



THE **XP**ERIENCE BASED ECONOMY; A BROADER APPROACH

Abstract:

Since the earliest days of board and digital gaming, experience points (XP) have been the *de facto* currency of in-game life. As a character goes through their narrow world, they gain XP which can be used to “level up” and improve statistics or function.

XP, the decentralized cryptocurrency, aims to introduce this function into life in a way that makes it both simple and intuitive to build XP rewards into daily living. Whether it is through the mechanism of XP being given as a reward for game play, as it would be used in a more conventional sense, or XP being given as a component of the gamification of reality, the practice of awarding XP for use in the real world presents a tangible solution to some of the problems endemic to today’s somewhat abstract and disconnected reality. Through building this bridge between a user’s everyday life and the blockchain-based world of XP, a new and brighter future blending cryptocurrency and life can be built.

Whitepaper Version:

The most current version of this document is accessible on the web at: <https://xpcoin.io/whitepaper.pdf>
The version available at that URL represents the only valid version of our whitepaper.

Note for Experienced Cryptocurrency Enthusiasts

As this paper is designed to not only introduce people to XP, but also to cryptocurrency in general, some experienced readers may find certain segments to be slow-going, boring, or overly simplified. Because of the fundamentally world-changing potential exhibited by the XP ecosystem, it is important that non-crypto people can read and understand what is proposed by the XP Development Team. Many of the ideas presented in this introductory whitepaper will be further fleshed out in technical yellow papers at a later date.

*As this paper was designed for non-crypto people as well as cryptocurrency enthusiasts, **if you would like to skip some of the basic information and get straight to the groundbreaking proposals, please skip directly to Section V.***

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I. Why XP?

The true value of a life isn't measured in money or in age or in things – life is measured in experience. A life well lived is filled with infinite grains of experience that set it apart from every other. Living to the ripe old age of 100 years in a bubble is no life at all, but going out in a blaze of glory in your mid-20s while doing something amazing can be considered a “life well lived.” While not advocating the mid-20s blaze of glory path, there is something to be said for experience. Life is meant to be lived – fully.

Everything we do in life gives us experience. Each trip we take, each concert we attend, and each new friend we meet, contributes to the eternal distributed ledger of our lives. Why not use this experience? Why not find a way to account for it and to make it work for us as we go through life? Why not meet with others, who also have experience, and share another unique experience together. ***This sharing economy of experience is what XP was created to facilitate.***

The central requirement of XP is that it is for everyone. Unlike other cryptocurrencies that have a specific and very narrow usage, XP is designed to be used by anyone, anywhere. With a mechanism that can provide a degree of distribution impossible with other cryptocurrencies, XP can enhance your life and bring you closer to the experience-driven community. Unlike other cryptocurrencies which must be purchased or mined, XP can be made available to you as you build experience. XP is one of life's tiny rewards that you get for a job well done or a new experience tucked away. XP opens the potential for an entire economy based on what you have done, where you have gone, and the communities with which you engage.

Before we begin, it is important for potential users to understand the use case of XP. With most cryptocurrencies, the use case is hypothetical. Often, this use case itself is in development and it MAY be available for use at some point in time in the future. With XP, the use case already exists, because people are out there in the world building experience every single day.

The term XP was first used by Gygax, Kaye, and Blume, the original creators of Dungeons and Dragons.¹ Since that time has become ubiquitous in many different areas of life. The trend towards gamification has allowed the concept of “experience points,” once reserved for games, to spread into tasks from doing your laundry to walking your dog. XP seeks to capitalize on this by providing an incentivization structure to permit the free flow of tokens from generation points to users and back to spending partners.

¹ First mentioned in the First Edition of the Dungeons and Dragons Basic Set in 1977.

II. Understanding Market Sizing

There is a large contingent of the cryptocurrency investment community which associates the price of a cryptocurrency with its supply. However, this logic is somewhat faulty, as it isn't necessarily the supply of a token which determines its price, but rather demand and usage. We are dedicated to building that demand and creating that usage.

And now for some brief notes about market sizing:

In Gaming:

- In 2016, gaming represented a total market valuation of US\$99.6 billion, with an 8.5% growth rate over 2015²
- 58% of all growth in gaming in 2016 occurred in the Asia-Pacific Region

In Tourism:

- In Europe, tours and activities account for around **US\$40 billion** annually³
- Travelers are likely to spend more on sightseeing and building experience than on shopping, souvenirs and nightlife combined⁴

In Entertainment:

- Total box office receipts for movies globally was \$38.3 billion in 2015, up 5% over 2014's total⁵
- In 2016, there was over 60.4% growth in streaming revenue for the music industry⁶

In Social Media:

- There are over 800 million active Instagram users globally, with over 500 million daily users⁷
- In the year of 2015, 6,917,000 visitors stopped in at the Eiffel Tower in Paris⁸

There has been no single means of incentivizing action across and between each of these different ecosystems – until XP

In XP's Current Ecosystem:

- There are 232 known peers as of December 22nd, 2017⁹

The dramatic use case for XP is clear

² Newzoo Games – 2016 Global Games Market Report, 2017

³ Stephen Joyce – WeblnTravel.com, 2016

⁴ Tripadvisor – Tripbarometer, 2015

⁵ MPAA – 2015 Theatrical Markets Statistics, 2016

⁶ IFPI – Global Music Report, 2017

⁷ Instagram – Strengthening Our Commitment to Safety and Kindness for 800 Million, 2017

⁸ Société d'Exploitation de la tour Eiffel 2015, 2016

⁹ CryptolD Block Explorer, 2017

III. What is XP?

XP, or eXperience Points, is a Proof-of-Stake cryptocurrency. Since XP is designed to be used by a much broader audience, it would do well to spend some time explaining exactly what this means. While much deeper explanations can be found in many different locations online, a brief hyper-condensed explanation of exactly what a cryptocurrency is and how it is generated follows.

The first cryptocurrency, Bitcoin, was developed by a person, or persons, known as Satoshi Nakamoto. This cryptocurrency, in a stroke, revolutionized the financial world. One characteristic that makes cryptocurrency so revolutionary is because it removes the requirement for faith in a financial system. If you have a dollar in your wallet, you know that dollar will buy you a set amount of bread or water. You know this because that dollar is backed by the Federal Reserve Bank of the United States, which is, in turn, backed by the United States Government and everything that entails.

However, history has taught us again and again that banks fail, governments collapse, localized computer systems fail, and operator error can wipe out the financial records of millions. With decentralized currencies, this isn't possible. With cryptocurrency, you don't need to trust any single person or organization, instead you can know, with mathematical certainty, that your deposits are secured and protected by the entire distributed network.

Proof-of-Work (PoW) currencies rely on computers to perform complex calculation to secure the network. While this seemed like a good idea at the advent of cryptocurrencies, as difficulty increases it is becoming clear that it is environmentally irresponsible and wholly unnecessary to rely on these sorts of arbitrary calculations to generate new tokens or to secure the network.

As a replacement for PoW, XP uses a system known as Proof-of-Stake (PoS) to defend the network. This also makes the generation of tokens possible by anyone who maintains a coin balance and keeps their computer on; it does not require a powerful computer or expensive GPUs to "mine" coins.

From a network security perspective, this makes a difference as well. As computing power advances and quantum computers begin to edge their way out of theory and into actual usage, PoW currencies are going to become much less reliable as the security of the network depends on no single actor being able to control a majority of the processing power being used. In the event that one state actor makes an advance in quantum processing, it would be possible for this state actor to attack the very core of PoW currencies. On the other hand, in order to destabilize the network with a PoS currency, it is necessary for the hostile actor to control over 50% of the available coin supply. This is much less likely than someone attempting to successfully destabilize a PoW network.

IV. The Economics of Digital Token-Based System

Due to the fact that it is our long-term goal to push XP out into the world and beyond the cryptocurrency community, it is important that we address some of the fundamental concerns presented by the uninitiated. This segment was borne out of a discussion with several bankers who raised several points about which they were concerned.

The Liquidity Problem: This issue, as it has been thus termed for Bitcoin, is essentially the challenges facing conversion from Bitcoin to more easily usable fiat currency. This problem of the essential fungibility has been dealt with, in large part, by the growth of the market. If viewed as an investment instrument, such as a bond, then the conversion of Bitcoin to cash presents barriers no greater than a certificate of deposit or any other paper-based asset. However, if viewed as a store of value and currency in its own right, cryptocurrency doesn't need to be "converted," it simply needs to be used. Around the world, it is becoming more and more possible to USE cryptocurrency without being concerned about the fundamental ability to instantly convert to fiat. In many ways, cryptocurrencies present a great opportunity of global functionality which national currencies do not possess.

That said, if you must convert a cryptocurrency to cash, there are:

- Cryptocurrency exchanges which can direct deposit funds into your bank account based on cryptocurrency deposits
- Crypto-based banking institutions
- Bitcoin ATMs or other automated banking services available to cryptocurrency users

Decentralization and the Lack of Oversight: This is an issue of special concern to many financial experts. There is a great need amongst adherents to the financial institutions of today for some sort of centralization and control. The fear is that without centralized control and oversight, there can be no sort of Keynesian economic controls exerted on the system. While this is technically true with most cryptocurrency systems, most cryptocurrency users would consider this very much a feature, and not a bug. Having state-sponsored oversight guarantees only that meddling will occur. The system cannot be self-correcting because market conditions often act in opposition to attempts to control the market creating a negative oscillatory cycle.

Cryptocurrencies DO lack a central control system, but that also means that they cannot be manipulated outside of the application of market forces. This is a double-edged sword because on one hand it means that the users themselves retain control over their own resources. On the other hand, it means that market forces CAN be used to lead to market movements. This is no different than the more standard financial models, but the scale of many cryptocurrencies mean that it is easier to move the value of cryptocurrencies than it is to move the value of, for example, the dollar. It is expected that as usage increases and a token such as XP moves from the hands of those who

speculate to the hands of those who actually use the token, these fluctuations will decrease, and a market equilibrium will be achieved based on growth and usage.

Black Market Usage: It has often been said by critics that the only reason cryptocurrencies exist is to conduct black market transactions. While this is certainly possible, cash and metals will always be king for large-scale illicit transactions. The very fact that transactions exist on a blockchain which is immutable and a permanent record that movement has taken place makes blockchain transactions unattractive for anything illegal on a large scale. Blockchain forensics is a growing area of law enforcement interest, and the days of using cryptocurrencies to move large amounts of money completely undetected are coming to an end.

V. The State of XP Today

The XP community has raised several concerns regarding XP's fundamental technology and market distribution. There is often comments about reducing total supply, reducing stake rate (the first stage of which has been done with the December 25th, 2017 Wallet Release), and large wallets held by previous team members. While a great deal could be said about these issues, it is best to simply present the solution.

All of these issues can be effectively managed through the introduction of the **XP Pentanode System**. Rather than relying on simple staking for the security of the network, XP will rely on five different types of specialized nodes to provide network security and the verification of transactions. In addition to receiving various annual returns, the nodes will also send a percentage of their stake rewards back to the XP Foundation to be used to grow the network or to be burnt in a transparent and auditable fashion.

***NOTE:** The XP Pentanode System currently proposed has been input into the Official 2018 XP Roadmap. However, as development continues, these details may change.*

XP Masternodes (Cost: 50m XP)

These are standard investment-grade Masternodes, paying out at roughly 50% annually. In order to guarantee uptime, stakes will occur every 60 minutes after the node has been active. Annual earnings assume a 24/7 uptime, with bonuses being distributed to nodes for being up and staking for the longest period of time. For each hour staking, these nodes will receive approximately 2,800 XP. The nodes will be configured so that it doesn't matter whether the node holds 50m or 500m, the payment will be the same. This incentivizes the creation of new nodes and disincentivizes hoarding.

XP Supernodes (Cost: 1b XP)

XP understands that people would like to gain higher returns for the service of securing the network and keeping tokens out of circulation. In light of this, we will be creating the XP Supernode. This node will require a much higher initial deposit, but will stake at a much higher rate. In exchange for this higher staking rate, there will be a one-week delay before the node can be broken.

Furthermore, the creation of a supernode will result in a permanent burn of the coins used to establish the node. While it will still receive roughly 200% of the initial 1 billion XP deposit annually, the first billion has been destroyed. This means that after the purchase of the Supernode, it will take roughly six months to be able to break the node without losing a percentage of funds.

These two innovations will prevent the opportunistic dumping of high token volumes when price targets are reached. This feature will essentially limit Supernodes to those who believe in the project and are willing to support it with their continual service of network security.

XP Salesnodes

In order to grow the XP network, it is necessary to bring merchants willing to both accept XP and provide XP to their customers. This is vital to onboarding new users and introducing them to the XP economy. This simple economic reality necessitates the creation of the Retail Salesnode. The vast majority of people spending money today are not familiar with cryptocurrency in any meaningful sense. Certainly, they have heard about various cryptocurrency projects, but cryptocurrency has a magical unreality to it.

In order to facilitate the spread of the XP economy, the XP Foundation will create and distribute XP Salesnodes to retailers/shopowners who would like to either accept XP or to use it for promotional purposes. The Salesnode will function exactly like a Masternode with one critical difference – while a Masternode can be broken up and sold at its holder's whim or transferred, a Salesnode cannot be broken up or sold. The stake rewards from this node can be used promotionally, as rains, or in any way that the merchant can devise. However, it will only stake to 150% of the initial deposit. This prevents a dormant or lightly used Salesnode from continuing to stake when not being used. The Salesnode itself also serves as a point-of-sale integration system, allowing the main wallet to be used just as a normal wallet for sales purposes, keeping the staking portion of the node segregated from the daily balance for usage.

In the event that the merchant decides to no longer participate in the XP network, the coins will be functionally burnt and can be removed from the total supply. In fact, the creation of the sales node, for all

intents and purposes, functions as a coin burn. This means that for every single merchant partner that joins the XP network, the total coin supply is reduced by a set number, while the security of the network is maintained. This will mean that there can be a DIRECT correlation between merchant signups and market price.

Devnodes

Unlike their relatives, the Retail Salesnodes, Application Devnodes exist to facilitate online growth of the XP economy. These Devnodes are provided, free of charge, to developers. They stake at a very high rate, but operate on a 10-day moving average coinburn. Essentially, if a developer has a game that is very popular, it is vital to be able to provide XP to be rained into their ecosystem. However, to prevent accumulation or manipulation, these nodes will burn coins that have not been used after ten days. These nodes can only be accessed through the to-be-created XPlay API, and are otherwise inaccessible. Like the Retail Salesnodes, they function as a coin burn when created, and cannot be broken and sold. Likewise, their staked coins cannot be directly accessed, but only distributed using the XPlay API.

Geonodes

One of the critical differentiating features that XP can offer to the world, is the ability for users to gain XP simply by visiting certain locations. Using the android-based XP wallet, with planned iPhone integration in the future, users can activate location tracking on their wallets, which will enable them to receive geolocation based rains.

This works by making it possible for a retail location, a monument or a museum to offer experience points to their visitors by simply notifying them that experience points are available and offering a QR code for them to download the wallet.

Imagine being able to attend a concert – As you listen to the music, your phone receives a rain of XP from a local promotional partner. You are then able to turn around and use this XP to buy refreshments from an XP affiliated retailer. The possibilities are endless with Geonodes and XP is the first crypto currency to offer this feature.

The XP Foundation Mothernode:

While not a staking node and while serving a very different purpose, the XP Mothernode is the central and auditable clearing house for the stake percentages returned to The XP Foundation. The XP Mothernode serves primarily for the creation of the preceding node types (with the exception of Masternodes and Supernodes). The XP Mothernode is entirely transparent and can be audited by anyone. To fund this node, a portion of all stake rewards are sent back to the XP Foundation Mothernode to be used in ecosystem growth.

This node functions on a 30-day moving average and burns all tokens which have been sent if they have not been used in 30 days. This prevents accumulation by the development team and altogether avoids the problem created by previous developers.

The continuous burn will prevent undue supply inflation, but will also allow for the creation of Retail Salesnodes and Application Devnodes as needed to onboard new retail locations and developers.

VI. A Brighter Future with XP

The critical roadblock for all cryptocurrency units today is answering the question of how to drive adoption. Currently, to buy XP, a user has several avenues, but most of them involve buying some crypto of one sort or another and moving it to an exchange to buy some XP. This is not sustainable and locks out the vast majority of potential users who are uncomfortable with cryptocurrency in general, and are abjectly terrified of exchanges, with all of their elaborate bells, whistles, candles, and unfamiliar terminology.

The solution to this is to create an ecosystem that is based on a regular distribution of tokens in amounts that incentivize user engagement while not over-inflating the currency or disincentivizing purchases on exchanges by the investor class. The overall idea is to help people see the utility of XP, so that they will go out on their own to acquire more – either by supporting XP affiliates or through purchasing XP on an exchange.

This can be done in a variety of ways:

The most reliable source of XP for the average user should always be the holders of the Salesnode and Devnodes. As a currency, we serve more than one purpose; in addition to serving as a medium of exchange, XP serves as an able vehicle of incentivization for customers, clients, and visitors everywhere.

Salesnodes: While there are hundreds of use cases, consider these few examples of holders of Salesnodes using them to grow their businesses.

Meet BloodyEwe – BloodyEwe operates xp.market and uses it to sell Steam codes and other XP-related merchandise (really! Go check it out!). In addition to selling these codes, he would like to be able to establish a referral system so that when someone sends their friends to buy Steam codes with XP, BloodyEwe can give some XP back to the referrer.

Meet Jan – Jan is a travel agent who uses XP to incentivize specific trips. The Salesnode enables Jan to functionally give discounts on a trip while not negatively impacting her bottom line. Jan recently gave 50m XP to Barclay for the purchase of a trip to Thailand, and also provided

him with a list of retail locations and places where XP can be spent. The XP was sent to Barclay's XP Mobile Wallet where he will be able to spend it at participating retailers in Bangkok.

Meet Hugo – Hugo is a cutting-edge chef in New York City. He believes that a meal at his restaurant should be an experience. In light of this, he was delighted to discover that he could set up a retail sales node in his restaurant. Now, at the bottom of each of his receipts, a private key is printed which allows his customers to redeem XP. When you experience his fusion take on chicken Cordon Bleu you get 1000 XP as a reminder of your visit.

Meet Htet Oo – Htet Oo operates an elephant tour company located in the jungles of Myanmar. He is thrilled to run a retail sales node because it gives him the opportunity to attract international customers who are interested in touring the world and using XP. For each of his elephant rides, for which he receives XP, a more stable alternative to the Burmese Kyat, he offers XP in exchange for social media posts on his customers Facebook, Twitter, and Instagram accounts. He operates both a retail sales node, and his own personal master node. He also uses his mobile wallet to pay guides and service providers along his tour routes.

Devnodes: As our digital lives grow, there is much we will be able to do in terms of digital content delivery and digital life integration. While the following cases could apply right now, more and more use cases spring into existence daily.

Meet ThePinkCrypto – ThePinkCrypto operates a chatroom and wants to use XP as an in-chat tipping currency. To facilitate this, the XP foundation provides her with an application Devnode, which provides some degree of liquidity for rains, thereby incentivizing channel participation, but also acts as an additional security node on the network.

Meet Loopylew113 – Loopylew is the developer of Forest Siege, an indie game available on itch.io. He uses an application Devnode in forest siege because it allows him to rain XP on players for performing specific tasks within the game. This connects directly to an in-game wallet, which will enable players to store XP to purchase in-game items, or send the XP to their own core wallet. As time goes on he intends on building an entirely enclosed marketplace based on XP within the forest siege game.

Meet Yaneli - Yaneli is an app developer who focuses on the creation of health-based applications. In exchange for using her meal planning application, users are awarded XP for each item they enter into their daily meal plan. This XP incentivizes people to use her applications,

making them more attractive in an open market. However, it also makes her applications much more effective because of the effect that the positive enforcement from gamification offers.

Meet Fon – Fon is a developer for an online education based website, at which students can sign up for classes, watch videos, and participate in online forum discussions. By maintaining an application Devnode, Fon can provide experience points to her end-users. If you sign up to take her class on blockchain technology, you will receive 5 million XP on completion.

Geonodes: The first geographically-based cryptocurrency reward system gives the average user a way to earn XP without having to spend anything at all to purchase XP, but still contributes to the ecosystem by patronizing local landmarks such as those below.

Meet John Harvard - The famous statue of John Harvard sits in the quad at Harvard College. As a sort of mecca for those seeking Ivy League acceptances, the figure of John Harvard is a frequent location visited by hundreds of thousands of people every year. With an XP Geonode, an educational consultancy can rain XP on visitors to the statue of John Harvard. These visitors, can in turn use XP at various locations throughout Boston and around the world.

Meet Big Ben – No postcard of London would be complete without the iconic image of Big Ben looming in the background. A tour company in London could identify a specific location for an XP Geonode, which would rain XP on visitors who came to take photos with Big Ben in the background. This XP could then be used to purchase discounts on double-decker bus rides throughout London, provided by the same tour operator.

Meet Mount Everest – one unique feature which will be available for use with Geonodes is the concept of scarcity. A location, such as Central Park, which is frequented by millions of people every year, might yield very little in the way of XP rains. However, a location which is almost never visited would be permitted to accumulate a much more extensive store of XP, which would correspond to how much work is needed to reach the Geonode. The first person to unfurl an XP flag on the summit of Mount Everest and access the Geonode there, would undoubtedly receive a fantastic reward, both regarding actual human experience and XP.

Meet New York City – another unique feature that would support Geonode distribution is the use of “GeoDrops.” These drops would enable users or a company to establish XP Drop Points at any point geographically where they could be displayed on a map, bringing members of the XP community into range to attempt to collect the XP.

In terms of market sizing, this has the potential to make Pokemon Go, which has revenues of \$268 million as of August 12th, 2017¹⁰, look tiny by comparison.

Integrating Advertising with the XP Network using Geonodes: The primary goal of XP has always been to attempt to find a way to incentivize what is good in the human experience, and reward people for their involvement in a broader global extra national network. XP is continuously looking for ways to enhance our offerings to humanity. One such way we can do this is through leveraging the XP network to fund various social and environmental projects. The way that we do this is by offering advertising placement in the XP Mobile Wallet which is based on the geographic location of an XP user.¹¹ This will make it possible for the XP Foundation to sell advertising space to hand selected companies and direct a large portion of the proceeds from this advertising to preservation efforts. For example, an XP user in Yosemite National Park may receive an advertisement for North face apparel, partnered with rain from a Geonode. For the first time, this creates a mechanism that both allows the delivery of advertising content to the end-user, incentivizes the end-user to acknowledge the advertising company, and simultaneously works to preserve the National Park system with advertising revenue. This concept is still under development, and will be explored in greater depth in a later publication.

VII. Conclusion

This is just the beginning of what XP can accomplish. 2018 is to be a year of capacity building and ecosystem growth. The XP Team looks forward to the continued support of the XP Community as we work to make XP the world's premier experience-based currency in gaming, sports, academics, and every other area of life.

XP: Do it for the experience!

¹⁰ BusinessofApps.com, 2017

¹¹ This will, of course, only work for an XP user who has gone into their wallet and activated the location reporting so that they can receive geo-rains.

Whitepaper Change Log

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Two typos corrected (thanks Shbour!)
Notice about the whitepaper permalink added
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