EthPayCash

Research paper
A liquidity promoting exchange platform.
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Abstract

EthPay Cash is a blockchain based exchange platform with an aim to promote, "easy exchange of Digital assets with real world assets". EthPay Cash is taking inspiration from existing offline peer to peer platforms for exchange of virtual assets for real world assets. A true mark of a open free market economy is for each party to "be able to exchange any good or services in any form(soft, hard, virtual or real) for any other counterpart".

EthPay Cash is the first of its kind blockchain platform that facilitates a decentralised exchange of virtual goods/services for their real world counterparts.

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1. Digital assets and their history a brief intro

1.1. What is a Digital asset?

Intangible Assets

According to wikipedia, "An intangible asset is an asset that lacks physical substance (unlike physical assets such as machinery and buildings) and usually is very hard to evaluate. It includes patents, copyrights, franchises, goodwill, trademarks, trade names, the general interpretation also includes software and other intangible computer based assets. ."

We could broadly categorize Digital assets into::
- Asset that a user pays for (Office software, application, games...)
- Items that a user earns through work like: (Level Achievement, experience, Game credit, Blockchain Credits)
- Items that the user creates thereby having a default copyright on like (Articles, UserNames, Identities)
- Entities legal or otherwise that user creates either on paper or in digital form like companies, firms, Digital Avatars.

With the advent of the Internet a new term was coined, "Virtual Assets".

According to What is, "A virtual asset is a representation of currency in some environment or situation. In this context, currency can be defined as either a medium of exchange or a property that has value in a specific environment, such as a video game or a financial trading simulation exercise. Monetary virtual assets are often called virtual currency."

A broader term "Digital goods", covers almost all forms of digital intangible assets.

2. The problem at a glance

Lack of Liquidity:
It's very difficult for a user today to take a Linden Dollar (used in second life) that they earned through gameplay or otherwise directly for any out of game virtual or real world asset.

Centralisation:
The reason for "Lack of liquidity", is mostly centralisation with only one game company being involved.
Companies like Steam and Sony with their playstation only provide a bigger centralised marketplace that does not solve the problem.

Real world example:

Almost every person owns a virtual/Digital asset. Let's take a simple example of a Facebook ID.

You have created this ID, you manage it, you grow it by adding content to it.
Yet it is difficult for you to monetize it. No standard way to transfer it for real world money.

No central exchange that would give you money for it.

There is a clear need so there are shady markets for it with no trust or guarantee of getting what you want for your efforts.

Facebook does monetize and advertise and takes advantage of all the content you create.
SteamIT[link] is a novel idea that gives control back to the users allowing them to monetize this content, however even here what you get back is a digital currency with no direct way to use it in the real world.
Further the problem as outlined above is a lot larger than just news and content creation.

3. Proposed Solution EthPayCash

End Goal: **"Provide easy access to exchange virtual/digital goods/assets for real world assets"**

To put simply one should be able to pay for their coffee in the morning using the credits that they earned playing Dota2 the night earlier.

Just as simply as one pays using Credit Card or using E-cash mobile Wallet.

What do we need to be able to do that?

Step 1: Provide a proof of concept:

Decentralised Game Exchange platform to facilitate users to exchange in game virtual assets.We will be providing a API that the game developer would have to integrate with. This would then allow users of that game to be able to exchange their coins for our XCC. XCC would be based on top of ERC20, traded on exchanges allowing users to exchange it for any other game token or real world asset. More details about the gaming exchange are provided below.

Step 2: Acceptance and real world usage:

Mobile wallet that allows you to exchange XCC with select partners.

Step 3: General Acceptances using "EthPayCash Cards"

Our team has experience working with banks and financial institutions around the world.
Our next step would be to partner with these institutions who would allow XCC to be used in partner houses.

4. EthPayCash Executive Summary

4.1 The Debit Card

EthPayCash is a debit card usable at payment terminals around the world, including ATMs. EthPayCash customers back/fund their own card with allowances from ERC20 compatible contract wallets.

4.2 The EPC Token

EthPayCash is creating the EPC tokens for a limited time. A fixed number will be created during the presale, and no more will be created thereafter. The EPC Token provides a EPC holder with the right to use the EthPayCash for transaction using EPC without having to pay additional licensing fees (transaction fees charged by third party card issuers and payment system providers remain applicable).

4.3 Use of Funds

The proceeds from the funds will finance development, partnership programs, float (both fiat and token), operations, regulatory and most importantly, marketing and customer acquisition. Because of this, any money we receive from pre-sales over our minimum will largely go to marketing and customer acquisition. This creates a value multiplier for the project: as we have more money we will be able to spend a higher percentage on customer acquisition and boost spending commensurately.

4.4 Prudence: Reserve Tokens

We have some concerns about other project's capitalization in these early days of the token economy. In particular, most projects dilute out their token holdings by 80%; this dilution isn't equity dilution, but worse – often giving away 80% of gross revenues. This may be imprudent.

Lessons from modern markets show that both debt and equity are useful tools for raising capital. Therefore we are minting an amount of 15% of all EPC but not offering them for sale during this presale.

These EPC will not be issued or sold during the initial pre-sale and are locked in a smart contract. If at some point it seems advisable for the EthPayCash project to sell more tokens, some or all of these may be offered in an auction format or some other format that suits the capital needs of the project.

4.5 The Future

We have big plans. Our mobile app will allow customers a number of features that they cannot easily access with other digital currency and token wallet apps. We aim over time to bring about a world which makes access to tokens far easier than it is today, far more intuitive, with far less friction.

5. Motivation

7 years after the creation of Bitcoin, one of the greatest experiments to date, we have witnessed the emergence of a new industry. Ethereum has added a Turing-complete layer into the mix, and broadened the horizon of what is possible by an order of magnitude. This in turn has facilitated the creation of a new synergistic ecosystem, one that promises to overturn the status-quo.

Over the years numerous attempts have been made to bring cryptocurrency to the masses yet adoption is still slow and cumbersome. These companies and projects have failed to identify and address the main issues present in making mass adoption of digital assets possible. The core issues remain:

1. **Security**, storing assets is cumbersome and inevitably people choose to store their assets   under a third party's control, like an exchange. This defeats one of the greatest properties of cryptocurrency, and exposes them to risks that have consistently proven to be catastrophic. A system is needed that can securely store assets without compromise on usability.

2. **Usability**, numerous steps are often involved in seeing real use of one's digital assets. A user   needs wallets, exchanges and accounts on various services. They are required to withdraw, deposit, do KYC and even become amateur traders. A system is needed that eliminates these steps, and offers a seamless plug-and-play experience for the uninitiated that can be integrated across platforms.

3. **Volatility**, forcing people to use a volatile asset like Bitcoin is a no-go. The people have spoken,   and it deters more than it attracts leaving only a risk-taking fringe. A stable, more diverse asset class is needed.

Through the game-changing power of Ethereum we now have the tools at hand to create a distributed banking replacement for the post-bank era that promises to solve these problems and in the process outperform traditional banking counterparts in flexibility, efficiency and transparency.

The Token and EthPayCash platform proposed in this document strategically targets and solves these issues and will position itself at the heart of the effort to

facilitate the mainstream adoption of the compelling Ethereum Ecosystem and dominate this next phase in financial history.

6. EthPayCash at a glance

6.1 Control

EthPayCash users are able to store and transfer tokenized assets securely, without introducing a third party. By retaining control, users never subject themselves to centralized risks, whilst benefiting from the efficiency and cost reduction that comes with eliminating a third party.

6.2 Community

The project will focus on initially providing a solution for the Ethereum community, with a smart contract powered debit card that can spend Ether and other ERC20 compliant tokens and allows for various spending modes that support the lifestyles of those who wish to transact primarily in tokens.

6.3 General Public

Moving forward, the project will shift focus to the general public. By using our debit card as an introduction to this transformative technology, we aim to provide a familiar user interface where users retain all the benefits of Ethereum without having to master them.

6.4 Synergy

EthPayCash directly benefits from the powerful products currently being developed on Ethereum like asset-backed tokens, stable coins and other tokenized assets and strongly supplements their value proposition. By providing a way for these projects to become useful to people outside of the community through EthPayCash, they can expand their market dramatically.

6.5 Standard Wallet

EthPayCash is capable of working directly with the standard ERC20 contract wallets. These token wallets are relatively secure, but not as widely used as hoped. We believe the improved usability and focus on real-world transactional security needs will make the Token Contract Wallet a desirable first-class wallet solution for most token holders.

6.6 Gateway

EthPayCash allows for mass adoption of consumer-facing Ethereum platforms like Singular and First-Blood that greatly benefit from the streamlining of the user experience. With EthPayCash integration users can seamlessly start reaping the benefits of Ethereum dapps without needing to perform complicated actions.

6.7 Token Agnostic

The platform is token agnostic – users are given freedom to choose how to hold value and transact. With EthPayCash, regular users will have an expanding pool of assets at their fingertips within the Token App.

6.8 Innovative spending options

Users will be able to pay in multiple assets at the same time while keeping their portfolio balanced. This is a world first; customers will be able to keep all of their assets fully invested at all times, and not worry about manual reallocation when they wish to spend.

7. Market

Our current roadmap focuses on several distinct markets and user-bases where EthPayCash is best positioned to excel. In general, we have the underlying Ethereum community, platform specific markets and general public banking replacement.

7.1 Ethereum Community

Providing a payment solution for the underlying Ethereum community is the most basic use-case for this market. However, it should not be underestimated. With a rapidly growing market cap among Ether and ERC20 tokens, there is an accompanying need for payment utility of assets on the network.

7.2 Platform Specific Markets

The most exciting use-cases for EthPayCash are within the many different markets that are being tapped into by other projects in the space. We are actively integrating EthPayCash with these native Ethereum platforms, giving EPC holders direct access to diversified markets while providing connections to a major payment rail for the platform's underlying user-base.

We believe that this is where EthPayCash's true role in the ecosystem lies, with integration benefitting: EthPayCash, the integrated platform, and most importantly, the end users themselves. This also suggests strong growth prospects for EPC; the success of integrated platforms translates directly across to EPC holders.

EthPayCash makes every partnered project with a token far, far better. We believe there will be rapid uptake by token holders worldwide.

7.3 Product Strategy

Our initial target market will be token holders of other projects and the Ethereum community in general. This is not a numerically large group, but it is extraordinarily wealthy, and strongly demands this product.

Because EthPayCash makes every other token project better, it will grow rapidly whenever any one of the other token projects sees growth. We forecast massive

growth in the token ecosystem over the next two years, and will be there to provide real value to each token issuer.
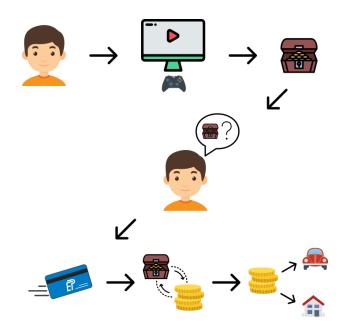
7.4 Broader Market

Our strategy to capture the general public will start with social media, and likely extend to partnerships and traditional media. We'll be working closely with a dedicated marketing team to construct campaigns and strategies to attract a broader user to the platform.

Strategies that tap into network effects, for example, by recommending friends and family to the platform in exchange for a free card, will be key to growing the platform. EthPayCash's role within the Ethereum ecosystem offers sufficient innovation to capture interest from larger media outlets, which will complement our marketing effort.

We believe we will be able to capture significant ROI on Customer Lifetime Value vs. Acquisition cost in many markets, and plan to spend a significant portion of the token sale proceeds on growing this customer base, while remaining judicious and careful.

8. Game Credit Exchange

Game Credit Exchange is a platform where players can exchange their In-Game Credits in lieu of Tokens, which then can be exchanged on any exchange in lieu of cash. Thus making it possible for a gamer to earn some money while playing their favourite games.

There are three Roles in Game Credit Exchange Ecosystem:

1. Game developers
2. Credit Sellers
3. Credit Buyers

Game developers:

   Only Game developers can list games on the marketplace. In order to do so they need to deposit some security money in the contract (say 10 XCC Tokens). Game Owners (developers who lists the game) can add game credits to any players' account by sending a transaction signed with their private key.

- Let's say a dev lists a game named ABC on the market.
- ABC has a game asset (credit) named XYZ which gamers earns by winning tournaments.
- When a player P has enough XYZ credits, he/she can request the game server to withdraw those credits, which then can be used for trading on the GameX market.
- When P requests a withdrawal of assets they gets transferred to the smart contract of GameX for which P has to pay a withdrawal fee.

- Then P can sell those credits on the market and will get XCC tokens in exchange.
- These Tokens can then be used to either convert to fiat currency on some exchange, or to buy some other digital asset (in this case some other game or some other game's credits). Thus making the trading between different games easier for players.

Credit Sellers:

Credit Sellers are the players who owns In-Game credits and wants to sell those credits on the marketplace in lieu of cash.

Credit Sellers has 2 options to sell their credits on the marketplace.

1. Create a sell trade on the market :

   - Player (Let's say P1) withdraws his/her credits from the game server and pays a small transaction fee for withdrawal.
   - Credits gets deposited in P1's account in the Game Credit Exchange's Contract.
   - P1 then creates a new sell trade which gets listed on the marketplace.
   - Some other player can buy these credits from the marketplace by sending the required amount of XCC tokens to P1's account.

2. Fill an existing buy trade from the market :

   - Seller (Let's say P2) withdraws his/her credits from the game server to the Game Credit Exchange contract and pays a small transaction fee.
   - Credits gets deposited in P2's account in the contract.
   - P2 choose an existing trade from the marketplace (Let's say player P1 listed this buy trade on the marketplace).
   - P2 sends his/her credits to P1's account.
   - Tokens from the escrow gets transferred to P2's account.

Credit Buyers:

Credit Buyers are people who wants to buy in-game credits from the marketplace with fiat money..

Buyers have 2 options to buy the In-Game credits.

1. Buy from existing buy trades :

    ● Player choose from the existing sell orders available on the marketplace.
    ● They send the XCC tokens to the contract to buy those credits.
    ● Once the transaction gets confirmed, credits gets transferred to the Buyer's account.
    ● Buyer sends these credits to the game server which then gets synced on the game server and can be used in the game.

2. Create a new buy trade on the marketplace :

    ● Player can list their buy trade on the marketplace to buy the In-Game credits. (Let's say a player P1 wants to buy 50 XYZ credits of game ABC)
    ● For this player P1 sends the amount of XCC tokens required to buy 50 XYZ credits.
    ● Once some other player (Let's call this player P2) fills this request by sending 50 XYZ credits to the user's account, P2 gets his/her XCC tokens in their account.
    ● P1 then sends these 50 XYZ credits to the game server's account, which then gets synced to the P1's account in the game server and can be used in the game.