ethereum high

A robust and feather-light smart contract to hedge the risk of your cryptocurrency portfolio

Concept abstract

Ethereum High (HIG) is a new blockchain cryptocurrency based on the robust ECR20 Ethereum Token technology. Ethereum High was established out of the collective ambition of Bitcoin enthusiasts and seasoned investors. Our goal is to help cryptocurrency investors value their investment by hedging their cryptocurrencies' portfolio. We provide to a robust and feather-light code which brings a reliable solution for the mitigation of several well-known risks associated with owning cryptocurrencies.

Ethereum High Token has the ambition to become one of the essential components of a sound and diversified portfolio. Ethereum High (HIG) cryptocurrency intends to reach the fifth place in market capitalization over the next two years through widespread adoption of the Ethereum High token.

Ethereum High (HIG) is designed to be compatible for trading with all major currency exchanges. The Ethereum technology allows Ethereum High token to be eventually traded at a high price/high frequency rate and to become the highest standard in cryptocurrency exchanges.

Ethereum High (HIG) is low risk. With Ethereum High, each key owner has direct control over their own token balance in a private and secure way. Due to the solidity of the Ethereum platform, on Ethereum High anyone can set up a node that replicates the necessary data for all nodes to reach an agreement and be compensated by users. This allows Ethereum High (HIG) users to remain private and Ethereum High (HIG) currency transactions to be decentralized.

Given the promising outlook of the High token and the solidity of its underlying Ethereum blockchain technology, early adopters will benefit from a competitive advantage in its market capitalisation.

Invest in the Ethereum High Token - features

One of the most promising technology

Blockchain is one of the most promising new technologies for the future. It is this distributed ledger technology that underlies Ethereum High. Providing a new way to record and transfer data. It is transparent, safe, auditable, and resistant to outages.

Send and receive: fast and easy

Ethereum High transfer feature ensures that your money is flawlessly sent or received in a secure, reliable manner. Unlike Bitcoin, transactions with Ethereum High are fast. You will not to have to wait several minutes. You can send Ethereum High anywhere on the planet instantly and have it confirmed as spendable within 30 seconds.

Protect your assets

Entrusting third parties to hold cryptographic assets is a significant custodian risk to the token economy. Ethereum High puts you in control of your assets by allowing you to hold your token directly in your own wallet.

The Ethereum High platform is built on top of open blockchain technologies, leveraging the security and transparency that they provide. The Ethereum High smart contract was developed as an online, peer-to-peer value transfer technology. We built Ethereum High to harness the same power of blockchain as a globally accessible, friction-free value network, supporting private and secure exchange between peers.

A scalable technology

An important aspect for a cryptocurrency is scalability, meaning finding solutions for the blockchain to scale well enough for mass adoption. Everything will be tokenized and connected by a blockchain one day. At the moment, Ethereum can handle about 13 transactions per second. If current efforts are well executed, Ethereum High could be ready for a 10 millions user app by the end of 2018.

A large and decentralised open source community

Ethereum High is an open source smart contract developed by and for the user community. Open source projects provide tremendous opportunities for developers to share and learn through collaboration. Contributions are not limited to code, as Ethereum High project need a diverse range of skills. Driving innovation requires optimizing how a company creates, deploys & uses software assets.

Invest in the Ethereum High token - Advantages

Our team has tailored the underlying smart contract of Ethereum High Token with the purity of simplicity in mind. Going further of Ethereum High's aforementioned core features, we crafted this token for the general public with a vision for the future.

Ethereum High's code brings general advantages and also ICO specific advantages that will provid an edge in the post ICO marketization.

An opportunity for newcomers

Ethereum High is a safe place to invest assets. Unlike most recent ICOs in the current cryptocurrency craze, Ethereum High's core functions do not constitute a promise to be fulfilled. Consequently the risk of failure to deliver doesn't exist and the value of invested assets will not depend on a potential calendar of events, management fragilities or erroneous code and prototypes. Ethereum High will not be at risk of not delivering.

New investors on the cryptocurrency segment may feel overwhelmed by the efforts needed to enter the market, as there remains still a number of barriers to entry: information bias, reputation hazards, price volatility, atomization of projects, and, pure project inherent risks. Ethereum High's aim is to provide to new entrants with a first step investment on their journey to valuation. We have set parameters to allow a vast amount of units of the currency to be traded, with a set in advance limit. Simply put, this limitation reduces the risk of inflation of the currency and is an essential component of its value. Its valuation, that will evolve with time, derives from this vast but limited supply and its corollary demand.

An opportunity for mature crypto investors

Today's participation in competing crypto currencies require an increasing allocation of resources for due diligence purposes. Luckily, the Ethereum High Token follows the peer-to-peer and cooperation approach of the crypto community. Our team has undergone a series of internal audits and self assessments to answer fundamental questions that arise today among Coin offerings. See below our Due diligence and Hewey Test assessment.

Ethereum High Token penetrates the market at a time of ever increasing cryptocurrency valuation and ever increasing regulatory predation risks. Also today the atomization of initial offerings increases the need to find refuge in authoritative coins. In this context it is no shivering ambition to reach fifth capitalization in year +5. However, Ethereum High's parameters may achieve just that in this specific context. In the short term this Token holds a competitive advantage in its simplicity compared to the new offerings out there. This simplicity of the core components of the underlying smart contract relates to its venerable

predecessors, which solidity over time are humbling. In the mid to long term, Ethereum High will naturally finds its place in a wider marketization of cryptocurrencies, that will be both more liquid and more secure.

Ethereum High Token has the ambition to become one of the essential components of a sound and diversified portfolio. Internal factors, be it its robust and feather-light code, combined with external factors, be the context of its creation and fast evolving environment, cumulate to render Ethereum High a sound value proposition. It is no secret that high and fast gains are to be expected from ICOs today and in the near future. It no secret either that some other will disappear and destroy value fast. The parameters of Ethereum High's smart contract are set to answer to a simple yet strong portfolio strategy that was set up by a team of seasoned investors on the FIAT markets. Simply put, In lieu of a complex Coin, with numerous parameters that each increases the level of a wide array of risks : failure to comply, failure to finish, failure to protect, Ethereum High will instead concentrate its sole reason of being to diversify those risks.

Ethereum High constitutes a hedging scenario in this particular context, that both the creators of the coin and other cryptocurrency investors may look for. While the community is progressing in financing innovative projects, platforms and networks, it is all the more true that the natural evolution of the market will leave some empty handed. Ethereum High token can be utilized as a hedging component all the while continuing to invest and promote new ventures on the blockchain.

Calendar specific advantages

Ethereum High was built to derive from its core parameters specific advantages for the duration of the ICO and past this duration, advantages as a tradable currency on the markets. Ethereum High aims to be born a unicorn and grow up to be a trustworthy working-horse of the cryptocurrency markets.

ICO Specific advantages:

- Price remains stable for the whole duration
- No asset backed offering
- No lottery system, no bounties, no referral program
- No bonuses pre or during the ICO
- Hardware wallets compatible
- A featherlight underlying smart contract useful to diversify a portfolio

Advantages as a tradable currency on markets, post ICO:

- Not market specific: tradable on a wide range of markets
- Storable on the leading hardware wallets and online outfits
- No third party custodian risk if kept on hardware wallets
- No mining capabilities: no mining induced barriers to entry
- Price not subject to the realization of a project
- Quick due diligence
- Fixed supply of tokens
- Mid to long term holding: a long position to participate in the market's growth

Coin Offering - Due diligence

Due Diligence is increasingly resource consuming on cryptocurrency markets and that is a very positive developments. This increased rationality from the part of investors and creators will participate in vastly limiting risks, first and foremost price volatility.

Recent turns of Events, both endogenous to the blockchain and exogenous, proves that an ex-ante due diligence is necessary.

The Dao failure exposed to the world the danger of endogenous risks : criminal attacks, code fragility, human errors due to excessive trust led the community to understand, correct, better. But lots remain to be done.

The Chinese Regulator's decision to ban ICO's altogether is one of the baldest exogenous decision that affected the community. But it set a precedent that the recent opinion from the SEC is set to follow to a future coming near you. Lots remain to be done.

In this context Ethereum High will participate whenever possible to these efforts that remain to be done.

Howey Test

The creators have self applied the Howey Test on Ethereum High Token. The result of this test shows that the related ICO would not fall within the threshold of a Security pursuant to the SEC's opinion (July 25 2017). Specifically, some key features of the upcoming ICO are as follows:

- No dividends, no return on investments as a result of the work of the founding team.
- No specific payouts to be derived from our managerial efforts.
- Our protocol will be live on our ICO Crowdsale first day.

Compliance

(For more detailed explanations about our liability and obligations, please refer to the Disclaimer section of the white paper).

The Ethereum High Token should be understood by investors to be a utility vs. an investment, and the value of it will be decentralized via a network (like gold) rather than by an issuer (ex Apple stock).

To understand the difference between an investment vs. a utility, in the ethereum Token world, let us consider the following: If money comes into the smart contract and as a result, more money comes out, it is an investment, if money comes in and as a result something exists, a service, like an amount of cloud storage, a computing sequence, a transfer or money ownership, it may be considered as a utility.

The basic understanding of the difference between Issuer vs Network is as follows : The authentication is done via the public encryption key. The accounting and record keeping is done via the distributed ledger that is the blockchain. The management oversight is executed not by one team, be it the issuer's team, but by the decentralized efforts of every users on the blockchain that can participate in the computing and be rewarded for their oversight, by token issuance, for instance.

Ethereum High (HIG) Token main parameters

Ethereum High token symbol: HIG

Ethereum High supply is limited to 100,000,000 units.

Ethereum High token is a smart contract based on the ECR20 Ethereum Token technology

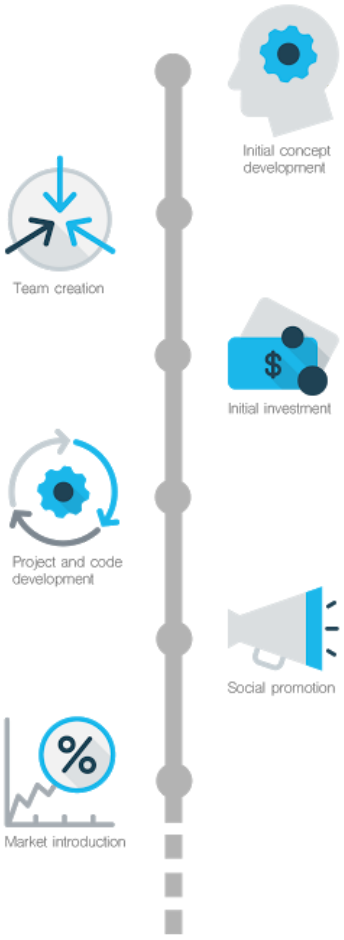
Ethereum High will be released in a currency sale at the price of 0.01 Ether (ETH) per High Token, a mechanism intended to provide the High cryptocurrency with an initial value on the market.

The Ethereum High (HIG) token price will remain stable during the whole Initial Coin Offering period unlike unreliable alternative token offered currently on the market by untrustworthy sources which are promising bonuses of all kinds.

The Ether received from the sale will be used entirely to pay bounties to developers and invest into various future for-profit projects in the Ethereum and cryptocurrency ecosystems.

If you transfer Ether while the crowdsale is inactive (i.e. the crowdsale period has ended or the crowdsale has already reached its target) your Ether will be automatically returned to your wallet (minus the GAZ amount). Your funds will not be lost as the Fallback Function is implemented in our crowdsale smart contract.

Project Timeline



2016 Q4
In-depth research on cryptocurrency and traditional online payment system & alternative payment solution. Initial concept development

2017 June - July
Project envision, consultation with key informants and core parameters development. Team finalisation.

2017 August - October
Market assessment including comparative analysis and Ethereum High token code development

2017 November - December
Initial Coin Offering and promotion, Token diffusion and promotion, Social Media Campaign

2018 Q1
Project review and development of new smart contracts based on Ethereum High post-project review findings

2018 Q2
Implementation of new smart contracts

Compliance with Anti Money Laundering (AML) and Counter Finance Terrorism (CFT)

I have read the latest version of the Whitepaper, I understand the contents stated in these documents. I agree that I will not, under any circumstances, participate in any form of money laundering or financing terrorism activities by using Ethereum High Token (HIG). I am not a politically exposed person (PEP). I have not been subjected to any regulatory sanctions. The state or country where I am based in complies with regulations of Anti Money Laundering (AML).

Risk Acknowledgement

I am contributing entirely at my own risk. Due to the inherent high-risk nature of cryptocurrency markets and ICOs, acquiring the Ethereum High Token (HIG) does not provide safety of principle, no income, no interest and no guaranteed growth.

Ethereum High is not intended to be an investment or a financial product. It is not backed by, nor represent ownership of any: financial assets, tangible or intangible goods, services, enterprises or projects. Nor it is a promise of future delivery of any of those.
It's trade value will be dependent, at any point in time, on the supply and demand that originates from the present and future owners of the token. We will not be held liable or responsible for any losses or damages, monetary or otherwise that result from the use of the token.

Underlying technology

The concept of decentralized digital currency, as well as alternative applications like property registries, has been around for decades. In 2009, Bitcoin a decentralized currency was for the first time implemented in practice by Satoshi Nakamoto, combining established primitives for managing ownership through public key cryptography with a consensus algorithm for keeping track of who owns coins, known as "proof of work." Since then, an alternative approach has been proposed called *proof of stake*, calculating the weight of a node as being proportional to its currency holdings and not its computational resources. The discussion concerning the relative merits of the two approaches is beyond the scope of this paper but it should be noted that both approaches can be used to serve as the backbone of a cryptocurrency.

The basis - the Ethereum blockchain

Ethereum High token (HIG) is based on the Ethereum blockchain technology. The intent of Ethereum is to create an alternative protocol for building decentralized applications, providing a different set of tradeoffs that will be very useful for a large class of decentralized applications, with particular emphasis on situations where rapid development time, security for small and rarely used applications, and the ability of different applications to very efficiently interact, are important. Ethereum does this by building what is essentially the ultimate abstract foundational layer: a blockchain with a built-in Turing-complete programming language, allowing anyone to write smart contracts and decentralized applications where they can create their own arbitrary rules for ownership, transaction formats and state transition functions. A bare-bones version of Namecoin can be written in two lines of code, and other protocols like currencies and reputation systems can be built in under twenty. Smart contracts, cryptographic "boxes" that contain value and only unlock it if certain conditions are met, can also be built on top of the platform, with vastly more power than that offered by Bitcoin scripting because of the added powers of Turing-completeness, value-awareness, blockchain-awareness and state.

Applications - the token system

In general, there are three types of applications on top of Ethereum. The first category is financial applications, providing users with more powerful ways of managing and entering into contracts using their money. This includes sub-currencies, financial derivatives, hedging contracts, savings wallets, wills, and ultimately even some classes of full-scale employment

contracts. The second category is semi-financial applications, where money is involved but there is also a heavy non-monetary side to what is being done; a perfect example is self-enforcing bounties for solutions to computational problems. Finally, there are applications such as online voting and decentralized governance that are not financial at all.

On-blockchain token systems have many applications ranging from sub-currencies representing assets such as USD or gold to company stocks, individual tokens representing smart property, secure unforgeable coupons, and even token systems with no ties to conventional value at all, used as point systems for incentivization. Token systems are surprisingly easy to implement in Ethereum. The key point to understand is that a currency, or token system, is just a database with one operation: subtract X units from A and give X units to B, with the proviso that (i) A had at least X units before the transaction and (ii) the transaction is approved by A. All that it takes to implement a token system is to implement this logic into a contract.

This is essentially a literal implementation of the "banking system" state transition function described further above in this document. A few extra lines of code need to be added to provide for the initial step of distributing the currency units in the first place and a few other edge cases, and ideally a function would be added to let other contracts query for the balance of an address. But that's all there is to it. Theoretically, Ethereum-based token systems acting as sub-currencies can potentially include another important feature that on-chain Bitcoin-based meta-currencies lack: the ability to pay transaction fees directly in that currency. The way this would be implemented is that the contract would maintain an ether balance with which it would refund ether used to pay fees to the sender, and it would refill this balance by collecting the internal currency units that it takes in fees and reselling them in a constant running auction. Users would thus need to "activate" their accounts with ether, but once the ether is there it would be reusable because the contract would refund it each time.

Transactions and fees in the Ethereum ecosystem

The term "transaction" is used in Ethereum to refer to the signed data package that stores a message to be sent from an externally owned account. Transactions contain:

- the recipient of the message;
- a signature identifying the sender;
- the amount of ether to transfer from the sender to the recipient;
- an optional data field;
- a STARTGAS value, representing the maximum number of computational steps the transaction execution is allowed to take; and
- a GASPRICE value, representing the fee the sender pays per computational step.

The first three are standard fields expected in any cryptocurrency. The data field has no function by default, but the virtual machine has an opcode with which a contract can access the data. As an example use case, if a contract is functioning as an on-blockchain domain registration service, then it may wish to interpret the data being passed to it as containing

two "fields", the first field being a domain to register and the second field being the IP address to register it to. The contract would read these values from the message data and appropriately place them in storage.

The STARTGAS and GASPRICE fields are crucial for Ethereum's anti-denial-of-service model. In order to prevent accidental or hostile infinite loops or other computational wastage in code, each transaction is required to set a limit to how many computational steps of code execution it can use. The fundamental unit of computation is "gas"; usually, a computational step costs 1 gas, but some operations cost higher amounts of gas because they are more computationally expensive, or increase the amount of data that must be stored as part of the state. There is also a fee of 5 gas for every byte in the transaction data. The intent of the fee system is to require an attacker to pay proportionately for every resource that they consume, including computation, bandwidth and storage; hence, any transaction that leads to the network consuming a greater amount of any of these resources must have a gas fee roughly proportional to the increment.

Because every transaction published into the blockchain imposes on the network the cost of needing to download and verify it, there is a need for some regulatory mechanism, typically involving transaction fees, to prevent abuse. The default approach, used in Bitcoin, is to have purely voluntary fees, relying on miners to act as the gatekeepers and set dynamic minimums. This approach has been received very favorably in the Bitcoin community particularly because it is "market-based", allowing supply and demand between miners and transaction senders determine the price. The problem with this line of reasoning is, however, that transaction processing is not a market; although it is intuitively attractive to construe transaction processing as a service that the miner is offering to the sender, in reality every transaction that a miner includes will need to be processed by every node in the network, so the vast majority of the cost of transaction processing is borne by third parties and not the miner that is making the decision of whether or not to include it.

In Ethereum, highly gas-consuming blocks can also take longer to propagate both because they are physically larger and because they take longer to process the transaction state transitions to validate. This delay disincentive is a significant consideration in Bitcoin, but less so in Ethereum because of the GHOST protocol; hence, relying on regulated block limits provides a more stable baseline.

Blockchain and Mining

The Ethereum blockchain is in many ways similar to the Bitcoin blockchain, although it does have some differences. The main difference between Ethereum and Bitcoin with regard to the blockchain architecture is that, unlike Bitcoin, Ethereum blocks contain a copy of both the transaction list and the most recent state. Aside from that, two other values, the block number and the difficulty, are also stored in the block.

The Bitcoin mining algorithm works by having miners compute SHA256 on slightly modified versions of the block header millions of times over and over again, until eventually one node comes up with a version whose hash is less than the target (currently around 2^{192}).

However, this mining algorithm is vulnerable to two forms of centralization. First, the mining ecosystem has come to be dominated by ASICs (application-specific integrated circuits), computer chips designed for, and therefore thousands of times more efficient at, the specific task of Bitcoin mining. This means that Bitcoin mining is no longer a highly decentralized and egalitarian pursuit, requiring millions of dollars of capital to effectively participate in. Second, most Bitcoin miners do not actually perform block validation locally; instead, they rely on a centralized mining pool to provide the block headers. This problem is arguably worse: as of the time of this writing, the top three mining pools indirectly control roughly 50% of processing power in the Bitcoin network, although this is mitigated by the fact that miners can switch to other mining pools if a pool or coalition attempts a 51% attack.

The current intent at Ethereum is to use a mining algorithm where miners are required to fetch random data from the state, compute some randomly selected transactions from the last N blocks in the blockchain, and return the hash of the result. This has two important benefits. First, Ethereum contracts can include any kind of computation, so an Ethereum ASIC would essentially be an ASIC for general computation - ie. a better CPU. Second, mining requires access to the entire blockchain, forcing miners to store the entire blockchain and at least be capable of verifying every transaction. This removes the need for centralized mining pools; although mining pools can still serve the legitimate role of evening out the randomness of reward distribution, this function can be served equally well by peer-to-peer pools with no central control.

This model is untested, and there may be difficulties along the way in avoiding certain clever optimizations when using contract execution as a mining algorithm. However, one notably interesting feature of this algorithm is that it allows anyone to "poison the well", by introducing a large number of contracts into the blockchain specifically designed to stymie certain ASICs. The economic incentives exist for ASIC manufacturers to use such a trick to attack each other. Thus, the solution that we are developing is ultimately an adaptive economic human solution rather than purely a technical one.

Computation, Turing-Completeness and scalability

An important note is that the Ethereum virtual machine is Turing-complete; this means that EVM code can encode any computation that can be conceivably carried out, including infinite loops. EVM code allows looping in two ways. First, there is a JUMP instruction that allows the program to jump back to a previous spot in the code, and a JUMPI instruction to do conditional jumping. Second, contracts can call other contracts, potentially allowing for looping through recursion.

The alternative to Turing-completeness is Turing-incompleteness, where JUMP and JUMPIdo not exist and only one copy of each contract is allowed to exist in the call stack at any given time.

One common concern about Ethereum is the issue of scalability. Like Bitcoin, Ethereum suffers from the flaw that every transaction needs to be processed by every node in the network. With Bitcoin, the size of the current blockchain rests at about 15 GB, growing by

about 1 MB per hour. If the Bitcoin network were to process Visa's 2000 transactions per second, it would grow by 1 MB per three seconds (1 GB per hour, 8 TB per year). Ethereum is likely to suffer a similar growth pattern, worsened by the fact that there will be many applications on top of the Ethereum blockchain instead of just a currency as is the case with Bitcoin, but ameliorated by the fact that Ethereum full nodes need to store just the state instead of the entire blockchain history.

The problem with such a large blockchain size is centralization risk. If the blockchain size increases to, say, 100 TB, then the likely scenario would be that only a very small number of large businesses would run full nodes, with all regular users using light SPV nodes. In such a situation, there arises the potential concern that the full nodes could band together and all agree to cheat in some profitable fashion (eg. change the block reward, give themselves BTC). Light nodes would have no way of detecting this immediately. Of course, at least one honest full node would likely exist, and after a few hours information about the fraud would trickle out through channels like Reddit, but at that point it would be too late: it would be up to the ordinary users to organize an effort to blacklist the given blocks, a massive and likely infeasible coordination problem on a similar scale as that of pulling off a successful 51% attack.

In the near term, Ethereum will use two additional strategies to cope with this problem. First, because of the blockchain-based mining algorithms, at least every miner will be forced to be a full node, creating a lower bound on the number of full nodes. Second and more importantly, however, we will include an intermediate state tree root in the blockchain after processing each transaction.

Conclusion

The Ethereum protocol was originally conceived as an upgraded version of a cryptocurrency, providing advanced features such as on-blockchain escrow, withdrawal limits, financial contracts, gambling markets and the like via a highly generalized programming language. The Ethereum protocol would not "support" any of the applications directly, but the existence of a Turing-complete programming language means that arbitrary contracts can theoretically be created for any transaction type or application. What is more interesting about Ethereum, however, is that the Ethereum protocol moves far beyond just currency. Protocols around decentralized file storage, decentralized computation and decentralized prediction markets, among dozens of other such concepts, have the potential to substantially increase the efficiency of the computational industry, and provide a massive boost to other peer-to-peer protocols by adding for the first time an economic layer.

Based on this technology, Ethereum High (HIG) intends to become a standard in cryptocurrencies exchanges using the Ethereum smart contract and Dapps as a platform.