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The COG (Cognition Object General Ledger) Blockchain System

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Abstract: COG (Cognition Object General ledger) is a Proof-of-Stake utility blockchain designed to enable resource management and negotiation on the blockchain, allocation, and certifications. Registered systems can be validated against the blockchain and tokens exchanged for resource access. Resources can be registered to authenticate for COG access but can also be Smart Contracts on the blockchain.

Keywords: COG Token, Ethereum, Blockchain, Resource Management, Artificial General Intelligence, ASI, AGI, Artificial Super Intelligence, Cognitive Architecture, ICOM, Cloud, Commodity, Utility, Independent Core Observer Model.

Introduction

Artificial Intelligence empowers the world increasingly, and that power grows at an incredible rate. Unfortunately, like any other valuable and scarce resource, it is subject to profit-harvesting silos that seek to make it artificially even more scarce and only for their purposes, which pay little attention to the common good. The AGI Laboratory believes that AI resources should be a public utility, accessible to and developed by everybody.

Artificial General Intelligence Inc., therefore, introduced COG in 2017 to bootstrap an economically viable resource exchange around Artificial General Intelligence (AGI) related resources and services. A large part of this was to allow the free management of resources

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between systems. The intent is to create a community of such systems that can consume and negotiate resource usage on the blockchain. This community of systems will bring AGI resources to the world as a general-purpose utility. COG tokens not only allow sales of cognitive services and consulting—hosting across Amazon Web Services, Microsoft Azure, the Google Cloud Platform, and others—but COG tokens will also enable you to participate in new community prediction and governance markets, as these tokens will grant you voting rights and resources in efforts ranging from research to altogether new resource development as well as service access.

The mission of AGI Laboratory with COG is to build a community of experts, consultants, and automated tools that can take on any intellectual and information assessment job, in the process building a repository of knowledge and new tools that can be re-used and improved by anyone. Kaggle, a leading data sciences firm, is superb for the few who can afford to run a high-reward contest and the top-tier teams that can benefit—but despite the Kaggle community’s yeoman efforts to help newcomers, little of the knowledge and tools are retained from contest to contest.

AGI Laboratory will accomplish community re-use and education via an infrastructure of easy-to-use mix-and-match General Intelligence qualia. No intimate familiarity with disparate systems and programming languages will be necessary. The tools bootstrapped by the COG community are easily accessible. In particular, and to start with, we will build an economy of blockchain-based smart contracts that facilitate the processes of buying resources, managing contracts or bounties for creating new tools, and offering cognitive services and products as well as resource certifications.

Why COG Tokens?

COG Tokens provide humans and AI a medium for managing essential resources dynamically. The tokens enable far easier automation and removal of humans from the equation of cloud and machine-learning resource management.

What do COG tokens do?

While COG tokens provide standard smart contract token functionality, they also allow humans and AI systems to manage blocks of resources directly on the blockchain (versus other less secure methods). The COG Token is further designed to extend blockchain functionality. We can add to or extend the token with our token architecture creating new ERC20 tokens on the COG blockchain.

What is AI?

Artificial Intelligence refers to systems that apply “machine learning” principles, typically in narrow application domains. AI engages in activities like playing chess or complex advanced data

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analysis and deep learning applications, or more recently, voice applications telling you the latest in weather and reminding you what you need to do that day.

What is AGI?

AGI is Artificial General Intelligence. Where AI is limited to specific applications, AGI systems can be applied generally for any application. A human being is a functional example of a General Intelligence like an AGI.

What are COG Tokens?

COG Tokens are Proof-of-Stake fork of the Ethereum codebase and include the smart contract that represents operational resources such as machine-learning Application Programming Interfaces (APIs) or external cloud-hosted assets which support a token extension framework.

COG Tokens and Business

COG Tokens convert AI cloud systems into a commodity utility. This utility will enable your business and ours.

What does the token do?

COGs assign and access cloud-based resources such as Azure-based Machine Learning web services, cloud-based neural network systems, or custom visual analysis. COGs orchestrate these systems around any business need.

Cloud Resource Access

Increasingly prevalent cloud services enable more machine-learning, big-data, IoT (Internet of Things), and AI technologies, which COG will exploit by providing greatly simplified AGI automation interfaces to them. The competitive advantage is much greater cost-effectiveness for users.

Resource Management

Resource management is key. COG's most important function is resource management. All other functions are related to this function. This includes Cloud-based resources such as databases or REST services-to-cognitive machine learning services that will help us evolve artificial intelligence into a publicly accessible utility managed by COG interaction.

Manage Research Allocation

COG is a medium for the community to guide our research team's agenda. Because Artificial General Intelligence should be driven by public interest, COG will flourish outside of the sales and marketing constraints of a university or large companies. Everyone should drive AGI. Via COG, it will be. Research agenda and research voting are done via COG.

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Early Access to AI Technologies

Along with managing resources and the research agenda, COG holders get real-time access to research as we do it. You will have access to internal research papers and studies before they are released, with direct access to the research team. COG gets you the inside scoop on what is next in AI.

The COG ICO

COG was soft-launched in 2017, and the ICO is in 2021 with the release of COG as a product for research management; bootstrapped without dependency on any narrow interest agenda is available now. Society's agenda will drive COG. The Released Token COG pool is controlled based on available resources, with little or no gas or mining costs.

Pre-ICO Details

The pre-ICO focuses on token use in resource allocation, production, and management. Tokens will be available to partners, developers, and researchers, with grants to contributing research teams that use COG for their resource management.

Pre-ICO Funds

The following list shows the pre-ICO release count for COG and other ICO-related details such as price, dates, and distribution details.

- Maximum Released Pre-ICO 1,000,000
- COG Pre-ICO Price 1 USD = 1
- COG Minimum Transaction .00 COG.
- Pre-ICO Dates up to June 2021.

Token Distribution Contract distributes upon funding receipt based on processing speed and related factors.

Main ICO

At ICO, there are about four million tokens held in reserve until resources allocate some tokens. The released token pool is controlled based on available resources. The token Symbol for COG is "COG".

Token Distribution

From pre to post-launch, the total ICO distribution will be a maximum of 20,000, where token sales are only released upon the availability of additional demand around infrastructure. In this case, the token is used as a management medium, resulting in the maximum release amounts.

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Unsold Tokens

Any tokens not sold will be held in reserve by the company for release as the market needs them – in particular, new resources come online, increasing the total resource count and the need for management. The Released Token pool is controlled based on available resources.

Fund Allocations

Funds derived from the token sales will cover the costs of research, services, support, administration, and scaling of cloud providers via COG, to ensure consistency in the COG resource network. Funds are subject to oversight by the Board of Directors.

The COG Token and the AGI Inc. Business Model

The COG token enables the AGI Laboratory business strategy. Our goal is to bootstrap AGI, particularly for operation in the “wild” or public cloud-based environment. Our business model is designed to remove the need to operate such systems via fiat currency. The COG token will function as an exchange medium between multiple AGI cloud commodity systems for uniform resource sets. AGI Laboratory has been privately funded through investors up until the public crowd-funded IPO for an undisclosed amount. The COG token is more specifically for automation used by the AGI resource systems we have designed and for new ones being designed, but it is also helpful for human management of those same resources. All funds raised from the token sales will support the COG blockchain and further research and development at AGI Laboratory.

Partners

AGI Laboratory has partnerships with Microsoft and several other firms involved with machine learning and cloud-based assets.

Market Segment

The target market for AGI resources as conceived and presented in this document is currently disconnected in numerous business sectors. With the newly invested community, we will create and prove a new AGI resource cloud commodity market. Our initial focus is on development that will join ancillary markets needed to support development. The viability of our research and development springing from these ancillary markets is supported by wider community research. For example, market research around the trend word “singularity” suggests a market expectation of AGI at some point. We will tap into that market expectation by developing various smaller commodity units designed to become independently sustainable and operate as building blocks for more complex functionality. This includes new cloud and machine-learning commodities which the COG token uses, manages, and consumes. As we develop these new asset classes and become independently sustainable, we will spin each asset off to support the company and COG resource community. We will focus on developing analysis Application Programming Interfaces

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(APIs) using the core technologies we have already developed, and later in 2022, our teams will focus on a new graph database system. Both the research team and the team managing COG would be separate business units as products or services become viable, or if they prove to be less viable, additional plans will be developed to help the firm focus on those elements that show the most promise.

No team members outside of the public officers and Board of Directors are publicly available. The corporation is a C Corporation out of Wyoming. (For the current State of the AGI Laboratory Research Program, see <https://agilaboratory.com/research/>.)

COG Token Technical Description

A COG token is a Proof-of-Stake fork of Ethereum supporting ERC20 standard smart contract, based on the Solidity. Before release, the token and services are both available.

Given that COG is a Proof of Stake (PoS) that states that a person can mine or validate block transactions according to how many coins they hold. This means that the more coins owned by a miner, the more mining power they have. (see [Cryptocurrency Strategy & Education](#))

Proof-of-Stake is a type of consensus mechanism used by blockchain networks to achieve distributed consensus.

It requires users to stake their COG to become a validator in the network. Validators are responsible for the same thing as miners in Proof-of-Work: ordering transactions and creating new blocks so that all nodes can agree on the state of the network. (see [Proof-of-Stake](#))

- Proof-of-Stake comes with a number of improvements to the Proof-of-Work system
- Better energy efficiency – you do not need to use lots of energy mining blocks
- Lower barriers to entry, reduced hardware requirements – you do not need elite hardware to stand a chance of creating new blocks
- Stronger immunity to centralization – Proof-of-Stake should lead to more nodes in the network
- Stronger support for shard chains – a key upgrade in scaling the COG network

Proof-of-Stake, Staking, and Validators

Proof-of-Stake (PoS) is the underlying mechanism that activates validators upon receipt of enough stake. For COG, users will need to stake 32 COGs to become a validator. Validators are chosen randomly to create blocks and are responsible for checking and confirming blocks they do not create. A user's stake is also used as a way to incentivize good validator behavior. For example, a user can lose a portion of their stake for things like going offline (failing to validate) or their entire stake for deliberate collusion. (see [Proof-of-Stake](#))

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How does COG's Proof-of-Stake Work?

Unlike Proof-of-Work, validators do not need to use significant amounts of computational power because they are selected at random and are not competing. They do not need to mine blocks; they need to create blocks when chosen and validate proposed blocks when they are not. This validation is known as attesting. You can think of attesting as saying, "this block looks good to me". Validators get rewards for proposing new blocks and for attesting to ones they have seen.

If you attest to malicious blocks, you lose your stake. (see [Proof-of-Stake](#))

Published Research

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