Girauno

GiraUno – white paper

Abstract

Giracoin 2.0, previously Giracoin, strives to become the leading digital blockchain-based platform for Europe. The core feature of the platform is the crypto currency GiraUno, a digital token with open-source mining based on the Ethereum Virtual Machine (EVM). The platform also provides user-friendly payment and investment services, including a desktop, web and mobile wallet, and the Hyperledger Fabric blockchain technology allows the decentralized development of blockchain applications and projects, also by third parties.

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Vision

Launched by the Swiss fintech company Gira Financial Group AG (GFG), the Giracoin is a digital currency in full compliance with regulatory requirements. Led by the company's vision to introduce crypto currencies to everybody, Giracoin enables laymen to access the world of crypto currencies and to own tokens within minutes. The Giracoin platform provides an ecosystem of services similar to the ones offered by traditional financial intermediaries and therefore introduces the concept of the decentralized ledger to a broader public. Giracoin is secured by two different consensus mechanisms, both

using SHA-256 hashing (the same algorithm Bitcoin uses): Proof of Work (PoW) and Proof of Stake (PoS).

Proof of Work supports the network by providing computer capacity and solving mathematical problems, using specialized hardware. This process is

called mining, and ASIC miners for the SHA-256 algorithm are especially important.

Proof of Stake is still about solving mathematical problems, but it needs much less computational power and requires the miner to have a positive balance in his wallet. It can be done using normal CPU/RAM, and it is suitable for desktops and servers.

Proof of Work & Proof of Stake

PoW is performed internally by GFG, thereby preventing attacks and ensuring a fair distribution of coins. PoS, however, is decentralized and can be executed by every user in a distributed network. In the long-term, this will ensure that neither the company nor the community of users will be able to take control of the network, as none of them alone has enough power to successfully execute an attack.

The distribution of coins takes place by selling mining power that is used to support the Giracoin blockchain to ensure a fair distribution. In this context it should be noted that fair distribution doesn't mean equal distribution; fair means that all users follow the same flow to get Giracoins, and they all have the same chances and the same opportunities to obtain them.

During the initial distribution period, only the web wallet was available, thus only allowing for PoW. As soon as the distribution was considered broad enough, the desktop and mobile wallets were released, enabling users to transfer coins from the web wallet (where PoS is not possible) to their desktop wallets, leaving in the web wallet only the balance they were going to spend in the short term. The long-term objective is to create a hardware wallet, a small physical device where users can store their coins and earn an annual interest.
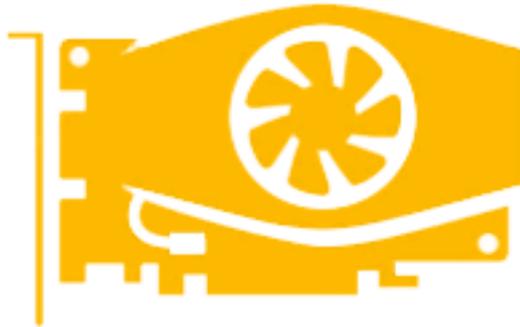
History and progress

Giracoin was launched on October 1, 2016, with an initial coin supply of 0 and a maximum supply of 21 billion. The PoW-reward for identifying a block was 2600 Giracoin (GIRA), with no halving mechanism in place.

In May 2017, Giracoin switched the blockchain from PoW only to PoW/PoS hybrid. The
initial supply was 730'072'200 coins to start the block height again. During the implementation of PoS there was a temporary removal of the maximum number of coins issued. After the successful deployment, this number was again limited to its target of 21 billion coins through softfork.

The PoS parameters provide an interest of 3% p.a.; the minimum coin age is 0 days, there is no maximum coin age. The CPU and RAM power of the user's desktop wallet is used
for staking. It should be noted that only the desktop wallet provided by GFG supports staking. The transaction fee is 0.0075 (0.75%) of the transferred amount in Giracoins. Furthermore, a desktop wallet was offered for the commonly used operating systems (windows, mac, linux), including a smartphone app.

Nonetheless, there were some challenges in implementing GFG's vision, and since inception of the company, the crypto currency world has moved from just providing digital means of payment to offering the whole value chain needed for the digital transformation.

In anticipation of the evolving market's directional development, Giracoin decided to go open source. With the introduction and stable release of Hyperledger and other projects in the technology field of decentralized ledgers, GFG has the technology to build a crypto architecture that can meet the expectations of a modern stack and to strengthen the acceptance of Giracoin.

Going open source as GiraUno

During the process of developing Giracoin and its ecosystem, including Girabuy and other projects which accept Giracoin, GFG's approach of a closed mining workflow and the implementation of a linear reward model helped to support the sustainable and steady performance of the Giracoin. The

fact that GFG was asked again and again to guarantee and provide proof of existence of the Giracoin blockchain, and requests from members to actively take part in the mining, show the interest among the community to sustain the existing network.

The current state of development is that GFG is moving from Giracoin to Giracoin 2.0 – from Bitcoin Core as the platform's base architecture to EVM/Hyperledger stack for Giracoin 2.0 open source.

Since the Bitcoin Core implementation is called Giracoin 1.0 for internal use, it seemed natural to release the open source digital currency under the name of GiraUno. Nevertheless, before publication, GFG still needs to adapt some parameters of GiraUno to the open source crypto currency standards. These changes are listed below.

Technical facts

GFG's user-friendly platform intends to provide the Giracoin community a native desktop client and web wallet, proprietary applications such as Girapay, the ReactNative mobile app for Android with full functionalities, and a native implementation for iOS with restricted functionalities for a personal wallet.

The Giracoin platform's core feature is the crypto currency Giracoin (GIRA). As a real currency, the token is a payment instrument and a good store of value. The Giracoin is based on Bitcoin Core v.0.13 and has been extended to a hybrid coin with PoW/PoS. It has been implemented with a combination of SHA-256 hashing and a simple retargeting algorithm. The interval between blocks is 120 seconds for PoW and 60 seconds for PoS. The level of difficulty adapts automatically to this average time frame in order to ensure that PoW and PoS follow the defined rules. The maximum coin supply will be 21 billion coins with a linear reward of 2600 GIRA for each block. Once the maximum coin supply is reached, neither PoW nor PoS based blocks are rewarded with tokens.

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To meet the requirements of a quickly evolving environment and to secure the future market acceptance of the token, Giracoin will be upgraded to GiraUno, and it will be released open source. As in the case of Bitcoin and other Altcoins, a halving algorithm will be introduced, which will replace the linear reward distribution and serves as inflation protection. Since Bitcoin Core v.0.13, crypto currencies have experienced several disruptions such as the split of Bitcoin Cash on August 1, 2017, or the implementation of SegWit to the mainline of Bitcoin on August 24, 2017. GiraUno reflect these changes by introducing SegWit and Atomic Swap readiness and by increasing the block size to 2 MB.

After the launch of GiraUno, a team of system developers will maintain the code and ensure the stability of the currency – and guarantee its adaptation to the latest developments in the blockchain space.

Conclusion

To achieve GFG's vision for Giracoin and to gain even more acceptance within the crypto currency community, going open source is a forward-looking option. As the core developers of Giracoin will continue to maintain the source code, GFG expects the GiraUno to conquer new areas and reach further heights.