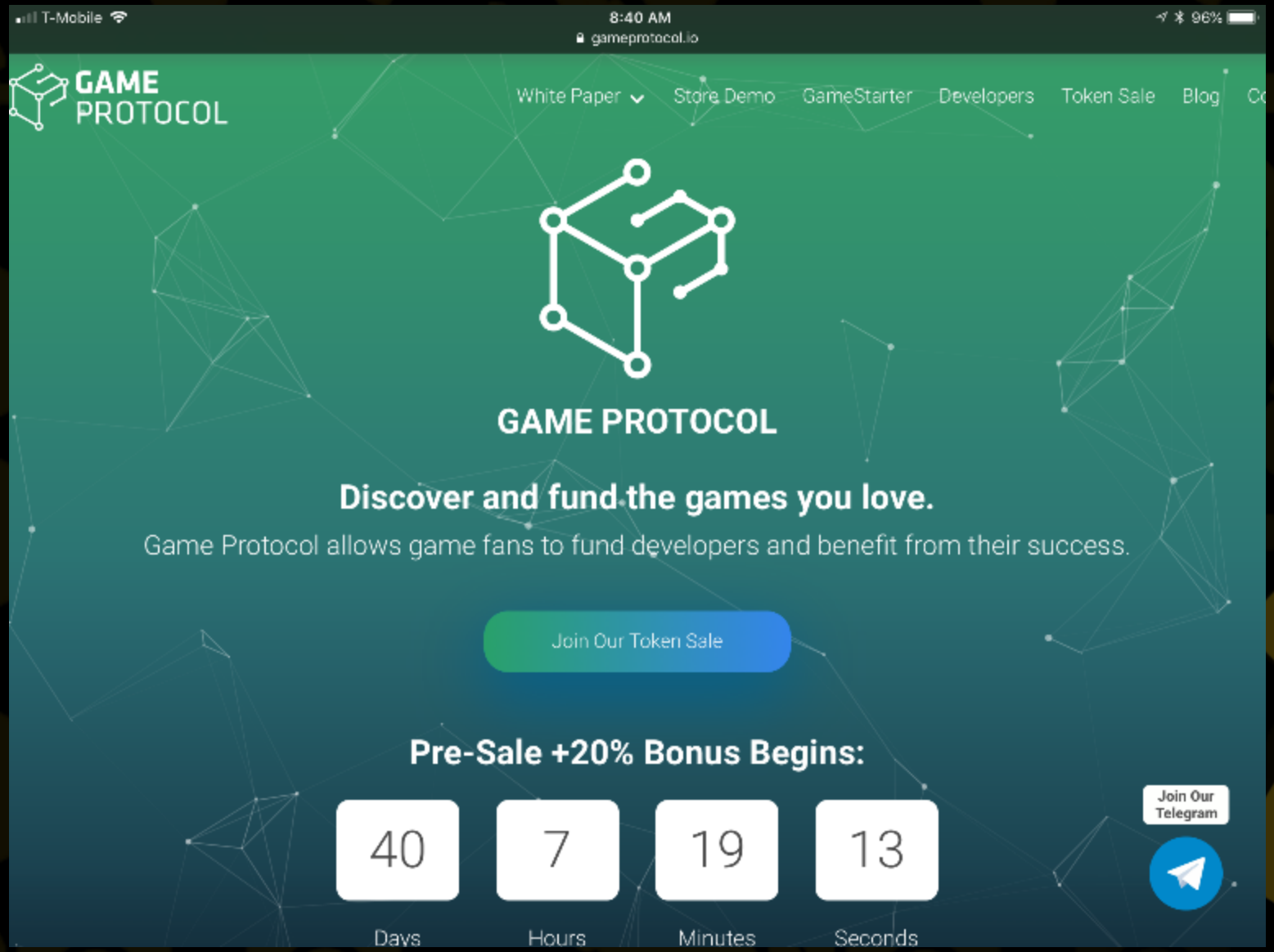
Screenshots










T-Mobile
8:40 AM
gameprotocol.io
96%
GAME PROTOCOL
White Paper
Store Demo
GameStarter
Developers
Token Sale
Blog
GAME PROTOCOL
Discover and fund the games you love.
Game Protocol allows game fans to fund developers and benefit from their success.
Join Our Token Sale
Pre-Sale +20% Bonus Begins:
40
7
19
13
Days
Hours
Minutes
Seconds
Join Our Telegram

No Service 8:41 AM 95%

gameprotocol.io

Tl Moment Book a Flig... openplay a... Kids Attra... GitHub - b... Conferenc... Making Pu... www.dtic.... Do the Cro... GameSt...

GAME PROTOCOL

White Paper Store Demo GameStarter Developers Token Sale Blog Co

GameStarter

GameStarter helps game developers, programmers, and enthusiasts get the funding they need for their project, with the help of Game Protocol and the assistance of our amazing community. Using GameStarter allows game creators and developers create the game they would like to make and avoid having big studios dictate how or what the game should be. With GameStarter we hope to see many great games published.

Popular Projects

Have a look through our top projects

Game Name

Special Guns

About

Help us create a unique online experience! Special Guns is browser based online FPS. This means that you can play nearly anywhere without downloading a thing! Choose from over 72 different weapons and challenge your friends in

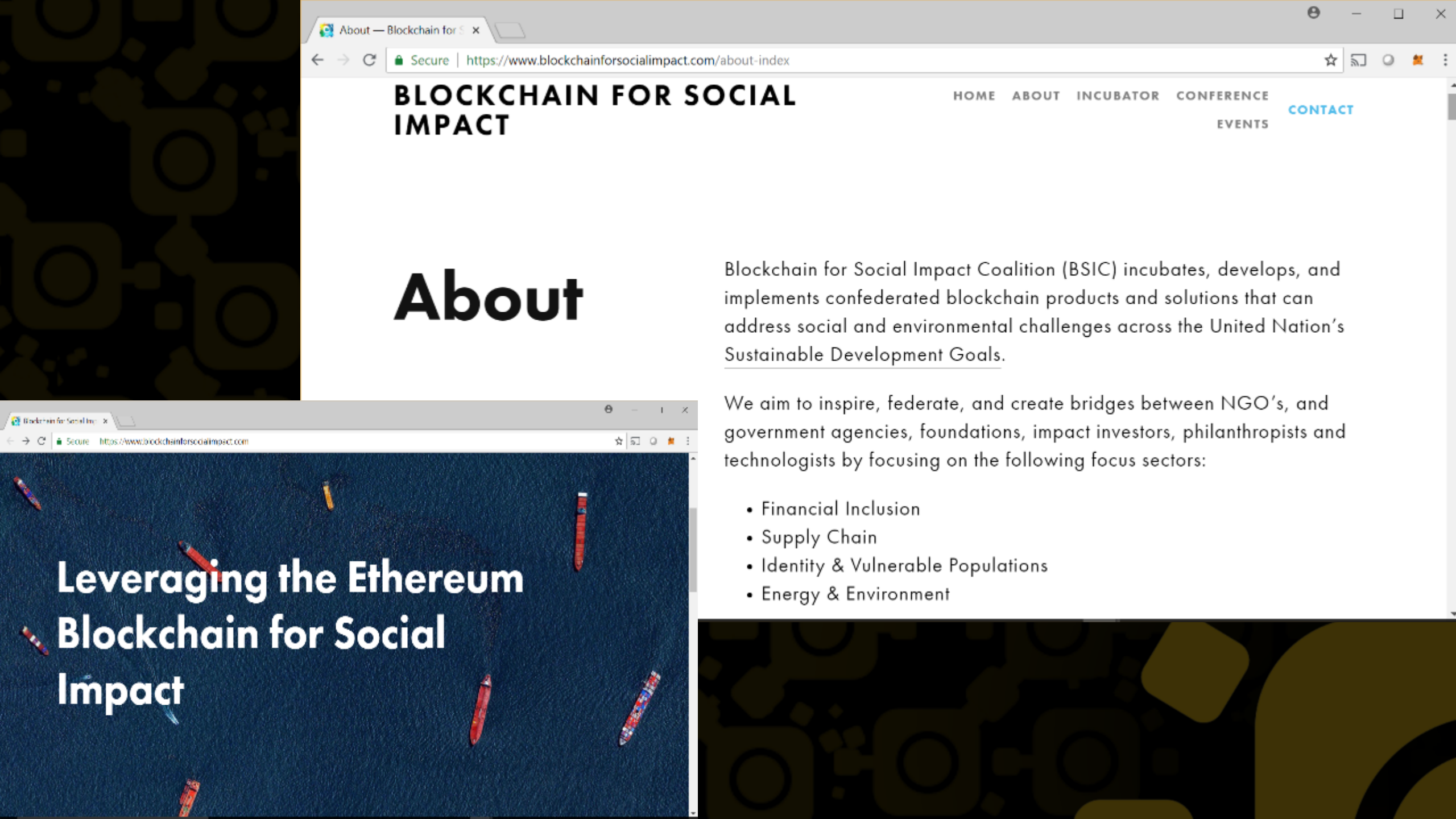
Next Steps

- Leverage Strengths- Games? Social Causes? Vertical Industry- (Health, Finance, Media, etc.)
- Find or Grow a base of blockchain developers
- Partner wisely
- Seek out projects or potential grants with a social value for something you are involved in or care about

- UCF is actively seeking partners in some of these areas for our projects
  - IOT and Blockchain solutions
  - Blockchain Simulator
  - Social Entrepreneurship and Impact Metrics (Global DApp)
  - Continuation of early Healthcare solutions using Blockchain

What Sectors of Society Can Benefit Most?

- Cross-sector technology integration strategy-
  - Mil/GovTech, HealthTech, EdTech, FinTech, TransTech, Global/ CharityTech
- Military research benefitting other sectors of society through commercialization and licensing (Dual use)
- Each sector benefits from the others in a neutral acad setting- creating public/private benefit to so


About — Blockchain for
Secure
https://www.blockchainforsocialimpact.com/about-index
BLOCKCHAIN FOR SOCIAL IMPACT
HOME
ABOUT
INCUBATOR
CONFERENCE
EVENTS
CONTACT
About
Blockchain for Social Impact Coalition (BSIC) incubates, develops, and implements confederated blockchain products and solutions that can address social and environmental challenges across the United Nation's Sustainable Development Goals.
We aim to inspire, federate, and create bridges between NGO's, and government agencies, foundations, impact investors, philanthropists and technologists by focusing on the following focus sectors:
• Financial Inclusion
• Supply Chain
• Identity & Vulnerable Populations
• Energy & Environment
Leveraging the Ethereum Blockchain for Social Impact

Partnership Approach at Univ of Central Florida Institute for Simulation and Training

- Partners with similar vision
  - Public, nonprofit university
  - Compelling projects with the potential for global impact
  - International partnerships that meet the broad goals of UCF, and the Institute
  - We can be an academic partner that understands how to interact with NGOs, Government and Industry partners
  - Joint pursuit of grants
- Resource strategies for people, funding, and tools that create sustainable innovation
  - Spin-off multiple commercial entities and help launch/fund startup activities for students, faculty and our staff
  - Develop next generation leaders and technologists

- Intelligent Garage

Institute for Simulation and Training
UNIVERSITY OF CENTRAL FLORIDA

METIL
MIXED EMERGING TECHNOLOGY INTEGRATION LAB

UCF Construct at WHIT Intelligent Garage
Studio for 3D virtual reality, augmented reality and holographic visualizations

Ideation
Creation
Evaluation

3D Visulatization
Wellness
Health
Performance
Living Laboratory
Mixed Reality
Wearable Evaluation

Partnership Approach at Univ of Central Florida Institute for Simulation and Training

- Partners with similar vision
  - Public, nonprofit university
  - Compelling projects with the potential for global impact
  - International partnerships that meet the broad goals of UCF, and the Institute
  - We can be an academic partner that understands how to interact with NGOs, Government and Industry partners
  - Joint pursuit of grants
- Resource strategies for people, funding, and tools that create sustainable innovation
  - Spin-off multiple commercial entities and help launch/fund startup activities for students, faculty and our staff
  - Develop next generation leaders and technologists

Point of Contact

Dr. David Metcalf, Director
Mixed Emerging Technologies Integration Lab (METIL)
Institute for Simulation & Training
University of Central Florida
3100 Technology Parkway, PII-322
Orlando, FL 32826
dmetcalf@ist.ucf.edu
407-882-1496