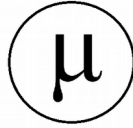


Mu-Pay (μ)

Micro-payments for a Macro world.



Micro Payments

A micro payment (conceived by tech pioneer Theodore Nelson) is a financial transaction that involves a small sum of money and occurs online. We at Mu-Pay consider a micro payment to be any online transaction below the value of Twenty United States Dollars (\$20).

Micro payments have been in discussion since the early late '90s, along with the beginning of the World Wide Web. Until development of Blockchain technology however, the hope of efficient micro payment systems has dwindled. Even the W3C, the World Wide Web Consortium, who help to develop Web standards, had closed their micro payment and e-commerce activity.

Bitcoin is now inefficient as a means to process micro payments. At the time of this writing the average transaction fee for an addition to the next block is ~ \$2.40 with an average wait time of ten minutes. This is during periods of low volume. During periods of high congestion, similar to the end of 2017, the average fee reached and all time high of ~\$38 for addition of a transaction to the next block. This amount is higher than most definitions of what constitutes a micro payments and unsuitable for content creators where the majority of their e-commerce services fall under the sum of twenty dollars. For occurrences where immediate confirmation of payment is needed before services are rendered (i.e. live streaming) the instantaneous settlement on the Stellar Network is preferred. E-commerce services that once took Bitcoin as payment have no stopped due to congestion and possibility of a network fee higher than the value of the original item. Steam and SatoshiPay are two such examples.

Traditional services that initially provided micro payments for e-commerce are also outdated. According to PayPal, a micro transaction is averages at ten dollars or less. The fees for such a transaction on their platform are five percent (5%) plus an additional five cents (\$0.05). While this is

lower than the average bitcoin transaction, it still does not compare to the fraction of a cent that is required for a transaction to occur on the Stellar Network. Traditional services such as PayPal act as a third party who monitor, collect and then distribute such payments. Mu-Pay removes this third party, a middleman, and connects buyers directly to sellers. Funds are only ever in the wallet of the buyer or the seller, also removing handling fees (5% for PayPal). The only fees paid go to the network and are a fraction of a cent.

About Mμ

Mu-Pay is a crypto-asset, based on the Stellar Network and using the Stellar Consensus Protocol (SCP). Mu-Pay aims to serve content creators as a micro payment service with settlements in under five seconds (5s) and transaction fees of a fraction of a cent. A transaction fee of \$0.01 is able to handle ~600,000 transactions.

Mμ-Pay believes in an open, free and distributed Web. Without such freedom, it is possible for governments and corporations to limit and even eliminate the rights of citizens who depend on the internet for knowledge, e-commerce, and social liberty. The Great Firewall of China is one such example. The most populous country on earth with some of the most restrictive internet policies.

Mμ-Pay aims to work with current open source projects to provide e-commerce and micro payments the growing distributed global network. Blockchain technology threatens the power and influence of centralized institutions, while giving back that power to the people. Centralized institutions will now face the decision in the coming years to either adapt, or fade into obscurity.

There are many benefits to using the Stellar Consensus Protocol, such as decentralization and low network latency. 2018 will see many Initial Coin Offerings through the Stellar Network.

Content creators and providers will be able to decrease the cost of small transactions and provide incremental payment offers to viewers and subscribers. Settlement between content providers and viewers happens in real time (under 5 seconds). The balance of a wallet will be available immediately.

Using the Stellar Network allows for immediate exchange of Mu-Pay on the Stellar Distributed Exchange. The Stellar Distributed Exchange is accessible directly through the Stellar Desktop Client. The Stellar Network asset Lumens (XLM) will provide the initial liquidity for Mu-Pay on the exchange. Mu-Pay will work with any Stellar wallet address similar to how ERC-20 tokens are held in an Ethereum wallet address. The Token balance of any wallet address can be checked on the Stellar Blockchain through a block explorer.

Token Information

- Mu-Pay will have a max supply of 777,000 tokens. (100%)
- 543,900 tokens will be airdropped to the public. (70%)
- 77,700 tokens are to be reserved for bounties. (10%)
- 155,400 tokens are to be reserved for the development team, operational cost and future projects. (20%)

There will be **no** Initial Coin Offering (ICO). M μ will depend on community involvement, supply and demand and integration for use of e-commerce by content creators through open source projects.

The Interplanetary File system (IPFS) is an open source distribution protocol and peer-to-peer distributed file system. IPFS connects to distributed nodes to serve and request data. Using this, IPFS will remove the need for central origin servers for websites. IPFS plans to do for the World Wide Web what Bitcoin did for money and BitTorrent did for file-sharing. “Instead of searching for locations (servers), you search for the content itself. Instead of asking and trusting one server to provide you file you need, there are millions of computers capable of delivering that specific file.”

Future integration of Mu-Pay for e-commerce for use by content creators sharing and selling through sites using decentralized projects is our goal. These are a few projects whose ideals are inline with M μ -Pay that aim to open and free the World Wide Web.

ZeroNet

ZeroNet is an open source decentralized web-like p2p network. ZeroNet identifies websites by a public key (Bitcoin address) instead of a traditional IP address. A user's private key allows the site owner to sign and publish changes, which are then propagated through the network. ZeroNet sites aim to be uncensorable. As long as a website has one seeder (peer), it can not be taken down through third party methods. (i.e., DMCA site take-downs.)

Through use of the same cryptography that secures Bitcoin, site owners can now be sure that their content is secure and remains in their possession. ZeroNet also has built in Tor-functionality.

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Dat Project

Dat is free software built for the public by Code for Science & Society, a nonprofit. Dat's unique distributed network allows users to store data where they want. By decentralizing storage, Dat also increases speeds by downloading from many sources at the same time. Dat works on a distributed network unlike cloud services, such as Dropbox or Google Drive. This means Dat transfers files peer to peer, skipping centralized servers. Dat's network makes file transfers faster and more secure. You can even use Dat on local networks for offline file sharing or local backups. Dat reduces bandwidth costs on popular files, as downloads are *distributed* across all available computers, rather than centralized on a single host.

Other interesting decentralization projects

- **Beaker Browser:**
 - A peer-to-peer web browser.
 - <https://beakerbrowser.com/>
- **Neocities:**
 - Free web-hosting service.
 - <https://neocities.org/>
- **Storj:**
 - Encrypted cloud storage
 - <https://storj.io/>

This is by no means a complete list. There are many more projects already out and there will be more to come. A free and distributed Web is already here to stay and will continue to grow.

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