GREENDOGE NETWORK

Whitepaper

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Based on Chia Network business whitepaper

https://greendoge.dog

Introduction

Bitcoin, Ethereum, and its underlying blockchain are viewed by many as the leading edge of an irreversible, transformative evolution of money, finance, commerce, and society itself.

However, these cryptocurrencies are often criticized for not being environmentally friendly. Those who view that as dismissive are underestimating the transformative impact that programmable digital money is going to have. This whitepaper will attempt to explain the impact that we believe digital money and blockchains can ultimately have on commerce and society. We believe that blockchains applied to money and money adjacent use cases have the power to transform finance, wealth, safety, digital security, and ultimately the entire concept of trust.

The new generation of cryptocurrency should be easier to use, safer, and more environmentally friendly than cash. In the GreenDoge blockchain, any Chia farmer can reuse their existing farming hardware to help the GreenDoge blockchain verify transactions while farming Chia, win GreenDoge farming rewards.

Using environmentally-friendly cryptocurrency, anyone can become their own bank because it is more convenient, lower cost, lower energy consumption, and ultimately more secure. We believe that the GreenDoge blockchain, on the existing hardware of Chia farmers, will have lower energy consumption than other cryptocurrencies, and ultimately realize the promise of "Green Dogecoin".

A Brief History: From Bitcoin, Ethereum, Chia . . . to GreenDoge

Like all new technologies, the impacts of digital currencies and blockchains are overestimated in the near term and underestimated over the long term. Bitcoin has, to date, led the way just as ARPANET and early ISPs paved the way to the internet, the Web, and ultimately the “there’s an app for that” world in which we currently live.

The more one studies Bitcoin the more subtle, powerful, and fascinating it is. Nakamoto’s consensus proved that a globally shared database can be trusted without trusting anyone. However, the Proof of Work method that the Bitcoin protocol uses included an assumption that unused CPU cycles are a vast excess commodity in millions of computers worldwide. This premise did not ultimately prove to be correct but it was prescient to search for a vast excess commodity. Specialized single-use hardware and cheap electricity have, instead, become far better at Proof of Work calculations than general-purpose CPUs.

This development has weakened another core Bitcoin principle -- decentralization -- as the specialized “mining” hardware is increasingly owned and operated by just a few large entities in purpose-built large data centers located near inexpensive electricity. Thus there has been centralization of what was intended to be a decentralized consensus network. This centralization lowers trust and raises difficult issues regarding electricity consumption, e-waste, carbon generation, and geopolitics.

Eleven years after Satoshi’s whitepaper was released, the world has learned much from the Bitcoin experiment. Research progress in cryptography has also advanced. Chia has set out to harness this experience and stand on the shoulders of giants like Merkle, Rivest, Hellman, Finney, Wuille, Boneh, and others to apply new cryptography, some of which we helped invent and refine, to create the next chapter of the Bitcoin experiment.

Chia is doubling down on Bitcoin. We are adopting and helping Bitcoin adopt new technologies like bech32m, graftroot, and taproot. Chia transaction rates and block sizes are effectively double based simply on more modern engineering. Chia coins use a refined version of Bitcoin’s unspent transaction outputs (UTXO) model. Chia is the first new Nakamoto consensus since Bitcoin and utilizes many of Satoshi’s previously un-articulated insights like the fact that natural log governs key blockchain constants related to work difficulty resets. We bring advanced engineering, experience deploying internet-scale applications, and scientific rigor to this project.

Chia has also brought creativity to bear to tackle other important aspects of driving the adoption of digital money globally. We have a unique plan to use the corporate, and later the public company form, to give transparency, control, regulatory acceptance, and public buy-in, to this new internet money.

Chia is going to use our expertise in these technologies and go-to-market strategies to scale out a global open source software support business following in the footsteps of open-source pioneers RedHat and MySQL AB. We believe that large institutions, corporations, and other entities will be able to reap the efficiencies and benefits of using a digital currency like chia without fear because we will be there to support them.

Chia is an attempt to improve on Proof of Work-based blockchains with a new consensus algorithm we call Proof of Space and Time. Instead of consuming massive amounts of electricity and wasteful single-purpose ASIC hardware to validate transactions, Proof of Space leverages the over-provisioned exabytes of disk space that already exist in the world today.

Chia has observed that many projects and enterprise initiatives that required programmable internet money turned to Ethereum only to discover the harsh limitations of Solidity, Ethereum's smart contract programming language. Poor design and security have made it virtually impossible for enterprise projects to adopt Ethereum to move money or investments in production or at scale. The next most likely alternatives, such as Ripple and Stellar, also have significant issues that force governments and banks to use "intranet" versions of blockchain software on an experimental basis instead. Intranet blockchains are private, permissioned, and have few benefits over a good old-fashioned database. They lose all of the positive network effects of an open, decentralized, and secure blockchain.

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The GreenDoge blockchain, which is forked from the Chia blockchain, inherits all the advantages of the Chia blockchain technology. The GreenDoge blockchain is compatible with Chia's farming hardware so that any farmer can help the GreenDoge blockchain to verify transactions while farming Chia and win the block rewards of GreenDoge. The GreenDoge blockchain can reuse the hardware of Chia farmers, which is greener, more environmentally friendly, and lower energy consumption than the Chia blockchain.

Any transaction should be as simple as pressing a button, no matter how complicated the settlement is.

You have the right to privately, safely, and securely hold your wealth and hold it in a manner where you can mathematically predict inflation.

You should be able to securely buy assets and use markets that don't require you to trust anyone.

GreenDoge is a more environmentally-friendly cryptocurrency.

Company Vision

We formed GreenDoge Network for the purpose of driving the adoption of GreenDoge and to be listed on more cryptocurrency exchanges. Through development by the company or cooperation with third parties, to provide more decentralized applications using GreenDoge.

Sustainable Nakamoto Consensus using Proof of Space and Time

GreenDoge Network's blockchain relies upon a new Nakamoto consensus algorithm called Proof of Space and Proof of Time, the same as Chia. These new methods do not consume the significant amounts of electricity and single-purpose hardware that Proof of Work has come to require. GreenDoge Network's blockchain (and GreenDoge) is intended to be a "green," eco-friendly alternative to Proof of Work. Unused space is a widely distributed, ASIC-resistant, and over-provisioned commodity. Electricity prices are largely irrelevant to running storage and will become even less relevant as consumer SSD prices fall below hard drive prices. We anticipate that chia farming will be more decentralized than Proof of Work or Proof of Stake and significantly less energy and resource-intensive.

Satoshi Nakamoto chose Proof of Work to solve critical problems around trusting a crowd of anonymous individuals to agree upon a transaction ledger. Online it Is relatively easy to fake multiple personas so that one individual might look like 1000 different people on a social media platform. Proof of Work forces each individual or entity to exert some provable effort that makes it unlikely that they control more than one logical account or supposed persona.

Additionally, Proof of Work creates a way to choose the next person who will validate a block of transactions in a way that is mathematically proven to be random. This gives participants in the network assurance that the person who validates their transaction will not be the same person they just sold a boat to in order to avoid an outcome where the validator could make the payment to the boat seller disappear and thus never show up as a completed transaction. Randomly choosing the validator of the next transaction block prevents the boat purchaser from sailing away without making payment or double-spending it. Satoshi had hoped that the "unit of work" would be the unused CPU capacity on everyone's computers. However, the algorithms that have the needed properties on CPUs are susceptible to being accelerated in purpose-built

ASIC chips that drive the cost of proving work towards the cheapest sources of electricity. That gives those with significant capital and access to cheap power the ability to prove far more work per minute and dollar than someone using their laptop at home.

Proof of Space is a way to prove that you are keeping some storage unused on your hard drive. Users of GreenDoge Network's blockchain will plot unused space on their hard drive, by installing software that generates and stores a collection of cryptographic numbers on disk into plots. These users are called farmers, as opposed to Proof of Work's miners. When a new block is broadcast on the GreenDoge Network's blockchain, farmers will scan their plots to see if they have a number that is close to the new challenge number derived from the previous block. This operation of checking for Proof of Space is fast and very efficient - farmers are known to farm a petabyte on one Raspberry Pi. A farmer's probability of winning a block is the percentage of the total space that a farmer has compared to the entire network for each challenge and there are 4608 chances to win a challenge per day on average.

Using storage as the commodity to secure the unique identity of the next verifier has the properties that Nakamoto hoped for with idle CPUs. Enterprises and end-users tend to buy more storage than they're going to need today in anticipation of their future storage needs. Importantly, there is no technological way to store random data more cheaply per terabyte than by leveraging unused hard drives and SSDs made by Seagate, Intel, Western Digital, Samsung, and others. Storage also has the property that when someone is done farming, they can repurpose it to other valuable uses like storing a corporate database or adding more pictures of their kids. These Proofs of Space also give excellent assurance that the winning farmer who will validate the next transaction block will be chosen at random.

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Like Bitcoin, work difficulty on GreenDoge Network's blockchain is dynamically adjusted so that 32 blocks are completed with a target time of 10 minutes on average. Not every block is a transaction block and there are expected to be 9 to 14 transaction blocks every 10 minutes. The farming difficulty adjusts based on both the amount of network space and the speed of the fastest Timelord to keep the target times regular. Regardless of which one changes, if blocks are being released too fast, the difficulty is increased. If blocks are being completed too slowly, the difficulty is decreased. As the farming competition goes up by adding more space to the network, farmers can expect rewards from a particular amount of storage to go down.

Smart Coin Language

Greendogelisp is GreenDoge Network's smart coin language. It is exactly the same as Chialisp based on the functional language Lisp. The following is its introduction from Chia. Almost everything on the chia blockchain is a coin. Smart coins deliver smart contracts and smart transaction capabilities in one package. Chilalisp has been designed for security and simplicity while allowing for powerful and broad functionality. Applications running on Chia Network's blockchain are intended to have functionality appropriate for banking, payments, and financial applications. The primary focus for our launch will be on core functionality such as financial controls, payments clearing, and settlement, and managing the issuance of assets.

Chia Network's blockchain will enable users to customize custody and clearing arrangements. Chialisp will allow chia controls to match and exceed internal accounting controls and to safeguard funds from accidental loss, theft, or hacking with various risk tolerance levels in an auditable manner. Chialisp is designed to easily have smart coins serve as controls for an SSAE 18 SOC 1 or SOC 2 report and to be relied upon for a GAAP or IFRS financial audit.

This may sound boring to those who have not self-custody digital money, but for those who have, it makes carrying around digital money feel less like walking through the bad part of town with cash falling out of grocery bags, and more like having your own portable bank vault.

Chialisp will operate within the simple and reliable approach used in Bitcoin of keeping track of currently spendable coins as the only shared state (the UTXO model). Chialisp features enhanced support for net settlement by allowing transactions which open and remove payment channels to be indistinguishable from normal transfers. Chialisp's rules are enforced on the blockchain for superior security of those controls.

With the launch of Alpha Testnet in December 2019, Chia Network made a set of reference smart coins and wallets available to developers and deployers of chia. The initial use cases that Chialisp reference smart coins cover include advanced multi-signature support, atomic swaps, authorized payee whitelisting, withdrawal clawback escrow, withdrawal rate-limiting, slow paper wallets, digital identity wallets, and Coloured coins. The Company published reference smart coins for colored coins in April 2020 and expects to release a digital identity smart wallet shortly.

Coloured coins are Chia's implementation of so-called "colored coins." This is a term of art that loosely describes a class of methods for representing and managing real-world assets on top of a blockchain. Chia Coloured coins will be represented by a smart coin embedded into a few of the smallest denominations of chia (a mojo, which is one-trillionth of chia) that allows an asset to be defined and issued by anyone on top of Chia Network's blockchain. The issued assets will also inherit all of the Chialisp smart coin functionality so that they can have all the custody and controls that native chia enjoy. Adding DID (Distributed Identity) wallet functionality will allow an issuer to only automatically issue an asset to someone who has completed KYC/AML or been verified by a national registry but in a way that is privacy-protective and relies upon the W3C Decentralized Identifiers standard.

Multi-sig and Atomic Swaps:

Multi-signature and atomic swaps are building blocks for more sophisticated smart transactions and core to many simpler controls and custody arrangements. This allows a corporation to require two out of three signers to spend money out of a wallet or to complete a trade between bitcoin and chia in a way that requires trusting no other party to propose and complete a swap. The IETF BLS signing protocol also makes multiple signature schemes easier and much safer for the participants as signatures can be merged and don't have to happen in order or at the same time or place.

Authorized Payee Wallets:

Authorized payee whitelisting allows, for example, a corporation to delegate spending authority from a controller to a payroll administrator where the administrator can only make payments to the chia addresses that the controller or CFO set. This mitigates the possible consequences of a successful email phishing attempt or hacks on the payroll administrator. This also makes embezzlement difficult. We intend to use our distributed identity wallets to make this especially flexible but have first implemented our reference version of this in a parent wallet, child wallet format.

Transaction Clawback:

When one organization sends coins on a blockchain to another organization, there are two things that need to occur. A certain amount of block confirmations have to happen to prove to the recipient that the coins sent are valid and not a double-spend where the coins received will not be considered valid by the network in the future. The second activity is simply the recognition that a payment transaction is actually in the process as it may take some minutes to be considered final by the recipient. Withdrawal clawback escrow adds a time period in which the sender can claw back the funds after the initial transfer moves onto the blockchain. By adding a third key that can claw back or accelerate the transfer of a transaction's underlying coins one can lower the risks of sending a transaction and implement escrow business models. With a short recovery escrow period - as an example 1 block less than the recipient's number of blocks they would otherwise consider final - a sender can now correct a typo in a recipient address by detecting the error after sending the transaction, clawing the bad transaction back, and resending a corrected transaction. For certain heavily controlled use cases, one can implement a longer clawback period which allows all transfers from a wallet to be audited and un-done if they are later found to be improper. In a mail-order model the consumer could delegate the recovery escrow period to a shipping company that would release the funds to the retailer when the shipper receives the package or return the funds back to the buyer if the goods aren't sent to the shipper in an agreed time frame.

Rate Limited Wallets:

Withdrawal rate limiting allows the creation of wallets that can only spend a certain amount of coins over a specified amount of time. You can put a year's worth of living expenses in a wallet but restrict it to only allow spending 1/52nd of the funds in the wallet each week. If the wallet were stolen or compromised by a third party, you can use the primary wallet to pull back the balance of the funds that were not yet stolen once it was recognized that control had been lost. Chia shipped a reference rate-limited wallet to testnet in August 2020.

Slow Paper Wallets:

Current cryptocurrency best practices are to keep a paper wallet backup of your active or hot wallet. This is prudent for many reasons including that hardware can fail and it's easy to have your hardware lost or stolen. However, this leaves you vulnerable to someone stealing your paper wallet and having complete control over, and the ability to steal, all of your funds. Slow paper wallets allow you to store a smart transaction that's capable of starting a time-delayed process to recover your funds in your hot wallet but it is not a duplicate of your private key. If someone were to steal your slow paper wallet and start that process, your active wallet can recognize the situation and instead redirect the fund transfer to a new wallet you control. Starting the backup recovery can optionally require a security deposit to further hinder attempts to steal funds via the slow paper wallet.

DID Wallets:

Chialisp enables digital identity wallets that have in-depth recovery options and allows individuals and organizations to add identity and permissioning on top of a permissionless blockchain. Users can pseudonymously delegate control of their identity to family or legal counsel in a way that can be recovered by both the delegates and in a way that allows the delegate's own identity to be recovered and used as well. This enables certain types of trust/trustee relationships and is a path to digital inheritance. This also allows the provider of an asset on Chia Network's blockchain a method to have end users complete processes like KYC/AML and present that attestation from their digital identity wallet to be able to receive equity, a subscription to a hedge fund, or a government-backed stable coin. The asset issuer or verification service can also easily revoke those credentials if they determine that someone's status has changed.

Coloured coins:

Coloured coins allow individuals, financial institutions, corporations, and governments to issue on-chain assets that inherit the smart transaction capabilities of Chia Network's blockchain and rely upon the globally decentralized secure validation that Proof of Space and Time provides. ERC-20 tokens are currently the most recognized form of colored coins, but they are very limited. The Solidity smart contracts they depend on are plagued with security risks. Additionally, they do not feel like a native part of the Ethereum blockchain to end-users and require each asset to be individually enabled by wallets and digital money exchanges. Recent security research has shown that they are vulnerable to being counterfeited on exchanges too. Chialisp

coloured coins inherit all of the capabilities of Chialisp which makes them far more suitable to high compliance asset issuance and allow them to be more native to chia wallets.

Unlike Solidity, Chia coloured coins can be used to create ephemeral value and thus applications on the Chia blockchain don't generally require flash loans. This has been one of the achilles heels of DeFi on Ethereum. Ephemeral coloured coins combined with Chia's native exchange capability and partially completed transactions of arbitrary complexity are superior building blocks for the kind of arbitrage applications and transactions that DeFi projects are attempting to build.

Applications of Greendogelisp/Chialisp:

On the enterprise side, a US-based hedge fund could leverage chia-coloured coins to manage subscription ownership and have investors present a digital identity that would prove their citizenship, investor qualifications, and KYC/AML status - all natively to Chia Network's blockchain. A government could issue their domestic currency-backed stable coin to anyone who had completed a required KYC digital identity certificate. Coloured coins on Chia Network's blockchain can be used for stored or open-loop company gift cards, debt issuance, equity issuance, and any related kind of asset issuance, tracking, and management.

Because Chialisp is a generalized development language and environment, all of these example functionalities can be mixed and matched as appropriate for a use case. Developers can create new and currently unimagined capabilities with the toolset that Chialisp provides without needing changes to Chia Network's protocol or environment while Chialisp will deliver security and auditability of those controls and applications. We believe that Chialisp will be the best tool for the emerging De-Fi movement.

Chialisp and the choice of BLS Signatures make the implementation of payment channels simpler and more direct than they currently are for Bitcoin or Ethereum. Development in the payment channel space is moving quickly and thus the Company expects to adopt the best technologies from the layer 2 community as they emerge after the launch of Chia Network's mainnet.

The Strategic Reserve

The Company expects to create 21 million GreenDoge at mainnet launch (GreenDoge Network's Strategic Reserve or pre-farm). And by increasing the farming rewards, the actual pre-farm value is much lower than that of Chia's pre-farm, as discussed below. It is challenging to predict the resources needed to drive the adoption of the GreenDoge blockchain, especially those denominated in GreenDoge. Thus we hope we are on the side of having a reasonable Strategic Reserve of GreenDoge owned by the Company and ultimately the shareholders.

Post-launch GreenDoge Emission Schedule

Farming rewards will create new GreenDoge once GreenDoge Network's blockchain is launched. Our farming rewards schedule was directly patterned after the Chia rewards schedule. We present these rewards in an ideal case but the reality is usually far from ideal. Due to the fluctuations of space joining the network and Timelord speeds increasing or decreasing, the actual issuance schedule will vary slightly just as Bitcoin's issuance schedule has historically. We may add a time adjustment factor based on what we have observed in Bitcoin to attempt to have farming rewards end up closer to this ideal than Bitcoin did. The idealized schedule is as follows:

- 3200 GDOG will be created every ten minutes for the first 1 month after launch.
- 640 GDOG will be created every ten minutes in months 2 through 6.
- 320 GDOG will be created every ten minutes in months 7 through 12.
- 160 GDOG will be created every ten minutes in year 2.
- 80 GDOG will be created every ten minutes in years 3 through 4.
- 40 GDOG will be created every ten minutes in years 5 through 6.
- 20 GDOG will be created every ten minutes in years 7 through 8.
- 10 GDOG will be created every ten minutes for every year after year 9.

There is no cap, or limit, on the total number of GreenDoge that may be created by farming rewards on GreenDoge Network's blockchain. Capped supply blockchain rewards will eventually completely come only from transaction fees, which might result in farmers being incentivized to overwrite recent history instead of mining new blocks in periods where transaction fees are low, particularly if fees are significant during the day and approach zero every night (generally from Midnight Pacific Time to 4 AM Pacific), which is the pattern happening today.

GDOG Issuance Schedule:

	End of Year 1	End of Year 2
Farming rewards	36,441,600	8,409,600
Cumulative farming rewards	36,441,600	44,851,200
Running total GDOG	57,441,600	65,851,200
Farming % of all GDOG	63.44%	68.11%
Halving	End of Year 3	End of Year 4
Farming rewards	4,204,800	4,204,800
Cumulative farming rewards	49,056,000	53,260,800
Running total GDOG	70,056,000	74,260,800

Farming % of all GDOG	70.02%	71.72%
Halving	End of Year 5	End of Year 6
Farming rewards	2,102,400	2,102,400
Cumulative farming rewards	55,363,200	57,465,600
Running total GDOG	76,363,200	78,465,600
Farming % of all GDOG	72.50%	73.24%
Halving	End of Year 7	End of Year 8
Farming rewards	1,051,200	1,051,200
Cumulative farming rewards	58,516,800	59,568,000
Running total GDOG	79,516,800	80,568,000
Farming % of all GDOG	73.59%	73.94%
Halving	End of Year 9	End of Year 10
Farming rewards	525,600	525,600
Cumulative farming rewards	60,093,600	60,619,200
Running total GDOG	81,093,600	81,619,200
Farming % of all GDOG	74.10%	74.27%

After a final halving, GDOG continues trailing emissions:

Halving	End of Year 11	End of Year 12	End of Year 13	End of Year 14
Farming rewards	525,600	525,600	525,600	525,600
Cumulative farming rewards	61,144,800	61,670,400	62,196,000	62,721,600
Running total GDOG	82,144,800	82,670,400	83,196,000	83,721,600

Farming % of all GDOG	74.44%	74.60%	74.76%	74.92%
	End of Year 15	End of Year 16	End of Year 17	End of Year 18
Farming rewards	525,600	525,600	525,600	525,600
Cumulative farming rewards	63,247,200	63,772,800	64,298,400	64,824,000
Running total GDOG	84,247,200	84,772,800	85,298,400	85,824,000
Farming % of all GDOG	75.07%	75.23%	75.38%	75.53%
	End of Year 19	End of Year 20	End of Year 21	End of Year 22
Farming rewards	525,600	525,600	525,600	525,600
Cumulative farming rewards	65,349,600	65,875,200	66,400,800	66,926,400
Running total GDOG	86,349,600	86,875,200	87,400,800	87,926,400
Farming % of all GDOG	75.68%	75.83%	75.97%	76.12%
50 Year Total GDOG	102,643,200			

This issuance schedule is directly influenced by Bitcoin's emissions schedule with adjustments for some of the different math underlying the Chia and the GreenDoge blockchain such as 4608 reward chances per day on average and a quicker pace of halvings.

The following table compares Bitcoin total coins mined during each four year halving period to chia coins farmed during each three year halving period and GreenDoge coins farmed during each two year halving period:

	BTC	XCH	GDOG
First Halving Period	10,500,000	10,091,520	8,409,600

Second Halving Period	5,250,000	5,045,760	4,204,800
Third Halving Period	2,625,000	2,522,880	2,102,400
Fourth Halving Period	1,312,500	1,261,440	1,051,200
End of Year 11*	18,593,393	18,501,120	61,144,800

* Comparison of actual year 11 outcomes for three, BTC estimated.

Revenue and Go to Market

The Company expects to achieve revenues and build shareholder value primarily through:

- Providing installation, development, and ongoing service and support for the use of GreenDoge, Greendogelisp/Chialisp, and GreenDoge smart coins in commerce and issuances of assets using GreenDoge Coloured coins
- Develop by the company, cooperate, invest or sponsor third parties to provide decentralized applications using GreenDoge

Cryptocurrency Exchanges

The company intends to make GreenDoge listed on as many cryptocurrency exchanges as possible, which is different from that Chia Network intends to list the equity of the company on a national stock exchange.

The Storage Ecosystem

GreenDoge farming rewards will increase the value of storage in the storage market. Sellers of storage may be able to sell more storage per order as buyers of the storage will know that they can make money from over-allotments of storage. This lowers the risk that the buyer's estimate of how soon and how much storage they need is too conservative. Storage manufacturers can also generate revenue for themselves by changing their drive burn-in and quality assurance(QA) processes to plotting and farming GreenDoge. Optionally, manufacturers can set up drives for larger customers to have the QA process plot and farm rewards to the farming rewards pool of their customers - again incrementally increasing the value per order for storage customers.

Large storage purchasers, like cloud providers, install storage in their data centers twenty-four hours a day year-round. Due to cloud storage is a low-margin business, any incremental decrease in costs per terabyte bought and installed quickly increases margins. GreenDoge Network expects the largest storage purchasers to purchase more storage per order than they otherwise would have and recoup that cost from GreenDoge farming that occurs until a higher value use of the storage arises from one of the storage purchaser's customers requesting storage space.

Medium storage purchasers typically don't have full-time IT staff solely focused on storage. Much of this market is outsourced to cloud providers who are large storage purchasers. Those that don't tend to purchase storage in 3 to 5 years estimated need increments. Their IT team can focus over a few weeks on installing a new storage area network (SAN) or network-attached storage (NAS) and then do nothing but routine maintenance on that storage until months or years later when they add additional capacity. The option to farm GreenDoge on the unused parts of that storage will allow buyers and their IT teams to buy and install more capacity upfront, which lowers the risk that they underestimated their storage needs and lowers the amount of time the IT team has to spend focusing on adding storage to a SAN or NAS.

End users have traditionally purchased storage on their devices that leaves about 50% of their storage unused on each device. With the transition from hard disk to SSD, the increased price of SSD has led to smaller over-allocations of storage space. However, the market for end-user storage is about to pivot to a majority of SSD and with that will come to a majority of R&D spending by storage manufacturers on SSD. This is likely to bring storage costs down as fast as they historically have for spinning drives. Industry analysts currently predict that consumer SSD will become cheaper than the equivalent size of the hard drive in 5 to 8 years as we discuss below. This will likely return end consumers to buying twice as much storage as they need. We intend to make it easy, via partnerships with storage and device manufacturers, for end-users to allocate their unused storage to GreenDoge Network's blockchain and earn rewards directly, or from pools created by the storage or device manufacturer.

The market for used storage is currently somewhat limited. Enterprises tend to retire data center storage after three years. These drives often have significant remaining useful life but can't be trusted for critical data storage as they reach their age of mean time to failure. These data center cast-offs are excellent for farming and we believe we will create a market for them that keeps them out of landfills for significantly longer and greener lives.

Two trends in NAND/SSD storage are also promising for GreenDoge farming. Certainly by 2031 and probably much sooner than that, consumer SSD will be cheaper than the same size hard drive. This will lead to a significant decrease in the amount of energy needed to farm GreenDoge plots. Additionally, there is a class of NAND storage that is generally considered waste today that could easily be turned into commercially viable farming space.

Finally, should it turn out that we have underestimated the availability of excess storage and the adoption of GreenDoge starts to put pressure on the storage business, the impact will be to drive down the per TB cost of storage for everyone. We consider that a social good even while we hope that the impact of GreenDoge will only be to better utilize existing under-utilized storage space

Executive Officers and Directors

Ethan Guo - Director, Chairman, CEO, CTO, and Founder

Experience:

- Technical Director, Head of Overseas Product, R&D Head of Hong Kong at Xiaoi Robot
- Senior Director of Product Development, Head of Development(EC) at 17 Media
- CTO at IJOING, Soft-World
- Lecturer of Computer Science at Taipei City University of Science and Technology

Intellectual Property

The Company licenses its software under the Open Source Apache 2.0 License.

Conclusion

GreenDoge blockchain runs on the existing equipment of Chia miners. It reuses excessive hardware resources to be lower energy consumption and more eco-friendly.

GreenDoge is an environmentally-friendly blockchain and cryptocurrency.

https://greendoge.dog