THE DAGS
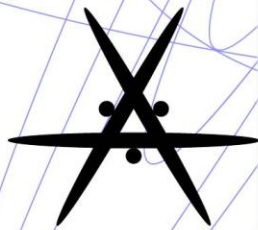## Decentralized Autonomous Government System
Utilizing Celestial Computing

Whitepaper

LOGOS EARTH

To transform society's governance so profoundly,
we marvel at how we managed without it.

EXECUTIVE SUMARY

To transform society's governance so profoundly, we marvel at how we managed without it.

The Challenges Faced because of the Lack of Secure Contracts

Today we use middlemen to secure our interests we arrange to have fulfilled with others. Whether this be a video hosting website, or an online auction or a taxicab service, there is at least one middleman involved that ensures the service or item is delivered as advertised. Without these middlemen, the world could not function with the level of assurance that we have. Middlemen are needed for payment systems. Middlemen are needed for insurance of transactions. Middlemen are needed for hosting websites. However, the world is becoming more and more autonomous in that bots and AI are capable of replacing middleman companies. Logos Earth aims to create a technology which merges all these middlemen together and annexes them for automation in a unified protocol. This will allow everyone, despite their knowledge of all these services being linked together, to be able to deploy and manage organizations with all of these advancements with negligible cost as unnecessary bureaucrats are eliminated, creating never before seen cost savings and contract security that is next to perfect.

> **Middlemen as a Service**
> Middlemen institutions add security to transactions, for a cost.

> **Replacing the Middleman**
> Middlemen can be replaced by bots and AI that secure transactions for us, for only the cost of work done.

Connecting Traditional Services with Decentralized Services

Open blockchain technology has opened up security that is un-hackable. However, open blockchain is inefficient and expensive. A hybrid of open blockchain, private blockchain, and cloud computing are necessary to be combined to get the best of everything. A complex ecosystem emerges in how funding can take place along with wrestling the complexities of consensus for updating and future deployment of features. We at Logos Earth have wrestled through the technicalities of this. This hybrid we call Celestial Computing and the technicalities of linking this together so that it funds and updates itself we call the DAGS (Decentralized Autonomous Government System). Anyone can use what we make with Celestial Computing to deploy their own DAGS which is self-sustaining and self-funding. It also is compatible with other DAGS. DAGS themselves host Municipal Coffers which are virtual DAGS that do not concern themselves with the maintenance aspect of the technology but can focus on utilizing it. This is a hybrid of centralization, distribution and decentralization. With Celestial Computing, financing the services we rely on will be economical, easy and secure. In addition, a whole new wave of decentralized technologies that have only been imagined up to this point will become practical and ready for widespread adoption. No matter who is deploying the technology, Celestial Computing will allow them to interface with preexisting technology and the most advanced technology by utilizing advanced smart contracts which link these systems together ensuring that even the smallest of work is fairly compensated for.

> **Celestial Computing** will link all forms of computing, creating an economic and interconnected ecosystem for individuals and entities to function.

The DAGS Ecosystem Economizes all aspects of Work

All of the services the DAGS is able to provide can be set up for individuals, non-profits, corporations, or governments. In addition to this, new types of organizations only possible through the DAGS will be able to exist. Organizations that hire autonomously and have decentralized management bringing a new type of agility into the workplace that has not been possible until now. Ultimately, the DAGS will provide jobs that are efficient for today's

world and offer advanced financial services that have only been enjoyed by an extreme minority due to the cost of these services.

Jobs will be made available that are autonomously and decentrally managed yet fully run and operated. The DAGS system will be empowered to hire and manage people it employs for truly decentralized organizations. Payment for all this along with insurance of fulfillment of the contract is built into the DAGS ecosystem.

Services once thought centralized will be able to be decentralized such as web hosting. Not only will the authority of who owns the server and manages it be decentralized, but the management will be decentralized as well. Services provided by websites such as commerce, social networks and media, will all be able to be funded in a decentralized way that is fair without any middleman in the process.

The Financial Opportunities made Available through DAGS

All financial services will be offered in the DAGS ecosystem, compliant with government and the decentralized movement. Advanced financial services such as municipal bonds will be leveraged by towns and cities easier than ever before. With this system, financial services such as ETFs will be mainstream among the poorest in the nation.

The DAGS ecosystem enables all forms of wealth storage to be automatically exchanged to get the job done. Whether it is decentralized gold, US dollars, Bitcoin, or a bond, all of these will be able to be used as payment and accepted as payment without the need for middlemen running an exchange platform. The work of the exchange will be secure and decentralized run by the community. Cryptocurrencies which function as payment for a unique service they provide will be especially empowered on this system as both their service and an exchanging into them for their service will be enabled autonomously.

Everyone will be able to have their own personal municipal govern their assets in a personalized way which buys and sells autonomously all forms of assets on their behalf. Thus, whether you have one dollar or billions your assets will be able to generate the same level of security and interest as the other.

Indexing of all types of assets in the DAGS will allow trade and financial services to be delivered in a decentralized manner. Through advanced financial services, custom tailored to the individual, all of their debts and credits sitting in all their different accounts will be merged together in a way that cancels negative interest and generates positive interest. This will be displayed in a customized way so as to be understandable to that individual. Insights through a personalized financial assistant (AI) will work for them to help them make purchasing decisions and investment decisions that is only in their best interest. All this will be done without personal information being violated.

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Philosophy Behind The DAGS

Difficulties of Living in the Age of Knowledge

From the Industrial Age to the current Knowledge Age we have had to move through many different types of systems. In the Industrial Age, systems such as Communism and Capitalism sprung into existence to meet the new demands. Although some may argue these ideas have long historic roots, the Industrial Revolution molded these concepts into their current expressions. Now in the Knowledge Age, governance must be restructured to work efficiently with current educational, mercantile and municipal entities; just as they were reshaped for the Industrial Revolution.

The systems of today that are used to educate and hire are out of date. Employers require greater assurance that employees will be competent with minimal training provided by the hiring entity. In the Age of Knowledge, the cost of learning is rising. Finding someone with the knowledge and skills in a given area for a particular job with little to no prior work history is challenging. As a result of this shifting demand in the workforce, a new ecosystem has been evolving.

Another challenge in the Age of Knowledge is that every aspect of life is becoming increasingly complex. The problem is, skilled knowledge is ever more difficult to unearth for one's self. Even when the knowledge and the skills are known, applying it

> **Knowledge & Economic Systems**
> Economic systems are everchanging as society evolves. Until recently, anyone could master economics, or an aspect of it. However, in the ever-increasing complexity of our world today, we need something to help us thrive in a society with an ever more complex economic system.

in one's life is becoming impossible. Ironically, society is unable to tap into its own resources. The way to remedy these issues is to better interlink municipals in order to sort what is vital, then deliver it. This new ecosystem is the DAGS (Decentralized Autonomous Government System); it seeks to address the challenges in the Age of Knowledge.
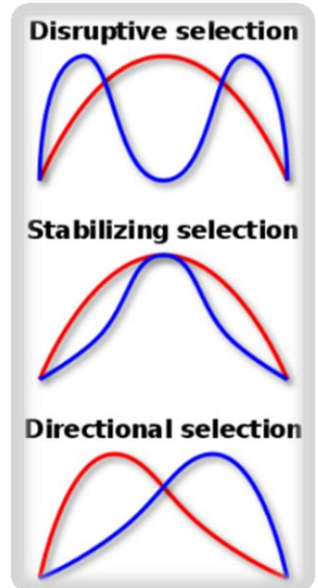
Historical Overview of the Systems & Philosophies of the DAGS

A fundamental ground that the DAGS is established on is that the systems in place today do not equip the average individual to understand, much less represent, the ideologies, practices and systems that individuals, corporations, and municipals use to navigate society. This cripples those who were never taught these ways of thinking in order to understand the grand framework in which they function. It is also unreasonable to suppose that everyone could be taught these things. Thus, to facilitate change we will look at a philosophical framework of thinking regarding the theory of evolution. It is frequently overlooked and is called Stabilization Theory. Understanding this theory will help us better understand what the DAGS is, and how it seeks to empower society.

Stabilization theory asserts that rather than fighting for dominance, two entities would sooner work together to build each other up, sharing the benefits of their resources rather than fight for top position which would come with its own costs to attain and maintain. As human society has developed, many new systems have come alongside the old. Take for example, the evolution of currency. At some point there was a transition between the trade of goods, to trading goods for coins made out of metal, to paper representing those metals, on to federally backed currencies by faith in their government. For the most part these systems worked in conjunction with each other; while some were trading sheep for shirt, others were trading shirt for coin, etc. Initially the systems coexist; often they merge slowly

together forming something new; like gold backed currency transitioning into the fiat currency we commonly use today. It is the exception rather than the norm to have an ecosystem in direct conflict fighting for dominance. On the contrary, when a good system flourishes it gives way for other systems flourish with it. Gold and other metals that were used to mint coins is still used as a store of value, paper currency never replaced gold, rather, the use of gold for currency made way for paper currency to flourish. It can be thought of as the norm that Stabilization with a competing system takes place rather than direct competition such as Disruptive and Directional Selection take place. The reason we think of these other two systems more commonly in evolution is because they generally stir up more attention due to their controversy, thus there is more to say about them in the wake of the controversy. We say a lot more about a nation in its time of war than in its time of peace. However, the DAGS is not looking to stir up a commotion, it is looking to make a contribution that will make the world a better place.

Let's look more in depth at Stabilization Theory and some of the competing systems to the stabilizing process. There are three ways that should be considered in which selection takes place: Disruptive Selection, Directional Selection, and Stabilizing Selection. One of the biggest problems blockchain and cryptocurrency faces today is that it is trying to disrupt, and in some cases do a directional switch in a huge number of ecosystems all at once. Disruption in an ecosystem requires an enormous change within an organization, unlike Stabilization which neither diminishes the status quo, like Directional, nor requires massive overhead like Disruptive; Stabilization is in essence, an easier and cheaper way to transition over to something. Compounding on the challenge of the crypto movement trying to use Disruptive or Directional tactics is the philosophical systems it is trying to break into were established thousands of years ago. The only way for this movement to succeed is for it to move away from Disruptive and Directional methods and for it to switch to Stabilization Selection in its deployment. The crypto movements technology and ideals are sound, however its deployment needs refinement.

The greatest problem facing blockchain technology is that it is viewed within a system of fighting for survival or dominance. Blockchains frequently compete to provide the greatest rewards to their investors thus cryptocurrency has been primarily a competitive wealth storage system. These practices hinder an environment of innovation and stunt its passion to evolve society. Rather than approaching the introduction of the numerous applications of blockchain in a disruptive manner, the best chance for blockchain to succeed is to integrate through the stabilizing approach. Where both blockchain and conventional systems are implemented at the same time and work together for the optimal results to its users.

The DAGS will enter the market in a way that will maintain stability in traditional markets while also paving the way for innovation. Allowing for an ease in mass adoption.

For the new open and secure world of blockchain technology these stabilizing principals must envelope all these facets. The DAGS will create an ecosystem not only for all blockchains to flourish, but also provide a platform for Industrial Age systems to flourish as they transition into the Age of Knowledge.

Celestial Computing Rises Above

Blockchain Computing is a common type of Decentralized Computing. This computation may be a simple maintained ledger, or as complex as a virtual machine running on a Turing Complete language. When Blockchain Computing is in conjunction with distributed servers it becomes a type of Celestial Computing. Frequently today this

is used to create decentralized data servers. The distributed servers are not a part of the blockchain itself, but they are governed by the blockchain; this is the beginning of Celestial Computing.

Let's look at the future of this, Celestial Computing is blockchain computing acting as a server which talks to (and creates) a CCVDM (cloud-computing-virtual-distributed-machine) acting as its client. The CCVDM interacts with the data and computational power with the speed and stability of cloud computing and the benefits of the blockchain. When properly deployed Celestial Computing will nullify the negatives of both while utilizing their advantages. However, the DAGS will need to utilize Celestials Computing at a much larger level than this contemporary form of Celestial Computing. The DAGS will utilize these types of computing as well as integrating traditional forms of computing (i.e. servers, cloud, PCs, and even people) making integrated hybrids as needed with cost effective and agile deployment. This is essential to step fully into the new age. Celestial Computing designed for the DAGS will utilize, and therefore mine, all types of computing.

> CCVDMs will allow centralized entities to take advantage of decentralized and distributed services without compromising speed or security.

The Essence of the DAGS

The DAGS is a Theoretical Framework which links multiple systems together; technological systems, nontechnological systems, blockchained systems and societal systems. The DAGS has many subsystems operating within it. Many of these systems may not be designed to work with the DAGS, but the DAGS is designed to work with them. This makes the DAGS a large system which encompasses all human socio-economical systems of this age.

The DAGS utilizes the power of Celestial Computing. In doing so it will create an ecosystem where worth is viably distributed. Whether the computation is Cloud Computing, the human mind, or Blockchain Computing, all these systems added together make up the essence of the DAGS as it enables appropriate movement of funds to the workers involved.

Integrating the Technology of Tomorrow

The blockchain of the future needs to have complete updates, but it cannot push out its older version without a transition period. This is especially the case when a fundamental ideology has been altered in the new blockchain. The blockchain of the future must be able to update and have people choose to move their coin over. In doing so, those coins will be eliminated from the old version and transitioned to the new one. This way more than one version of the blockchain can exist at any given time without the problem of creating new currency as well as avoiding the use of force on the values and beliefs of the users. With this same principle in mind, copies of the same source code for the DAGS blockchain can be modified. It can still interact with other DAGS blockchains providing the same safety and security without forcing change on its users.

> **The Oblivion Wallet** is designed to transition users of a blockchain to its updated version without force or creating duplicate coins.

In addition to this, the blockchain of the future must be able to collaborate with other blockchains in order to fulfill the needs of the users. When complex systems of trade are necessary, going back and forth between using incompatible technologies necessary to make the complex system work makes adoption of the complex system difficult. The DAGS aims to minimize the complexity of using such a diversity of technologies. Some of the ways this will be accomplished will be through the coexistence and ease of use of multiple systems, generating backwards

compatibility, and future proofing. This will ideally create a platform that does not force the user to pick one system over another, nor the entities of each system needing to compete in a hostile environment. This is the only way to have a truly decentralized and autonomous network.

Tailored Interfaces are Ideal for the Best User Experience

In traditional blockchain services, there is typically only two types of users. Those who mine, and those who use its services. Originally, this was not the idea behind blockchain. A user and a miner were typically thought of as one in the same. This idea stems from a server/client relationship which is still how we think of the World Wide Web for the most part. Instead of having a black and white view of users, the DAGS proposes a more colorful view of users which also uses entirely different fields then just data up and data down. The DAGS uses data storage, data calculation, and even more importantly, human work, all as ways of generating work on the DAGS system which in turn creates value that can be denoted and exchanged. This is considered to be Celestial Computing in its fullness. Limiting users to one of two options (client/server) extremely limits a number of types of users from utilizing what blockchain has to offer. The DAGS will deploy several GUIs based on a user's experience, needs and desires. The core components of making Celestial Computing a reality have to revolve around different types of users, their needs, and how each one will generate work and consume work in such an ecosystem. Today's needs, if thought of on a spectrum, can help us create an ecosystem which will make the society that we know this age needs.

The importance of the GUI Experience cannot be stressed enough for the DAGS. Extreme attention is given to protocols, UX & UI; all the while keeping in mind the continued indefinite development of them. Just like OS GUI's empower users of all different levels, the DAGS will empower users with an OS feel to the DAGS's surfing of Celestial Computing. No matter who the user is, mining will be made easy. Those who use the DAGS system can be broken down into four types of users. The GUI experience of each will be finely tailored to their requirements.

GUIs Tailored to the Individual

- Basic
  - ➢ This type of user enjoys simplicity of navigation and ease of use; they care little to adjust settings and customize their experience. The GUI will enable surfing of the blockchain. Setting up all types of municipals will be as familiar as any other social media platform. This will suit the majority of users.
- Advanced
  - ➢ The advanced user wants to feel that they are able to customize their experience in a wide range of aspects of UI to their liking. Settings which could be dangerous will be enabled for adjustment. GUI enabled Bot set up will allow a multitude of municipals for organizations to be set up with a low learning curve. Complex municipals utilizing Bots will be able to feather tailor their Bots to the group's needs. The majority of infrastructure, creation and maintenance will likely want to do the majority of their daily interactions in this mode.
- Power
  - ➢ The power user wants to feel empowered to deploy scripts and adjust settings to maximize efficiency without having to know how to program. Power users most often want to customize their UX to maximize efficiency and minimize time spent on redundant tasks. Unfortunately, in many modern technologies, the power user is minimally empowered at best. In the DAGS system, a GUI empowered system will display a registry of permissions enabling deployment of complex scripts. Parameters of AI construction will

empower those without programming skills. Power users can be thought of as the backbone of content creation whereas programmers can be thought of as the creator of the backbone.

- Developer
  - ➤ The UX of developers are often overlooked. Optimization for developers is paramount for the continuous programming of the DAGS. The source code will be written to maximize ease of further development, with meticulous documentation such as Behavior Driven Development being used to empower other development teams. Agile methodologies will feel empowered in the GUI enabling rapid release cycles of any team inside the DAGS ecosystem. Open API will be integrated into Celestial Computing so currency trading, database permissions and web-based information exchange is utilized in 3rd party applications with ease. Tools and plugins for project management and decentralized business management will be integrated into the ecosystem.

New Concept Review

Celestial Computing – is the concept of linking all different types of computation together. This is identical to Cloud Computing up to the point of where it becomes distributed and/or decentralized. In a nutshell, it's the smart contract aspect integrated with extreme Hybrid Cloud Computing which makes it need a new term which sets it apart from Cloud Computing as checks and balances are determined by code and not ultimately the controller of the physical server.

DAGS – (Decentralized Autonomous Government System) is an application (or plugin) where Celestial Computing is enabled to utilize the DAO (Decentralized Autonomous Organization) with centralized layers in interconnecting databases with other DAOs and DAGSs. The DAGS is the data base which is able to host the technology of Celestial Computing that is proposed in this White Paper.

Municipal Coffer – sits inside a DAGS. In its own right it is a DAGS in and of its self as it is able to do everything a DAGS can do on Celestial Computing. However, unlike the DAGS which hosts it, mining is not a concern for upkeep. But nevertheless a Municipal Coffer is empowered to have its own separate mining so that it could become self sustaining and self hosting along with hosting as many Municipal Coffers under its self; it is capable of self replication.

CCVDM – (Cloud-Computing-Virtual-Distributed-Machine) are a hybrid of cloud computing and private blockchain. Their security can vary from extreme to basic depending on the needs of the application.

Core Components Behind Celestial Computing

Principal Municipals of the DAGS

An Introduction to Municipals

Decentralized municipal governance is at the core foundation of what sets apart the DAGS from everything else. A municipal can be thought of as any type of government which is specific to a group dedicated to accomplishing a specific task. Anyone at any time can make a municipal which they can invite others to for something as simple as gaming or something as complicated as starting a company. Even bots can be their own municipals. In some cases, such as AI, the ability for it to create municipals for itself and the community is empowered. All of the tools needed for the user experience will be custom tailored to fit the individual's way of thinking in their given field. This way, making a municipal will feel intuitive.

Bot – is a automated program which runs on a script.

AI – is a program which can generate and maintain its own script to run itself.

Blockchain Secured Municipal Coffer

A Municipal Coffer is a place where information is privately stored in a little box on a blockchain. This stores essential information that is needed to make our accounts function and work together the way each of us wants it to. It is empowered to hold the keys to access different blockchains. Permissions and passwords to all parts of each blockchain are stored here. This enables true and transparent privacy of personal information to whatever magnitude we desire. In practice this will enable anonymity, pseudonymity, and complete transparency depending on the permissions granted to the other parties. For example, making a payment on your mortgage can be transparent, because the bank needs to know who is paying their mortgage. If one wants to make purchases, but doesn't want to compromise their personal data to large companies, an assigned ID can be issued so that the Municipal Coffers that are doing the transaction knows your identity, but the people in control of those Municipal Coffers does not. This will also create anonymity by means of only those who need to know your interactions will be given that information and to everyone else it is anonymous activity.

Pseudonymity – is a way of identification where anonymity is maintained while they can still be verified. This means that someone can be verified through a third party, which maintains anonymity and trust. Examples are OAuth or OpenID.

This technology enables all cryptocurrencies keys to be stored in one place with the security of the blockchain. Access to this blockchain may have as many layers of authentication and security as we see fit. These permissions will dictate the protocols of how one Municipal Coffer will interact with other Municipal Coffers as one person may possess more than one Municipal Coffer. Our Municipal Coffers can link to one another in order to achieve a seamless experience from one system to the next.

Another advantage of a Municipal Coffer is self-pruning. History – not being necessary to store – creates a small & efficient blockchain. Localized transactions can take place with zero-confirmation because of *trust alone* of each other's Municipal Coffer. As a measure of security and accountability, a Municipal Coffer can be blacklisted if other Municipal Coffers complain about the behavior of another Municipal Coffer. Any transactions where a user was cheated, scammed or lied to can be addressed and resolved through 'Civil Servants of the blockchain' if such an

insurance is utilized. [Note: If theft or other problems occurs related to the technology an Oracle will be involved in the mending of the matter.]

In addition to cryptocurrency, nearly every country's federal banking system will be enabled to be placed into its own Municipal Coffer; an example could be a bank running its system through a Municipal Coffer. Special permissions can be coded for Municipal Coffers to allow us to abide by the legal requirements of a federally insured account. This will enable fiat accounts to interact with our other Municipal Coffers. Fiat will be held in separate Municipal Coffers, just as cryptocurrency keys has its own Municipal Coffers to track and perform transactions. Now one can have a traditional Financial Services interact with decentralized services efficiently, effectively and legally.

Side storage for the Municipal Coffer is still able to accomplish all of this functionality with the added benefit of making the blockchain that holds Municipal Coffers in a bloat free manner.

Complex permissions are empowered within the DAGS ecosystem. Identity verification will be stored in the Municipal Coffer being accessible only to entities whom the holder permits. In some cases, permissions need to be integrated with other Municipal Coffers that can override the permissions of another Municipal Coffer so that insurance, legality, and assured commerce is accomplished. For example, the Municipal Coffer which holds fiat currencies that are federally insured are ultimately controlled by the government of the federal insurer, thus overriding permissions must be given to the government so that compliance is upheld. It is through advanced permissions which are kept transparent & optional that legality can be upheld, and liberty is made tangible.

Other Municipal Coffers that hold account keys to BTC (Bitcoin) will have whatever perms that the user deems fit for them. This now allows you to trade BTC using your bots to trade with another bot of someone else's Municipal Coffer. Rather than transferring BTC from one BTC wallet to another, only the ownership of the private key will be transferred. This works because the first owner won't know the private key of the BTC in the first place and won't have the ability to access it. This avoids the cost of the transaction as well as maintaining anonymity on the BTC blockchain. At any time the BTC can be unlocked to reveal the private key if the owner wishes to remove it from the bot's control.

Municipals are empowered through Municipal Coffers with the ability of having multilayered transactions to ensure the contract is fulfilled. This type of transaction can be done with all types of wealth that someone decides to store: cryptocurrencies, fiat, even decentralized gold that is monetized into Commodity Backed Cryptocurrency. Gold requires a more complex municipal than one that just runs code; as it needs human auditing and cannot be audited by a bots alone. Municipal Coffers are the foundational technology behind the empowerment of municipals to accomplish what was previously centralized and expensive tasks.

Works of the DAGS

Patron Bots

Patron Bots are unique and specifically coded to the needs of its owner, and function within a Municipal Coffer. Patron Bots are patrons in a symbiotic relationship with the owner(s) of their Municipal Coffer which can be of a specific municipal organization or nuclear family therefore they are not necessarily a patron of just an individual but can be a patron to a collective group of individuals with the same representative needs. A Patron Bot belongs to a

Municipal Coffer, the code is set up, and develops over time to represent the wants, hopes, needs, dreams, and desires of the holder(s) in order to represent them ever better. Its development will be guided by the holder(s) of the Municipal Coffer so that it will only act in the best interest of its holder(s). Patron Bots may communicate with their own Subsidiary Bots or communicate with other Patron and Subsidiary Bots in order to accomplish its objectives. So, the Patron Bots are unwavering in their loyalty to the holder of the Municipal Coffer and are designed to evolve to best suit the ever-changing needs of its owner.

> **Patron Bots** can automatically move currency in order to increase the overall value the Municipal Coffer holds.

Subsidiary Bots

Subsidiary Bots operate through Celestial Computing in order to delegate permissions and move information. They will determine what is the most intelligible and efficient way to deliver on a task; thus, removing the human component of this work. Subsidiary Bots operate in tiers. The higher the number of the tier indicates the ultimate authority it has in its permissions. For example: zeroth-tier subsidiary, first-tier subsidiary, second-tier subsidiary etc. Zeroth-tier Subsidiary Bots are special in that they will serve as a fiduciary between the blockchain and its users. In essence, zeroth-tier bots are the hard-wired code of Celestial Computing giving the permissions flexibility to calculate and redirect perms and actions as needed. First-tier subsidiary and down will act more as ambassadors, advisers, lawyers, or paper-pushers. Bots from all tiers help interconnect Patron Bots and people together. They will do the work that is needed to be shared, with trust, between two or more entities. Municipal Financial Services, Secure Credit, HELOCs, Margin Trades, Loans, Retail, Insurance are all best suited for the work of Subsidiary Bots on the blockchain so that trust between entities can be assured. Think of Subsidiary Bots as incorruptible bureaucrats.

> **Fiduciary** – is a person who holds a legal or ethical relationship of trust with one or more other parties. Typically, a fiduciary prudently takes care of money or other assets for another person.

Civil Servants of the DAGS

Civil Servants of the DAGS are people who will be hired and managed through Celestial Computing using Zeroth-tier Subsidiary Bots. A Civil Servants work is considered a type of human mining. They work on behalf of the DAGS to uphold the trust and integrity of Celestial Computing by fulfilling the needs that only a human can do. Civil Servants will have a variety of job duties and criteria. For some of these duties' verification of the Civil Servant, identity may be done by other Civil Servants. In most cases, verification may be done through follow-ups with Subsidiary Bots. Verifying the correct work was done through redundancy checks. The ledger used in the Celestial Computing for the Civil Servants will be as spread out and as distributed as possible. Whereas other aspects of Celestial Computing on the DAGS may be more centralized when speed is a priority over security. The advantage of the contrasts is that Civil Servants will have highly distributed and redundant checks and balances. This empowers them in the trust necessary to safely audit people and property. Private blockchains and cloud servers will be able to have first party inspection with more trust in their inspection than any third party could ever give. Inspections are not just limited to the infrastructure of Celestial Computing. Civil Servants maintain the faith of the DAGS's integrity, things that only a trustworthy human can verify are done by them. Through these Civil Servants of the Blockchain the DAGS is able to verifies its own integrity of itself and for itself. This is automation in a complete, decentralized manner. With that said, Civil Servants are never above the records of an authenticated ledger. Civil Servants work is randomly audited

> **Civil Servants of the Blockchain** work and verify aspects of the DAGS ecosystem in ways that are unable to be accomplished by non-human means.

on a regular basis by other Civil Servants to ensure the integrity of the Civil Servants work. Just as a decentralized blockchain ledger has created an infallible record for computations, so will it create an equal accountability for the Civil Servants of the DAGS.

Tasks Civil Servants will do

- Auditing decentralized gold among other physical forms of wealth storage that are monetized into decentralized Commodity Backed Cryptocurrency.
  - Gold can either be a commodity money system from coins that have been crypto decentralized representation or jewelry that has been tokenized monetization for its representation in trade.
  - Gold is stored in local safes and traded as tokens on the blockchain.
  - Continued verification of the gold is to be done through Civil Servants
  - Gold may also be transported by Civil Servants to keep the small decentralized safes pseudonymous.
- As a service for startups verifying their legitimacy.
  - Continued investigation of work accomplished
  - Background checks and tracking of employees at the startup
  - Physical auditing facilities

Gold used for jewelry stores value and has the added benefit of:
- Exempt from IRS sales reporting
- A discreet means of transporting wealth once its crypto is exchanged at a local safe for its value.
- No historical precedent of confiscation
- Is beautiful and makes a great gift

- Protecting the DAGS from malicious developers.
  - Keeping their names on file and location up to date.
  - Empowered and funded to take legal action to resolve an issue; utilizing local laws.
- Dealing with security breaches unrelated to computer code.
  - If someone has their person or information compromised (duress, thieves, etc.) they can be locked out of the system on their own volition or by their Patron Bot. A Civil Servant can follow the protocols to unlock the Municipal Coffer to the rightful party.
  - Upon someone's death, the Civil Servant can unlock the Municipal Coffer to the appropriate inheritors. (So long as this function has not been disabled in the Municipal Coffer).
- Filing legal paperwork necessary for legitimizing municipals running on the DAGS.
  - Lawyers on the DAGS working on behalf of individuals or municipals.
  - Providing the service of sales insurance when bots are not enough.
  - Resolving blacklisted Municipal Coffers issues.
- In some instances, Celestial Computing consists of centralized servers. Although they may be using private blockchain they are still at the risks of centralization and are thus to be audited for physical security of the servers.
- Civil Servants can be private police, security, or bounty hunters used to uphold the legal system if breaches incur on the DAGS.
  - This is a type of protection and assurance policy which can be used in everything from retail to critical infrastructure inside the DAGS.

Amending Critical Blockchain Infrastructure in the DAGS Ecosystem

Oracles

In short, an Oracles job is to make alterations to the blockchain when permissions have faltered or are not enough. Not every blockchain in the DAGS will be able to have Oracles. Blockchain parts inside the DAGS which can utilize Oracles will utilize them; users inside Municipal Coffers, Patron Bots, Subsidiary Bots, Civil Servants, and special entities which may be elected from these groups to sort out issues. Users of Municipal Coffers have the option to mark the permissions of an Oracles degree of administrative power. The interpretation of the use of these permissions are denoted in agreed upon creeds. Creeds are created by the Municipal Coffers and keep the agreement of such laws decentralized in agreement. Oracles are never made up of a single person or singular municipal; checks and balances from other municipals are

> **Note**, money can be put on hold through a Subsidiary Bot for a designated amount of time to verify both parties agree to the transaction. This way Oracles are not needed to resolve disputes.

to always be used and created if none are in existence. In essence, Oracles are only to be used in a time of need when all other measures are not viable to restore a fault and restore faith in the DAGS. The laws that govern this are a set of fail safes to protect from failure spreading out of control. Oracles are always representatives of the majority and allow, whenever possible, the greatest number of options to the users on the blockchain so the greatest number of needs can be met through the system.

Updating Blockchains with Consensus

If an update is needed in the blockchain, patches or a complete fork may be necessary. Patches are a melding of the permissions that individual Municipal Coffers have given to Oracles in which the integrity is upheld in the blockchain. Those updates are only given to those who have selected them in their Municipal Coffers permissions.

On the other hand, a complete fork is another story. Forks would force everyone to update or else two blockchains are created. This is very problematic in that double coins are created. Forking is reminiscent of the double spending problem that open blockchains have yet to overcome in many instances.

If a fork is necessary coins will be moved to the new blockchain of the Municipal Coffers which agreed to it, however Municipal Coffers which did not give permission to the Oracles will remain on the unaltered chain. This way double coins are not created, and no one is forced to do something they have not agreed to. If Municipal Coffers do not agree to update, they can still interconnect with the nonupdated blockchain by moving value through any of the values that are not directly connected to that specific Celestial Computing blockchain. As an example, BTC can still be sent from one Municipal Coffer to another regardless if they are on the same blockchain version. The currency funding the DAGS's work, being Joules, will not be able to be double created in that those accounts that agree to the fork will

> **Regarding Value**
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> Because the DAGS is revolutionary in how it defines the worth of things; the term *value* will be used in place of securities, commodities, funds, bonds, fiat, cryptocurrency etc. This is to simplify our thoughts so that the storage and interest accumulated of value is thought of in a generic sense as opposed to thinking of it as its value in reference to BTC or USD. At the end of the day, this will help us accumulate more wealth by modifying our perception of what wealth is.

have their coins destroyed on the old blockchain and unlock the same amount on the new one. The records of this destruction will be forever stored in an Oblivion Wallet. These wallets are to keep the records open of this update and prevent the coins from remaining in circulation on the old blockchain.

Mining Celestial Computing

Joules | Excepting all Currency & Running Everything

Whenever a calculation is done or something is stored, the process requires work and costs someone something. Joules is a symbolic token of these costs; fiduciary money. Unlike most currencies; Joules' value is not intrinsic nor tied to any fiat. Instead, its value comes from intrinsic value (jewelry, oil, real estate) and currencies (gold coin, fiat, cryptos) locked into a coffer on the Joules blockchain. Because of this, nearly all forms of value can be used to make transactions on the DAGS through Joules representing the work being done (i.e. a transaction from US Dollar to BTC, or an ounce of Gold being entered into the system). Its value comes from users cashing in and out what is already considered to be of worth. Essentially, Joules are the fiduciary (holder) of all types of value, tokenized for easy transfer, which enables *this new type* of tokenized coinage to give value to Celestial Computing's work and validity to the DAGS' municipality.

> **The Joules Cycle of Value**
> If I wanted to transfer my dollars into Euros utilizing the DAGS Celestial System, this is how it would look...
> I want to transfer $100 into Euros; one penny will be broken off of that. It will be locked into an account [that is a bond locked away inside a DAGS Municipal Coffer controlled by a Zeroth-tier Subsidiary Bot]. A miner will mine Joules in order to do the work to make the transaction go through. The miner will then be able to take the Joules they mined and use them to release the penny to the corresponding Joules for payment of their work. (In reality a penny could pay for thousands of transactions.)

> **Cashing out of Joules**
> Whenever we want our Joules' value to be backed it can be cashed out of the system to what is locked up into Joules. Joules work as a buffer to automatically release what we want when our work as miners needs to be backed. The supply of Joules is continuously replenished as work is always being done.

Made for Everyone to Mine Everything

There will always be something to mine in Celestial Computing. Any piece of hardware can mine whether it be a cell phone or a PC. The ecosystem is designed to help us mine something within our means. Micro transactions are the powerhouse behind this system. Whether we are accessing a decentralized website, watching a video, or voice calling a friend, funds must be transferred to someone to maintain the infrastructure. The infrastructure of Celestial Computing is inherently decentralized and distributed with localized aspects of centralization where needed. No matter what token or currency someone is accepting in the infrastructure, Joules will be able to be the fiduciary in the trading process. This process will ideally go on behind the scene from us as micro transactions pay for everything we do. As an added benefit to ourselves, we will mine micro transactions continuously, empowering the community.

> **Joules Providing Reciprocal Services**
> Joules Enable the work of Celestial Computing to be funded. Data storage and its access will be funded on its used basis. We know a web site costs money to be maintained. It provides services which most of us want for free. This costs us something which we still do not like to pay which is our liberty, time and attention. Celestial Computing will change the way we pay for these services. It will provide the feeling of free as our computers provide these services for others.

Mining for Joules

Everyone in the system will receive compensation for the work they do, none of us will be left out unless we choose to. A common way of mining will be ledger upkeep which is best mined with as many users as possible, the mining of this is a small amount of work. Joules will also be mined by developers for the work they put into creating the technology. Coders mining will be compensated in a freelance style of payment. Careful documentation will be recorded for review so that the community can be instilled with trust of their work.

Civil Servants are paid in much the same way as a freelancer as they will be paid for the individual tasks they do. Although the Joules that each one of these workers produce may be on its own separate system creating the Joules

on a bond. Civil Servants will still be able to connect and exchange with the main system just as the main system can leverage Joules on a bond. This way volatility of work done and price of currency can be controlled by bots to make the economic system stable in price. The DAGS creates its own financial and economic services to power its requirements for the work it does. Within this system the algorithms which organize the price control cannot be tilted in a way that is not transparent as we are all the miners of Joules.

Mining for Everything Else

Celestial Computing heavily relies on decentralized virtual machines. Although at the date of this writing the most powerful and efficient virtual machines require a high level of centralization, this does not prevent the DAGS philosophy from being applied to make it effectively decentralized. This is why there are Civil Servants who will check in audits for centralized tasks such as private blockchains and servers. When someone is designing a server or a bot on the DAGS they are able to select the degree of redundancy and security their task needs to run on. Hybrid-decentralization of traditionally centralized services are enabled to have the security of decentralization and the benefit of centralization.

There will be many systems which do not make themselves available to Celestial Computing, nevertheless, Celestial Computing is empowered to utilize these systems. By being able to lock in the necessary funds and create intelligent smart contracts, the DAGS ecosystem can interlink with other systems regardless if the makers approve of it or not. This affectively creates stabilization in a market that has heavily relied on disruption to make profitable gains. Even the source code for Joules itself can be copied by anyone and made to be mined on their own DAGS. If this is done, they will still have compatibility as Joules can be traded for Joules from the two different DAGS, or Cryptocurrency could be exchanged for the work being done on the separate DAGS ecosystems.

This makes the DAGS ecosystem completely autonomous in its smart contracts. Traditional smart contract ecosystems require a reliance of the developers as its governance. Because of this, those systems are still somewhat centralized. Controlled by the updates the developers release and pressure miners to get on. The DAGS ecosystem successfully removes this type of centralized pressure on miners in a world which desires decentralized governance.

> The DAGS creates a sovereign ecosystem of open liberty.

New Concept Review

Joules – It is better to think of Joules as closer to a protocol that temporarily stores asset-information than it is to think of it as a Cyber Currency, which is in itself an asset that is stored. Unlike most Cyber Currencies, Joules cannot sit inside a wallet. Instead they must sit inside a Municipal Coffer. Joules are more of a bridge linking work together along with the transfer of values than they are a value store themselves. They do this by locking in assets. The community will determine if the total value of Joules is equal to the total value of locked assets, or the value of Joules exceeds its stored assets by a certain percentage. Joules themselves can lock up in Joules as a type of bond to itself. This is an option the community has if they do not want miners as an example hocking Joules quickly if it is decided that the total Joules value is to be greater than the total sum of its stored assets. In conclusion, the bottom line of how Joules works is decided by the community that deploys it. Joules are designed to work with other communities passively exchanging between each other. This allows fine tuning of every aspect of the blockchain to that community's needs while maintaining compatibility with the greater community. Value between the communities is handed off, not by Joules, but by the value Joules locks up.

Commodity Backed Cryptocurrency – is cryptocurrency that is backed by a physical thing. Whether the thing is physical fiat dollars, grams of gold, or physical stock certificates the idea is the same in that a thing is being represented by tokens on the blockchain. Typically, a commodity backed cryptocurrency is audited to ensure the items are readily available to be exchanged.

Civil Servants – (or Civil Servants of the Blockchain) are hired, fired, and managed by the blockchain. This is to say their boss is autonomous. Their job is to manage critical infrastructure to Celestial Computing and audit physical items that must be audited. In time Civil Servants may take on more advanced roles such as security, legal, and human relations in the cases of contracts. Civil Servants work is not necessary for Celestial Computing thus their work should be thought of as a fee that is added when needed.

Oracle – For the purposes of this paper, we will not go into detail of how Oracles will work. Simply put, Oracles are to fix blockchains when an error in the blockchain itself occurs. Their job only arises when doubt in the faith of blockchain and encryption are reasonable and must be fixed. They only exist in a time of need. All other issues concerning problems with commerce will be worked out using Civil Servants.

Value – Because the DAGS is revolutionary in how it defines the worth of things; the term value will be used in place of securities, commodities, funds, bonds, fiat, cryptocurrency etc. This is to simplify our thoughts so that the storage and interest accumulated of value is thought of in a generic sense as opposed to thinking of it as its value in reference to BTC or USD. At the end of the day, this will help us accumulate more wealth by modifying our perception of what wealth is.

Pseudonymity – is a state of identification where anonymity is coupled with verifiability. This maintains anonymity and trust through a third party which verifies the anonymous individual's identity. Integrity in a given circumstance is kept pseudonymous with specific policies. Examples are OAuth or OpenID.

Bots – are an automated program running on a script. (It should not be assumed that they are less sophisticated than AI.)

AI – There are many different types of AI, for the purposes of this paper, AI can be thought of as a self-programming and self-improving script.

Patron Bot – is a personalized bot/AI that is designed around a single entity. It is loyal to the needs of the entity alone. It is designed to evolve over time in a way that is exclusive to the growing needs of the one it serves.

Subsidiary Bot – is a bot/AI that is designed to manage and regulate the functions of the DAGS. Bot levels have higher authority the lower the number which is closer to the core of the blockchain (i.e. a Zeroth-tier Subsidiary Bot has more authority than a First-tier Subsidiary bot, etc.).

Zeroth Tier Subsidiary Bot – is a subsidiary bot that is directly connected with the maintenance of the blockchain. Joules requires automation as values move in and out of it. Civil Servants will also be managed by this highest of level.

First Tier Subsidiary Bot – Municipal Coffers will use First Tier and higher. The higher the number, the lower authority it has and lower the permissions are over the Coffer. First Tier will have nearly unlimited permissions over the Coffer concerning the automation of it. A Municipal Coffer that is not held by an individual person will require a first tier to manage the ownership of it; although this does not have to be the case if an individual wants extreme automation.

2nd Tier Subsidiary Bot – (and beyond) If a person holds a Municipal Coffer which acts as a management system to their small business, they may want employees time managed by a bot but they may not want the bot to issue pay. Not handling values would be an example of a task of a lower permission such as a second tier. This numbering system is designed so that permissions are understood as to what class the bot can alter the Coffer.

Oblivion Wallet – When a blockchain needs to be updated the double coin creation that forks cause are prevented. The new blockchain will not have coins until they are transitioned out of the old version into the new version by use of an oblivion wallet which marks this transition. The purpose of this is so that no one is forced onto new protocols that they do not want. The old version can continue running without any hinderance.

The DAGS in Action

Inherent Financial Services of the DAGS

The DAGS uses Municipal Coffers to secure wealth. However, at any given time we may hold so many different things of value we will not be able to understand the net value of all our private holdings. Thus, the Private-Universal-Index makes this complexity understandable to us mortals; displaying the data in a way we can understand. Celestial Computing is the powerhouse behind these services. In this new ecosystem there is still a cost for work done. Which is why a new concept in value has been created. Ultimately, this ecosystem is designed to motivate us to create systems for each other that will maximize our wealth, and help each other out too. At any time, bots can be brought into existence to run these newly created municipals. These bots accomplish the same work as a large team of people dedicated to the investment of wealth.

> Without prejudice, the DAGS delivers all types of financial services. Whether poor or rich there is no advantage of one over the other.

Uncovering Authentic Value with Universal-Index

The Universal-Index is similar to other economic indexes in that it is a representation of the total value of assets. Though, the Universal-Index does not necessarily represent assets that are at the same level of liquidity in the same index. The Universal-Index deals with this by adding another variable representing its liquidity. Thus, it is best to understand a Universal-Index as not having one variable but a multitude; this is why bots are needed in order to bring these variables into a sensible understanding for humans. In addition to this, the Universal-Index calculates credit and debt into the ratios which can be displayed in many different forms. Thus, the Universal-Index can be thought of as a toolbox to assess an entity's worth in all its facets.

> No longer are we subject to manipulation in understanding value so that our assets benefit others. We will use the Universal-Index to avoid manipulation and reveal our true net value in holdings.

These complex numbers will mean more in the trade with bots then they can be understood by us. Nevertheless, bots can make these numbers understandable within our personal understanding of economic value. The bot tailors personalized communication to guide us in making the best financial decisions to meet our financial needs. The continuous training of our Patron Bot motivates it to exclusively consider our interests.

> The DAGS philosophy creates an environment where greedy code manipulating our Patron Bot for someone else's gain is less profitable to developers than creating altruistic code.

The ultimate purpose of the Universal-Index is to allow us to understand how much wealth we have at a given moment as our net worth is distributed across our investments (net value holdings) and expenditures (mortgage, loans, bond issuer, etc.). We will be able to see our overall interest gains and interest losses at the various rates of each source. We will be informed on how to maximize interest earnings of our personal wealth and cancel out debt interest against our wealth by moving money back and forth through our Patron Bot. This will enable us to make decisions in the right timing which best suit our needs and help accumulate positive interest on our personal worth. Projections of interest gained, and probabilities of an investments return to the Municipal Coffer will be able to be displayed

> The DAGS allows the issuing of bonds in ways never before possible.

according to our preference to maximize usability and comprehension to our greatest benefit. In summary, the Universal-Index is a way to understand how all of our wealth is moving at any given moment or an elapse over time so that we can make the best-informed decisions to secure our financial future.

Wrapping things up, there are two main types of a Universal-Index, one is a Private-Universal-Index the other is a Public-Universal-Index. The Private-Universal-Index, which is held within the Municipal Coffer, is uniquely tailored to me, my family or my company. Our income and expenditures generate the index for us as it applies to our specific circumstance. On the other hand, Public-Universal-Indexes *hold publicly available assets such as precious metals (gold, silver etc.) publicly traded stocks, (Apple, Amazon, etc.) or government stocks and bonds (U.S. Treasury etc.). They* are open in its calculation and the assets are automatically moved by bots. Bots will utilize the currency which is locked into Joules. In some cases, Public-Universal-Indexes will invest into special long-term assets which will not be as easily liquidable. These public investments will utilize bots to ensure certain holding times and limit the number of transactions to Municipal Coffers that are verified to trade with them. This way a type of bond is created from this Public-Universal-Index that is its own public Municipal Coffer. Whatever the Universal-Index is based on the DAGS's Celestial Computing facilitates it in all its complexities.

Investing & Trading | Intrinsic Value & Bonds

Auditable Values on the Blockchain

Using Joules, any number of forms of wealth, currency or value can be traded as often or as little as is beneficial to the holders. The DAGS system can rapidly exchange one form of currency into any other being held on the Universal-Index system as they are traded through the Joules system. National bonds, Gold, Stock etc. can be held in a 'tokenized' way; making the token value-backed. Civil Servants of the blockchain will audit the physical items that have been tokenized so that they are linked in a secure way with their digital token representations. This effectively makes physical coinage having the disadvantages of being physical, and thus centralized, inherit the advantages of movement that decentralized coins bear. This mixing of technologies, new and old, is what Celestial Computing aims to create through the philosophies of the DAGS. This opens up entirely new realms of investing and trading that were never possible until now.

> ### Autonomous Municipal Coffers with Index Fund Management
> *Joules can be turned into* a public ETF Index *of sorts*. Although not a true ETF because it can be broken into its parts and cashed out at any time making it too variable in its holding to be a *true* ETF. For a true Index ETF, bots will tokenize all of their holdings in their Municipal Coffer. Buying and selling constantly to maintain the Index ETF. Another kind of public ETF *of sorts* will be created from bots filling in the gaps of prices as buying and selling occurs in different currencies. Filling in the holes in the exchange. Ultimately, the types of ETFs that can be created are only impaired by one's imagination within the DAGS.

Self-Governing AI Municipals for all Things Money

An actively managed Public-Universal-Index can sit in an autonomous Municipal Coffer. This autonomous Coffer can hold all types of tokens and coins creating an index value; a new sort of ETF. This is owned by a First-Tier Subsidiary Bot managing it as a decentralized autonomous fiduciary. Customizable Stable-Coins along with managed Volatile-Coins and autonomously managed bonds will be the formation in this new financial ecosystem.

> ### What is having a Tokenized Index like?
> I am holding 'X' tokens in a Public-Universal-Index that holds percentages of: USD, EUR, JPY, GBP, CNY, CAD, AUD, CHF. We'll call it TB8 (The Big 8). At any time, I can sell off the TB8 tokens or break the TB8 token into its individual tokenized currency holdings. When broken up, the currency tokens will be separated from the active management of the Public-Universal-Index... Perhaps I think my Private-Universal-Index actively managed by my Patron Bot can do better for me; personally tailoring my income with percentage holdings.

In this new ecosystem financial services will become autonomous making complex management simple. For example, a municipal bond can be created, managed and tracked with far more ease than ever before using Municipal Coffers. All these parts will be created *through Subsidiary Bots on the DAGS* which tokenizes value.

Municipal bonds already in existence can be tokenized and placed inside indexes as another layer of stabilization to the other assets that are held within it. However, the easiest thing to tokenize is known valued assets that are instantly liquidable. Tokenizing as many values as possible will be one strategy in this new ecosystem. Wrangling in the fluctuating value when these tokens are lumped together will be accomplished through Subsidiary Bots. The Subsidiary Bot will buy and sell automatically stabilizing and keeping the integrity of the price of a that Public-Universal-Index which itself will be 'tokenized'. Thus, you have a decentralized index of centralized goods with the stability of self-adjustment; decentralized autonomous active management of an ETF. This may not be ideal for an investor who is interested in volatility, but it is perfectly suited for short term value storage looking to gain a little interest (money between paychecks). Of course, this bot managed token representing that specific Public-Universal-Index can be cashed out for what it's made up of at any time.

My Patron Bot is My Financial Hero

Inside a Municipal Coffer a Private-Universal-Index can be actively managed by our Patron Bot. A portfolio is created that is finely tailored to our personal flow of income. With this information (expenditures, debts, and income) individual value holdings can be precisely adjusted to earn the highest percentage possible. Our personal finances change day by day, and month by month, with our Patron Bots knowing our habits the highest possible returns are earned based on our means. Overall risk is easily calculated into a way that any of us can understand. The level of risk that we wish to have on our assets can be adjusted at any time. If one is a gambler, they can set the risk very high to increase their chance on a higher return. If the risk is set extremely low, the portfolio will be extremely secure but still earn some interest; this option is better in every way than what a bank can offer. Patron Bots analyze our income and expenditures, in most instances, they will be able to know what level of risk we should be at better than we can manually set ourselves.

Evolving Financial Services are

- Roth IRAs can be managed through a Subsidiary Bot sitting in a Municipal Coffer with permissions that hold to the IRS standards.
  - This opens up possibilities for there to be better adjustments to the money held as it is actively managed better than ever before.
- Some types of ETFs will be commission free because the only cost will be to mine the transaction, which will be infinitesimal due to Celestial Computing's efficiency; essentially, with automation, commissions are a thing of the past.
- Monetized gold (such as gold jewelry) is tokenized into the system to create more currency. Municipal Coffers are empowered to monetize commodity's inherent value and make a streamlined process of decentralized storage and transfer of tokenized value.
- ETFs evolved, featuring nonprofit operational costs. Cash in and out at any time is now possible with no spreads. Subsidiary bots control and automate this process making it possible.
- New types of ETFs for today's world allows trade within the ETF. The funds that someone wants can be removed while leaving the rest in their place and the appropriate percentages can be auto-restored after the cashing out is completed. The operational cost is more or less the mining fee and upkeep for this decentralized service.
- Mutual Funds can be managed by parties with empowering permissions. Advanced permissions empower flexible and transparent management. With the aid of Subsidiary Bots monotony in management is removed

and the intelligence of AI improves management beyond the scope of human capability. This makes economic sense for today's Mutual Fund being managed by bots as this cuts out expensive, mistake-prone bureaucrats.

- Bonds can pay out by the minute instead of payouts semi-annually, even if the bond is a semi-annual bond. This is created by decentralization and tokenization of the bond. This is now possible as bureaucracy is automated.

New Concept Review

Public Universal Index & Private Universal Index – The goal of the Universal index is to display value in one number set so that one can understand their assets that are spread out at any given time. The Universal Index comes in both a private and public version. Indexes are created (and displayed) for different types of investments depending on the needs of the individual. What the index is made of is based upon the needs of volatility and liquidability. Many other factors are also considered in its construction such as the cost of buying and selling, and cost of ownership if applicable. The main advantage of a Private Index is that it is designed to adjust itself to the needs of an individual or business. It will harness what it knows about their fluctuating finances and fine tune itself to earn the highest amount of profit as it can.

Public Indexes have an advantage in that they move so much at any given time that they themselves affect the market. This unintentional manipulation is used to its advantage as an investment by filling holes in the market both by human purchases and bot purchases. Because Joules are intrinsically worthless, the only way to evaluate their worth is through what they have locked up inside them. Some of those assets will be locked up in a Public Index so that Joules has value as an Index Fund. The Public Universal Index will play a critical role in assessing the value that is in Joules and the value that is inside Public Municipal Coffers hosting financial services at any given time. The Universal Index is not so much a solid single number so much as it is a concept of the value of actively indexed assets.

Tokenize – To tokenize something is to take something's value and represent it in its own digital currency. In some cases, items will be dispersed amongst many holders and those items will form one large pool of tokens. When someone wants to cash out of the system, they will be able to do so through a local holder and transported by a Civil Servant. This keeps the holder safe and the system transparent. It goes without saying that a threshold for cashing out of the tokens must be reached which is greater than the tokenized item they are swapping out for.

Centralized Servers Now Decentralized & Distributed
Brief History of Measuring Modern Work

Cloud computing has made computing a utility, just like watt meters made electricity a utility, and steam psi launched the first industrial revolution. However, steam was localized in its consumption and creation. Watts are localized in their creation and dispersed in their consumption. Cloud computing is still localized like a power plant is. Celestial Computing will make cloud computing dispersed in its calculations for work.

Celestial Computing; merging cloud services with local computing

Servers rack up costly in-house bills and have a static amount of computing and storage capacity, which makes work and upgrades costly. Cloud Computing offers a solution to this as work for a service. Hybrid Cloud Computing brings an ease to many of these concerns, but it still lacks complete security. Consider industries that would not utilize cloud or hybrid computing due to security reasons, such as banking. When decentralized services are combined with cloud services and localized services, a constellation of multi-factor levels of security and efficiency are combined; this is Celestial Computing, and it is already here in its fundamental concept. This deployment is getting easier by the day.

Logos Earth aims to make Celestial Computing more accessible and easier to utilize, thus making it more available to all. Smart Contracts have not been added to the Cloud in any widespread sense yet. When centralized, distributed and decentralized services are combined in an easy to deploy ecosystem, our world is going to look very different. The industry will have a way of paying and understanding what they are covering when they're linking all their different types of services together. The services of the cloud, data centers and servers are not going to be replaced, but they are going to be better managed and effortlessly networked together. Municipals are the key to this management that the DAGS's principals will be able to lay down. The concept of this collective computation will continue to grow worldwide as Cloud Services of old blur into Hybrid Clouds and Celestial Computing.

Utilizing Decentralized Static IP

As of this writing, decentralized services do not cover static IP. Thus, domain names cannot integrate with the decentralized ecosystem. A Hybrid must be created to resolve this compatibility problem. A static IP server can be audited by Civil Servants. They verify the server's level of security among all the other necessities. The static IP server is subcontracted out, but the auditing is done by the blockchain itself. Linking the payment service for a static IP into one Municipal Coffer enables a municipal to utilize it with one payment system. The static IP is then connected to either a local or a remote distributed web server.

Distributed Web Hosting

Insecure to moderately secure web hosting is easy which makes it inexpensive. Distributed web hosting is as simple as having multiple web servers host the content. These servers are remote from each other and may be audited by Civil Servants depending on their security level. These distributed servers act both as a layer of redundancy and assurance as the distributed servers are randomly checked in a form of verification mining that what they are hosting is the same across the distribution. Higher level security, in most cases, can be done through the open and private blockchain which is only needed, in most cases, for a moment such as checkout and displaying personal information. The bulk of the information can be transmitted in Celestial Computing with relaxed security which is a more economical choice. Regardless though, the choice is available for the level of security and redundancy within Celestial Computing. To date, this type of distribution is already being done in many fields other than web hosting and this model of distribution is perfect for file sharing, voice and video as well as many other fields that do not require extremely tight end to end security.

CCVDM (Cloud-Computing-Virtual-Distributed-Machine)

Virtual machines will be taken to the next level on the DAGS. There are many different types of VMs. Although some can run on an open blockchain, they tend to be slow and very expensive to operate but are of the highest security level. Private blockchains accelerate the speed and plunge the cost but are inherently centralized to some degree. By the time we reach a server, VMs are completely centralized in the physical sense and the security is thus brought to a single failure point. Celestial Computing combines all of the virtual machines into a hybrid ecosystem. VM servers are audited by Civil Servants as an unbiased third party; this option can of course be left out if security is not imperative. Blockchain VMs that are private need to be audited otherwise they could be less secure than a centralized server.

For the most secure private blockchains, Civil Servant security will be assigned 24/7 and if the server is to receive maintenance it is to be wiped remotely with Civil Servant monitoring if it is compromised or it is to be self-

destructed without hesitation. The open blockchain will keep backups and verify the private blockchain. Even if all private servers were physically attacked at once, the open blockchain will act as a backup as all private servers are destroyed. This is the advantage of having Civil Servants of the blockchain audit and secure physical locations. Civil Servants themselves are continuously audited pseudonymously by other Civil Servants, creating layers of redundancy only possible since the advent of blockchain.

Decentralized Big Data

Data Centers have varying needs depending on what their data's use is intended for. Blockchain already covers most of these big data needs, and the needs that are not covered can be outsourced through the blockchain with decentralized workers storing the data which has been encrypted before being sent. The problem with decentralized big data is when you need low latency. Private blockchains are able to contend with this to a point. But as the needs rise in the future for more Big Data and tighter security with low latency, the only technological solution to date is to have it physically secure and well audited. Backups of this data should be off site using decentralized workers storing the data and the data center itself should be equipped to wipe the data if the center is physically compromised. This is where Civil Servants acting as security, ready to destroy the centers data on a moment's notice, come into play. The Civil Servants will be both local and remote so that if enough of them believe a compromise is taking place the data center can be shut down. This protects from server raids and all of that sensitive data being compromised as this has happened so many times before.

Decentralized Ownership of a Web Server & URL

Many websites that are community based would benefit by being owned by the community. To date, there is still a high level of central authority concerning web servers. Starting with the web address, this can be rented by an open blockchain which makes the request on behalf of the party by way of a Smart Contract. The URL is pointed to a private blockchain which directs the traffic to a server running under decentralized authority. The management of this website is now controlled by the agreements laid out within that Smart Contract making a 100% community-controlled experience. The need for outside intervention if one person attempts to gain authority over the site or the board decides to sell out their project is over. Funding for this service along with its update that is community controlled opens the potential for the decentralized community to break into businesses that they have not been able to yet.

Unlocking Multifactor Authentication for Municipal Coffers

In some cases, unlocking a Municipal Coffer will be necessary. Something may happen to its holder or could be locked by its holder (maybe he sent a panic to it as he was under duress). Civil Servants will lock themselves out of the system at the first sign of duress. Being unlocked from the system will require the Two-Man Rule. A minimum of two people will be required to complete a private key decryption of the necessary commands to activate something as sensitive as unlocking a Municipal Coffer. This is a service that the holder has opted into as a failsafe. Civil Servants will be decentralized to the extent that they are unaware of who each other is, but multiple Civil Servants must assess the situation and come to the conclusion that the Municipal Coffer will be unlocked and how that information will be delivered to the holder.

The Two-Man Rule will be taken to the physical level and will be made as an inexpensive solution to personal security. A physical device will be able to lock up the Municipal Coffer and unlock it when it gives its key and the

holder uses his memorized key. This kind of authentication is in regular use today but has not been integrated with blockchain storage for the masses yet. The Two-Man Rule can be adjusted to fully lock the Coffer, or just parts of the Coffer. Combining this with as many levels of authentication as possible, authentication can be made multi-layered; multi-leveled authentication will be made economical, accessible and safe. Surprisingly, BTC will be safer in a multi-factor protected Municipal Coffer as BTC is unsafe if the computer, utilizing the private key, is compromised. The fact is, most Cryptocurrencies still have a single point of failure, and that is the centralized storage of the private key. This centralized storage needs to be distributed to at least two parties to remove this point of failure. The Two-Man Rule will take the compromised computer situation out of the equation as it will take a minimum of two physical devices with two separate network connections to unlock the Coffer. Even higher security than this is built into the Municipal Coffer if the permissions require it. The key to a Municipal Coffer's security is that it is adjustable in the area of what type of keys are necessary to unlock it.

Tokenization of physical goods can be linked with a Security Chip

Inexpensive system on a chip are utilized in security all the time (example, SIM). A security chip can be directly connected with a Municipal Coffer which verifies the chip as one of a kind and will release necessary data stored inside the Municipal Coffer such as specifications of the item the security chip is attached to. Records of audits and transactions are stored in the Municipal Coffer and made accessible to the necessary parties. These security chips will be perfect for marking gold jewelry that is tokenized. An NFC integrated with the security chip will allow a Civil Servant to verify the chip that is paired with the tokenized jewelry. This will make transfer of the jewelry as someone cashes out easier. Once the jewelry is exchanged for the tokens it will need to be audited again or only be allowed to transfer to a verified owner (or the owner may insure it with an automated Municipal Coffer acting as an insurance if he plans on transferring its ownership). Security chips will allow easier identification and transfer of jewelry and important paperwork.

GETTING INVOLVED

What it's going to look like contributing to Logos Earth?

Logos Earth is striving to build an ecosystem where anyone can launch a municipal and have all financial services available to them. Many of the technologies needed to run Logos Earth and the subsidiaries it wants to create does not exist yet. So, Logos Earth is going to have an interesting road building this ecosystem. Unlike most other organizations, *"We actually use the product that we build; to build the product that we use."* [Donavan Brown; Concerning Azure DevOps]. We are confident we know how to build it.

Thankfully, the underlying technology to create Celestial Computing has pretty much all been made in one form or another. We just need to intelligently apply them all in the same framework. This is where you come in. We need people of all different types and abilities to pull this together. There is not going to be one mad scientist making this all happen; it's going to require the community to develop, deploy and use it. We need testers and evangelists; we need creative minds that can think of how to develop and use this technology. Above all else, we need people who genuinely want to make the world a better place for everyone.

Who do we need in order to succeed?

In order to create an ecosystem for the world, *all types of people are needed*.

We Need:
- **Users**: Evangelists, Members, Adopters, Investors
- **Creators**: Developers, Designers, Associates, Think Tanks
- **Partners**: Organizations that will work with us to integrate their technology with Celestial Computing

What can you get out of contributing to Logos Earth?

Do you think this project will be able to help you and your loved ones? If you decide to contribute to such an

> **Community is you and me.**

endeavor, not only will your work affect your loved ones, but it will very well shape the lives of more people in ways *beyond our imagination*. We hope you'll embark with us on this bold endeavor.

We know that if someone believes in something, they will do it for free. However, we also all know that everything has a cost. In as many cases as possible, work contributed should be compensated. For the early days work put in will be denoted for an agreed upon amount. Contributors will be treated as contractors paid on the basis of jobs submitted and accepted. How this denotation will equate to value will be decided upon by the community.

<u>Here are a few ideas on compensation</u>

- A token will be created to track how much work one has contributed.
    - The value of this token will be decided upon by the community.
    - It could be locked into Joules (but this token will *not* be Joules itself).
    - Logos Earth could buy back the tokens for the agreed upon value.
    - The tokens can be cashed in to a subsidiary of Logos Earth.

As this is a pre-release, please contact Christopher or Melody about how you would like compensation to work. We will finish the final release of this white paper together.

ABOUT THE FOUNDATION

Where the Challenge to the Community Arises From

Dr M. Amon Twyman, a philosopher of technology, describes the decentralized movement's history.

This arises from Internet growth that is characterized by a consumer demand for a decentralized Internet experience that is not limited or dependent on traditional institutions and governments. This movement aims to create an Internet based on the idea of Virtual, Distributed Parallel (VDP) States, "acting as a kind of organizational counterpoint to that State's governing bodies". Cryptocurrency and other virtual currencies are the VDP movements' currency alternative to traditional currency and traditional financial institutions.

[https://en.wikipedia.org/wiki/Virtual_currency_law_in_the_United_States#cite_note-18]

VDPs break down overseeing entities to the smallest possible to get the job done. Meaning, rather than a state overseeing the construction of a local park, the town would be ideal. VDPs have been seen as DAOs (Decentralized Autonomous Organization) in a number of Cryptocurrencies. Logos Earth seeks to empower governance to make municipals successful and thrive in this age, as opposed to creating a cryptocurrency to pay for its finite service. We want to empower municipals to link these finite services together in a in a universal ecosystem, we call this the DAGS (Decentralized Autonomous Government System).

No matter what you call the ideal technology behind *this* movement, a consensus on what this is about is clear. We want the management of governance to be free of human corruption. This is to say we love government but hate the pitfalls of bureaucracy.

At Logos Earth, we want these technologies to operate legally inside our country. We also want no compromises on what the decentralized movement stands for. Our security and liberty cannot be stepped on. At Logos Earth, we want to change who has the power over our data. We know there is already a loud consensus on some data being permissible and some data being unacceptable; the community needs to have the authority to act on what it believes in. We want the community to be the ones empowered with its own data, controlling its own destiny on an individual basis. We want our data to work for ourselves and what we care about. Logos Earth will bring these rights of services to the average person.

Logos Earth's Vision

> *To transform society's governance so profoundly,*
> *we marvel at how we managed without it.*

Logos Earth's Ideal Behind its Mission

All have the right of fair ownership which is established by the community without prejudice. Whether great or small, an advantage should never exist concerning financial and data services. All have the right to secure information beyond the reach of benevolent and malevolent forces. Empowerment to have consensus is a free community's right.

Logos Earth's Venture

Logos Earth aims to further develop Celestial Computing and create subsidiaries which will make DAGS's which will empower others to make their own DAGSs. They will be able to make an entirely independent system that lightly connects to Celestial Computing deployed by Logos Earth, or they will be empowered with the development that is done by the subsidiaries of Logos Earth's DAGSs. Logos Earth aims to create reliable subsidiaries that will be the model of what a DAGS can be running on the infrastructure of Celestial Computing. This is why Logos Earth is a Nonprofit Foundation, whereas a DAGS could be for profit, or anything the imagination can conceive of. Funding for Logos Earth will be decided upon by the community.

> **Again, we would love to hear your ideas!**

Celestial Computing is to be an open protocol which is open source and free to use. Developers of this protocol will be able to be compensated when parts of the protocol are utilized by a DAGS. In other words, a subsidiary such as a not-for-profit, or for-profit company.