

The Art of Money



White Paper Introducing NFFTs
Non-Fungible Fiat Tokens



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This paper is not a promise of sale or solicitation. It is a thesis paper detailing a new protocol that will be used to create new types of digital currency. The audience for this paper includes financial institutions, blockchain enthusiasts, and anyone interested in fiat and digital currency. The paper was written with the intention of being easy to understand by novices, as well as experts.

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A million thanks to everyone who contributed to this paper.



INTRODUCTION

Non-fungible tokens (NFTs) have rapidly become the world's most reliable and lucrative way to store value in data form as digital objects. This store of value can expand beyond the intrinsic value of the data or the object itself. NFTs are digital assets which represent real-world objects. These tokens are fortified by blockchain algorithms that allow them to be unique and non-fungible (duplicatable/replaceable).

What are NFFTs?

This paper introduces the concept of digitally "re-minting" previously minted physical art into digital tokens. We call these tokens **NFFTs, Non-Fungible Fiat Tokens**. The physical art we are re-minting are fiat dollar bills. The concept is to take images of dollar bills, save them as tokens on a blockchain and provide keys to those tokens as stores of value.

This process creates a data object that can effectively represent a globally decentralized digital store of value for any international fiat currency. By all institutional standards of art, the US dollar bill by itself is a work of art. When you include the serial number as part of the image, the art (or the image) becomes unique, and no other image exists with that exact imprint. Every US dollar bill, even though it looks the same as any other dollar, is as unique as a fingerprint when you consider the unique serial number of each dollar's image. The fiat dollar's serial number is a unique token index.

There are currently stores of value that associate their value algorithm with the dollar. NFFTs are a new store of value. Each token will contain the image data, the serial number, and the encryption algorithm used to decipher the public key. These stores of value will have their own coin nomenclature. We have now successfully introduced you to the concept of re-minting and NFFTs.



HISTORY

The US dollar bill was first introduced as a type of promissory note from the US Federal Reserve Treasury. Prior to that, settlers in the Midwest and western states with excessive amounts of precious metals; needed a way to carry the value they found without having to carry tons of precious metal through town. The promissory note was fully backed by real stores of gold and silver in Fort Knox and other fortified places in the US.

Generating interest in the concept of re-minting could also generate interest in collecting and storing digital versions of paper dollars.

In 1934, the US government moved the dollar to what is known as the Silver Standard. This allowed more flexibility in minting coins and dollars and allowed the government to print more money because the stores of silver were abundant. Every dollar minted was backed by a real piece of silver.

After decades of the tethering of dollars to precious metals, there was another shift. This began what we call the fiat dollar where the value of the paper dollar was set by the US Treasury on their word and a collective social agreement that states the paper is worth whatever the value is printed on the bill. This agreement is still in place today and works as well as expected.

The US dollar bill as a paper object is essentially worthless. As a historical artifact and digital work of art, the dollar retains an abstract form of value that could increase beyond the value of the physical object. This value honor system works well internally; however, in relation to other fiat currencies, it makes it much weaker. If there is a run on the paper-standard backed dollar and people

wanted gold or silver or any other form of value to represent the paper, the system could crash. Also, in relation to other fiat currencies, if a government became overindebted to another country, the value of that country's currency could significantly decrease to the country that is owed. This problem exists today and is a growing concern as debt has reached astronomical proportions.

Since the conversion of the US paper dollar from the bimetallism standard to the current fiat standard, the steady decline of the dollar has been predicted. The decline of the US dollar is becoming increasingly common in the United States and other countries. Generating interest in digitizing fiat currency could change that paradigm.



EXECUTIVE SUMMARY

We believe digital versions of fiat currency will become some of the most traded assets in the cryptocurrency market. This prediction is the driving factor for making NFFT. The plan to digitize image data, monetize its minting, and trading activity is worth the investment.

Customers will enjoy spending time scanning dollar image data and trading for value. The time, attention, and trading fees on the trading platform will be valuable and worth the credits/tokens they will receive. The usage, trading, and spending data collected will be valuable as well. The algorithm is easy for the average user to understand. The potential for this new protocol to preserve fiat currency's value beyond its current deadline is extremely intriguing. There are a growing number of exchanges focused on **NFTs**; there is no other exchange focused on **NFFT**.

There is no competition for this niche market within a very popular space.





TECHNOLOGY OVERVIEW

NFFT Minting System

The NFFT minting system is an import and encryption process that converts image and index data into an encrypted blockchain token.

Binary Image Data Collector

The binary image data collector is a feature for scanning the dollar bill's image into a binary image file (PNG).

Vector Image Data Converter

The vector image data converter is a process to convert the binary image file (PNG) data into a vector graphic (SVG).

Serial Number Data Collector

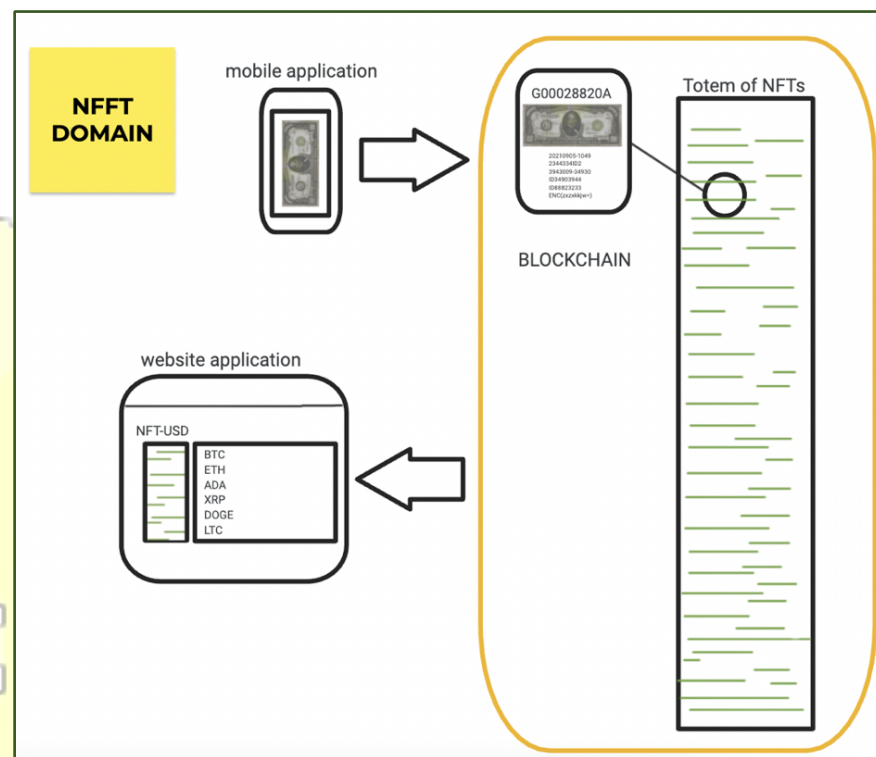
The serial number data collector is an optical character recognition (OCR) process that parses the scanned image data and exports the serial number from the US dollar bill image.

Serial Number Verifier

The serial number verifier is a process that scans the blockchain for all previously minted serial numbers and guarantees the uniqueness of each newly minted token.

Digital Currency Exchange Application

The exchange application is the destination for NFFT traders and minters to utilize the application's toolset to create and trade NFFT's.





GOALS

Create Non-Fungible Fiat Token

The creation of NFFT's will occur in four phases:

1. Initial Creation (100,000 **N2T-USD** tokens)
2. Stable Addition (1,000,000 **N2T-USD** tokens)
3. Customer Testing (10,000,000 **N2T-USD** tokens)
4. Customer Acceptance (100,000,000 **N2T-USD** tokens)

The 1st through 4th phase of re-minting consists of US currency. The next steps will be implemented with intentional currencies like the Mexican Peso **N2T-PES** and French Franc **N2T-FRA**.

Provide a Store of Value for the Tokens

The tokens will be stored on a blockchain with smart contracts.

Each NFFT token will represent the image data of (1) 100USD bill.

Each NFFT token will consist of a JSON data packet in the NFFT model.

Each NFFT token will be applied to the blockchain with the serial number of the previous block as the totem_id for the new block on the chain.

Create an app to Trade NFFT's

The application will be a new online exchange that will trade NFFT's and other currencies.

Create a Cash Counter-Scanner for Customers to Scan Dollars

The customer cash counter will allow customers the ability to count, verify and upload multiple fiat dollar bills automatically. We will create NFFT cash counters which will work like cryptocurrency mining machines to quickly count, validate, scan, and mint the dollar bills into NFFT's.



PROOFS

Proof: The fiat dollar is a unique store of value.

1. We will prove the fiat dollar is unique.
2. We will prove the fiat dollar is a store of value.

Proof: The fiat dollar is art.

1. We will prove the fiat dollar is a work of art.
2. We will prove the fiat dollar has value as a work of art.
3. We will prove the fiat dollar has value as a digital work of art.

Proof: NFFT's are minted on the blockchain.

1. We will prove it is possible to mint a US dollar bill image onto a blockchain token.
2. We will prove the token minted is unique and non-fungible.
3. We will prove this token has value.

Proof: NFFT's are minted dollar bill image data.

1. We will prove the data is minted and retrievable.
2. We will prove the data minted is encrypted.
3. We will prove the data is accurate and non-fungible.

Proof: Minting fiat currency images and serial data onto the blockchain.

1. We will prove the data can be decrypted.
2. We will prove the data minted contains the image and serial data.

Proof: Trading NFFT's for other digital currency.

1. We will prove customers will value NFFT's and purchase them with other digital currency.
2. We will prove customers will increase value of NFFT's with trading volume and minting attention.

Proof: International acceptance will occur.

1. We will prove that international acceptance of NFFT's will occur once N2T-USD becomes popular.



PLANS & PLATFORM

The plan is to re-mint US dollar bill images into digital tokens and create an exchange application to trade tokens for other digital assets. This plan includes the following steps.

1. Create NFFT Storage Model

The NFFT storage model is the collection of attribute and image data formatted in JSON. This information is the actual unique store on record for that specific bill.

Serial Number

The serial number is the unique key on the fiat image data.

Image Data

The image data is the actual scanned image in vector graphic format.

Meta Data

These data keep statistics and identification records for the NFFT.

Meta Data - Created Date

This value is the specific date/time the NFFT is created.

Meta Data - Minter Id

This value is the id of the user that minted the NFFT.

Meta Data - Totem Id

This value is the unique id of the previous NFFT on the blockchain.

Meta Data - Public Key

This value is the public key used to encrypt the NFFT.

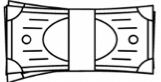
Meta Data - Manager Id

This value is the minter id of the node that added the NFFT.

Meta Data - Encryption Algorithm

This value is the code that does the encryption.

NFFT

SERIAL NUMBER	NL40335707E
IMAGE DATA	
META DATA	CREATED_DATE MINTER_ID PUBLIC_KEY_ID MANAGER_ID TOTEM_ID ENCRYPTION_ALGORITHM

* Model is subject to change.

NFFT Model (JSON)

```
nfft_model {
  serial_number: <alpha_text>,
  image_data: <alpha_text>,
  meta_data: {
    created_date: <dt_text>,
    minter_id: <uuid_text>,
    public_key_id: <uuid_text>,
    manager_id: <uuid_text>,
    totem_id: <uuid_text>,
    encryption_algorithm: <alpha_text>
  }
}
```



2. Scan bills into the NFFT Storage Model

Getting data into the blockchain consists of several steps.

1. Initial primary loading of base NFFT's.
2. Exchange app where customers can trade NFFT's for other digital assets.
3. Customer participation with cellphone scans and upload feature.
4. Creation of mining scanners to validate and upload bulk image data.
5. International outreach team to facilitate the adoption of other currencies.

3. Make NFFT Tokens on a Blockchain

Adding new blockchain technology for each currency and tying the currencies together with an exchange application. Making new blockchains is a process that will involve help from vendors and the NFFT community created from the white paper audience.

4. Create App to Mint Fiat Images into Digital Tokens

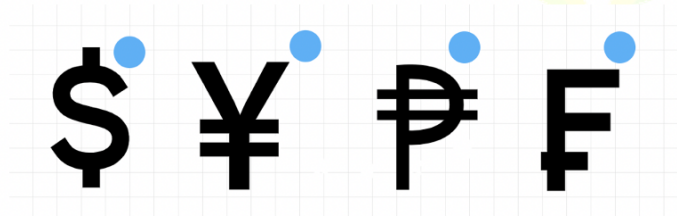
The minting of NFFT's consists of taking a digital image of the asset, converting that image into vector graphic data, extracting the serial number from the image data, verifying the serial number has not been added to the blockchain, and adding the image to the blockchain along with the metadata and serial number attributes.

5. Create Exchange App to Trade Digital Tokens

The trading and purchasing of NFFT's will be facilitated by an exchange application available online for the public. This exchange will be like other exchanges like Kraken, Coinbase Pro, or BlockFi.

6. Incorporate New Currencies

New NFFT currencies will be introduced in addition to **N2T-USD**.



N2T-USD - US Dollar NFFT
N2T-YEN - Japanese Yen NFFT
N2T-PES - Mexican Peso NFFT
N2T-FRA - French Franc NFFT

The application to mint and trade NFFT's and other digital currencies will be publicly available for customers and financial institutions.



CUSTOMERS & TOKEN ALLOCATION

Cryptocurrency and international fiat currency traders will find great value in the trading features provided by the NFFT application. Miners with surplus cash available for scanning will find great value in utilizing a new value store of the same cash. Gaining market share with the new trading app will consist of using social media, news, and print media, as well as online advertising, to increase visibility and interest in the application and NFFT's. The application will be popular with customers because it will introduce brand new digital currencies not available on any other exchange.

The application will be popular with customers because it will introduce new digital currencies not available on any other exchange.

Customer support will be handled by the NFFT community. Hands-on professional services support can be handled by an internal support team. We also have a support feature on the exchange application.

Customers will realize value by minting their own NFFT's. They can use scanners and the minting application feature to scan a fiat dollar, upload it, convert it to a token and collect the keys for that token.

Customers will realize value by trading NFFT's for other currencies. NFFT's value will be dynamic and adjusted based on popularity, availability, and usage.

Customers will realize value by minting and trading NFFT's. NFFT's will become some of the highest traded digital currencies because of the value they provide in sustaining interest in fiat currency.

Minter Id

Every minter entity (user, application, FI or service provider) that will have the capability to add NFFT's to the blockchain will be identified with a Minter Id, this id will uniquely identify the entity to apply minting credits.

Minter Authentication

Each entity will be authenticated upon access to the minting/scanning application. Each request to the scanning application will be accompanied by the minter_id.

**Penetration Testing**

Security testing exercises, including pen testing and denial of service attacks, will be conducted to make certain the application, protocol, and servers are protected from attack to the highest standards.

Blockchain Hardening

The inclusion of a third-party security audit and blockchain hardening audit will be conducted to make certain the application and blockchain are secured to the highest standards.

Security Audits

Frequent security audits will be conducted to make certain the entire system is functioning at the highest security standards.

Initial Creation

Token allocation will begin with an initial release of 100,000 N2T-USD tokens. These tokens will be allocated to the first 1000 early adopters. Early adopters will be collected via email registration and GitHub repository watch list, these users will beta test the application. The second release of 1,000,000 N2T-USD tokens will be released once stability is attained and 90% of service and support issues are mitigated. The estimated time frame is 3 months. These tokens will be available for purchase with Bitcoin, Ethereum, and Stablecoin tokens.

Stable Addition

The second release of 1,000,000 N2T-USD tokens will be available via an online exchange. This exchange will trade top-tier digital currencies including N2T-USD and eventually other NFFT currencies.

Customer Testing

After the second release, another 10,000,000 N2T-USD tokens will be made available for purchase. These tokens will be purchased by online digital currency investors. This release will allow enough volume to address any scaling issues as well as provide increased visibility in the digital currency space.

Customer Acceptance

After all support and scaling issues have been mitigated, the final round of 100,000,000 N2T-USD tokens will be released for purchase to the public via the exchange application.



FEASIBILITY & CHALLENGES

Product Market Fit

The potential for product-market fit for NFFT's is astronomical. Other iterations of this type of product have already far exceeded many products market fit indicators. This is a good sign for NFFT's. The market is ready for this type of innovation. Its simplicity coupled with its power to create new digital value is a certainty for product-market fit.

Global Adoption

The fact that every country in the world has some form of currency that can be converted into digital tokens is a great indicator that global adoption will be guaranteed.

Fiat Current Value

NFFT's have the potential to affect the value of fiat currency positively. Customers will have the ability to take photos of paper dollars and upload those images to the blockchain and realize new value from that data. This will increase interest in collecting, scanning, and uploading dollar images.

Digital Currency Value

The value of digital NFFT tokens will fluctuate. It will take a considerable amount of volume for the price of each token type to reach the equivalent price of the currency it represents. Eventually, the price of tokens themselves will increase beyond the value of the bill.

Consumer Adoption

Customers love products and services that are new and exciting, especially in the cryptocurrency space. Any new algorithm or perspective on creating value is welcomed and celebrated. Given this reality, NFFT's will gain much attention and coverage based on their innovative algorithm and concept. Attention in media and other technological conversations, will guarantee customer curiosity. Customer curiosity is one of the key factors when determining customer adoption. If richness in features and value of experience when customers interact with the application and NFFT protocol is good, then customer adoption will follow.



Profit Realization

Profit realization will occur once users begin to trade NFFTs for other digital assets. The volume may reach more than 1 million users per day. Users will incur nominal fees for buying, selling, or withdrawing funds. The profit potential is apparent when coupled with consumer interest and volume projections.

Gas Fee Limitations

Currently, there is a price involved when minting NFTs on the blockchain. This price is called a gas fee. It's a representation of the cost-of-energy required to create a new entry on the blockchain. In the case of NFFTs, we will develop a way to reduce gas fees to allow for bulk minting of the digital currency.

Security Considerations

An application of this scope, scale, and ambition will no doubt be the target of hackers and opportunists. The NFFT application must have the same standard of network security as any major financial institution.

Counterfeit and Duplicate Minting Prevention

The challenge to prevent counterfeit minting is considerable. There must be a consistent process for allowing the minting of only real dollars. The integrity of the blockchain is maintained by the uniqueness of each token minted. Given this fact, the process for preventing duplication must work consistently and without error.

International Considerations

Minting of international currency is also a considerable challenge. Given the potential for duplicate and counterfeit opportunists, there must be safeguards in place to make certain any type of currency is legitimate and unique. The system must be resilient and resistant to hacks and bad actors. The applications and processes involved will be hosted by secure cloud-based application servers in multiple availability zones.

Customers will have the ability to take photos of paper dollars and upload those images to the blockchain.



USE CASES

Investors looking for a new vehicle to diversify their portfolio.

An academic research team, interested in studying the relationship between digital currencies.

A casino that would like to mint their fiat image data to create a new value store.

Financial institutions that would like to scan their fiat image data to realize the new value store.

A collector who would like to have a digital recording of collected dollars.

A retirement plan investment manager looking for a new way to increase returns on investments.

Cryptocurrency enthusiasts who are interested in all new forms of digital currency algorithms.

Cash-based businesses with fiat dollars on hand that would like to organize their cash as digital data.

A futurist interested in maintaining the value of fiat dollars and being prepared for digital conversion.

A government agency that would like to remain aware of all digital currencies.

Software engineers interested in contributing to the NFT community.

Banks interested in providing new investment opportunities for their customers.



CONCLUSION

In conclusion, we have demonstrated how the world would accept and appreciate NFFT's. We have defined the structure of the token and demonstrated how it can be used to create digital value. We have introduced the concept of re-minting and have proven that fiat currency is a work of art.

Generating interest in the concept of re-minting could also generate interest in collecting and storing digital versions of paper dollars. This could potentially have the residual effect of extending the life of the global fiat dollar value as well. Paper dollars are minted by governments and financial institutions. Re-minting is the concept of minting the already minted dollar bills into digital currency by minters and minting applications.

We have made a firm case for this concept and found value in the concept itself as a driver for interest. We have highlighted some of the challenges and have made proofs to define exactly what it would take to accomplish this goal. With the proper support and attention, this concept could save the fiat dollar and would be an excellent addition to future digital currency options.



How can I learn more?

Email Us: whitepaper@nfft.dev with any questions and to be added to the mailing list.

Watch on GitHub: <https://github.com/nfft-dev> to contribute.

Follow on Twitter: [@nfft_dev](https://twitter.com/nfft_dev) for the latest news.