# Ascension Project Summary

**26 February 2018**
**Kevin Wilkerson, Sean Daley**
*Jim Davidson, editor*

Bitcoin and blockchain technology were created by Satoshi to establish a private, censorship-resistant, non-state currency which can be utilized as the nucleus of a larger ecosystem. Ascension Foundation (AF) has identified 15 significant issues impeding the realization of that goal including fundamental issues in scalability and decentralization. Despite the many criticisms we make here regarding existing blockchain technologies, such criticism is not the point of this paper. This is not a time for tearing down, but for building up a next generation of crypto-economic tools and businesses. We feel privileged to be able to work and contribute in such a dynamic, disruptive industry which has the potential to transform the world economically. Accordingly, this paper is not merely about what we ourselves can do, or what our own plans are. It's also in no small part about providing an infrastructure in which other entrepreneurs will likewise be able to contribute for our mutual benefit.

Ascension is a set of technologies residing above the blockchain that have worked together since 2011. These solutions provide full scalability; untraceability; transaction speeds in seconds; distributed functionality with controllable software updates; independent issuance of monetary instruments with independent monetary and reserve policies among private issuers; a lightweight client architecture; local-only private keys giving access to only that user's transactions; transaction records are only seen by sender and receiver, can be permanently deleted, and are stored in the user's wallet only at the option of the user; using XMPP provides innate encryption and inherent intra-community messaging; individually owned and operated exchanges and marketplace businesses foster decentralization as the ecosystem grows.

The Ascension blockchain layer is permissioned to reduce or eliminate dust spam DDoS, bogus spends, nearly-empty block mining, and other bad behaviours; employs decentralized contracted mining to provide censorship resistance and impose obligatory software updates; smart contracts are published only as approved by Ascension. Ascension Foundation has developed monetary engineering policies to match real-time economic situations; various revenue sources including a coin sale.

AF has a highly experienced team with long track records in digital currencies, but not just in digital currencies alone. Our wallet design already supports multiple assets, already has an operational escrow-enabled exchange, and already has a functioning marketplace app. There is also a sandbox for testing with test currencies. Our goals have been to hide complexity from users; make wallets reasonably hack-proof; minimize and compartmentalize the damage a hostile party can do even as an insider; make network eavesdropping very difficult and not rewarding; make wallets friendlier with human readable addresses, lost credential recovery features, and user control of transaction history; lighten the footprint of blockchain clients so that wallets can be accessed safely on any device (even devices not belonging to the wallet's owner); anticipate and circumvent potential protocol blocking and national firewalls during any future crackdown on cryptocurrencies.

Our mission statement is: “To promote the growth of robust, borderless, wealth generating, free market ecosystems.”

## Crypto-economic Monetary Engineering

The growing cryptocurrency market (now around US$600 billion in aggregate market cap) is more than just a speculative craze. It is the tip of the spear in a vast transformation of the global economy, incorporating what can justly be described as the crypto-economy. The internet revolution of the 1990s successfully integrated the online economy into the global economy. Analogously, the cryptocurrency revolution of this decade will successfully integrate the crypto-economy into the sphere of global economic activity.

The crypto-economy represents the next generation of finance, destined to replace most current systems for payments, banking, currency exchange, stock markets, credit and debt markets, commodities markets, international trade, shipping, warehousing, inventory control, even the issuance of currency itself -- traditionally the exclusive province of nation states. The legacy system is not only corrupt to the point of putrescence, but is also centralized, anti-competitive, and top-down. The new crypto-economic system is decentralized, competitive, and bottom-up. The legacy system is highly politicized, while the new system is essentially post-political.

What are the monetary engineering goals for a privately issued currency in the crypto-economy? Goals should be simple, and non-conflicting. We've identified these goals:

1. Supply of the currency should be adequate to provide the float necessary for ongoing economic activity conducted in the currency, plus other uses such as loans, savings, investment, and R&D.
2. Demand for the currency should be adequate to allocate supply.
3. Net growth should occur from the bottom up, not from the top down.
4. Exchange rates, measured against a basket of fiat currencies, should exhibit long-term stability.

Supply is increased (new coins minted) in three ways: by coin sales into the market, in exchange for fiat currencies or other accepted cryptocurrencies; by coin creation in the context of the operation of certain DApps; and to pay for labor undertaken for AF projects. The first minting function, coin sales, is described below. It is noteworthy that this is not an ICO, because there is nothing “initial” about it. The sale is uncapped and ongoing, limited only by market demand. The second function, minting in a DApp context, is limited in scope and typically tied to an insurance function.

On the demand side, the AF will foster the development and deployment of DApps and other portals where OTO/Lyra can be utilized. Initially, some of these will be developed in-house; but it is intended that third party licensees will ultimately develop and operate the vast majority of them. We also expect that once there is a large quantity of our coins in circulation, it will become useful outside of our own wallet ecosystem, and thus become an accepted form of payment generally. At some point it may even become useful for modulating cross-border capital flows.

The AF will monitor all of these data points: rates of new sales, monetary growth in DApps, total coins deployed within DApps, currency velocity within both the voucher system (OTO) and the Ascension blockchain (Lyra), the willingness of users to hold balances, and price history in secondary markets. It will then correlate these data with long-term exchange rates versus a basket of other cryptocurrencies (private or even government-issued), to use as a feedback signal in order to arrive at a bias for net expansion or contraction of the supply, and to determine the rate at which this should occur.

The AF will retain certain reserve levels in various currencies such as BTC, arising from the proceeds of its wholesale sales. Since on a blockchain coins are never actually removed from circulation, whenever the board

determines that circulating Lyra should be reduced, the AF will tap these reserves to buy back coins, which it will then hold until circumstances warrant their resale into the market. Naturally the reserve buffer must be well diversified, in order to avoid a situation where a rapid change in market cap by one component asset would exert a disproportionate effect. For the same reason, rebalancing of the reserve components will be undertaken at regular intervals. Since the AF has no goal or mandate beyond relative price stability (for example, economic stimulus or full employment), its monetary engineering efforts will be steered exclusively by the market rather than by politics.

## Structure of Coin Offering

We are currently in our Presale phase, conducted in a "warm market" consisting solely of personal acquaintances and associates. This phase has already resulted in sales of approximately US $850K, and we intend to continue it until at least a further minimum of $500K has been sold, but not to exceed a total of $3M for the Presale. Buyers of OTO/Lyra in this phase get a price of $0.30 per coin if they purchase in bulk lots of $25K or more, or a price of $1 per coin for smaller quantities. In either case buyers are given a choice: add a 50% bonus in coins delivered immediately; or add a 100% bonus that does not vest until the start of Round 6, in which coins will be sold at $32 ($9.60 bulk rate, see Table 2 below).

Following the completion of our Presale phase, we will commence what we've designated as "Ground Zero." In this phase a minimum of a further $3M worth of coins will be sold, up to a maxiumum of $30M. The price structure will be the same as for the Presale, but the coin bonus structure will be different, as follows:

| Progress toward total sales of $30M | Bonus awarded for purchasers in this block |
|---|---|
| $0 – 3 M | 50% |
| $3 – 6 M | 45% |
| $6 – 9 M | 40% |
| $9 – 12 M | 35% |
| $12 – 15 M | 30% |
| $15 – 18 M | 25% |
| $18 – 21 M | 20% |
| $21 – 24 M | 15% |
| $24 – 27 M | 10% |
| $27 – 30 M | 5% |

*Table 1: Ground Zero Phase Bonus Structure*

Following the completion of the "Ground Zero" phase, there will be at least six further numbered Rounds, depending upon demand. In these phases the discount will gradually be reduced from 96.88% offered in Presale and Ground 0, and be cut by half in each successive Round. Bulk prices will always be 30% of manufacturer's suggested retail price (MSRP). For its use in DApps, OTO/Lyra will be pegged at the MSRP. In addition, the quantity of coins available for sale will be doubled each round. There are no bonuses after Ground 0. At least two independent "funnels" will be utilized for Round sales, each with its own quota. These are: the bulk (or

wholesale) funnel, for lots >$25K, and the retail funnel for lots <$25K. Retail packages will be defined at $500, $1500, $3000, $10K, and $25K, and possibly other price points.

In addition there may be a third funnel, for ERC20 tokens (Elyra). These will be sold for ETH on a sliding scale price based on the market price of ether. Elyra tokens will be interchangeable with OTO vouchers, as well as with Lyra coins on our blockchain. Once the Ascension blockchain has been launched, all Elyra ERC20 tokens will be converted to Lyra coins.

The structure of the Rounds envisioned is as follows:

| Round | Coins (retail) | MSRP | Coins (bulk) | Bulk Price | Discount rate |
|---|---|---|---|---|---|
| 1 | 1,000,000 | $1 | 1,000,000 | $0.30 | 31/32nds |
| 2 | 2,000,000 | $2 | 2,000,000 | $0.60 | 15/16ths |
| 3 | 4,000,000 | $4 | 4,000,000 | $1.20 | 7/8ths |
| 4 | 8,000,000 | $8 | 8,000,000 | $2.40 | 3/4ths |
| 5 | 16,000,000 | $16 | 16,000,000 | $4.80 | 1/2 |
| 6 | 32,000,000 | $32 | 32,000,000 | $9.60 | -0- |

*Table 2: Round Structure*

Therefore, a minimum of 126M Lyra coins will be minted between the start of Round 1 and the end of Round 6. This figure does not include those coins minted in the Presale or Ground 0 phases. That number will depend entirely upon the average price at which those early-phase coins are sold. (That is, it depends upon the quantity of sales that are made in bulk versus by means of packages at full retail price.) Our current estimate for Ground 0 mintage is ~60M coins. Any Lyra sold as Elyra ERC20 tokens will represent additional mintage. It will be observed that if one funnel sells out its Round allocation prior to another, it may create an arbitrage opportunity for alert speculators.

It will be seen that the total number of Lyra introduced into the market from all sources cannot be determined definitively in advance. Our working estimate for the end of Round 6 is on the order of 200 – 250M coins. At a MSRP of $32 this projects a total market cap of between $6.4 and $8 billion. If this were achieved today, it would place Ascension in around 12th position for market cap, between EOS and Dash. Of course, we expect that selling this many coins will require a minimum of at least one year, while the top 10 list of cryptocurrencies changes extremely rapidly on a daily basis as the space grows. It is quite possible that in the event, our successful completion of Round 6 will not even place us in the top 50. In any event we will always publish accurate total circulation figures, via websites until our blockchain is launched, and via the blockchain itself afterwards.

Beyond Round 6, our plan is to continue to sell tokens at a premium price (>$32) to meet market demand, as may be needed. However our expectation is that after that point significant growth in circulation will be accomplished by means of DApps, which will have become much more numerous.

## Offering Rationale

The customary practice in the world of Initial Coin Offerings (ICOs) has been to offer a capped quantity of

tokens, typically at a sliding offer price, rewarding earlier buyers with a greater quantity of tokens. Open-ended, uncapped ICOs do exist but are widely derided in the space. There are two main reasons for this disapprobation. First, raising "all the market will give us" rather than a specific fixed sum determined in advance is seen as evidence of either extreme budgetary ineptitude, or unbridled greed. Second, a non-deflationary currency is seen as monetary treason in the world of blockchain currencies, which as a rule are inherently deflationary. You will notice the Ascension Foundation's coin sale does not have a predetermined overall cap, although individual Rounds are capped. We believe a hard cap is a poor choice for the kind of economic system we propose to develop, based on the following rationale.

Recall the views of the legendary Austrian school economist Friedrich Hayek, who argued for privately issued money as opposed to money issued by governments or central banks. Hayek concluded that privately issued currencies, competing with one another for market share, would result in a more stable system which would better protect the interests of the users of such currencies. Doubtless he would be pleased at the ease with which various non-governmental organizations are now able to issue what amounts to their own private currencies, using today's technology.

However as Hayek also pointed out, a deflationary (upward-valued) currency inherently favors creditors, just as an inflationary (downward-valued) currency inherently favors debtors. It could certainly be said that a deflationary supply favors *speculators* in that currency, since expanding demand meeting limited supply is bound to lead to a net rise in the price. But if we're talking about the currency being used as exchangeable value to support economic activity, beyond mere speculation and use as a reserve asset (which we must be, else there's little point to cryptocurrency on a long-term horizon), then a currency with an inherent deflationary bias is no better than (or just as bad as) a currency with an inherent inflationary bias.

Consider this question. If a cryptocurrency such as Bitcoin, Litecoin, or Ethereum were truly going to replace the dollar, euro, yen, or pound, then among other things it would need to be used to make loans. This is true even in a Rothbardian world entirely without fractional reserve banking. Looking at the past year's price charts of any of these currencies, who in their right minds would take out a loan (even a short-term interest-free one) payable in BTC, LTC, or ETH? Only a complete fool would do this, as they'd likely end up repaying a multiple of their principal on a purchasing-power basis. Speculators love these currencies today, but no sane person would ever use one of them to purchase anything which needed to be financed in that currency. Even providing intraday credit for trading presents challenges. Money holding substitutes for lending as a vehicle for savings (a problem long known to economists.) Moreover, as the price consistently rises, holders become reluctant to spend that currency. This is the exact opposite of a currency experiencing hyperinflation, which people tend to convert to physical goods as soon as they receive it.

This illustrates how a deflationary currency can be quite unsuitable for actual economic activity *other* than investment. Even handling several months in the pipeline for goods could be highly problematic, given enough volatility, much like with a currency that's undergoing hyperinflation (such as the Venezuelan Bolivar). The difference is that the inflationary currency with the eroding value punishes manufacturers and wholesalers (leading to empty shelves), whereas the deflationary currency with the skyrocketing value punishes retailers (leading to no shelves at all), and even hurts customers who miss out on future gains by spending their coins today. Fortunately, at present everyone can convert in and out of fiat dollars, or other currencies, whenever they wish -- which is precisely the service provided by bitcoin merchant service providers such as Coinbase.

Obviously the AF cannot deploy legal tender laws to force people to use Lyra in the marketplace. We can only

earn the trust of the global market by managing our currency intelligently. As described above, we plan to begin by building both the demand and supply sides simultaneously. By creating DApps such as ABC, Q13, and SportsTrader (with others to follow), we will create practical uses for the coins in circulation. By selling OTO vouchers into existence to interested buyers, we will mint initial supply. We believe in an honest free market capitalist approach. This means that the purpose of offering coins is to generate revenue through presales, while the purpose of trading on the secondary market is to create liquidity for them, and to provide a forum for honest price discovery.

To insure that too many coins are not sold, they are offered in progressively larger blocks at escalating MSRPs. Existing holders always have the ability to step in front of retail sales to sell at a price between the current retail price and the previous one. (Or indeed, at any price.) New retail sales thus occur only when demand at the new price level exceeds available existing supply. As the number of holders grows, they therefore acquire a kind of collective veto against the AF's ability to continue the expansion of the monetary base by means of new sales, should enough existing holders choose to exercise it.

This factor is the reason why cryptocurrencies (including ours) are not “Ponzi schemes,” despite the frequency of this accusation from establishment mouthpieces. Earlier buyers are not being paid by the purchases of later buyers. Instead, later buyers need to pay higher prices to earlier buyers to induce them to part with an appreciated asset. Actually it is fiat monies and government social insurance programs that are the true Ponzis, as discussed here.

The flip side of this is that we cannot even estimate the total amount of OTO/Lyra which will ever be issued. To attempt to do so would be to assert knowledge not only of our projected development and other fixed costs (which, naturally, *are* estimable), but also knowledge of the future demand for our DApp services, our future market share of p2p sports betting and other large, complex markets, future demand for use of OTO/Lyra in cross-border transfers, the amount of reserve assets which should be held in order to insure liquidity and implement monetary engineering goals, etc., all necessarily *a priori*. This is simply not possible; and to make the effort would be to commit what Hayek called “the knowledge fallacy” – the presumption that perfect information exists which makes efficient central planning possible.

The AF cannot and will not attempt to centrally plan the Lyra-backed economy. What it can do is use the long-term price of Lyra (against a basket of assets) as a feedback signal to indicate when the coin supply should expand or contract. Beyond minting more Lyra to expand supply, excess supply can be addressed either by deploying more use cases for Lyra, through marketing, or by buying it back in the secondary market (as described above in section VII).

In conclusion, we're not merely catering to speculators, or aiming just to line our own pockets. Recall that our mission statement is: “**To promote the growth of robust, borderless, wealth generating, free market ecosystems.”** This goal simply cannot be achieved by means of an ICO with a forever-fixed quantity of tokens issued. We are different, because we're thinking much bigger and further ahead. Our vision is for long-term parallel economic development, not merely for short-term development funding and purely speculative gains.

## Proposed Ascension Foundation Price List

The following is a provisional list of items which we anticipate will be sold by the AF to interested buyers. This is not necessarily a complete list, and all prices shown are estimated and may be subject to future revision, or

negotiation in individual cases. All prices are shown quoted in US dollars; however payment must be tendered in OTO/Lyra. The OTO/Lyra remitted must be purchased directly from the AF at the then-current retail price. Certain items may not be available until the Ascension blockchain has been launched.

- Permission to operate a DApp in the SilentVault Marketplace (SVM franchise): $50K (plus review of business plan and server-side code written by purchaser). Renewals $10K / year.

- Permission to publish and operate a smart contract on the Ascension blockchain: $10K (plus prior review of smart contract code written by purchaser). [Assumes that we deploy suitable smart contracts in the Ascension blockchain.]

- Permission to operate an additional Openfire Gateway (OFS) within the existing wallet network: $20K. Renewals $2K / year.

- Independent SilentVault Exchange (SVX) franchise: $500K. Renewals $50K / year.

- Permission to operate a voucher Issuer within the existing wallet network: $250K (plus due diligence on operators and regular audits of asset reserves). Renewals $25K / year. (Note this could be used to conduct a pre-blockchain ICO, as we ourselves are using it with OTO.)

- Non-exclusive license for operating an independent Voucher Publisher (VP) network with its own Issuers: $5M (plus due diligence on operators and a contract for software maintenance).

- Annual subscription to a premium multi-hop VPN service which accepts OTO: $300.

- Permission to operate a retail sales portal for OTO and/or Lyra: negotiable.

- Contract custom software development by our engineers: $300 / hour, or negotiated fixed bid.

## Use of Funds

As noted above, the Ascension Foundation will be contracting out its coin sales to others: the first identified sales outlet is CryptoWealth.com. It will presell its Lyra coins in bulk at wholesale prices to the OTO voucher Issuer (OTO.Money), which will sell the vouchers representing those coins to the distributor CryptoWealth for the same price per unit. (NB: the OTO.Money issuer earns fees when OTO vouchers are purchased or exchanged in the SVX.) CryptoWealth will apply a retail markup in exchange for performing all sales and marketing functions. Additional competing sales portals may be established in the future.

The AF intends to accept a list of national fiat and crypto currencies for its Lyra coins. These payments may be held in the forms in which they were received, or converted to other forms or used to purchase other assets, depending upon the category to which the funds are allocated.

**Development** (40%) refers to funds expended to develop and deploy technology. This would include paid technical staff, contracted mining pools, hardware, equipment, bandwidth and other services.
**Legal** (15%) relates to funds expended for the creation and maintenance of business entities and accounts, hiring attorneys, accountants, trustees and directors, fees for any required licenses or legal permissions, as well

as building a war chest in the event of any future legal attack by state agents.
**Licensing** (15%) refers to funds paid to acquire the lawful use of technology produced by others. Initially, this will include the phased purchase of an exclusive license of existing Voucher-Safe and SilentVault technology, but may also include any other proprietary tech deemed vital to AF's operations. In respect of V-S and SV tech, this category is subject to a hard cap of US$10 million. Should this milestone be reached, future revenue falling into this category will be allocated to establish a venture capital fund for investing in new technologies in the crypto-economic space generally.
**Reserves** (25%) are monies set aside for implementing monetary engineering goals. These funds may be highly static, and held mainly in bitcoin or other "hard" cryptocurrency assets.
**Operations** (5%) expenses are those for day-to-day operations such as office expenses, customer support staff, web design services, insurance, bookkeeping and the like. There is a possible overlap here with the Development and Legal categories.
**NB: Sales & Marketing** is not shown as a category because those expenses have been out-sourced to retailers.

## Disclosures:

All team members and contractors will be paid at appropriate market rates out of the Development, Legal, or Operations budgets above. Any bonus compensation will be paid in the form of OTO/Lyra in bonus incentive pools. The total OTO paid to team members past and present to date is approximately 500,000. A further pool of 3,333,333 Lyra is earmarked for future team bonus compensation, and vests at a price of US$16 (Round 5).

A quantity of OTO has been presold to seed round buyers between 2014 and today. This includes the seed sources for SilentVault. (Yes, we were selling "tokens" way before it was cool to do so.) The total amount of OTO already sold to our various presale buyers is approximately 2.8M. This is vested immediately.

Lastly, we have allocated a founders pool totaling 6,666,667 Lyra. These Lyra cannot be claimed until the price of OTO/Lyra reaches US$32 (Round 6) *and* the Lyra blockchain has been deployed, *or* the end of 2019, whichever comes first.

## About the Authors

### Sean Daley, Founder and CEO

The first decade of Sean's law career was spent as a trial lawyer based in Toronto,Canada. Prior to law school, he served as an advisor to a conservative government on youth policy. Upon discovering the nascent digital gold space, Sean went all in,launching e-gold's first widely popular application, a virtual stock game. Sean later proved out the viability of a hedge fund type model for syndicated sports betting in San Jose,Costa Rica. After government intervention censored the use of digital gold for online free market business,Sean leveraged that gold knowledge as a professional trader of Gold Futures and Options. The advent of Bitcoin nudged Sean back to online free-market economics and he co-founded SilentVault,a P2P digital assets platform, in 2012. Sean is thrilled to have the threads of his professional life all weaving into collaborative fruition in Ascension.

## Kevin Wilkerson, Founder and CTO

Kevin has been involved with software development for more than 30 years, as a coder, a systems architect, and technical team lead. He has worked in areas as diverse as mechanical CAD/CAM, interactive cable television, e-commerce, and private secure communications technologies. He was involved in the digital gold industry in the 2000s, the predecessor to today's cryptocurrencies. Kevin is the co-architect and principal implementer of the Voucher-Safe digital cash technology, which allows OTO and other assets to circulate privately off-chain. He is a former freedom movement political activist, science fiction author, and classical musician. Kevin founded the Digital Cash Alliance in 2015, ElanVPN in 2016, and has been involved in a number of other free market business enterprises.

## Conclusion

We expect our ideas presented here will come in for considerable criticism from the community. In particular, we anticipate that we will be criticized both for utilizing a centralized payment clearing mechanism, and for refusing to specify a hard limit on the ultimate number of Lyra coins to be issued. Our reasons for making these decisions are explained above. Here in closing we'd like to observe that after the long blockchain scaling debate (still ongoing), and the various hard forks, we expect that the criticism about locally centralized clearing will be a lot less loud than it would have been several years ago. In view of the parabolic valuation growth of cryptocurrencies going on at present, especially in bitcoin, we likewise expect that the ability to increase supply as needed, which is today a radical notion, will gain growing acceptance in the months and years to come. Our proposal is to follow the guidance of the free market, rather than the hubris of designers – not excluding ourselves.

This is a time to get real, to reassess, and to make sober adults-in-the-room plans for how to build on top of the first generation crypto technology to continue to develop the crypto-economy. In this effort it is neither necessary nor desirable to discard everything that is known and done in the legacy, pre-crypto economy. On the contrary, it's about learning what we can from history, and designing solutions to tough problems arising in both the legacy economy and in the new one.

One of the prerequisites for doing this is to recognize the importance of decentralizing the crypto-economic business model, not just certain functions such as mining. This involves asking questions like: where are the profit centers? Who pays for those profits? Who is in competition with whom, and how can competition be harnessed to reward innovation and better service? How can every vital element be made self-supporting? How can those who perhaps are not themselves radical innovators participate through operating crypto-businesses, beyond mere passive investment? How do we create a better, fairer, post-political economic order in the crypto-economy, without repeating the mistakes and pitfalls of the old order? Such considerations on decentralizing the business model by means of competition and profit incentives are seldom talked about when decentralization is discussed, even by the brightest people. Our business model attempts to take all of these kinds of questions into account.

The time has come to focus on the larger perspective of what we are enabling as we build for the future. Bitcoin has been called “a hole in a burning building,” and the developing crypto-economy represents an escape hatch from the imploding debt-based legacy economy, which continues to disintegrate. A global asset bubble of approximately $250 trillion has been inflated by central banks since 2005. When this bubble begins to collapse, an unknown portion of it will flow into the crypto-economy.

We'll leave you with an updated version of a quotation taken from a book by Norm Franz:

> *GOLD is the money of kings; SILVER is the money of gentlemen; BARTER is the money of peasants; and DEBT is the money of slaves; but CRYPTO is the money of the free.*

We hope you will join us in building the next phase of the crypto-economy!