

NΔTTRIBUTES

Δ SΔTRIBUTES.ΔRT PROJECT

Introduction to Digital Matter Theory (DMT)

Overview

Digital Matter Theory (DMT) introduces a groundbreaking perspective on digital substance, proposing a novel way to understand and interact with data. At its core, DMT suggests that patterns inherent in digital data can be harnessed to create "digital substance" - a new form of matter that exists in the computational realm.

Basic Premise

The basic premise of DMT is that through the careful analysis and interpretation of data, we can reveal underlying patterns. These patterns, once identified, can be utilized to generate a form of digital matter. This digital matter, while not possessing physical form, exhibits properties that make it manipulable and interactable within digital environments.

Fundamental Concepts

- **Patterns in Data:** DMT posits that all data contains patterns which, when identified, can be the building blocks for digital substance creation.
- **Digital Substance:** Defined as a material that exists within the computational realm, exhibiting certain properties similar to physical matter. It is the core product of applying DMT principles.

Applying DMT to Bitcoin

The integration of DMT within the Bitcoin ecosystem introduces a novel class of digital assets. By leveraging the immutable and transparent nature of the Bitcoin blockchain, DMT facilitates the creation of non-arbitrary tokens (NATs) that have distinct value and uniqueness, grounded in the blockchain's data.

This repository is structured to guide you through the foundational concepts of Digital Matter Theory, its application to Bitcoin through creating NATs, and further exploration

into the methodologies, use cases, and the broader implications of this innovative theory.

Introducing Nattributes:

Nattributes represents a groundbreaking intersection of art and technology, utilizing Digital Matter Theory (DMT) within the Bitcoin ecosystem. As the first 10k DMT Collection on Bitcoin, Nattributes has pioneered the incorporation of abstract art onto the Bitcoin blockchain, achieving significant attention with record-breaking pending purchases on platforms like MAGIC EDEN.

Launch and Significance:

Nattributes has already burst onto the scene with a stealth launch, quickly setting records across the bitcoin space. From the First Abstract Art collection using DMT on Bitcoin, the first DMT collection to be listed on Magic Eden, the first 10k DMT Collection to name just a few. We are just getting started and we hope you join us in the brave new frontier.

Launched, inscribed, and minted all on February 27, 2024, Nattributes marks a historic moment in Bitcoin's history, introducing abstract art to the blockchain through innovative means. This collection uniquely leverages sats from Block 9, featuring some of the earliest transactions in Bitcoin history, including the first transaction from Satoshi Nakamoto to Hal Finney.

Element 2D, Pattern 2D.

The innovative fusion of Digital Matter Theory (DMT) with the specific pattern "2D" in the Nattributes collection represents a remarkable advancement in the realm of blockchain art. This collaboration leverages the unique properties of Bitcoin's blockchain data, utilizing the "2D" hexadecimal pattern as a foundational element in the creation of each Nattribute. This choice is not arbitrary but is deeply rooted in the principles of DMT, which emphasizes the significance of underlying patterns within data as the basis for generating new forms of digital matter.

The "2D" pattern serves as a creative seed, a digital DNA of sorts, that informs the generative process underpinning the Nattributes collection. By identifying and harnessing this pattern within the Bitcoin blockchain, Nattributes not only celebrates the technical intricacies of blockchain technology but also showcases the potential for this technology to intersect with art in creating meaningful and captivating works.

This application of DMT using the "2D" pattern is a testament to the innovative spirit of the Nattributes project. It illustrates a thoughtful integration of technology and artistry, where

blockchain data transcends its traditional financial context to become a medium for artistic expression. This approach not only enriches the Nattributes collection with a layer of complexity and significance but also highlights the untapped potential of blockchain as a canvas for creative endeavors.

In essence, the use of the "2D" pattern within the context of DMT underscores a groundbreaking moment in digital art. It signifies a shift towards a more nuanced appreciation of the blockchain, viewing it not just as a ledger for transactions but as a rich source of inspiration and material for artistic creation. This pioneering work paves the way for future explorations at the intersection of blockchain technology and art, promising a new chapter in the evolution of digital art on Bitcoin.

Nattribute Onchain Viewer:

The Onchain Viewer allows for the eternal visibility of Nattributes, enabling anyone to view their artwork onchain by entering a valid block number associated with their Nattribute. This feature ensures that Nattributes can be appreciated forever, unbound by traditional digital limitations.

View Nattributes on Ordinals.com:

<https://ordinals.com/inscription/2d387a9eebaaf40a5bad7f0064326b6d3601552e9ec7bfe293847ba433b4b56i0>

Nattributes stands as the premier abstract art collection employing Digital Matter Theory on the Bitcoin blockchain, setting records and defining the future of digital art. By converting the Bits field of Bitcoin block data into hexadecimal code, we've unearthed patterns that have shaped the foundation of the Nattributes collection.

Evolution with AI:

The integration of Artificial Intelligence with DMT has propelled Nattributes into uncharted territories of creativity and innovation. This synergy has led to the development of a unique collection that not only resonates with the digital art community but also paves the way for future explorations at the nexus of technology and creativity.

Nattributes Supply

Determining Supply:

The supply of Nattributes is intricately linked to the occurrence of specific patterns within the Bits field of Bitcoin's block data. This method ensures a finite and unalterable total supply of Nattributes, grounded in the immutable nature of blockchain data.

Trait Selection and Rarity:

Traits for each Nattribute are derived from Bitcoin block numbers, providing a unique and diverse array of artworks. The rarity of traits is determined by the distribution of the Nattributes supply across Bitcoin blocks, adding depth and value to the collection.

Traits and Rarity Documentation

The selection of trait categories within the Nattributes collection is not only a homage to the luminaries of cryptography and blockchain technology but also a vivid tapestry of colors that represent the foundational pillars of the digital world. Each color is thoughtfully chosen to resonate with the contributions of key figures in the field. "Finney Mint" celebrates Hal Finney's pioneering involvement in Bitcoin, setting a precedent for digital currency transactions. "Dai Lilac" honors Wei Dai's visionary work with b-money, a precursor to the cryptocurrencies we know today. "Szabo Teal" reflects Nick Szabo's groundbreaking ideas on Bit Gold and smart contracts, foundational to the functionality and versatility of blockchain technology.

"Adam Gray" is a nod to Adam Back's Hashcash, an early form of proof-of-work system that underpins Bitcoin's consensus mechanism. "Chaum Peach" commemorates David Chaum's advancements in digital cash systems and the importance of privacy in digital transactions. "May Orange" draws inspiration from Timothy C. May's "The Crypto Anarchist Manifesto," highlighting the philosophical underpinnings of crypto-anarchism. "Wilcox Red" pays tribute to Zooko Wilcox-O'Hearn's contributions to privacy in cryptocurrency through his work on Zcash. "Nomicon Green" alludes to "The Cyphernomicon," by Timothy C. May, a foundational document of cypherpunk ideals. "Perlman Pink" acknowledges Radia Perlman's significant contributions to network infrastructure, demonstrating the interdisciplinary nature of blockchain technology. Finally, "Merkle Brown" is in honor of Ralph Merkle's invention of Merkle trees, a critical component in ensuring the integrity of blockchain data.

This selection of traits serves as a vibrant lexicon of the digital age, encapsulating the spirit of innovation and the enduring legacy of these pioneers. It imbues each Nattribute

with a depth of history and a spectrum of stories, making the collection a mosaic of technological heritage.

Detailed Trait Assignments:

Each Nattribute features 100 unique traits inscribed onto historic Block 9 450 sats, making them among the oldest and some of the most significant digital assets on the Bitcoin blockchain. The documentation details the assignment of traits based on block numbers, offering insight into the rarity and uniqueness of each piece.

Special Traits:

In addition to standard traits, Nattributes includes special traits based on specific patterns in block numbers, further enhancing the collection's diversity and appeal.

Trait Occurrence and Special Patterns

This section documents how certain patterns in block numbers influence trait occurrences, providing a clear understanding of the design methodology behind Nattributes. From unique patterns to exclusive designs, this documentation offers a comprehensive overview of the trait selection process.

For a detailed exploration of Nattributes, including its integration with AI and the full scope of trait documentation, proceed to the subsequent sections within the docs directory.

Detailed Trait Assignments and Rarity for the Nattributes Collection

Nattributes leverages the immutable ledger of Bitcoin's blockchain to create a unique collection of digital art, each piece inscribed directly onto the blockchain. This approach ensures permanence and rarity, with each Nattribute's traits and characteristics directly tied to specific Bitcoin block data. Below are detailed explanations of the trait assignments and rarity calculations that underpin the Nattributes collection.

Nattributes Supply Determination

The total supply of Nattributes is intricately tied to the occurrence of specific patterns within the hexadecimal "Bits" field of Bitcoin's block data. This pattern occurrence is pivotal in defining the rarity and uniqueness of each Nattribute. Here's an overview of how Nattributes supply is determined:

Bitcoin Block Number	Bits Field	Bits Field Hexadecimal	Nattribute
250915	426957810	1972DBF2	Yes
457033	402809567	180262DF	Yes
834667	386095705	17035A59	No

The supply is capped at 10,080 Nattributes, with each piece uniquely associated with a Bitcoin block that exhibits the target pattern. This ensures a finite collection that remains unaffected by future blockchain data.

Trait Selection and Assignment

Each Nattribute is a masterpiece with traits determined by the Bitcoin block number it's associated with. This unique method ensures that each Nattribute not only embodies abstract art but also carries historical significance from Bitcoin's blockchain. The traits are assigned based on a pattern search function applied to the block number:

"p" "tap"
"op" "dmt-deploy"
"elem" "00b2cf8f890ab1f17cef34ff07bd30ad00dab00fb484759d031505fa751baa4fi0"
"tick" "nattributes"
"dt" "h"
"id" "2d387a9eebaaf40a5bad7f0064326b6d3601552e9ec7bfef293847ba433b4b56i0"

Rarity is a function of both the block number and the distribution of Nattributes supply across blocks, with a subset of block numbers qualifying as valid instances of Nattributes.

Detailed Trait and Color Assignments

The traits for each Nattribute are inspired by various aspects, with each trait representing a specific digital pattern found within the block data:

Trait Categories and Their Digital Patterns:

- Digit-to-Trait Mapping:

Digit	Trait
D1	Third Eye
D2	Face
D3	Right Brow
D4	Left Brow
D5	Right Cheek
D6	Left Cheek

- Specific Digit Color Definitions:

Digit	Color
0	Finney Mint
1	Dai Lilac
2	Szabo Teal
3	Adam Steel
4	Chaum Peach
5	May Orange

6	Wilcox Red
7	Merkle Brown
8	Nomicon Green
9	Perlman Pink

- Chin Traits Based on Nattribute Number Ranges

Nattribute Number Range	Chin Trait
548352 - 550367	Dai Lilac
457631 - 455616	Finney Mint
251999 - 249984	Chaum Peach
112895 - 110880	Wilcox Red
110881 - ∞	Szabo Cyan

This table illustrates how the Nattribute number (block number) determines the specific chin trait for each Nattribute within given ranges, adding another layer to the uniqueness and diversity of the collection.

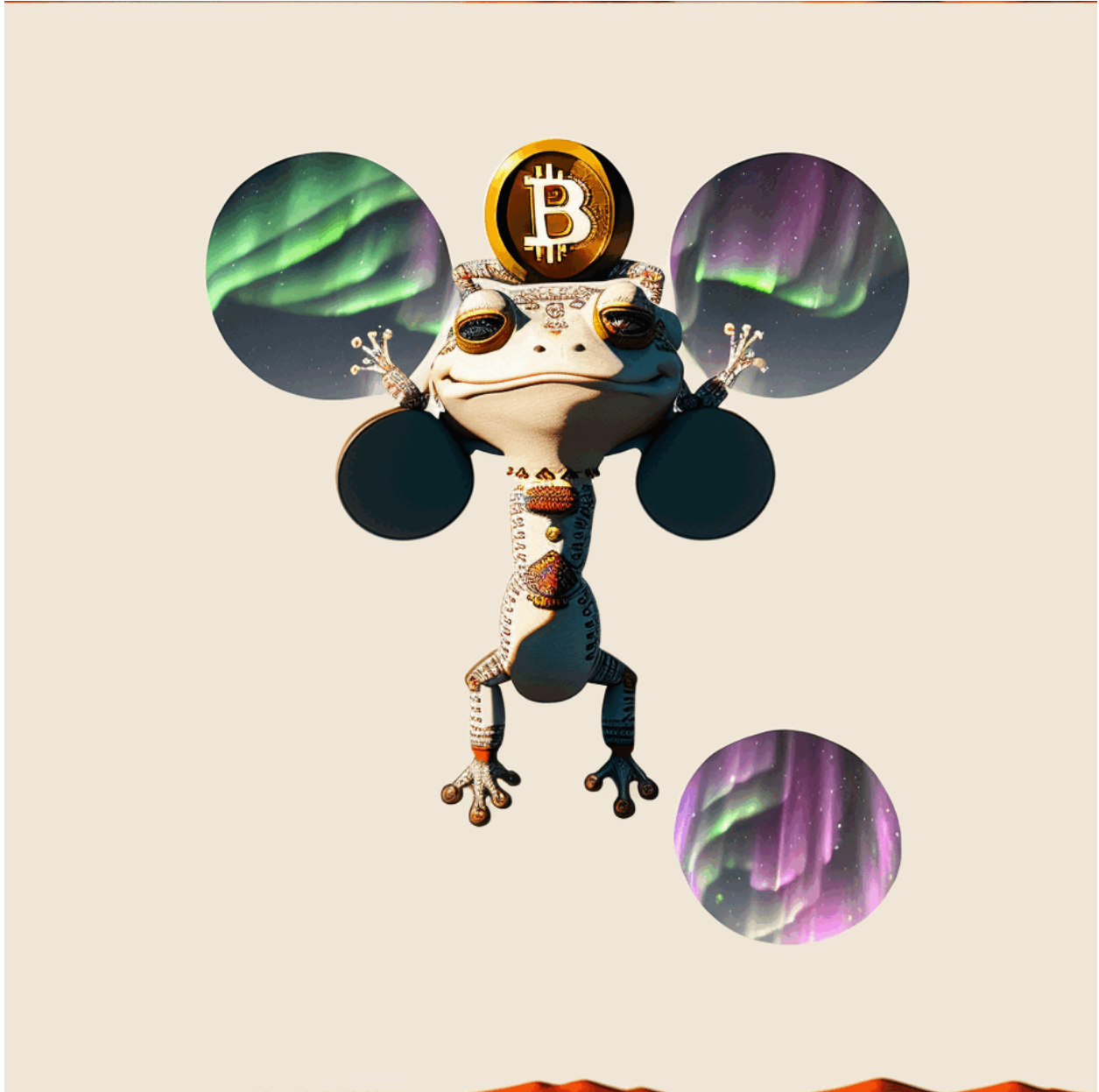
Rarity Documentation

Rarity within the Nattributes collection is static due to its predetermined supply. Special traits and designs are attributed based on block numbers containing specific patterns or multiples: Trait Appearance for Left Cheek, Right Cheek, Left Dimple, Right Dimple in Multiples of 14, 21, 42 and 13 might appear only if 2 is present in ones or tens place respectively. The colors for all the traits below are defined by the last digit of the remainder.

Description	Divisor	Trait Appearance
Unique pattern for multiples of 42	42	Left Ear, Right Ear, Left Cheek, Right Cheek, Left Dimple, Right Dimple
Distinct design for multiples of 21	21	Left Dimple, Right Dimple, Left Cheek, Right Cheek
Special trait for multiples of 15	15	Left Ear, Right Ear, Left Cheek
Exclusive trait for multiples of 14	14	Left Dimple, Right Dimple, Left Ear, Right Ear
Rare design for multiples of 13	13	Left Dimple, Right Dimple
Common trait for multiples of 10	10	Left Dimple, Right Dimple, Left Ear, Right Ear
Widespread pattern for multiples of 6	6	Left Ear, Right Ear, Left Cheek, Right Cheek
Trait for multiples of 3	3	Left Cheek, Right Cheek
Common design for even numbers	2	Left Ear, Right Ear

Innovation Through Blockchain Data

The Nattributes collection embodies the innovative fusion of art and technology. By using Bitcoin's blockchain data as a canvas, Nattributes not only ensures the uniqueness and rarity of each art piece but also establishes a new paradigm for digital art creation and ownership. This approach allows for an unprecedented level of authenticity, provenance, and permanence, redefining the value and significance of digital art in the blockchain era.



Evolution Windows

The integration of Digital Matter Theory (DMT) with Artificial Intelligence (AI) represents a pioneering step forward in the realm of digital art, particularly within the Bitcoin ecosystem. This innovative fusion has given rise to a unique process whereby the foundational images generated through DMT principles serve as the basis for further artistic evolution via AI. By leveraging the block number (or Nattribute number) as a seed, along with user-provided prompts, holders are granted the unprecedented ability to evolve their Nattribute. This process is not only a testament to the versatility and depth of blockchain technology but also a celebration of human creativity and interaction with AI.

Bridging DMT and AI

At the heart of this innovative endeavor is the synergy between DMT and AI. DMT, with its focus on uncovering and utilizing patterns within data, particularly Bitcoin's blockchain data, lays the groundwork by generating base images. These images, rich with the inherent patterns and traits tied to specific block numbers, provide a perfect canvas for AI's creative augmentations. When AI is introduced into this equation, it acts as a transformative agent, taking the seed provided by the block number and the thematic direction from user prompts to evolve the artwork in ways previously unimaginable.

Community-Driven Evolution

This fusion empowers Nattribute holders by placing them at the center of the art creation process. Through the use of AI, holders can guide the evolution of their Nattribute by submitting prompts during designated evolution windows. This collaborative effort between the AI and the Nattribute community ensures that each piece of art is not only unique but also carries a piece of its holder's vision and imagination.

Partnership with Magic Eden

Our collaboration with Magic Eden introduces a dynamic platform where this evolving art can be showcased to the world. With a weekly evolution window, all art evolved over the prior week is updated on Magic Eden, allowing the broader community to witness the metamorphosis of each Nattribute. This partnership not only amplifies the visibility of these unique art pieces but also underscores the community-centric ethos of this project.

A Landmark in Collaborative Art

This initiative marks the largest collaborative art endeavor seen on Bitcoin, setting a precedent not just for DMT-based projects but for the entire Bitcoin art community. The combination of DMT's data-driven art generation with AI's limitless creative potential, all underpinned by community input, is poised to result in the most diverse and mesmerizing collection on Bitcoin.

Historic First

This is the first time such a fusion of technology, art, and community participation has been attempted on Bitcoin. It highlights the evolving capabilities of blockchain technology beyond its financial applications, venturing into the realms of art and creativity. By allowing Nattribute holders to actively participate in the art creation process, we are witnessing the birth of a new form of artistic expression, one that is decentralized, collaborative, and boundless in its potential for innovation.

As this project unfolds, it stands as a beacon of what's possible at the intersection of blockchain technology, artificial intelligence, and human creativity, heralding a new era for digital art on Bitcoin and beyond.

Links

X:

<https://twitter.com/Satributes> , Nattributes official twitter / X account

https://twitter.com/aiblocks_net , Tech partner

<https://twitter.com/@MEonBTC> , Magic Eden Launch Partner

Discord:

Nattributes official Discord <https://discord.gg/ahYZYc5r9H>

Viewers:

Official Onchain Viewer:

<https://magiceden.io/ordinals/item-details/2d387a9eebaaf40a5bad7f0064326b6d3601552e9ec7bfef293847ba433b4b56i0>

Onchain Nattributes deployment inscription <https://www.ord.io/62591354>

Marketplace: Magic Eden <https://magiceden.io/ordinals/marketplace/nattributes>