

SparkleCOIN

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Abstract:

The dream of using cryptocurrencies for everyday transactions has been in existence since the creation of Bitcoin itself. While cryptocurrencies offer a number of advantages over fiat currencies and even credit/debit cards, the volatility in the value of cryptocurrencies has been an obstacle that has yet to be overcome. Because of this, the dream of transferring value from the virtual world to the real-world using cryptocurrencies has yet to be fully realized.

Since the formation of this company in 2016, SparkleCOIN has been creating technologies that can be utilized in near-endless ways, especially in the context of real-asset tokenization on distributed and private ledgers, as well as real-time transactions between cryptocurrencies and traditional financial networks.

This paper brings forth the pain points associated with tokenization of traditional assets and the underlying problems with its integration with existing market infrastructures. It highlights how SparkleCOIN can help plug these gaps with SparkleCOIN's SPRK use token, the SparkleCOIN blockchain, and the SPRK Awards Platform.

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Introduction:

Distributed ledger technologies (DLTs) are poised to become a transformative feature, both in financial products and in the underlying market infrastructure itself. The digital representation of real assets (or tokenization) on distributed ledgers is one of the core parts of this technology's revolutionary potential.

Tokenization is the process of digitally representing an existing real asset on a distributed ledger. Asset tokenization involves the representation of pre-existing real assets on the ledger by linking or embedding by convention the economic value and rights derived from these assets into digital tokens created on the blockchain. Tokens issued in asset tokenization exist on the chain and carry the rights of the assets they represent, acting as a store of value.

The real assets on the back of which the tokens are issued continue to exist in the “off-chain” world and, in the case of physical real assets, those would typically need to be placed in custody to ensure that the tokens are constantly backed by these assets.

Communication between the “off-chain” (traditional business infrastructures) and “on-chain” environments will be crucial for assets that continue to exist off the chain.

By creating a virtual representation of assets in DLT, businesses and their customers benefit by:

- Gaining efficiency driven by automation;
- Facilitating the exchange of value without the need for a trusted central authority or intermediary;
- Transparency;
- Improved liquidity potential and
- Faster and potentially more efficient clearing and settlement.

In theory, any asset can be tokenized and rights to such assets can be represented on a distributed ledger. Issuance of tokens is backed based on real-world assets valuation in fiat currency, and convertible to platforms native-token or cryptocurrency.

However, while tokenization of a real-world asset is possible unless that token is a stable coin, whereby the value of that token remains constant, that token cannot be used in daily transactions due to the volatility and rapid change in value. This has been the case for all cryptocurrencies that are traded and here lies the fundamental problem as to why they have not been widely adopted for use in daily transactions.

Finally, while there are a number of cryptocurrencies that are being used to move values from the virtual world to the real world, they are mostly done by individuals on an OTC (peer to peer) basis or are specifically coded to that virtual platform. Furthermore, they are not end-to-end solutions, which include the last-mile connections to cryptocurrency exchanges and traditional banking systems like the SPRK Awards Platform.

About SparkleCOINs Underlying Technology:

In recent years, Blockchain has been heralded as a major disrupter on track to rattle almost every industry from agriculture and manufacturing to Finance, Oil and Gas industry. While in many cases, the technology's promise can be clearly seen, however, for the vast majority of enterprise use-case, the companies require a different record-keeping system that hides sensitive information or bookkeeping from the public.

The SPRK Awards Platform offers a unique combination of features and consortia building enterprise-level solutions - a dual-ledger system. It offers two different but interactive ledgers.

1. A proprietary and private ledger for a privately labeled token priced at \$1 and,
2. The SPRK Blockchain, governed by the SPRK token.

Both ledgers will have complete audit trails and reporting functionalities.

The SPRK Blockchain (ledger) can be described as a ledger of any transactions or contracts maintained in decentralized form across locations and people. All the information on it is securely stored using cryptography and can be accessed using keys and cryptographic signatures. Any changes or additions made to the ledger are reflected and copied to all participants. Once the information is stored, it becomes an immutable database, which the rules of the network govern, making the records resistant to malicious changes by a single party.

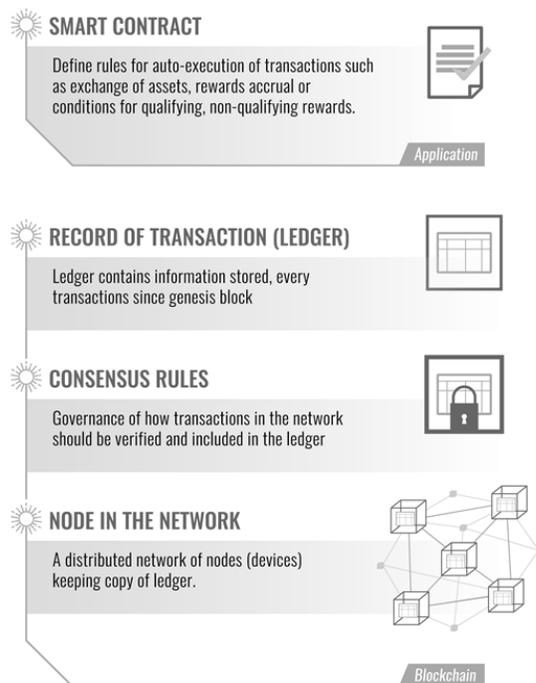
The SPRK distributed ledger technology uses a hybrid of Proof-Of-Work and Proof-Of-Stake consensus mechanisms to ensure that there is agreement among participants on the current state of the blockchain. Its primary aim is to ensure that the chain is not re-written.

The objective behind using the hybrid system is to capture the benefits of the respective approaches and use them to balance each other's weaknesses, which is:

- PoW blockchains have significant mining costs (hardware requirements and electricity consumption) and since it can split at any moment, it requires transaction finality to wait for a couple of block confirmations.
- PoS blockchains could be subject to long-range attacks and could compromise the trustless nature since past stakes do not accumulate in the PoS based ledger, as the stake is released after some arbitrary bonding period.

SPRK utilizes both PoW and PoS in recognizable forms and merges them together to produce a multi-factor or hybrid consensus mechanism. In SPRK, PoW miners are responsible for producing and submitting new blocks. PoS stakeholders confirm that a block should be included in the blockchain by voting. A network node can be either a PoW miner, a PoS stakeholder, or

both at the same time. In SPRK, 0.25 tokens are provided to PoW miners who produced the respective block, and a 1% annual reward is provided to PoS stakeholders.



Smart contracts:

Smart contracts on the Sparkle Blockchain make life easier for anyone engaging in commerce and deals. Sparkle blockchain's smart contracts provide parties the ability to conduct rule-based transactions and agreements without the need for third parties and digitally facilitate, verify, or enforce the negotiation or performance.

The creator of the smart contract defines the rules and agreed upon by the involved parties. Once saved onto the blockchain, it will remain there forever, and the code at that location will never change. The Sparkle's ledger stores and replicates the agreement giving it security and immutability, and is automatically executed upon meeting the defined rules and obligations. There is no central authority necessary to run the software to function seamlessly.

Sparkle's smart contracts can:

- function as 'multi-signature' accounts, so that spending funds only occurs when a required percentage of people agree
- manage agreements between multiple parties
- provide utility to other contracts
- automatically trigger the sending and receipt of data to applications

Reward and loyalty program and challenges faced:

As it stands today In today's competitive landscape, most enterprises are adopting customer-centric business models to gain market leadership. Customer engagement and retention being the core focus areas, loyalty programs are becoming increasingly effective as strategic investments. In the US alone, consumers hold more than 3.3 billion memberships in customer loyalty programs.

While the loyalty management market size is expected to grow from USD 7.6 billion in 2020 to USD 15.5 billion by 2025, at a Compound Annual Growth Rate of 15.3% during the forecast period, many organizations are still not able to meaningfully engage with their customers.

Customer sentiments across various industry reports indicate:

- Some 57% of members don't know their reward points balance,
- Only 25% of members are satisfied with the level of effort needed to earn a reward,
- 33% highlight difficulties in using the rewards because of various terms and conditions,
- 36% say their points or rewards expire before they can use them, and
- 38% of buyers claim that they never knew if they had accumulated enough points to collect the prize.

In addition to the above concerns, customers increasingly these days are worried about their data privacy and security. Moreover, there are significant monetary implications that create barriers to entry for companies that are not well-funded or prepared.

More about monetary implications:

As the internet has evolved as a marketplace, more and more businesses are finding that they are subject to money transmitter laws and licenses. Although digital currency is gaining popularity, the world still runs on paper currency, which is why the exchange of money plays an important role in today's global marketplace. Without a steady stream of money exchangers, it would be far more difficult for customers to exchange loyalty points in the open market.

Though there is no uniform global definition for which business or services should obtain a money transmitter license, in general, money transmitter license is required if the business is :

- "engaging in the receiving money or monetary value for current or future transmission or transmitting any form of monetary value within or to locations outside the country by any and all means including, but not limited to, payment instrument, wire, facsimile or electronic transfer or issuing stored value".

According to the South Florida Business Journal, a mobile payment site was recently fined over \$500,000 for operating as a payment processor in Florida without a money transmitter license. This case and others like it puts Internet payment sites on notice that they may need the license before operating legally.

For instance, for applying for a Money Transmitter License in the U.S., businesses have to:

- Register With the Federal Government
- Register With the Bank Secrecy Act Electronic Filing System
- Create an Anti-Money Laundering Compliance Program
- Report Currency Transactions
- Report Suspicious Transactions

To operate as a money transmitter in a state, a business will need to meet the same licensing and regulatory requirements as traditional financial institutions. To fulfill the above-said requirements adds a complexity, significant cost, and duration to operating a business that doubles as an effective barrier to entry for companies that are not well-funded or prepared.

Creating bridge between virtual world to real asset:

SparkleCOIN's SPRK Award Platform creates a bridge between virtual world assets and their trading, storage, and transfer in the real world. It provides complete control to providers and consumers alike—the former being able to set the rules that will govern how customers can use the rewards, and the latter having full control to access and use these points as they deem fit.

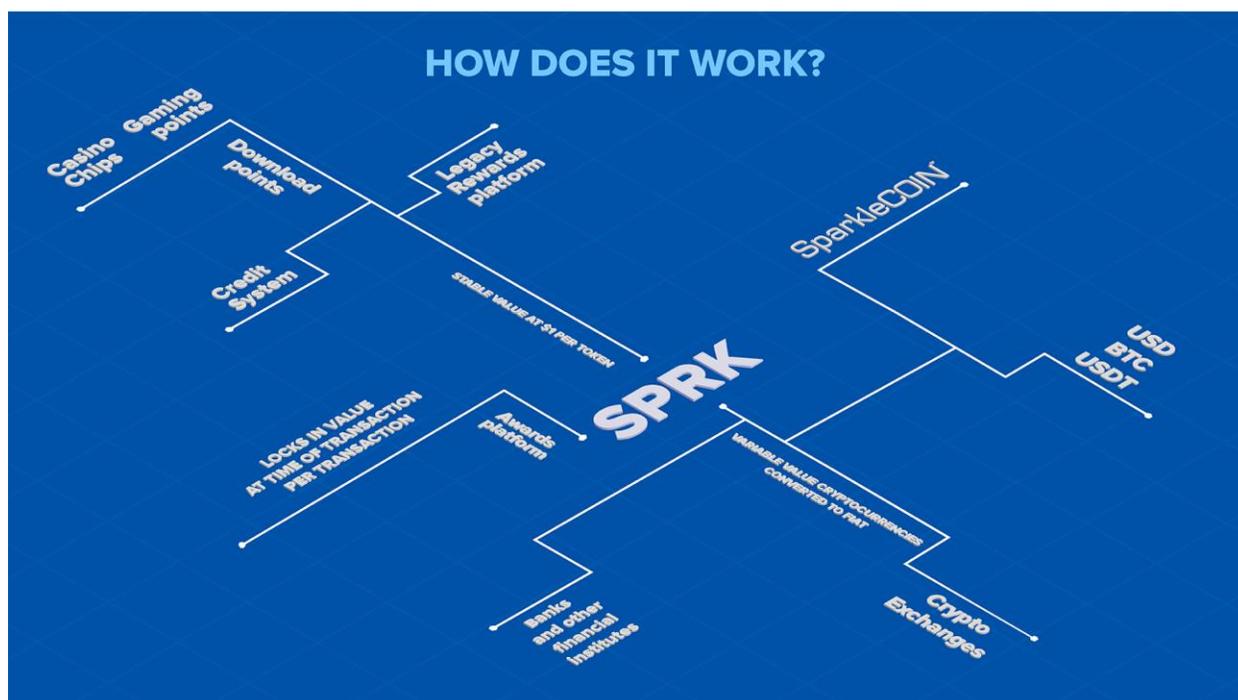
With a blockchain-based loyalty program solution in place, enterprises also stand to gain in terms of:

- **Operation cost:** Using smart contracts, businesses can minimize friction, errors, and fraud to ensure secure and transparent transactions, allowing for seamless operation management.
- **Transaction ease:** More trust in the transactions will permit program providers to bring down minimum points' requirements for redemption, in turn allowing customers to use points more frequently.
- **Transparent process:** Near real-time credit of rewards points allows them to be readily redeemable. In addition, by maintaining a timestamped distribution database for every transaction, blockchain ensures each record is traceable and every entry is irreversible.

Around SPRK, we have developed sophisticated transactional software and platforms that are designed to seamlessly move values from the virtual world to the real world and back. The solution includes -

1. business methodologies,
2. software technologies,
3. integration,
4. user interfaces,
5. a blockchain, and
6. direct real-time transactions with the world's largest cryptocurrency exchanges.

The SPRK Awards Platform is a turnkey end-to-end solution for the exchange of virtual assets and fiat currencies by means of a stable token valued at \$1 and any number of cryptocurrencies with constantly changing values, governed by the SPRK token. The platform can be utilized by any company that has a virtual economy such as gaming, company loyalty rewards, and even brick-and-mortar businesses.



Let's see a gaming business's virtual economy. Within this economy are points that are being used to upgrade the gaming character or buy special assets such as swords. With SparkleCOIN's SPRK Awards Platform, businesses can allow users to transit the virtual rewards or (points) to real-world fiat currency through SparkleCOIN (SPRK) in real-time. Likewise, the user can also deposit fiat and cryptocurrencies through the SPRK Awards Platform to convert into the gaming platforms points to be used within the game's virtual economy. This is managed

by first setting up a fixed valuation for the virtual assets (or points). For example, every 100 points equal 1 stable token, which in turn equals 1 U.S. dollar. This denomination is recorded in the SPRK private ledger.

If a user decides to convert the points, he/she uses an interface that helps to easily redeem the collected points (or rewards) to the stable token, which then can be redeemed for SparkleCOINs (SPRK) at the current market price.

By doing this, the SPRK Awards Platform provides the ability for the stable token to operate within the virtual economy as a fixed-price carrier of value while allowing the SparkleCOIN (SPRK) token to have the varying price dictated by demand and trading on the third-party cryptocurrency exchange, yet providing a seamless way to go from one to the other in real-time.

Based on the information used by the user to create the account, the business can choose to store this information in their own database or transition to SparkleCOIN's private ledger. The private ledger integrated with the business's platform is also used to update in real-time the debit or credit of the user's points.

For each business account, the same login credentials are used to create an account with crypto exchange. Once the user triggers the redeem process (and depending on the method of cash out selected - SPRK or Fiat), the asset management company will manage the transaction at the backend. For instance, buy SPRK from the market (exchange) and transmit the required currency to the user's SPRK wallet. An asset management company usually holds funds in reserve (USDT, or SPRK). This can be a third party or the same business or SparkleCOIN the company itself.

SparkleCOIN leverages its own SPRK blockchain to facilitate SPRK and other cryptocurrency transactions across participant networks. The SparkleCOIN's digital wallet is integrated into business platforms allowing rewards credit in real-world currencies to the users.

Given that businesses are limited with providing users with options to cashout due to money transmitter laws and licenses, their rewards ecosystem is limited to in-app upgrades. With SparkleCOIN's SPRK Award Platform, since the transition is handled by regulated exchanges, all legal aspects (such as KYC, AML, or money transmission) are automatically handled by crypto exchanges.

Note, a license for a cryptocurrency exchange in the USA entitles its owners to operate with the exchange of cryptocurrencies. Except for crypto exchanges, all other applicants who intend to provide payment services have to obtain trade or money transmitter licenses. However, if dealing with Fiat transactions, they are required to obtain a money transmission license.

Future work - A consortium program:

A consortium program can be enabled where all companies in SparkleCOINs (if they want) can choose to store their customer's data in a permissionless distributed ledger (sharable-secure database). This would allow companies to accordingly capture and analyze customer data for segmentation and profiling, and deliver personalized offers to customers.

In the longer run,

- Companies can launch bundled offerings and joint campaigns based on the segments identified. This solution also makes it possible for new partners and vendors to join the program, in turn, giving consumers more options to choose from.
- Not only does this extend the reach to a larger customer base, but it also helps cut down advertising and branding expenses, increase sales, and improve brand recall and customer stickiness.
- For consumers, this becomes a one-stop shop for all their loyalty program needs.

SPRK token function:

- **Enabling loyalty points monetary value:**

When customers are awarded for their loyalty and referrals with reward points, they require a fast and fair approach to exchange them in the open market. SparkleCOIN provides a bridge where users can redeem points to SparkleCOIN (SPRK) tokens making them tradable in exchanges, thereby, providing monetary value to the points earned from the platform.
- **Data storage cost:** One of the key benefits of the blockchain network is decentralized, tamper-proof data storage. Companies using SparkleCOINs blockchain can choose to store their customers data in the ledger. To do so, companies have to pay in SPRK for storing information in the blockchain.
- **Transaction fee:**

A transaction fee is charged to users when performing transactions such as the movement of assets from one wallet to another or for smart contract execution. The fee is collected in order to process the transaction on the network and distributed to the miners and validators.
- **PoS validators staking:**

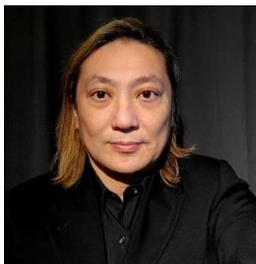
The SPRK distributed ledger technology uses a hybrid of Proof-Of-Work and Proof-Of-Stake consensus mechanism. While PoW miners require adequate hardware to produce blocks, PoS participants require to lock a certain amount of SPRK coins to participate for block verification. Depending on the PoS participant's stake, a proportional reward (paid in SPRK) is distributed.
- **Block producers and validators rewards:**

To process blocks and maintain the SparkleCOINs distributed ledger, participants are rewarded in SPRK. In SPRK, 0.25 tokens are provided to PoW miners who produced the respective block, and a 1% annual reward is provided to PoS stakeholders.
- **Payment gateways:**

Sparkle's ecosystem partners can accept transactions in SPRK as payment from customers in exchange for goods or services.

Author Bio:

Victor Wong, SparkleCOIN founder.



I have been an inventor, entrepreneur, and futurist since a child. I have founded a number of successful companies that have fundamentally changed the world. The first company was one of a handful that was authorized by Apple to make Mac OS compatible computer systems. We produced the most powerful Mac OS computer ever back in 1997 and was the first company to offer a “bare-bones” configuration whereby the end-user can add their own RAM, hard drives, and other components.

On the software side, I also founded a company that used Web Objects from Apple to create one of the first web-enabled business management software applications. This software powered online commerce for companies like Lucent Technologies and even the LBJ Presidential Library and was marketed by Apple to its enterprise customers. After this I founded Open Labs, which was the first company to create a complete all-in-one music production station powered by a computer and Windows, which was integrated into a musical keyboard. Our products included the NeKo, MiKo, and DBeat and was used by many artists and producers to compose and perform music including: Prince, Madonna, Faith Hill, KoRn, Maroon 5, Timbaland, Polow Da Don, Lil Jon, Michael Jackson, Linkin Park, Teddy Riley, and many others. One use example is all the keyboards on stage for the Super Bowl performance by Prince were from my company. We were instrumental in introducing the world to music production and performance using computers, which is now the norm.

Currently I run several technology-based companies including Music Computing, a maker of large format touch screens that are used by companies including Capital One and National Instruments, and government agencies like DARPA, and in boardrooms and trade shows worldwide. We were the first to produce multi-touch capabilities for Windows based computer systems as well as the first to produce any touch capable screens for Mac OS. Another company I currently run is Victor Racing, which makes Smart Active Aero products for cars. Our latest line of products won a Best New Product Award at the SEMA show in 2019 and is currently being used exclusively by the U.S. Touring Car Championship racing series.

In 2016, I also founded SparkleCOIN, a blockchain and cryptocurrency technology company, which has developed the SPRK Awards Platform that is being showcased in this document and will be utilized by large volume clients at the time of its public launch.