2019 Curecoin Model (White Paper draft – English)
White Paper Draft (Chinese 中文)

Our Mission

Curecoin aims to increase the maximum potential of Distributed Computing Networks (DCN) around the world that are searching for important answers to medical, scientific, and mathematical problems by incentivizing the donation of computational resources, such as GPU's and CPU's. Incentivization is done through the creation of a unique blockchain which rewards this research.

Since our inception in 2014 the Curecoin DCN team has grown to produce more than half of computational power for the largest research based DCN on earth, Stanford's Folding at Home project (now part of WUSTL). Some estimate the Curecoin team produce as much as 45 PetaFlops of computational power, completely dedicated to research. In comparison, USA's 2nd fastest supercomputer, IBM's Titan, only produces 17.6 PetaFlops nominal and 27 PetaFlops at peak, 2-4 times slower.

What is Curecoin?

Curecoin is a Bitcoin-like digital token designed to reward those who create computing power for the DCN. It uses decentralized blockchain technology to allow unlimited and nearly free exchange of Curecoins on the Curecoin network

How are We Different?

Curecoin's current model is based closely on the Bitcoin Proof of Work (PoW) model, but with a few key differences. Unlike Bitcoins PoW system that uses miners to hash mundain mathematical problems to secure the blockchain; Curecoin uses the automated distribution system from cryptobullionpools.com to reward miners who contribute computational power to our select DCN(s), a fair share based on the percentage of the computational power they give to the network. We then use a Proof of Stake (PoS) system, similar to PeerCoin, to reward those who contribute to the security of the blockchain which is a much more (environmentally/power) efficient way to secure the blockchain.

For further distribution details, please see:

"How are Tokens Divided Up" and "Details on Pre-mined Coins and Future Mintage"

Currently the Curecoin team has only one DCN, Stanford University's Folding@Home project (now part of WUSTL). However Developer Maxwell Sanchez has been working on a new system to introduce more DCNs to our system and we will announce in more detail about these as they develop. This expands our focus beyond Folding@Home, creating a versatile rewards system for DCNs of many types. This new, secure system is cutting edge in its technology that we believe it will be resistant to attacks, even from quantum computers, due to the use of cryptographic primitives which aren't based on mathematical trapdoor functions.

The Curecoin 1.x technology has now evolved into Curecoin 2.0+. Features that have been added from the older 1.x include better seed node resolution, fork prevention and checkpointing upgrades, an "Easy Stake" user friendly update, UI improvements and more. There is development started for advanced features such as document storage and accounting features.

The 2.0 version of Curecoin brings full Proof of Stake minting to the blockchain security process. The shift of rewards to secure the blockchain have removed the sha256 ASIC mining completely and increased the incentive for staking to secure the chain.

Our Ecosystem

Curecoin, like other similar platforms, can be used for General Exchange and exchange for goods or services. This means that the theoretical use case is unlimited.

In reality, it will take focused efforts to introduce acceptance in various areas. Early business applications may focus on Healthcare and Medicine, rewards like Gift Cards, and technologies such as GPUs, allowing users to put their rewards back into powerful hardware to continue the cycle.

With the introduction of coinpayments.net anyone in the world is now able to send or receive Curecoin and other digitals items as form of payment in stores around the world.

Our Team

Curecoin Developer Joshua Smith developed the original concept in early 2013, and he was joined soon after by developer Maxwell Sanchez. Together, they created the version of Curecoin that launched in May 2014. Maxwell is now leading the charge on the technical side of the next iteration of Curecoin version 3.0+.

Shortly before launch, they were joined by Jake Wiser and Curtis Chapman, who took up the mantle of networking. Around this same time, Mike McMullen joined the project as the Webmaster and technical writer. Since then, Ivan Tuma, Jr. has also joined the team as a technology advocate, spreading the news of Curecoin.

In 2021, the core team is composed of seven active community assets (including two active developers), in addition to over 26,000 Folding@home community members, who have contributed to protein folding research through the Curecoin team (Team ID 224497).

Community building

A clear focus for our target users, as well as our methods of incentivizing, is crucial to the project.

The initial focus community for participation in the network is cryptocurrency miners, gamers, and computing enthusiasts. These groups represent enormous amounts of largely un-utilized or underutilized computational power. The Scrypt mining boom saw an unprecedented run on GPUs – many of which now sit idle as the price of Scrypt-based altcoins has dropped. Other algorithms continue to go through a similar cycle of cpu > gpu > asic mining as well, allowing those underperforming CPU/GPUs to migrate as well. And then there are the Gamers who use their GPUs only part of the time – why not put them to work doing valuable research when idle?

Putting Curecoins to use is our other key focus. Rather than attempt to compete directly with Bitcoin, the juggernaut of the arena, Curecoin aims to develop its own niche. It can be a reward for corporate health initiatives, redeemable in a "company store" of rewards for those employees who earn it through improved overall health. It could also be accepted as payment for Healthcare Services, or medical devices and supplies. Computing hardware companies can accept Curecoin for purchases or in return for rewards, a marketable approach demonstrated by EVGA Bucks, allowing users to improve their systems and get new hardware to give back even more to the DCNs. Unlike EVGA, which limits users to a maximum of $120 "Bucks" per year of in-store credit, Curecoin team members can compete for CURE rewards continuously, and they can trade CURE for Bitcoin and other crypto-currencies – in addition to goods and services provided by participating vendors.

2014 – 2021 Achievements

Our premise has been thoroughly proven in the short time the project has been live. In 6 months, Team Curecoin shot up to the #5 spot in the all time rankings of total contribution to Folding@Home, surpassing many teams which have been at it for over a decade. The raw computing power that drove this shift is but a tiny fraction of what is available amongst miners and gamers. And that was just the beginning – by mid 2017 the Curecoin system had taken the #1 spot in total contributions of computational cycles provided to folding@home research. Then in Q2 2018 the Curecoin team had roughly 20x the total production of any other DCN team and more than half of the total DCN.

In 2020, the Curecoin Team reported a record 1 Trillion Cumulative Points on Folding@home's Protein Folding network, and continues to be the number one organized team on the network.

To date, the Curecoin Team has donated nearly $45,000 USD in converted CURE and other cryptocurrency to over 30 charities around the world, and continues to do so through our 501(c)3 sponsorship from Visions Made Viable

Operations

The relatively low operating costs of Curecoin's highly autonomous blockchain systems mean that Curecoin development can be self-funding and self-sustaining. The team members and community members receive some Curecoin from a "Dev Funds" created at inception (Dev Fund is released as 3% of weekly mintage on a time release basis), though this is largely symbolic – we do what we do because we believe in the future of Curecoin's potential to accelerate DCN's and many forms of research.

Additional work continues for Curecoin, enabling the team to be present at cryptocurrency and technology conferences, university visits (to discuss onboarding additional DCNs), advertising, and more. Work to increase these efforts is underway.

*As with any cryptocurrency, current roadmaps are subject to change – and the community will be notified via social media channels if and when those plans officially change.

**The Curecoin LLC rewards system is run independently from Folding@home, which is owned and operated by a consortium of Washington University St. Louis, MO, et al.