



ROOT

SERIES

Whitepaper

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Model-T

Creating A New Global Business Structure With Code

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ABSTRACT

*“Coming together is a beginning.
Keeping together is progress.
Working together is success.”*

Henry Ford

Root Series, (‘Root’), introduces **Model-T**, a novel software protocol that aligns code with contractual freedom, redefining the ‘*lex societatis*’ and the next generation of ‘the company’ that will operate on public blockchain infrastructure. It takes its name from the pioneering entrepreneur Henry Ford and his vision of a universal mass produced car, the Model T. In the spirit of Ford’s Model T, we are building a legal vehicle with software code fit for the Internet of Value, Web3.

Model-T will enable traditional companies to expand their corporate structures into a code-based future. It will also enable DAOs (decentralised autonomous organisations) to become legal entities and to unleash their full potential. **Model-T** will provide them with a ‘cyber seat’ and will enable them to become ‘co-modal’, existing in both physical and virtual worlds.

This use case incorporates the scaling capabilities of the DAO code-structure with innovative Ricardian legal contracts in conjunction with smart contracts, public blockchain, and cryptography to underpin the entire process of company formation and registration.

Model-T is built on well-established common law principles of contract and company law and implements the Delaware Limited Liability Series structure to create legal personhood with a limited liability shield. **Model-T** implements the freedom of blockchain technology and code with the spirit and the letter of the Delaware limited liability legislation – the freedom to contract.

Model-T represents ‘the tree of code-based companies formation and registration’, and **Root** – the legal gateway which facilitates the building of decentralised legal entities organically.



I. INTRODUCTION

Model-T is an agnostic, multi-chain dApp (decentralised application) that will enable automated company formation and registration fully on-chain.

It is a software tool implementing the Ricardian limited liability legal framework, which will make **Model-T** the primary tool for attesting company formation and registration on the blockchain.

Particularly, it will offer a legal, responsible, and safe harbour for existing decentralised autonomous organisations ('DAOs') to incorporate and register as limited liability companies as well as for more complex decentralised companies ('DAC's) to form and trade on the blockchain fully embracing the burgeoning virtual goods and services economy.

We, at **Root**, believe that 2023-2024 is the year that governments around the world will reassess the status of DAOs. As the regulatory and legal scrutiny intensifies most DAOs will be forced to adopt and operate in traditional company structures. The biggest obstacle to the mass adoption of DAO structures is the lack of legal recognition and clarity.

Model-T offers an immediate solution to the current uncertain, fragmented, and fragile DAO landscape: it is the software protocol from which countless independent, decentralised businesses can be spun (formed) capitalising on the fluid functionality of the DAO code structure and the legal flexibility, certainty and the application of the principle of contractual freedom espoused by the Delaware Limited Liability Series structure. It will give DAOs much-needed legitimacy, clarity, and protection from liability for their members and their assets.

Presently, a DAO is not a recognised legal model of corporate governance¹, and many current DAOs are facing the risk of being treated as de facto unincorporated general partnerships with unlimited liability, exposing any individual DAO member and token-holder to potential liability.²

Many DAOs currently operating face serious legal and technical challenges in terms of meeting the requirements of being a fully decentralised entity.

¹ Except for the US States of Vermont, Wyoming, Tennessee, Utah which have passed DAO legislation

² CFTC-v- Ooki DAO; Sarcuni-v-Bzx DAO

Ownership and governance control in DAO structures has proven to be heavily centralised, which may bring DAOs perilously within the remit of the EU's Markets in Crypto Assets Regulation,³ and within the Financial Action Task Force's definition of a virtual-asset service provider, ('VASP'): these may be DAOs that perform or provide crypto-asset services and are controlled directly or indirectly, including through smart contracts or voting protocols, by identifiable natural/legal persons.⁴

We, at **Root**, know how complex and difficult it can be to take advantage of this new technology. Building decentralised infrastructure and governance is fraught with difficulties and legal risks, but if Web3 technology is going to be as inclusive and revolutionary as promised, ease of entry is paramount. It cannot be a closed shop, available only to a tiny elite of tech pioneers and high net worth individuals. It must be available to all. But the barriers to entry are high, and **Model-T** is tearing down those barriers.

Model-T will be critical to the building of the Web3 digital economy, as our core functions underpin entrepreneurship, accountability, and freedom to trade and to contract. These will be embedded in code and in legally enforceable Ricardian contracts which foster the spirit of responsible decentralisation, legitimising new code-based business structures on-chain. They will drive the adoption of standards, and will ensure there is always accountability even in a decentralised world.

Through **Model-T** our goal is to create a global, cyber Companies' Register that is automated and fit for the technological revolution, and the Internet of Value, efficient, transparent, and cryptographically resilient improving the usefulness of data and facilitating decentralised digital commerce whilst combatting misuse of corporate entities, and lack of accountability.

³ Markets in Crypto-Assets Regulation, Recital 22

⁴ Financial Action Task Force, Updated Guidance, 2021: paragraphs 55- 68



2. Why Is Model-T Needed Now?

As technology is proliferating at a vertiginous pace and a new decentralised blockchain powered economy is burgeoning, traditional business models are being left behind and will need to reappraise their corporate offering to market.

The tech revolution has inspired the creation and experimentation with DAOs, simplifying and democratising corporate governance and management of assets and income by use of blockchain technology and code. The DAO is a prototype for corporate forms of the future that utilise digital protocols for voting and company-wide initiatives for investment and strategic growth. It has ushered in a new era of work with more inclusive, collaborative, and fairer projects that have empowered the unbanked⁵ to benefit from a global digital economy. Since 2014 with the formation of MakerDAO, exciting new organisational business models have been introduced with different degrees of success. Presently, Uniswap appears to be the most successful protocol DAO which acts as a decentralised exchange and automated trading platform.

The characteristics of a DAO are decentralisation, transparency, and independence. A DAO is essentially a composition of smart contracts built on decentralised infrastructure. The end goal is non-centrally controlled decision-making and governance. Their decentralised and autonomous elements create the opportunity to realign, streamline and automate organisational structure and operational requirements such as governance, voting, asset/wealth distribution, membership/participation, participant contribution, incentives, financial and legal contracts.

But, presently, the landscape is fragmented, uncertain and often difficult to understand, navigate, and implement. The so-called DAO 'trilemma' – decentralisation, autonomy, and organisation (scalability) – remains an unattainable goal with many DAOs struggling to achieve one, let alone all three pillars.

And most significantly, DAOs lack legitimacy in the legal world. They remain unincorporated organisations facing the uncertainty and the risks of being treated as de facto partnerships with unlimited liability, exposing their members to uncapped personal liability.

⁵ There are 1.7 billion people worldwide without access to financial services, cf WEF, Sep. 2022

In order for DAOs to achieve their full potential and unleash the true transforming promise of Web3, a new use case is needed that will legitimise and combine blockchain-based governance with the limited liability business structure. A large part of corporate law is based on contract principles that govern the internal and external conduct of a company. These principles lie at the heart of the DAO, too, and in order for a DAO to exist and flourish a new protocol that aligns code with contractual freedom is created and it is called **Model-T**.

Building A Web3 Business Environment

For centuries, perhaps millennia, commerce, trade, entrepreneurship, and innovative businesses working in increasingly open and dynamic marketplaces have driven human progress and helped define our world. Companies have been at the heart of building international trade since the Middle Ages. The concept of limited liability has gradually evolved since the 1800s.

Model-T follows in that historical and technological evolution by launching a new software protocol that will create and empower the 'smart' business organisation fusing the programmability of code with the flexibility and freedom of the limited liability governance model.

Model-T is fast, cost-effective, reliable, and creates a legally enforceable framework – the ultimate enabler of automated company creation for the Internet of Value era in an increasingly challenging regulatory environment.

The current Companies' House model is not fit to address the technological needs of new code and smart contract based business structures.

Presently, the registration requirements for traditional corporate entities do not recognise the deployment of DAO smart contracts on a public blockchain. There is no equivalent – either functionally or legally - to the registration of a code-based company into a corporate registry.

We are creating **Model-T** to address this existential problem, reinventing the companies' delivery model for the technological revolution by creating a Companies' Registry for Web3 that will allow new code and blockchain-based business models to become the building blocks of the next evolution of the Internet and the Metaverse. In the coming decade, businesses will likely have to change even more frequently, more rapidly, and more dramatically than in the past.

A digital economy will require a complete overhaul of traditional structures launched 250 years ago by the industrial revolution. A corporate model spawned from the First Industrial Revolution, some 250 years ago, is not sufficiently agile and adept to meet present-day needs of 4IR (the Fourth Industrial Revolution).

We, at **Root**, are ready to break away from previous orthodoxies and mindsets to envisage, experiment and scale rapidly in new, digital opportunity spaces, and with a renewed focus on our societal and organisational business models and economic growth.

With **Model-T** we create binding operational agreements with code, that can be read both by humans and machines⁶, that are authenticated and maintained fully on public blockchain infrastructure, and at the same time capable of being reproduced in a printable format. **Model-T** helps build corporate accountability in the decentralised, distributed infrastructure of the Internet. Thus, it will legitimise the use of blockchain technology in the eyes of regulators and governments across the world.

Upon onboarding, all newly formed companies will follow a similar blueprint, emanating and being part of one **Root Series** space. Crucially, they will all share operational similarities and common technical and legal grammar that will create a new generation of interoperable companies based on similar operational language and blueprint. We will be creating our own space, our own 'language', scaling up and generating huge network effects leading to the development of a global digital business environment for 'DAC' to 'DAC' trade.

Through **Model-T**, we will build a universal vehicle for Web3 company formation and registration using Ricardian smart contracts. These are state-of-the-art legal frameworks embedded in code and deployed on public blockchain infrastructure to create a cryptographically authenticated, tamper-proof and transparent Companies' Register.

Ultimately, **Model-T** will provide governments with the vehicle to set up their own legal cyber register of blockchain-based companies that will clarify and speed up regulatory compliance, enforcement, and thus trigger mass adoption. With its unique use case of Ricardian contracts, **Model-T** will drive the adoption of legally enforceable standards by governments in creating corporate responsibility and accountability for Web3. This is because, by design, Ricardian contracts allow more security to end-users who want to build companies, invest, or to make use of blockchain technology in international digital trade.

⁶ Ricardian contracts



3. What Are Ricardian Contracts?

The concept of Ricardian contracts was pioneered in the '90s by financial cryptographer Ian Grigg, in a paper entitled “*Financial Cryptography in 7 Layers*”. Grigg developed an interesting concept to digitise a legal contract or any financial instrument or asset. He named his concept after British economist David Ricardo, in honour of his contribution to international trade theory. But technology in the '90s wasn't advanced enough to implement Grigg's theories. Today, blockchain technology not only satisfies the technical requirements, but also provides the perfect testing ground for legally valid, live contracts like Ricardian contracts.

Recently, Ian Grigg described a Ricardian contract as **“*simply a text document with all the normal words that the lawyers like to use with all the terms and conditions; it's a way of communicating a legal document across to a program such that both the program and the human are happy to understand what's going on.*”**

A Ricardian contract serves two main purposes:

(1) it defines the parties in the agreement, their intentions, their rights and obligations, the possible legal implications, and the relevant legislation that can be used in case of a dispute; in short it is a traditional legal contract between two or more parties that can be easily read and understood by both lawyers, and laypeople, (clients), and can be physically produced (printed) in court; it is legally binding and enforceable.

(2) it is a machine-readable contract as well, because by using blockchain, a Ricardian contract can easily be cryptographically signed (using private keys), hashed, and stored on the blockchain with its unique reference hash (number).

Ricardian contracts provide the necessary legal framework that smart contracts alone do not and cannot. Significantly, Ricardian contracts add blockchain and smart contract functionality to complex legal agreements without losing any of their richness, semantic nuance, and legal enforceability. This will result in enhanced transparency, clarity, reduced costs, and ease of enforcement when resolving a dispute.

We, at **Root**, believe that Ricardian contracts have the power to define and secure a new era in digital trade, and have set out to build **Model-T** as the software vehicle par excellence to take us there. Let us look closer how.



4. The Model-T Licence / How It Works

“**Model-T** turns a human-readable legal contract into machine-readable code.”

All end-users onboarding the **Root Series** must purchase the **Model-T** licence. Such users may be already existing DAOs, new DAO-like structures, Web3 projects, and any traditional companies that want to expand and restructure their operations using blockchain technology, smart contracts, code, and automation.

The **Model-T** licence will give them access to both virtual and physical worlds of commerce by providing them with a ready-made limited liability company structure and operational blueprint for their company unleashing endless business opportunities.

This is decentralising the way code licensing can support the building of an autonomous business network to which any company can ‘plug in’, and derive benefits from being part of the protected limited liability universe of the **Root Series**.

On an operational level, **Model-T** simplifies and replaces cumbersome, often opaque, and bureaucratic documentation processes and swathes of intermediaries with code and automation. **Model-T** turns a human-readable legal contract into machine-readable code that can be executed by the software with the click of a button. **Model-T** is the tool to authenticate and automate the entire process of company formation and registration on a blockchain network.

Significantly, on a legal level, **Model-T** software licence will enable automated limited liability company formation and registration through a set of Ricardian and smart contracts. Each document will have to be signed with a private key and will be uniquely identified by its hash on the blockchain, effectively creating its unique identification number.

By use of Ricardian contracts, **Model-T** aligns law with code and enables us to notarise the formation of each limited liability company, by cryptographically hashing the contracts on a public blockchain network and keeping a complete reference chain of each contract: each new legal entity will be registered and identified by its own, unique hash.

With every limited liability operational agreement cryptographically signed by both parties, (**Root** and the prospective company) a company’s formation is registered by being hashed on the blockchain, and it is impossible for anyone to unilaterally change the legal agreement.

Registration will provide a company with legal personhood and a limited liability shield emanating from the **Root**; a hash - a uniquely identified number registered on a public blockchain; a decentralised identity pointing to a wallet (treasury/account), and registration of tokenised ownership (members' shares/interests).

The newly formed company will have its own hash, which means its unique reference number to be used thereafter as Proof of Existence, (PoE), or attestation. Thus, the newly formed company is endowed with a legal personality, has a 'cyber seat', a 'lex situs', and a presence on the public blockchain.

Through this process, **Model-T** creates a Companies' Register by tracking the formation of each limited liability company on-chain. It creates a register of parties involved with the help of private keys and a mechanism to hold them accountable.

Root becomes the "Companies' House" for Web3 code-based companies and provides a Proof of Custody of all signed documents of incorporation with an authoritative, tamper-proof revision history and evidential trail hashed into the blockchain. When company formation history is stored with **Root**, it is possible to track the master company formation document and its data by referencing its unique PoE hash.

By use of Ricardian contracts, privacy of end-users is preserved, as only the hash - the company's unique reference number - is made public on the blockchain whilst keeping the company's and its members' details private, stored internally with **Root**.

Model-T will track and authenticate the legitimacy of each newly formed legal entity in cyberspace, and thus create a cryptographically authenticated, tamper-proof, and transparent Companies' Register for Web3.



5. Implementing Model-T

Model-T's global journey starts in the State of Delaware with the formation of **Root Series LLC** as a protected **Series** in accordance with **section 18-215 (b)** of the Delaware Limited Liability Company Act, ('The Act'). The steps to formation are well established: a limited liability certificate of formation is filed with the office of the Secretary of State containing the notice of the limitation on liabilities of a protected **Series**.

Through its limited liability company agreement, **Root** establishes the formation of a **Series**, with its 'mothership', **Root LLC**, as its first member whose sole activity is to implement **Model-T**: to build and facilitate the formation of independent, limited liability governance structures by code for any type of business that wants to embrace Web3.

The sole purpose of the 'mothership', therefore, is to implement **Model-T** from which a protected series of separately formed decentralised autonomous legal entities are launched without the need for any further certificates of formation or any documents of incorporation or permission required from the Secretary of State or any other jurisdictional encumbrance. **Root LLC** is the only one entity filed with the State.

Each newly formed 'DAC' is an individual 'series', legal entity, and an independent member of the **Root Series**, with its own separate members, rights, powers or duties with respect to specified assets. Any such individual 'series' may have a separate business or not-for-profit purpose, or investment objective, with their own assets and their own limited liability digital wallets, accounts (treasuries); each 'series' becomes an individual legal personality with all the benefits and obligations that such a status entails.

The **Model-T** business formation set-up of the **Root Series** will be embedded in code and Ricardian smart contracts that will underpin the limited liability legal framework, and any prospective company that onboards will need to enter into an individually tailored Ricardian operational agreement with **Root**, the 'mothership', in the manner of an LLC operating agreement.

With each limited liability operating agreement cryptographically signed, a new code spin-off is automatically launched, a new PoE is automatically hashed, and a new 'DAC' is thus formed and imbued with limited liability protection over its governance and its wallet, (treasury). No need for certificates of formation or documents of incorporation to be filed. This is company formation at the click of a button. **Root**, 'the mothership' is in effect a

one-stop-shop legal gateway to forming any code-based blockchain company as a limited liability entity with a legal personhood.

Through its programmability, **Model-T** will enable us to scale and flex our operations globally and support companies' functions much faster, using code and Ricardian smart contracts and giving us increased agility and the ability to respond creatively to technological changes and legal requirements.



6. Why the Delaware Series LLC structure?

Delaware offers the first, perfect testing ground for **Model-T**. This is because Delaware corporate law is considered a world leader, the most advanced, favorable, and technologically friendly legal framework that is predominantly made up of enabling default rules that leave significant discretion to private choice. Its ‘*freedom to contract*’ principle best suits the programmability of code and best embodies the Web3 spirit. Enshrined in its statute runs the legislation’s governing principle of contractual freedom as a golden thread – Section 18-1101 (b) of the Delaware Limited Liability Company Act, Chapter 18: “*It is the policy of this chapter to give the maximum effect to the principle of freedom to contract and to the enforceability of limited liability company agreements*”.

Significantly, using the Delaware Limited Liability Series structure expounded at **section 18-215 (b)** of the Act, the legal position of any DAO-like structure becomes legitimised, as upon becoming a member of the **Root Series**, it is imbued with legal personhood, and becomes a legal entity separate from its members, able to enter into contracts, hold title to assets, grant liens and security interests, and sue. Each newly formed entity (‘DAC’) is seen as a separate, independent, ‘legal person’ from the ‘motherhood’, and from each other.

Structurally, the enhanced liability shield works as between **Root** the ‘motherhood’, and the spun-off legal entities, (‘DAC’s), and importantly between the newly formed legal entities themselves, as there is a firewall of liability protection that separates them and their assets.

Therefore, internally, the relationship between **Root** the ‘motherhood’, and the DACs and between the DACs themselves is horizontal, and not vertical in the manner of parent-subsidiary relationship. This is in line with both Web3 principles and with the freedom to contract Delaware legislation.

Model-T creates this unique, programmable limited liability structure for any type of code-based company which ultimately allows for the freedom to contract and to carry out activities as any other traditional business, each decentralised legal entity keeping its assets, records, digital wallets, (accounts), members, activities, operations, liabilities, and losses separate from each other and separate from **Root**, the ‘motherhood’.

This is the ‘maker’ economy and the ‘maker’ legislation fused in one novel, transformative use case building the infrastructure of Web3 and the Internet of Value.

As the technology for automated governance proliferates, the **Model-T** protocol will be adopted by forward-thinking Web3 builders, prospective DAOs, and the business people of today and tomorrow for its flexibility and efficiency in accomplishing vital internal and external company agreements through highly secure smart legal contract protocols and tokenisation of ownership (shares).

What is also appealing is **Model-T's** potential to give everyone the ability to programme secure complex legal agreements for high-growth decentralised businesses, and maintain growth through strong liability-limiting properties. Traditional governance entities may be with us for quite some time, but the promise of a better way of doing business may present an irresistible, worthy competitor.



7. Conclusion

Root and **Model-T** will revolutionise company law worldwide and will enable the creation of a responsible, code-operated and blockchain-powered global business environment.

Through **Model-T**, **Root** is commercialising the Companies' House delivery model by creating a dApp available on multi-chains and to all jurisdictions around the world.

Model-T is democratising the adoption of DAOs as legal entities, and the evolution and proliferation of a new form of 'smart company' that functions in both physical and virtual worlds – the Decentralised Autonomous Company, 'DAC', laying down the foundation and the building blocks of Web3 digital commerce.

Thus, newly created 'DACs' can thrive in cyberspace without the usual constraints of intermediaries, bureaucratic and administrative red tape, leaving behind archaic, opaque and questionable structures, and enjoying legal personhood and the rights and obligations that come with it via automated code, and the transparency of the blockchain.

Ultimately, **Model-T** will provide governments with the tool for the creation of an international legal-tech standard for a responsible Web3 corporate governance model.

There is a global race for the first economy to become the legal hub of technological innovation and we believe that whoever implements **Model-T** will win that race, and will speed up regulatory compliance, enforcement, and thus trigger mass adoption.

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