Abstract

Galliumcoin is building a decentralized exchange, liquidity provider mechanism, clearinghouse messaging network, and asset-backed blockchain gateway. Galliumcoin is not owned by any single one party. Instead, it is an open distributed network of validators which enforce behavior of all participants. It uses the mechanism of a protocol token to create a proof-of-stake blockchain to enable enforcement of market activity amongst participants.

This high-performant distributed network enforces exchange across asset classes, from fiat-backed issuers to fully decentralized blockchain tokens (ERC-20 style and native cryptocurrencies). Unlike nearly all other decentralized exchange platforms, this allows for decentralized exchange of other blockchains and between multiple blockchains directly without a trusted gateway token. Markets may be able to significantly reduce spreads and encourage market assurance via decentralizing custody and increased transparency of market activity. This is achieved using smart contracts, proto-col tokens enforcing correct market behavior of orderbook matching, a new construction of Bitcoin bonded external enforcement of clearinghouse activity, and commitments to historical exchange data for use with Bitcoin smart contracts.

Mission Statement

"Our mission is to build an accessible prediction market platform enabling the free flow of useful information."

Gallium will be a disruptive force driving change in a number of systemically important global markets, including finance, gambling, insurance, and information. Gallium prediction markets will also find applications in new forms of distributed, market-based governance protocols, and will provide unique incentivization opportunities for both local and global economies.

Gallium is well-positioned as a medium for a long-term shift toward information arbitrage economies that will power the Internet of Things, as well as more advanced forms of artificial intelligence. We believe that we are on the cusp of a Cambrian explosion of machine intelligence that will leverage a global liquidity pool of information for decision-making and will be deeply interwoven on a shared blockchain fabric such as Bitcoin. Decentralized prediction markets seeded Son Gallium will be the ideal medium of exchange for these intelligent agents.

Vision

Gallium's vision is to create a people-powered new economy services company that makes the crypto currency market accessible and trustworthy to the average user, accelerating adoption of block chain technology and democratizing ownership of crypto currencies.

Team

While this is a massive vision, Gallium has an experienced and enthusiastic team and community who are ready to make this vision a reality. The Gallium team brings together a unique collection of experts across crypto currency, financial services, distributed computing systems, mobile technology, and broad scale consumer app development that has built multiple award-winning applications and collectively powered over $1 billion in mobile micro payments.

Introduction To Blockchain Technology

Blockchain, a seemingly unassuming data structure, and a suite of related protocols, have recently taken the worlds of Finance and Technology by storm through its groundbreaking application in the modern crypto-currency Bitcoin, and more so because of the disruptive innovations it promises. While Bitcoin has been the most talked about application of the Blockchain technology to date, new applications such as Smart Contracts have tried to exploit more abstract nature of the platform. In this , we explore Blockchain similarly – as White Paper an abstract data structure and development platform to solve generic problems in FinTech.

Cryptographic Components

Blockchain Technology relies heavily on fundamental tools from Cryptology and Data Security, especially in terms of message authentication targeted towards tamper-evidence and tamper-resilience. In its most abstract form, a Blockchain may be described as a tamper-evident ledger shared within a network of entities, where the ledger holds a record of transactions between the entities. To achieve tamper-evidence in the ledger, Blockchain exploits cryptographic hash functions.

Cryptographic Hash Function

A generic hash function maps arbitrary size inputs or messages to fixed size hash values or tags. In order to justify the authenticity of a message through its tag, a cryptographic hash function tries to ensure pseudo one-wayness, that is, the practical infeasibility of generating the input message given the tag, and pseudo collision resistance, that is, the practical infeasibility of generating two input messages that produce the same hash value or tag. Due to these two properties of cryptographic hash functions, it is probabilistically ensured that if a message is inadvertently exposed to errors, or has been intentionally tampered with, its hash value will not match with the original tag, and thus, the tampering will be evident. In fact, for minor differences in the input message, the tag generated by a cryptographic hash function is supposed to exhibit major (random) difference. This allows us to utilize hash functions for creating tamper evident structures.

Hash Pointer

A pivotal construct in blockchain technology is the hash pointer – a combination of a regular pointer structure with the hash value of the data fragment it points to. This produces an inbuilt data integrity mechanism, as storing the hash pointer simultaneously guarantees the location evidence of the data (through the regular pointer) as well as the tamper evidence of the same (through the hash value). In other words, storing the hash pointer to any piece of data acts as a commitment towards the location as well as the integrity of the specific data fragment. The hash pointer is flexible enough to replace the regular pointer in any acyclic pointer- based linked data structure, and hence is capable of producing a variety of data structures with inbuilt data integrity and tamper evidence. An example of such a tamper evident data structure is the Blockchain.

Blockchain: Tamper-evident Linked-List

Let us consider a linked-list, with the regular pointers linking the nodes replaced by hash pointers – this is preciselywhat a blockchain data structure looks like. Each block in the blockchain acts as a node in the list (or chain), holding some amount of data, and a hash pointer pointing to the previous block on the chain. The first block in the chain is called the genesis block, and this is the only one that does not have to contain a hash pointer

Blockchain Protocol

The driving force behind the recent fame and success of blockchain technology is the wide range and flexibility of protocols that can be realized using the basic data structures defined in the previous section. To understand the blockchain protocols, we need to define some essential functional components, as follows:

Network

The blockchain protocol, in its most generality, establishes a consensus over a decentralized network of members involved in the respective protocol. The members participating in the protocol may have various roles and actions in managing the authenticated data structure, as specified in the protocol. Such roles and actions may depend upon a pre- specified access control mechanism, or a set of permissions, as and when applicable, to make the protocol fully flexible. Consequently, the structure of the blockchain network may be peer-to-peer (flat) or hierarchical, as and when required by the respective protocol.

Transactions

A mutual contract struck between any set of entities in the blockchain network is generally termed as a transaction. Owing to the historical origin of blockchain technology from Bitcoin, any such contract is called a 'transaction'. However, in its most Applications of Blockchain Technology to Banking and Financial Sector in India generality, a transaction can be a complex multiparty contract encoded as a Boolean logic, implemented in the form of an executable script. These generic blockchain transactions are also called Smart Contracts. The transactions are the fundamental atomic components of a blockchain protocol, and the other structures in the protocol are built on top of transactions. One may in fact view a blockchain platform as a tamper-evident distributed ledger of transactions.

Ledger

A collection of transactions in a blockchain network is generally stored in the form of a Merkle Tree, to ensure tamper-evidence of the set of transactions using a constant size commitment (hash pointer to the root of the tree). Each such set of transactions, recorded as a Merkle Tree, is included in the data segment of a block, and these blocks are stored chronologically (as per their time-stamps) in a blockchain ledger, that is, in the form of a tamper- evident linked-list

Verification

Blockchain is inherently meant to be a decentralized ledger of transactions. Thus, each transaction or contract between two (or more) members in the network requires verification or validation by the network itself, without going through an independent arbitrator. This is achieved by incorporating a verification scheme in the protocol. In practical blockchain schemes, this verification scheme is often implemented as a part of the transaction in the form of an executable script, which results in either acceptance or rejection of the specific transaction. In certain practical applications of blockchain technology, the verification routine also connects the current transaction to previously existing transactions in the blockchain, which have been verified earlier as inputs. These connections have been depicted by the dotted lines in Figure 4. Depending on the application, the verification scheme may be designed in such a way that the transactions admit to public verification, or it may be entirely permissioned.

Consensus

The transactions are grouped together in a Merkle Tree, and the block containing this tree is recorded in the blockchain ledger. It is to be noted that in a distributed network, the task of creating a block and appending it to the ledger should also be natively decentralized. The blockchain technology is flexible enough to accommodate a suitable form of decentralized appending process, known as mining in general.

Gallium coin
BUILD A BETTER FUTURE

Digital Currency

Electronic Money, which is an early version of digital currency is formally defined as "value stored electronically in a device such as a chip card or a hard drive in a personal computer". The value stored and transferred needs to be denominated in a sovereign currency to be considered e-money; while, in many cases digital currencies are not denominated in or even tied to a sovereign currency, but rather are denominated in their own units of value. A cryptocurrency is a form of digital currency designed to work as a medium of exchange using cryptography to secure the transactions and to control the creation of additional units of the currency.

The examples of cryptocurrencies include Bitcoin, Litecoin, Ripple, Ethereum and Dogecoin. Typical cryptocurrencies have their own advantages and disadvantages.

TOKENS

Supply of GIMC depends on incomes and outcomes of fund's capital. Every time purchaser sends BTC or ETH to Gallium Coin BTC or ETH address. Gallium Coin issues GIMC based on a price which is calculated at 12.00 and 00.00 GMT each day.

Token Price = Value of Assets / Supply

Purchaser Tokens = Investments / Token Price - Entrance Fee
Every time purchaser sends TKN to GoCash Coin account tokens are destroyed. Payout is calculated based on a price which is calculated at 12.00 and 00.00 GMT each day.

Token Price = Value of Assets / Supply

Investments = Purchaser Tokens * Token Price - Exit Fee
Also a purchaser can sell GIMC in the open market.

Problem

The Gallium platform is designed to tackle specific problems in the world of Cryptocurrency:

- Choosing between an ever-growing array of crypto currencies
- Understanding attributes across different crypto assets
- One-click diversification into multiple crypto assets
- A safe and secure mobile wallet that handles multiple keys
- Being able to easily transfer value across digital assets

Design Approach

The end-state requirement is a construction of a decentralized mechanism for eWallet platforms holding fiat-backed value (as well as native, opt-in, support for cryptocurrencies). The eWallet fiat tokens will have the ability to use Ether on the decentralized, public Bitcoin chain (or any other decentralized cryptocurrency) as the interchange/in-termediary cross for maximum efficiency. We believe that this allows for significant more activity and value in decentralized cryptocurrencies, as it will serve as a useful venue for Many eWallet platforms.

As it's a core function for this decentralized network to do eWallet interchange, a 2 the decentralized exchange. There is an expectation, that eWallets will hold some reserve of fiat tokens of other eWallets, ready to be used for smaller transfers in popular directions. Constructions such as Lightning Network allow for payments to occur off-chain when eWallets hold balances to facilitate rapid payments. Implementations allow for payments across Bitcoin which can be easily ported to the GMC chain for eWallet balances.

The result of the Gallium blockchain construction is it allows for eWallet interchange, supported by a decentralized exchange, cryptocurrency (e.g. BTC) matching, orderbook, and clearinghouses without full-custody trust

GalliumcoinTech

GalliumcoinTech is our dual blockchain system for sending private Galliumcoin payments. Essentially – the transaction information is encrypted and sent through a second blockchain, which completely breaks any link between the two addresses.

It's easy to use and comes pre-configured in our latest wallet. It is open source and decentralized. Anyone can setup their own servers or use ours.

Advantages And Disadvantages

Advantages

Control and Security:

Users are in control of their transactions, without foregoing their privacy while overcoming identity theft. Due to the fact that blockchain transactions cannot be reversed, do not carry with them personal information, and are secure, merchants are protected from potential losses that might occur from fraud.

Transparency:

All finalized transactions are available for everyone to see thus allowing immediate verification of transactions. Protocols being open source undergo wide scrutiny, thus enabling trust in the underlying platform and guaranteeing that they cannot be manipulated by any single person, organization, or government. It is possible to send and receive money anywhere in the world at any given time, without a central authority.

Very Low Transaction Cost

Currently, blockchain payments fees is very low. With transactions, users might include fees in order to process the transactions on a priority basis. Digital currency exchanges help merchant process transactions by converting them into fiat currency by charging lower fees than credit cards and PayPal.

Disadvantages

Risk and Volatility

Digital currencies are very volatile mainly due to the fact that there is a limited amount of coins and the demand for them increases by each passing day. A Committee on Digital Currencies set up by Bank for International Settlements (BIS), is cautious about Digital Currencies. They have observed that unlike traditional e-money, digital currencies are not a liability of an individual or institution, nor are they backed by an authority. Furthermore, they have zero intrinsic value and, as a result, they derive value only from the belief that they might be exchanged for other goods or services, or a certain amount of sovereign currency, at a later point in time. Accordingly, holders of digital currency may face substantially greater costs and losses associated with price and liquidity risk than holders of sovereign currency. The degree of anonymity provided by some digital currency schemes may discourage a range of financial system participants from direct use or from providing facilities for digital currency use to their customers, as AML/CFT requirements may be difficult to satisfy in relation to digital currency transactions. Also increased adoption and use of digital currencies could affect the conduct of monetary policy.

Wallet

A wallet is a piece of software that is used to interact with A eternity. A wallet manages private keys for the aeon and creates and signs transactions. One can use the wallet to send channel transactions, and use apps in the channel network.

Conclusion

In conclusion, an industry specific cryptocurrency (such as GalliumCoin) could significantly reduce the industry specific costs, lead to economies of scale and provide quality services to people from lower income groups. As more and more People earn GalliumCoin (GMC) and use them in various ways, the value of the Cryptocurrency will rise, giving more freedom to the community.
Indeed, the idea behind GalliumCoin is revolutionary but it is also inevitable. There is an obvious solution to the problems of various industries and it's just a matter of time until communities implement GMC and reap the benefits thereof.

Gallium Coin specifications

Coin Name :	Gallium Coin
Coin Tag :	GIMC
Total Coin Supply:	250.000.000

Gallium Coin Blockchain- ETHERSCAN.io
Contract Address: 0x9336c4fb60aa77dc1e561b6b0ae03210c01554db
Blockchain Url: https://etherscan.io/token/0x9336c4fb60aa77dc1e561b6b0ae03210c01554db

Gallium Coin Social Profile

Facebook: https://www.facebook.com/pg/Galliumcoin-1855396320140 41/posts/?ref=page_internal

Twitter: https://twitter.com/Gallium_Coin

Reddit: https://www.reddit.com/user/GalliumCoin/

BitcoinTalk: https://bitcointalk.org/index.php?topic=2377925

Github: https://github.com/galliumcoin

Blog: https://www.galliumcoin.com/blog

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