

WTF is an Ordinal

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It's likely that you've come across the latest crypto craze, Ordinals, if you've been keeping up with the latest buzz on Twitter. In January 2023, the ordinals protocol was launched enabling individual collection, trading and tracking of Bitcoin's smallest unit, known as satoshis.

Through a process called [inscription](#), data such as video, text, and images can be attached to satoshis. For fans of NFTs and Bitcoin users, this is exciting and controversial.

Let me break it down

Most NFTs are powered by Ethereum or other smart contract blockchains like Tezos, Solana, Polygon. Many people are unaware that a majority of these kinds of NFTs are not stored directly on blockchains. JPEGs require a whole lot of data, and the data size becomes even greater for large NFT collections. In order to achieve more efficient data storage, numerous NFT projects choose to store their data off chain. The NFT does not live on the blockchain. It is the smart contract residing on the blockchain which points to the off-chain location where the NFT data is stored.

The ordinals protocol is different. Ordinals are Bitcoin-based NFTs stored directly on-chain. While the idea of Bitcoin NFTs is not novel, circumstances were not always conducive to their development. Now with the upgrades of [Taproot](#) and [Segwit](#) on the Bitcoin network, it is easier and cheaper to store large amounts of data. In January 2023, [Casey Roadmar](#), Bitcoin developer, leveraged these changes and with his [ordinal protocol](#) made the Bitcoin network more favorable for NFTs.

Here is how [ordinal theory](#) works.

The basic unit and native currency of Bitcoin are satoshi's, not bitcoin. 100,000,000 satoshi's make up one bitcoin. In order to make Bitcoin non fungible, [ordinal theory](#) assigns satoshi's a number based on the order in which it was mined. These are called ordinal numbers. Ordinal numbers represent the sequence of the mined satoshi. Furthermore, content like images, video, or text can be attached to each satoshi through a process called [inscription](#). The [inscription](#) on a satoshi creates what users find intriguing- Bitcoin based NFT, also known as native digital artifacts.

Artists, communities, and builders are excited to play around in this newly designed schema. Not only can NFTs be stored on-chain, the ordinal architecture sets up an ecosystem where rarity and desirability can be indexed. Ordinal NFT communities have the ability to determine the valuation of their digital content and extract additional value from being integrated into the Bitcoin network. This provides opportunities for these communities to create unique value propositions and further enhance their offerings for their holders. For instance, communities may collect early ordinal numbers or accumulate ordinals during significant events

like the Bitcoin halving. Notable smart contract based projects like [SkullX](#), On Chain Monkey, and Yuga Labs, have created their own Bitcoin-based NFT.

The introduction of ordinals has caused a stir in the Bitcoin community, with debates around the network's true purpose, as well as concerns over malware attacks and high transaction fees. On the flip side, a new wave of users and developers are being introduced to the network which can aid in adoption, innovation and novel solutions for Bitcoin.

Getting Hands Dirty: Learn and Participate.

[Ubbe](#), full stack engineer and lead developer at [SkullX](#), believes that the newly introduced [ordinal protocol](#) will entice fresh developers to join the Bitcoin network. [SkullX CyberRaiders](#) is a dark arts project that launched their ordinal project in February. In order to inscribe an ordinal, users must download Bitcoin core and run a synced Bitcoin node. It is important to note that since this [ordinal protocol](#) is still in its early stages, there are obstacles and opportunities to learn along the way. For new developers there are things to look out for, [Ubbe](#) suggests:

- When setting up your ord wallet be aware that after you're done syncing the Bitcoin chain, you still have to index ord as well - which takes a while. (<https://docs.ordinals.com/guides/inscriptions.html>)
- When inscribing the ord wallet it uses a fee rate of 1 sat/vB (Satoshi per virtual byte) by default, which is usually too low - getting your transaction stuck for a while - so remember to use the "--fee-rate <FEE_RATE>" flag. Check expected fee rates at Mempool (<https://mempool.space/>).
- To inscribe multiple [inscriptions](#) in one block, you need to have satoshi available in X addresses in your ordinal wallet - only one inscribed transaction can be active per address.

Bottom Line

The ordinals protocol offers a novel space for NFT enthusiasts, artists, developers, traders and entrepreneurs to delve into. Presently the advantage to adopt the [ordinal protocol](#) is that it facilitates the exhibition of historical provenance as well as placing digital artifacts specifically on-chain. By the process of satoshi [inscription](#), the [ordinal protocol](#) facilitates Bitcoin's non-fungibility as now art, video can be collected, traded and tracked. There is debate on whether Bitcoin's purpose is to have an environment of digital artifacts or if the true value is to remain fungible. It remains to be seen whether this new protocol is just a passing trend or will truly enhance the value of the NFT ecosystem.

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