WHITEPAPER VERSION 1.0

Solum

Introducing Solum:

An innovative solution enabling businesses to rent out excess and idle computational power, storage, and bandwidth, in a market driven by supply and demand, using cryptocurrency.

CONTENTS

Executive Summary

Unused assets can slowly kill a business. A resource sitting idle not only doesn't add to the bottom line, it can drain it, siphoning off manpower or capital that could be better utilized elsewhere.

Think of an unoccupied hotel room, an empty airline seat or a warehouse full of unsold products. They're costing money, not making it.

Now, consider unused IT resources.

In most businesses, powerful, state-of-the-art IT hardware and its' computational capabilities are used for 8 or 10 hours a day, then sit idle for the balance of the day. The staff may have gone home but the hardware remains, ready to work around the clock.

On the other hand, what about individual entrepreneurs or businesses that lack adequate IT resources?

Cryptocurrency miners, artificial intelligence developers, medical researchers, law enforcement agencies and others struggle daily with inadequate computational power, storage, or bandwidth, unable to afford or not having access to the IT "horsepower" needed to accomplish their tasks.

Solum is a global marketplace bringing together those with idle and excess computational power (sellers), and those who need additional computational power (buyers).

For the seller, "renting" their idle IT resources during times the hardware would otherwise idle, results in extra revenue.

Buyers that lacks IT resources, but can access it as needed without the expensive upgrades or capital expenditure, save time and money.

Solum is a platform designed to bring buyers and sellers together under one roof to facilitate the safe exchange of computational power, storage, and bandwidth, among other computational tasks using a cryptocurrency platform with minimal fees.

Definitions

Cryptocurrency

is a digital form of currency, Bitcoin being the original and most commonly recognized. The birth of cryptocurrency is traced to Bitcoin creator Satoshi Nakamoto in 2009. Cryptocurrencies have monetary properties like traditional currencies (Dong, et al., 2016), but are not controlled by monetary policies of governments or central banks. Cryptocurrency has advantages such as security from political interference, and the prediction of its value increasing over time due to supply and demand. Cryptocurrencies are controlled in supply so that they reach a final number at a certain pre-calculated time. Other than Bitcoin, alternatives or "altcoins" include Ethereum, Litecoin, Ripple, Monero and others.

Initial Coin Offerings (ICO)

is a means by which funds are raised for a new cryptocurrency venture. Like an Initial Public Offering (IPO) transaction, an ICO is used by startups to bypass the heavily-regulated capital-raising process usually required by traditional venture capitalists or banks. The cryptocurrency world is attracted to ICOs for the funding of new platforms, new currencies. According to CoinDesk, in 2017 ICOs have managed to generate $1.8 billion and growing. ICOs, a form of disruptive technology, are on pace to displace the traditional method of venture capitalists and IPOs. There is little doubt that Cryptocurrency and token systems are the future of tech startup funding.

Mining

refers to the process of creating cryptocurrency units. Anyone with internet access and the suitable hardware necessary for the process is required to find a "hash," a product of a cryptographic function, which is what then connects the new cryptocurrency unit with its predecessors. Commonly known as 'Proof-of-Work,' the transactions are verified and thereafter added to a public ledger that is commonly known as "blockchain." It is also a process through which new cryptocurrency is released.

Blockchain

is a digitized, decentralized, public ledger of all cryptocurrency transactions, recorded and added to it in chronological order by market participants to keep track of digital currency transactions without central recordkeeping.

Nodes

are computers connected to a network that automatically gets a copy of the blockchain transaction. A node can receive, create, store or send data throughout network distribution points. A full node is one which keeps an up-to-date copy of a digital currency block chain, and checking it against the digital currency consensus rules. Full nodes also filter transactions and blocks on behalf of lightweight nodes, transmissions of new transactions from users to miners, and lastly, the broadcasting of new blocks from miners to other nodes.

Tokens

represent a specific value, a type of digital currency. Often referred to as “cryptocurrency,” tokens are often the preferred method of exchange when investing in an ICO. When used to “kickstart” and ICO, a token allows users to reserve a product or service when it’s ready to go to market. It also gives investors a stake in the future success of that product or service. Token values are driven by the market, by supply and demand.

Buyers

are the purchasers of computing power through the Solum global network marketplace. Transacted using cryptocurrencies, buyers rent excess and idle computational power, storage, and bandwidth for the purposes of cryptocurrency mining, video and graphics rendering, artificial intelligence development and other uses to meet their computational needs.

Sellers

receive payment in cryptocurrency for renting out computational power, excess storage, and bandwidth through the Solum global marketplace. Able to profit from previously idle IT resources, a Solum seller could be anyone from a large data center in the UK, an insurance company in Seattle, to a personal laptop in a Manhattan apartment. Any amount of previously idle computational power could become a profit center as a Solum seller.

Hashe

a cryptography function, is a large number generated by an algorithm confirming into the blockchain 'Proof-of-Work,' that a unit of cryptocurrency has been mined. A hash algorithm takes data of an arbitrary size, numbers, letters, and more, then transforms it into a fixed alphanumeric string. Like a "digital fingerprint," a hash is complex and unique, requiring a huge amount of computational power to solve the algorithm, to successfully "mine" a unit of cryptocurrency.

Hashpower or Hash Rate

is the measuring unit of processing power in cryptocurrency mining. In other words, hashpower is the speed of solving the algorithm, out fast the "mining" is accomplished.

Introduction

Idle Computational Power

Idle computational power is the time when a computer processor is not being engaged by any computer program. When a program runs on a computer, it occupies a certain amount of time for processing on the Central Processing Unit (CPU). During idle time, electricity that would otherwise be used is saved.

The processing power of a computer primarily lies within the architecture of the CPU. CPUs made of a high clock speed and which support large word sizes tend to have more processing power than those that have slow CPUs with small word sizes.

The problem with idle computer power is that it leads to a massive loss of valuable resource and time. Since processing power cannot be stored, if a CPU can process 100 million instructions per second, one second of idle time translates to an equivalent of 100 million instructions that could have been processed.

A surplus of unused processing power is a massive waste. In this case, the underutilized computations would not be any less than 100 million instructions worth of processing. Processing power is fixed, and can only go so fast, with no potential of slowing the rate to at least ensure the possible wastage is lesser (Manish, Srilatha, Indrani, Nuwan, & Dean, 2015).

As is the case of an unsold airline seat, unused processing power cannot be stored, saved up, or banked for a “rainy day.”

The Negative Effects on a Business

Idle computer power is bad for business. It’s a massive waste of resources. And any waste of money, time or resources will affect the profitability of a business.

Even a lean-running business which maximizes their processing power and

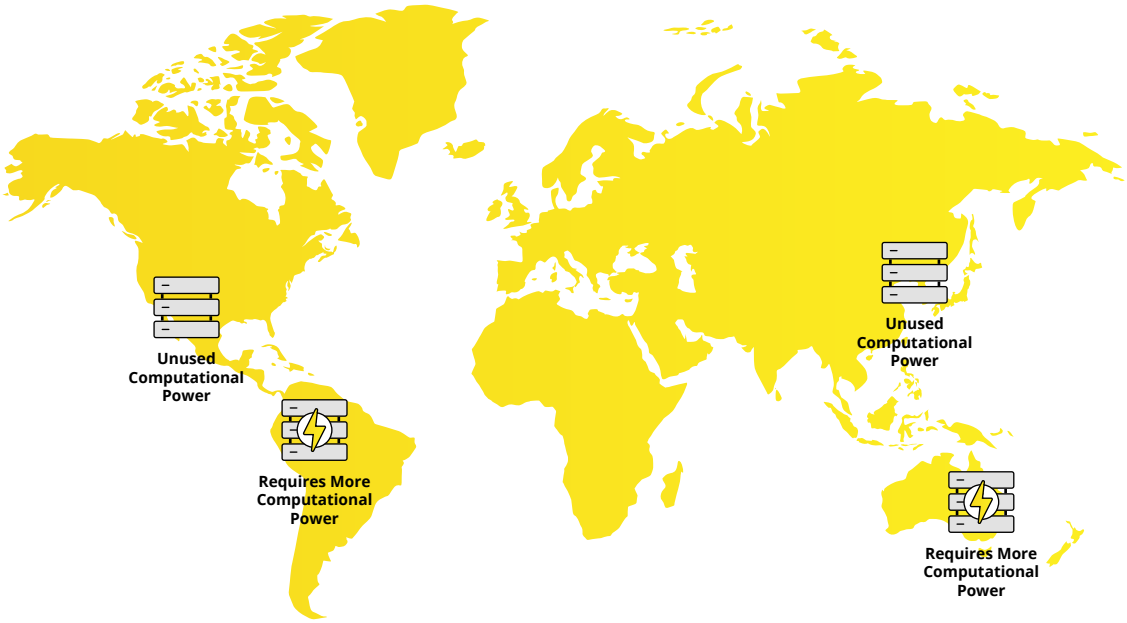
operations will still have some waste. When the staff has gone home for the night and the CPU sits idle, the resources are still costing money. Even though it might not be utilized overnight, they must be in-place, ready for the next day's tasks. The expense continues even when the CPU's output slows down or stops.

The Current Status

The "renting" of idle computational power, storage, and bandwidth in businesses is not yet a common practice. Especially in the case of transactions involving cryptocurrencies, many businesses are unaware such a transaction is possible or that they're "sitting on" the potential of an extra revenue stream. A department previously considered an unprofitable necessary expense could indeed become profitable, even after they've gone home for the evening.

Likewise, it is difficult for potential buyers of computational power to identify and locate potential sellers of needed IT resources. Even when they're able to locate idle hardware capable of meeting their needs, negotiations and pricing can be difficult since the sellers seemingly have all the bargaining power (Gareth, Efstathios, & Ariane, 2015).

Like most markets, it all comes back to supply and demand.



Introducting Solum

A solution to idle computational power

Solum is a global marketplace that solves a problem with the supply and demand of excess and idle computational power, storage, and bandwidth, by utilizing Cryptocurrency.

Buyers purchase computing power from a distributed network of suppliers

Sellers receive payment for renting out computational power, storage, and bandwidth

Solum utilizes the untapped resource of idle computing power on a distributed network of P2P nodes. The network consists of the combined power of all users' idle computational power. Buying and selling of computational power will be exchanged on a decentralized, P2P network that will run on the Ethereum blockchain, utilizing ERC20 compliant smart contracts.

How does it work for buyers?

Buyers can purchase computing power from a distributed network of suppliers. **Solum** identifies sellers who have sufficient computational power based on the needs of buyers. After identification of various sellers who can satisfy their computational needs, the buyer then has a pool from which to select from based on terms that are most suitable for them.

How does it work for sellers?

Sellers can receive payment for renting out computational power, excess storage, and bandwidth. **Solum** makes it possible for sellers to earn from something that would previously not have been lucrative to them, as they would have left the computational power idle.

The Solum Network

There are no minimum requirements for **Solum** network participation as users will be able to rent their unused computational resources from anything like a single laptop right to massive data centers. Businesses will be able to rent out their idle computer resources at any time they wish outside of their regular business hours.

The Solum Network:

- **Fully decentralized**
- **Built on P2P architecture**
- **Supported by its own exchange**
- **Uses custom client software**
- **Uses native $SOL tokens to settle trades**
- **Dividend Rewards for loyal users**

The Solum Network's node operation will be incentivized by the network. This will encourage decentralized participation in the network's security and will eliminate central points of failure.

Each transaction will incur a 5% fee that will go towards Dividend Rewards and network maintenance. Users who hold 100,000 or more Solum tokens in a single wallet will be awarded Dividend Rewards monthly. The more Solum tokens held, the more Dividend Rewards the user will be entitled to.

As an example, if the network generated 1 million Solum tokens during a given month and there were 800 million outstanding tokens, each Solum token holder would be entitled to a Reward Dividend of 0.00125 Solum Tokens (1 million divided by 800 million).

Since only those users holding more than 100,000 Solum tokens during the previous month are entitled to Reward Dividends, qualifying users will receive a higher, disproportionate number of Rewards Dividends.

Also, node operators will be incentivized to secure the network. Client software will enable users to interact with the Solum exchange and platform, to work out computational power requirements and availability, and to settle all trades.

Voting Rights will be granted to each token holder to participate in deciding important issues put up by company management for a vote.

50% of all transaction fee proceeds will be distributed to qualifying users as Dividend Rewards. The transaction fee as well as Dividend Reward structure may be adjusted at the discretion of the company to best meet the needs of Solum users and the company's infrastructure.

Hashpower Exchange for Mining

Hashpower exchange for mining differentiates **Solum** from others because buyers can buy direct from a pool of distributed sellers, unlike in other platforms where they must buy from a centralized cloud-based mining service, or where mining pools rent out their resources.

This makes it possible for the buyers to choose the computational power provider that best fits their needs and then negotiate directly on the pricing, as opposed to a centralized cloud based mining service where the prices are fixed.

Moreover, the **Solum** platform facilitates payment between hashpower buyers and sellers based on ICO tokens. Hashpower buyers will now be able to participate in a distributed free market for computing resources.

User Cases Beyond Mining

Although cryptocurrency mining is the most obvious use case, the Solum network will act as a global computational network and will also offer excess storage and bandwidth.

Users will be able to 'rent' their computing power to other users on the P2P network. These P2P exchanges will be facilitated and settled using the networks own $SOL token.

Buyers and sellers will be able to exchange; CPU, GPU, and ASIC computational power; excess hard drive storage; and bandwidth.

Services will not be limited to cryptocurrency hashing since almost any computational task can be enacted on the **Solum** global network.

Examples of potential use cases include, but are not limited to:

- Video and graphics rendering
- Virtual reality
- Augmented reality
- Machine learning
- Artificial intelligence development
- Research tasks
- Pattern recognition for climate science
- Facial recognition for law enforcement agencies

User Client Software

Users will be able to install user client software that interacts with the **Solum** network. The software can be used to identify available resources, and estimate computational power necessary for each user task. Once the required computational requirements have been discovered on the network, buyers will be able to interact with sellers of the network to enter into agreements.

All agreements will be settled using the network's native $SOL token. The client software will also act as an incentivized node on the network, and each node will receive a proportional share of the network's transactional fees.

Specific Benefits to the Customer

Customers in this scenario are both buyers and sellers, since they all rely on the services of the network. **Solum** provides an opportunity for buyers to get the computational power they need, which is competitively made available by Solum through a network of distributed sellers. Sellers can earn additional revenues from their idle computational power outside of business hours, since they would not have a connection to those in need of it.

So, for both **Solum** customers, they benefit from the platform from connections that improve their performance by taking good use of the computational power resources that are idle to increase output for one end, and increase revenues for the other.

Other key benefits are:

- **Buyers and sellers can negotiate rates**
- **Transactions are instantaneous**
- **Minimal fees using cryptocurrency, since no banks are involved**
- **A large pool of computational power will be available**

The Solum ICO Campaign

Overview

An ICO will be made open to the public and will involve the sale of the $SOL token in phases. Proceeds from the ICO sale will be used for the funding, development, and promotion of the network and its resources. Tokens can then be purchased directly from token holders through the Solum exchange initially, and then on third party exchanges as the network grows.

Solum intends to engage in an ICO to crowdfund the development of its platform into three phases; the first phase being the **Solum** exchange platform development; the second phase will be the creation of a distributed computational power protocol and network; the third and final phase will be to market and sell remaining tokens.

Phase I

In this initial phase, the target is to set up an exchange platform for the trading of existing cloud services and mining pools. This will involve a first-round sale of $6.67 million tokens which accounts for 33% of the total tokens expected at the end of the crowdfunding campaign. A percentage of the sale of the token will be used for the development of the **Solum** exchange platform that will facilitate the trading between the buyers and sellers.

Once development is complete, it will operate for 3 months and build up a community. Since the Solum tokens will not be launched yet Ethereum and or other alt coins will be used as medium of exchange. In launching the finished product, it is in line to build up trust with the community, so people are confident in the business. After this point, the project will enter Phase 2.

Phase II

Phase 2 involves the creation of a distributed computational power protocol and network, which will then be brought into the Solum exchange platform. This phase will draw on the successes of the first phase, namely, the creation of the computational power trading platform.

Token holders will be given a chance to enjoy the success of developing the Solum network in a second crowd sale. In the second round, some further $6.67 million tokens, an equivalent of 33% will be issued in addition to any remaining unsubscribed percentage from phase 1. Then after a further 3 to 6 months, the business will launch the third and final crowd sale. At this point the Solum community will have grown and is predicted to have tens of thousands of members.

Phase III

This final phase will involve the sale of the remaining tokens until they are completely sold out.

While phases 1 and 2 will last up to 120 days to allow a maximum time for the sale of tokens, phase 3 will continue indefinitely until all tokens are sold. It is anticipated that as time passes, the Solum community will grow larger and that new users will engage with the network.

In the unlikely event that any tokens are left unsold in any phase, those tokens will carry over to the next phase and company will collect dividends until tokens are sold. For the third and final phase, the token price will be set at the fair market price.

Hedge Fund

As laid out in our road map, if funding surpasses our requirements for Solum, remaining funds will be used to start a hedge fund. We will likely issue a new token to Solum token holders to account for differences in structure and company goals.

Our main mission for the hedge fund is to deliver a steady and long-lasting dividend to Solum token holders for investing in the crypto network. The hedge fund will be investing in ICOs, crypto companies and existing currencies which we believe have a strong potential for significant gains.

We will issue tokens built on a profit sharing "smart contract." The smart contract will allow token holders to receive 50% of quarterly realized profits. For our Solum project, users need 100,000 tokens in order to receive a dividend. However, for our hedge fund project we will lower this threshold to an amount to be determined later. Each token will receive the same amount of dividend based on the total supply. Naturally, a user with 1,000 tokens will receive a higher dividend income than a user with 100 tokens.

25% of profits will be reinvested back into the fund and 25% will be carried interest. A yearly management fee assessed on total assets will be instituted to keep the company running. As the fund grows we will work to diversify into other asset classes outside of crypto currencies should potentially lucrative opportunities presents themselves.

The fund will be a closed-end fund that will enable it to grow in size without the need of attracting additional investors. This will allow the fund to grow naturally in size as well as provide token holders stable, long-term dividends which will increase in value over time.

The closed fund will also eliminate investor exposure to losses if they ever occur. In the event of a quarterly loss, no dividend will be paid out and profit sharing will be paused until the fund balance surpasses the minimum amount needed to operate again successfully. A reserve fund will be setup to help avoid disruptions to dividend payouts and company operations. The company will also reserve the right to use the funds to buy back tokens and burn them. Each quarter, 3% will be set aside until 10-30% of the fund's portfolio is vested in Bitcoin as the reserve fund.

Token holders who hold our tokens long-term will be highly rewarded with consistent quarterly dividends as well as the appreciation in price from the token itself. As the fund size grows and larger dividends are produced off the fund, we anticipate the token price to also rise accordingly.

Token Distribution

The Distribution of the tokens will be based on the following breakdown. 33% of the tokens will be allocated to the **Solum** founding company with:

- **50% to be used for development of the exchange and platform**
- **50% to be used as a marketing war-chest**
- **34% of the tokens will be owned by token purchasers and will be made available to use on the exchange for the purposes of buying and selling.**
- **33% of the tokens will be owned by the owners for incentive purposes vesting monthly over a 3-year period.**

Why Invest?

Solum is a prime investment opportunity that any visionary investor should consider.

Think about this; less than 10 years ago “cryptocurrency” did not exist, yet industry experts predict the cryptocurrency market value will soon exceed $200 billion USD. A trillion dollar market will soon be on the horizon.

Imagine being a Bitcoin investor who risked just $100 in early 2011 and today sits on roughly $2.7 million.

Of course, we can’t promise Bitcoin-level returns on your **Solum** investment.

What we do know is that **Solum** is uniquely positioned to provide a service that was unthinkable a few short years ago.

The technological developments that have propelled cryptocurrencies like Bitcoin to where they are today are the same advancements that will serve our users AND provide our investors with a tremendous opportunity.

Solum goes beyond cryptocurrency mining and adopts a concept of supplying idle computational power to those without enough, as a means of saving on resources and generating more output from what would normally be non-productive computational power. This adds huge value for a range of businesses.

Considering the number of companies that have idle computational power, especially outside of working hours. **Solum** holds the key to solve problems on a global scale. Computational power can be rented to other companies, in a different time zone, with similar computational power requirements to use it.

Businesses’ CPUs can be engaged *around the clock,* with the advantage of time difference across the world, working to the advantage of both buyers and sellers.

Since **Solum** will receive a % fee from every transaction on the platform, there is a strong potential of high returns on your **Solum** investment.

Register to participate at XXXXXXXXXXXXXXXXXX. Also, feel free to contact us with questions or for more details at XXXXXXXXXXXXXXXX.

Maybe you didn't buy $100 worth of Bitcoin "back in the day." The good news is though that the **Solum** opportunity is now in front of you now, today.

THIS is a ride you won't miss out on!

The Solum Team

Karol

Senior Java Developer Karol comes to Solum with an impressive resume' which includes extensive Blockchain, multichain, and Ethereum experience. This strong Java programmer studied at the prestigious Poznan University of Technology, receiving his Master of Science degree in 2008. From bike rental software to online lumber auction sites to world renowned e-commerce projects, Karol's experience and insights have played a strong role in many successful ventures.

Adam

Like his friend and partner Karol, Senior Java Developer Adam also received his Master of Science degree from Poznan University of Technology. His strong asynchronous programming skills combined with his extensive background and knowledge AngularJS, PrimeFaces/RichFaces (JSF) and other JavaScript frameworks give Adam a deep understanding of release management, deployment risk assessment, failure analysis and more. Specializing in developing enterprise, cloud and mobile applications for the modern business environment, he is an essential part of the Solum team.

Lukasz

Senior PHP Developer Lukasz joins Solum from one of the UK's biggest and most successful B2B marketing platforms. As manager of the development team, he's a renowned specialist in REST, SOAP+WSDL, Doctrine 2, ReactJS, jQuery, Bootstrap (js), Angular 2, Node.js React Native, requirejs, Drupal 7/8, Magento 2, WordPress, WebGL, HTML5. In addition to his pivotal role in developing crowdfunding tools for the real estate market, Lukasz has designed websites and complex mechanisms for well-known tour operators, museums, and others.

Marek

Solum's Senior UX Designer Marek served an integral position in developing B2B marketing platforms, mobile betting systems and dozens of other well-known and prominent projects. As a co-owner of the digital agency Grafekt S.C., Marek's 18 years of Graphic Designer experience as well as his expertise in HTML5, JavaScript, CSS 3 Adobe Platform and more, he's specialized in food and beverage applications for his long list of clients around the globe. Also, Marek is an excellent photographer as well!

Milosz

Mid-senior PHP Developer Milosz comes to Solum with a passion for designing and implementing complex mechanisms and functionality. Particularly adept at preparing program-level and user-level required documentation, his experience in Drupal, Magento, WordPress, Bootstrap, Ionic, ZF2, REST, SOAP+WSDL, Doctrine 2, Node.js, Angular 2 JS, ReactJS, React Native jQuery, Bootstrap (js), CSS3 and other skills has been invaluable to projects around the world. From crowdfunding in real estate markets, websites and mobile apps, betting systems and internal CRMs for well-known tour operators, Milosz is a crucial member of the Solum Team.

References

Dong, H., Karl, H., Ross, L., Vikram, H., Yasmin, A., Mikari, K., et al. (2016). Virtual Currencies and Beyond: Initial Considerations. International Monetary Fund, 5-33.

Dr Garrick, H., & Michel, R. (2015). Global Cryptocurrency Benchmarking Study. London: University of Cambridge.

Gareth, P., Efstathios, P., & Ariane, C. (2015). Trends in cryptocurrencies and blockchain technologies: a monetary theory and regulation perspective. The Journal of Financial Perspectives: FinTech, 5-40.

Joon, I. W. (2017, June 05). qz.com. Retrieved October 9, 2017, from qz.com: https://qz.com/994466/the-new-cryptocurrency-gold-rush-digital-tokens-that-raise-millions-in-minutes/

Manish, A., Srilatha, M., Indrani, P., Nuwan, J., & Dean, T. (2015). Understanding Idle Behaviour and Power Gating Mechanisms in the Context of Modern Benchmarks on CPU-GPU Integrated Systems. IEEE, 366-376.