BGME TOKEN WHITE PAPER

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Please read this section very carefully. If you are in doubt as to any action you should take, please consult with your legal, financial, tax or other suitable professional advisers.

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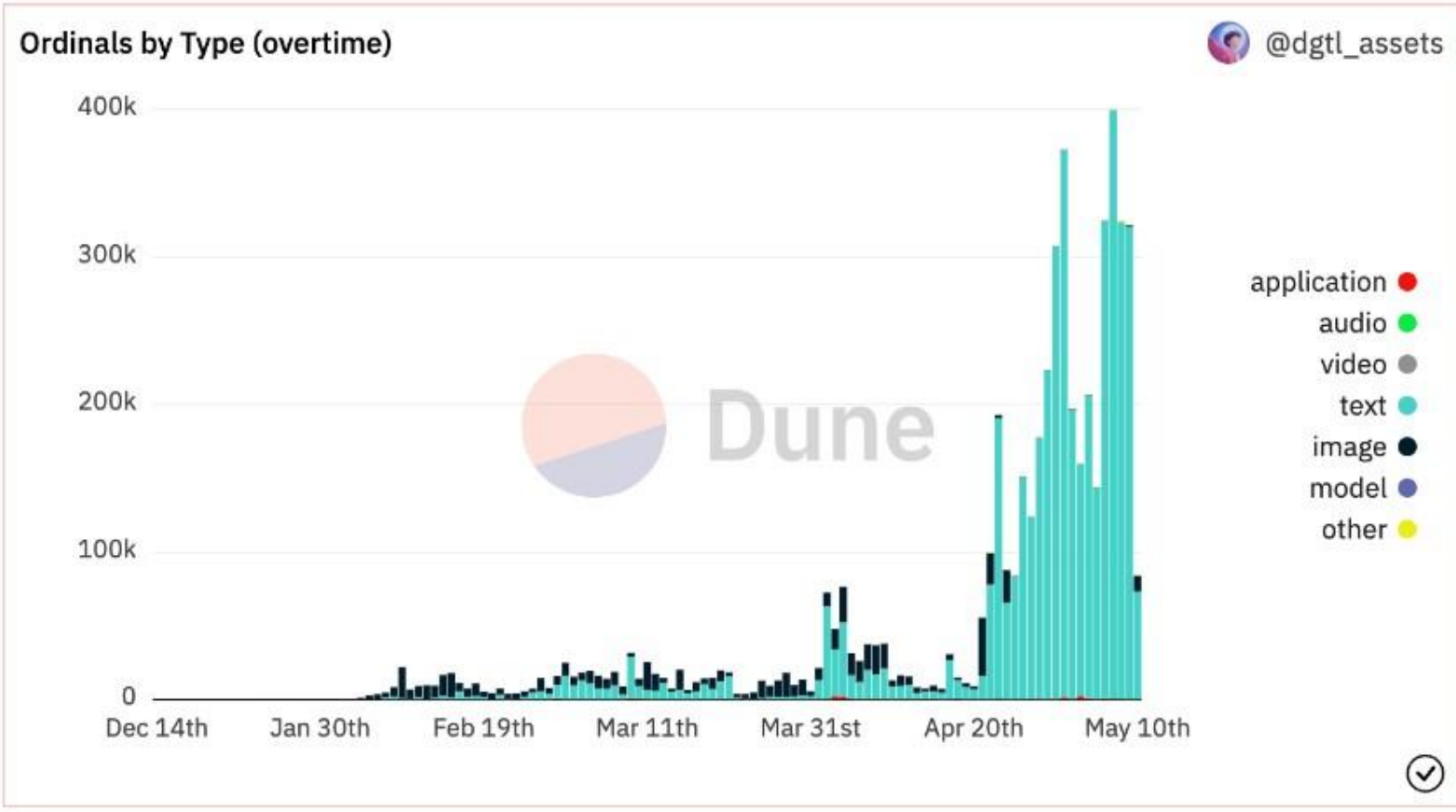
What Is a BRC-20 Token?

BRC-20 is an experimental fungible token standard using ordinal inscriptions on Bitcoin.
Should Bitcoin only be used as digital gold, or should it support more sophisticated functionality? The introduction of ordinal NFTs sparked a new wave of interest in Bitcoin, with the community beginning to experiment with the potential of using the Bitcoin network as a way of storing immutable data.
One such novel experiment is an attempt to create fungible tokens natively on Bitcoin through a standard called BRC-20. BRC-20 tokens are a clever way to circumvent the programmability limitations of Bitcoin and create semi-fungible tokens using ordinal inscriptions.
In this post, we'll explore BRC-20 tokens, examine how they work, and consider their viability as a token standard on Bitcoin.

What Are Bitcoin Ordinals?

First, a quick primer on ordinals. Ordinals enable data to be inscribed into individual satoshis on Bitcoin. They use a logical ordering system called ordinal theory to give each individual satoshi a unique number. Then, arbitrary data can be inscribed into each individual satoshi.
This data inscribed to satoshis can range from images, video, audio, text, and even entire applications such as a simplified version of the video game DOOM. As we'll see below, BRC-20 tokens are essentially ordinal inscriptions with a specific type of text embedded into them, providing a set of rules and specifications for creating and managing the tokens. While inscribing text has been a popular early use case for Bitcoin NFTs, due to the nascency of the technology, new use cases may emerge over time.



Ordinals enabled NFTs to be created that are completely Bitcoin-native, don’t require layer-2 solutions, work without changes to the Bitcoin protocol, and are backward compatible with the network. Ordinal inscriptions quickly caught on as a way to store immutable information on the Bitcoin blockchain.

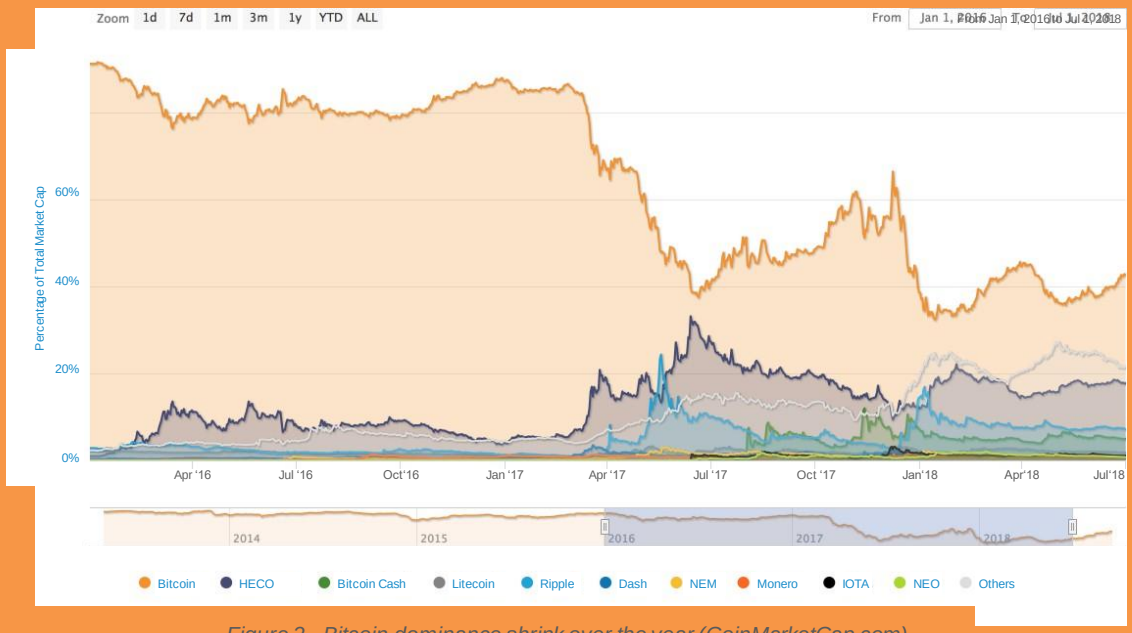


Figure 2 - Bitcoin dominance shrink over the year (CoinMarketCap.com)

Blockchain technology is still relatively young and is continuing to evolve. As part of the fundamental blockchain technology, the mining activities were subject to numerous changes over the years. When Bitcoin was first launched, mining using CPU Processors or GPU/VGA Cards was still possible. Later, the development of specific mining–hardware for Bitcoin with the use of technology such as Field–Programmable Gate Array (FPGA) or Application Specific Integrated Circuits (ASICs), made CPU & GPU Btcoin mining obsolete. In 2018, one can only viably mine Bitcoin using ASICs.

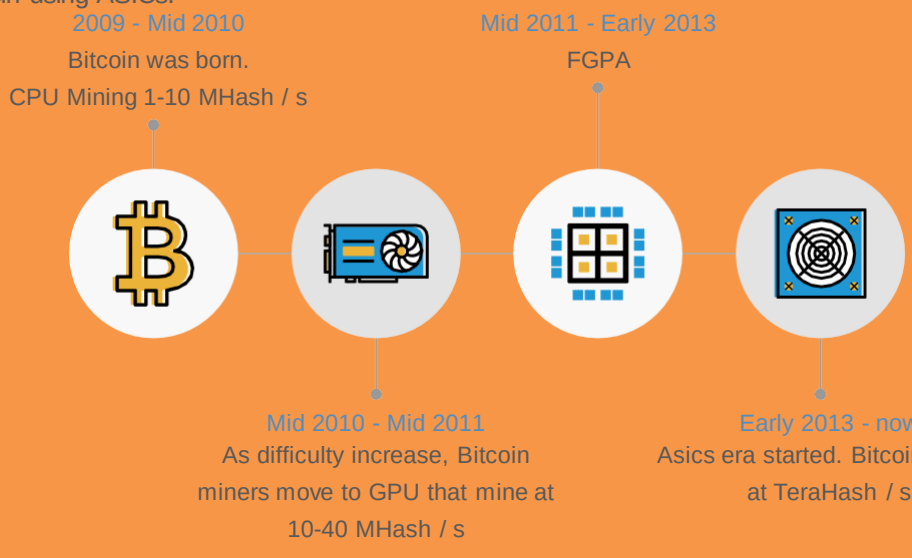


Figure 3 - History of Bitcoin mining hardwares

The ethereum platform was released in 2015, which gives it the benefit of learning from the Bitcoin experience. Instead of SHA–256, ethereum utilized a new consensus algorithm named Ethash with an Anti-ASICs feature. It is this feature that ensures mining is still reachable for people with common hardware such as GPU/VGA cards.

Despite these efforts, the ability to mine viably is still only accessible to people who hold the newer GPU/VGA cards with greater hashing power. Thus, a new alternative was proposed –Proof of Work (PoW) can be replaced with Proof of Stake (PoS) to achieve network consensus required for validation.

Comparison between Proof of Work (PoW) and Proof of Stake (PoS)

Proof of Work

In 2009, the Bitcoin network went online. With that, Bitcoin became the first PoW (Proof of Work) cryptocurrency on the Nakamoto Consensus. PoW requires each validator to perform some work that validates trustworthiness. This work consists in solving complex cryptographic problems using their own computational resources and those who find the solution can confirm the transactions and write the block onto the chain. Miners are competing with each other to create the next block of transactions on the blockchain. In turn, the winning miner receives cryptocurrency coins as a reward for the amount of time and energy spent for generating the solution.

This reward system incentivizes miners to generate the right solution and ensures that the network remains secure while newly minted cryptocurrency is added to the overall circulating supply of coins on the network. In the event that a fugitive party wants to attack the network, they have to take control of more than 50% of the network's mining hashrate or computing power.

Mining Economics

In order to mine on a PoW network, miners will need to acquire capable hardware & infrastructure. They also need to run the latest software version in order to support the network.

As the network grows, difficulty grows along with it and the number of coins rewarded is reduced to curb supply. With decreasing supply, the cryptocurrency itself will worth more due to increasing demand.

Market Capitalization

In the second quarter (Q2) of 2018, most mineable cryptocurrencies are still running under PoW. The undisputed leaders, Bitcoin & Ethereum are still 100% PoW. In 2017, the two coins collectively

make up between 60% to 70% of all cryptocurrencies' market capitalization.

Drawbacks

PoW is energy–hungry by design, with cost, maintenance, and efficiency being the major drawbacks. Another problem is due to the fact that increasingly, highly specialized hardware required to viably mine PoW cryptocurrencies lead to centralization. With the advent of ASICs, it becomes apparent that only those with tremendous capital can take part in this mining industry. Despite this, in Q2 of 2018, the top cryptocurrencies are still leaning heavily on PoW. For example, Bitcoin is using PoW algorithm SHA256, Ethereum is using Ethash, and Litecoin is using Scrypt.

Proof of Stake

On Proof of Stake, a validator may validate block transactions if they hold a stake on the blockchain network. PoS decentralizes the consensus power by ensuring rewards are distributed based on the number of coins staked by the miner.

As such, the selection is strongly influenced by those that have the most coins – the more stake they have in the network, the more they have to lose in the event of a mishap. The other determining factor is the length of time for which the coins have been owned, as it indicates whether the coins are in a long-term position – which is considered a more trustworthy position in comparison to coins that have been acquired recently.

In other words, those who own more coins and have been holding the coins longer are deemed to be more trustworthy and are considered less likely to attack the network.

Mining Economics

As PoS miners need to stake their cryptocurrency in order to mine, they need to believe in the cryptocurrency itself in order to get the reward. Similar to PoW, the miner needs to understand how to run and configure the latest version of the relevant software in order to support the network.

Market Capitalization

PoS is still in its infancy. Amongst the PoS cryptocurrencies, DASH is leadingbasedon market capitalization. As of Q2 of 2018, PoS cryptocurrencies constitute less than 5% of the total market capitalization. This will surely change as ethereum is finalizing its plan to launch CASPER, enabling ethereum to be a PoS-based cryptocurrency. When this happens, the market capitalization of PoS coins should increase dramatically and more coins should be following Ethereum and making the jump towards PoS.

Drawbacks

Although PoS has many advantages over PoW, the “nothing at stake” condition allows miners to vote on multiple chains. This is especially dangerous during chain–split/fork condition.

Blockchain Mining Industry Players

	Proof of Work (PoW)	Proof of Stake (PoS)
Blockchain Core Team	Each blockchain has its own core team. Depending on the size of the project, a core team can be well-structured, but there are many cases whereby the team is formed ad hoc with only a small number of individuals involved. This is true for both PoW and PoS.	
Chipmakers	As PoW needs great hashing power, chipmakers are joining the arms race of making the fastest and most efficient hardware in the market. NVIDIA and AMD are the leading players for GPU/VGA while Bitmain and Bitfury are leading the way on ASICs mining hardware production.	PoS does not rely on hashing power, therefore, specialized high-end hardware is no longer needed. What is needed for PoS to work are secure servers with sufficient processing power, memory, bandwidth, and a stable and fast internet connection to run the Masternode reliably.
Mining Pool	Antpool holds the biggest Bitcoin mining pool (17%), while Suprnova is the leading mining pool for altcoins.	Commonly referred to as “Shared Masternodes” by the community, they are done manually by a trusted member of the community who runs the masternode for the group.
Cloud Mining Company	Genesis Mining, NiceHash	There is not yet a global player company that provides “Shared Masternodes” at the level of PoW cloud-mining.

As the market moves toward PoS, there is no market leader for either PoS Mining Pool (commonly referred as “Shared Masternode” by the community) and Cloud Mining platform.

Problem Statement

While it is true that miners are making the blockchain network decentralized, there are still big barriers to entry that prevents everyone from joining: limited knowledge, limited technical skills, limited financial resources, and limited infrastructure being the main reasons. As of July 2018, there are more than 360 blockchains running various masternodes with different variation of staking and rewarding rules.

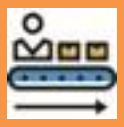
Masternodes typically have the following characteristics

1. Collateral

A fixed number of coins that need to be staked. The number is usually set to areasonably high value to limit the number of masternodes on the network.

2. Maturity Time

The time needed from when the masternode is setup to the time when the masternode is eligible to validate transactions on the network and received rewards.



3. Queue

The position of the masternodes on the rewarding mechanism. Upon receiving the reward, the masternode goes to the end of the line and wait until it's eligible for the next reward.

4. Rewards

The "mining" reward is given only to eligible participating nodes.
Only mature masternodes that has reached its turn in the queue can receive the reward. To run a masternode, users need not only own enough coins to cover the collateral, but also require intermediate to expert understanding of blockchain, computer & network security to run & configure the wallet.

Knowledge

Each blockchain project has its own way of sharing information. It usually starts with a Github repository and a Slack / Discord group as the official community. Once the project is set, the community starts to discuss it at various forum such as BitcoinTalk and Reddit. Gitter and Telegram are also becoming popular as the community grows. A more matured project will have an official website to keep the most recent information.

While these movements in the community are useful for the purpose of the project, they are unpredictable, and they vary in accordance to how good the Dev and Marketing Team manage their communication with the world.

Technical Skill

In general, these are the technicalities that a user will need to figure out:

- Run and configure a wallet that holds the collateral for a reasonably long time.
- Run and configure a masternode on a secure Internet–connected computer that runs 24/7 with a static Internet Protocol (IP) address.
- Sanitize both the wallet and the masternode computer environment.

Financial

Running a masternode requires significant collateral. Based on the data from July 1st 2018, a Dash masternode requires 1,000 DASH to be staked as collateral –which translates to approximately $250,000 based on the value then.

Coin - Ticker Symbol	Coin Price	Market Cap	# Required for Collateral	Masternode Worth
Dash DASH	$ 251.71	$ 2,055,696,978	1,000	$ 251,710
PIVX PIVX	$ 2.18	$ 123,660,020	10,000	$ 21,837
SysCoin SYS	$ 0.19	$ 102,923,892	100,000	$ 19,196
ZCoin XZC	$ 17.17	$ 87,538,485	1,000	$ 17,178
SmartCash SMART	$ 0.08	$ 86,780,318	10,000	$ 824

Infrastructure

Running a blockchain validator node requires the machine to run 24/7 like a server. There is a reason why people run servers on a data center - it is because they need stable electricity, stable networks, and clean-secured areas.

Running a masternode from a laptop/desktop machine from one's own house is not technically feasible for most people. Most masternode-enthusiasts run masternodes on a Virtual Private Server (VPS) because it provides cheap static IP addresses. A professional would run masternodes on a world-class data center provider such as Amazon AWS, Microsoft Azure, or Google Cloud Platform that guarantees not only static IP addresses but also high availability and enterprise-level SLA. That is important because down time reduces masternode's eligibility to the rewards.

Scalability

A more serious user who would like to run or be part of multiple masternodes will face the scalability challenge. Managing one wallet is very different from managing multiple wallets, each with its own development schedule and technical approach. Keeping the wallet version updated is very important because if there is a major blockchain protocol upgrade, a masternode that still runs on the old version will be left behind and will not receive the reward.





What Is the BRC-20 Token Standard?

Initially launched by anonymous developer domo on March 9, 2023, BRC-20 tokens use an experimental standard to create fungible tokens natively on Bitcoin. Notably, the BRC-20 standard does not use smart contracts like popular token standards on EVM blockchains—it enables users to store a script file on Bitcoin and use that to attribute tokens to individual satoshis. BRC-20 tokens embed JSON data into ordinal inscriptions to enable users to deploy, mint, and transfer tokens.
The first BRC-20 tokens created contained the following JSON data defining the token's name, a limit of 1,000 tokens per mint, and a maximum number of 21 million tokens:

```
{ "p": "brc-20",
"op": "deploy",
 "tick": “BGME",
 "max": "21000000",
 "lim": "1000" }
```

Even though BRC-20 tokens are just an experiment to create fungibility even according to their creator, they have sparked considerable interest within the Bitcoin community, and other tinkerers started to play around with creating their own BRC-20 tokens. Meanwhile, ordinals infrastructure providers, such as wallet services and marketplaces, have started to integrate BRC-20 to enable their users to mint and exchange BRC-20 tokens.
If nothing else, BRC-20 tokens are a prime example of the power of open-source communities and collaborative development. When a developer introduces a novel concept and makes it open-source, the idea can evolve and take on a life of its own thanks to other enthusiasts continuing to push the limits of the experiment. Such an open, collaborative environment can occasionally stimulate considerable advancements that push the frontier of the underlying technology.

Advantages and Limitations of BRC-20 Tokens

While BRC-20 tokens are considered fungible, it may be more accurate to call them semi-fungible since they can only be exchanged in set increments.
To mint BRC-20 tokens, a user must create a mint JSON NFT defining the amount to be minted, then compete with others through a priority gas auction to have the chance to finalize the mint. To exchange a BRC-20 token natively on Bitcoin, the seller must create transfer NFTs to break up their original mint NFT into smaller chunks so that they can sell predefined batches of tokens. If a buyer is looking to purchase a specific amount of BRC-20 tokens, the buyer needs to find a seller looking to sell the exact amount of tokens they are looking to buy.
Additionally, to determine the BRC-20 balance of a wallet, users must run or trust an off-chain indexer that is running the ruleset interpreting the inscriptions—having a Bitcoin full node isn't enough to achieve this task.

BRC-20 vs. ERC-20

The comparison between BRC-20 and ERC-20 stands in name only. ERC-20 is a fungible token standard on Ethereum using smart contracts, while BRC-20 is a clever way to create semi-fungible tokens using ordinal inscriptions on Bitcoin.
BRC-20 is simpler and more constrained than ERC-20 due to the purposely limited programmability of the Bitcoin blockchain.

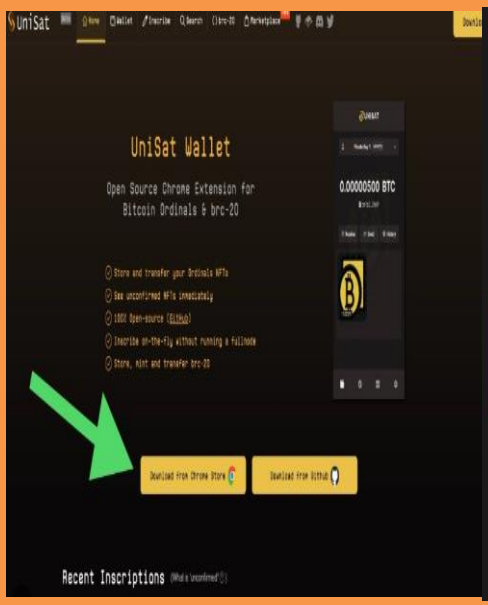
The Future of Tokens on Bitcoin

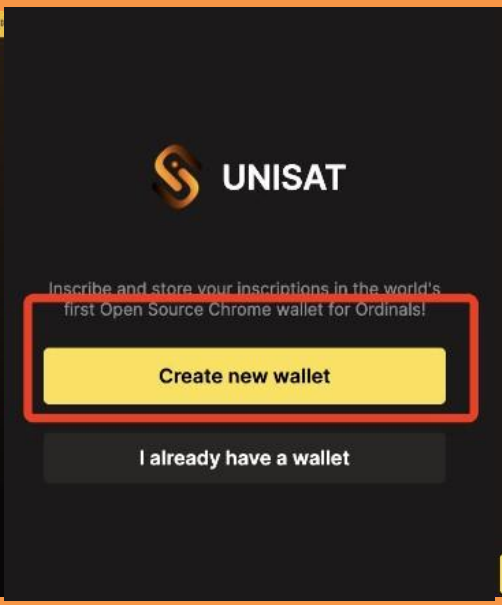
While not the first instance of attempting to represent assets on Bitcoin—with early experiments such as Colored Coins and more recent explorations such as Taro—BRC-20 is a novel way to create semi-fungible tokens natively on Bitcoin.
While even its own creator seems undecided about the long-term viability of BRC-20 as a token standard, the open-source developer community may seize this concept to evolve it further and push the boundaries of what's possible with the scripting capabilities of Bitcoin.

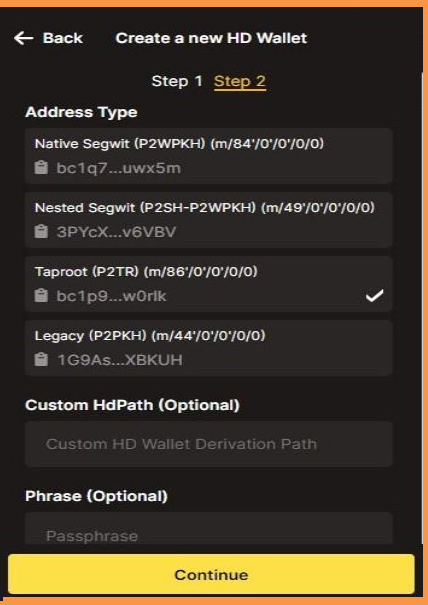
How to Set up UniSat Wallet for BRC-20 Tokens

With the introduction of the BRC-20 token standard, Bitcoin is now more than a store of value. The innovation, created by the arrival of Ordinals on the Bitcoin Network, has unleashed the potential of new BTC-based tokens. Already, developers have started deploying tokens on the network, and you can trade them easily.
Since Bitcoin is not EVM-compatible, BRC-20 tokens can only be deployed on a native Bitcoin browser extension or wallet. An example of such a wallet is UniSat, the first open-source browser extension wallet for Bitcoin Non-Fungible Tokens (NFT). Through Ordinals' innovation, users can now store BRC-20 tokens alongside NFTs in the wallet.

Here is how to set up your UniSat wallet to start storing, trading, and minting your BRC-20 tokens:
•Open the UniSat website by visiting Unisat.io and download the Chrome extension OR wallet.
•Open the wallet and select the option to create a new wallet.
•You will be prompted to create a strong password to proceed. Ensure that you use a strong password that you can remember.
•After confirming the password, UniSat will create a 12-word recovery phrase. Note the phrase and keep it safe, as it would be required for wallet recovery.
•The next prompt will be to select a network. Choose the Taproot Network to proceed. Taproot is compatible with BRC-20 tokens.
•You can now interact with BRC-20 tokens on your UniSat wallet.







Minting BRC-20 BGME Tokens on UniSat

Now that you have set up your UniSat wallet to interact with the Bitcoin token standard, you can now mint supported tokens with the following steps:

•Open the BGME UniSat website and navigate to the BRC-20 section. You also can click the search icon and select BRC-20 to view a list of distributed Bitcoin-based tokens.

•Select a token whose distribution is ongoing and participate in the minting process.

•Choose the number of times you want to mint the token. Minting once will ensure that you receive a specific number of tokens. Likewise, minting five times would give you five times the specific tokens.

•Input the amount of gas fees. It is important to note that higher gas fees will lead to faster transactions.

•Minting is complete.

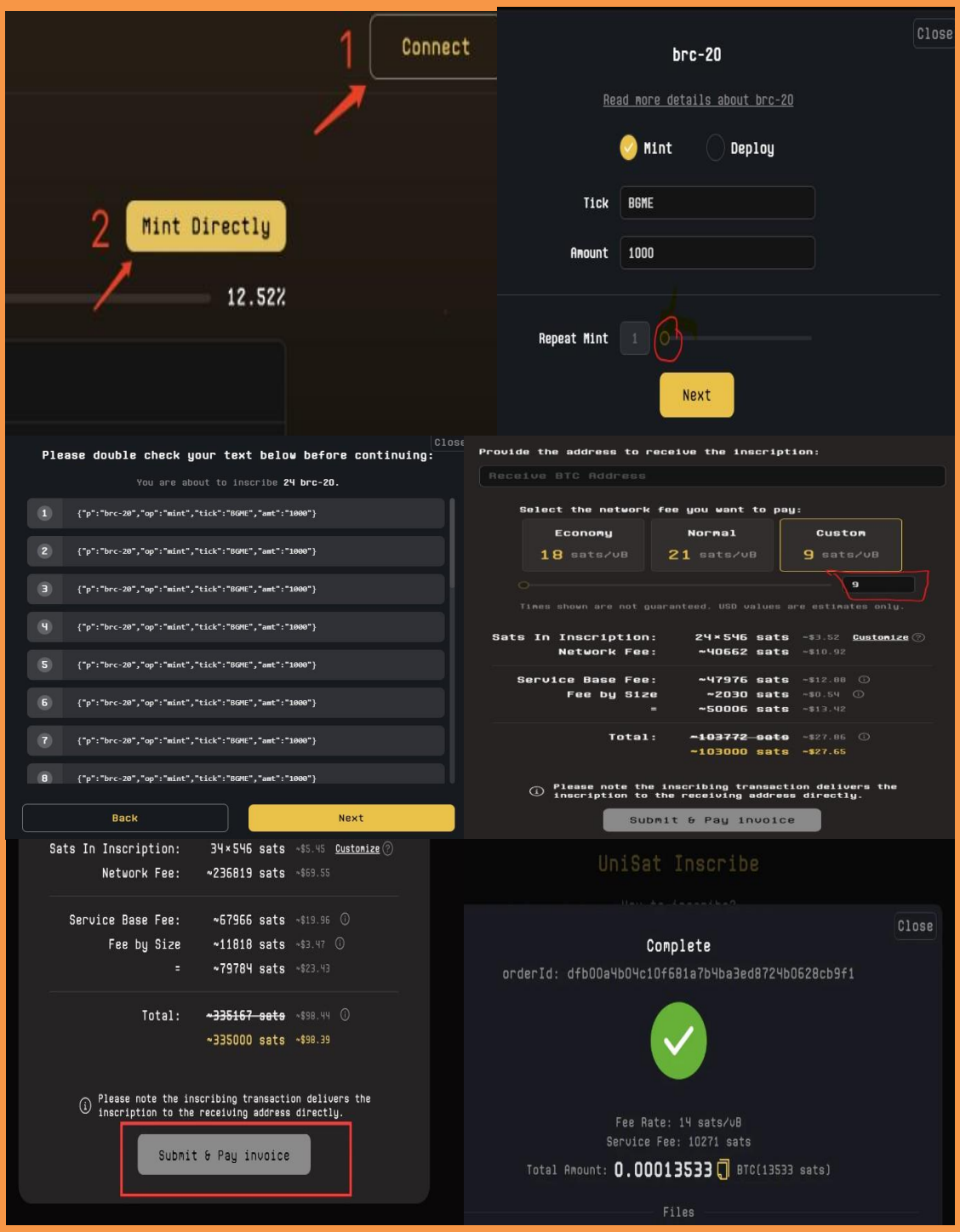
Since users can input gas fees based on their preferences, transactions can be front-run. This occurs when another user increases their gas fees to overtake your transaction. Also, if the token is 100% distributed before you complete minting, you will lose the token alongside your gas fees.

Regarding gas fees, the Bitcoin network has recorded massive gas consumption within a few months. According to Cryptofees.info, the network has recorded over $8 billion in the last seven days and is the second network with the highest gas fee consumption, behind Ethereum.

Therefore, users interested in minting BRC-20 tokens on UniSat should expect high transaction fees. In the meantime, users can now explore the BRC-20 ecosystem by following the steps outlined in this article. You can also read our BRC-20 explainer to learn more about the unique token standard.

Symbol: BGME
Total supply : 21000000
Limited mint per time : 1000
Gas : BTC
Mint BGME tokens link: https://unisat.io/brc20/BGME

Minting BRC-20 BGME Tokens on UniSat

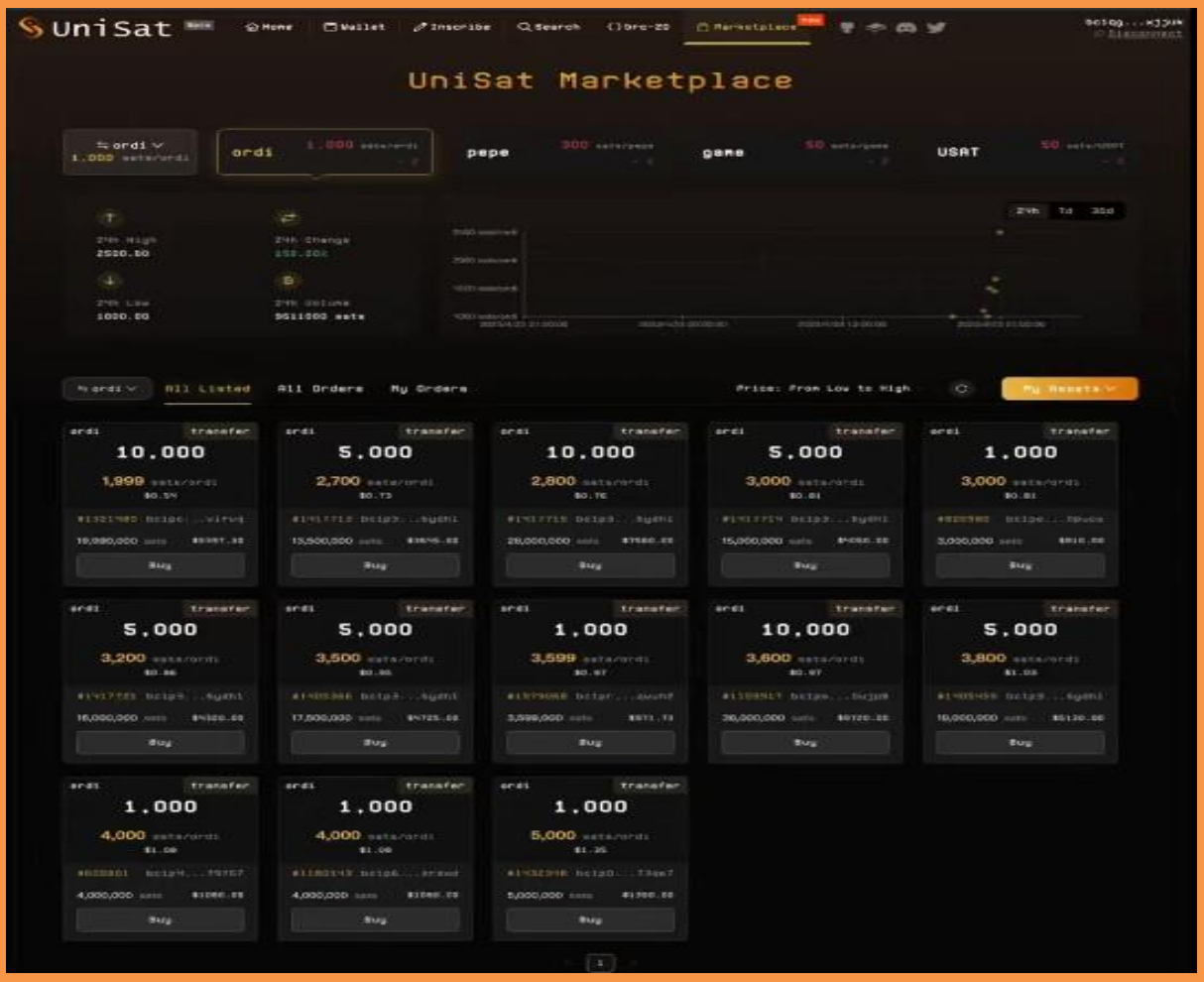


Globalization

BGME TOKEN is going to be mainly an optimized web platform that's reachable from web browser on mobile devices (phone/tablet), or desktop/laptop devices. REST API will be available for sophisticated miners. Android & iOS Client are going to be developed when the platform matures and requires such needs.

UNISAT MARKETPLACE

BGME TOKEN is designed to be highly potential from day one. BGME will be able to provide top quality services by utilizing world-class computing services on UNISAT marketplace .

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