

INVESTIGATIVE · THE INSIDER #0004

GenesisL1 (part 2) CIPNFT

10 June 2026

CIPNFT is a blockchain-based framework designed to allow intellectual property (IP) — such as scientific research, datasets, discoveries, concepts, or proprietary information — to be securely converted into encrypted digital assets known as NFTs (Non-Fungible Tokens).

Disclosure. Alderlux holds a position in GenesisL1. Alderlux has no advisory, commercial or equity relationship with the project.

We recently received a tweet

[https://x.com/genesis_L1/status/2018398214911668320]

and a host of messages in the GenesisL1 Telegram channel

[https://t.me/Genesis_L1]

The discussion centred around CIPNFT technology.

CIPNFT is a blockchain-based framework designed to allow intellectual property (IP) — such as scientific research, datasets, discoveries, concepts, or proprietary information — to be securely converted into encrypted digital assets known as NFTs (Non-Fungible Tokens).

Unlike traditional NFTs, CIPNFT technology focuses not only on ownership and provenance, but also on privacy and protection. The underlying content is encrypted and securely stored on-chain, allowing creators to establish verifiable ownership, authorship, and timestamps without publicly exposing sensitive information.

This is particularly important because public blockchains, whilst highly transparent and immutable, are not naturally designed for confidentiality. In sectors such as Decentralized Science (DeSci) — where blockchain technology is used to support open and collaborative scientific innovation — researchers and innovators often require a way to protect early-stage ideas, unpublished findings, and proprietary research from being copied, misused, or commercially exploited before appropriate protections are in place.

CIPNFT technology aims to address this challenge by combining the transparency and permanence of blockchain infrastructure with secure encryption and intellectual property protection, creating a system where ownership can be verified whilst sensitive content remains controlled and protected.

How CIPNFT Technology Works

Encryption and Privacy

CIPNFT technology begins by encrypting data directly on the user's own device using advanced modern cryptography. In simple terms, the information is securely locked before it ever reaches the blockchain.

Only individuals with the correct cryptographic key — similar to a highly secure digital password — can access and decrypt the content. The system can also provide optional “view keys”, allowing limited or controlled access for collaborators, reviewers, or authorised parties without transferring full ownership or unrestricted access to the underlying intellectual property.

On-Chain Storage

Unlike many traditional NFTs, which often simply contain links to files hosted on external servers, CIPNFT technology stores the encrypted data directly on the blockchain itself.

This removes reliance on third-party hosting providers or centralised servers, helping ensure the information remains permanent, verifiable, and resistant to tampering or loss over time.

Secure Buying and Selling

CIPNFT technology is also designed to support secure and transparent exchanges of encrypted intellectual property.

When a transaction takes place, the seller provides a buyer-specific decryption key through the blockchain system. The buyer can locally verify that the encrypted content is legitimate and accessible before the transaction is fully completed.

Once verified, the system automatically finalises the exchange by transferring both the NFT and the agreed payment. This process helps reduce the risk of fraud by ensuring that buyers receive valid access to the encrypted content before funds are permanently released.

Future-Focused Security

The system is additionally designed with “post-quantum” security considerations in mind. This refers to cryptographic approaches intended to remain secure even against future advances in quantum computing technology.

Whilst quantum computing remains an emerging field, CIPNFT aims to prepare for a future where significantly more powerful computational systems may exist, helping ensure that encrypted intellectual property remains protected over the long term.

Real-World Example

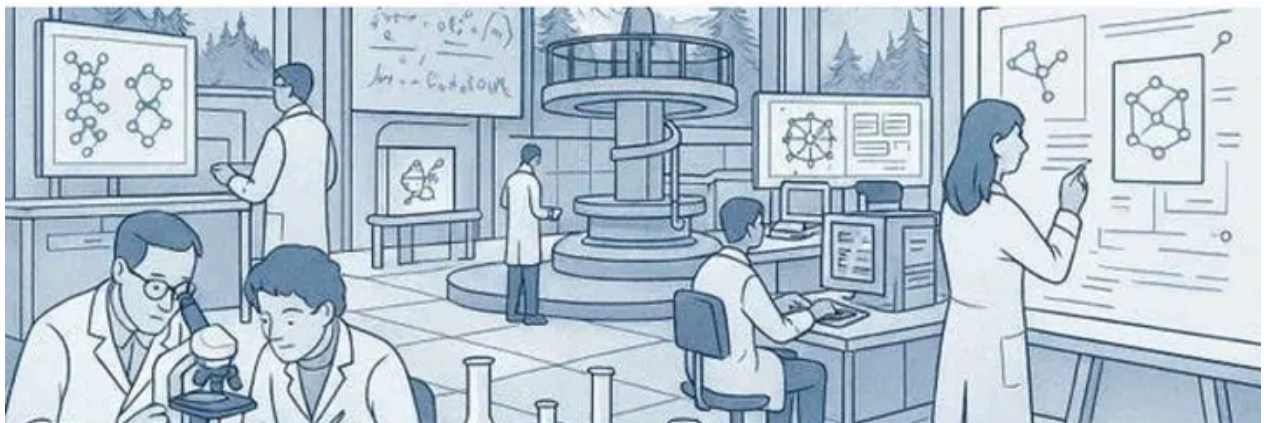
Imagine a scientist developing a new medical treatment or pharmaceutical compound and conducting early-stage research and testing.

Using CIPNFT technology, the researcher could encrypt the treatment data, scientific methodology, test results, and supporting documentation before securely converting it into a blockchain-based intellectual property asset.

This process would create a permanent and publicly verifiable proof of ownership and timestamp on the blockchain, whilst keeping the underlying research confidential and inaccessible to unauthorised parties.

The researcher could then selectively share controlled “view key” access with trusted collaborators, institutions, or reviewers in order to receive feedback or conduct further analysis without exposing full ownership rights or unrestricted access to the information.

If the intellectual property is later sold, licensed, or commercialised, the transaction can be conducted securely through the CIPNFT framework, helping ensure that both the ownership transfer and encrypted data exchange occur transparently, securely, and without relying on traditional intermediaries.



<https://genesisll.com/>

How CIPNFT Compares to Existing Technology

Encrypted On-Chain Intellectual Property Storage

Traditional NFTs often store only basic metadata or external file links on-chain, whilst the actual content is hosted elsewhere through systems such as IPFS or centralised servers. Fully encrypted on-chain storage remains relatively uncommon due to the technical complexity and costs associated with storing large amounts of data directly on blockchain networks.

CIPNFT technology approaches this differently by storing the encrypted intellectual property payload directly on-chain. This removes reliance on external storage providers whilst creating permanent, immutable proof of ownership and provenance without exposing the underlying content publicly.

Whilst elements of encrypted storage already exist within blockchain ecosystems, the application of fully encrypted on-chain intellectual property storage remains relatively uncommon within the Decentralized Science (DeSci) sector, where many projects focus more heavily on legal ownership structures or fractionalisation models rather than embedding encrypted research data directly onto the blockchain itself.

Secure Buying and Selling of Encrypted Assets

Within the broader digital asset industry, secure transaction systems such as escrow services, atomic swaps, and NFT marketplace settlement mechanisms are already widely used to help facilitate trusted exchanges between buyers and sellers.

CIPNFT builds upon these concepts through a process designed around:

- delivery,
- verification,
- and automatic finalisation.

The system allows a seller to provide a buyer-specific encrypted access key directly through the blockchain. The buyer can then locally verify that the encrypted intellectual property is authentic and accessible before the transaction is permanently completed.

This structure helps minimise the risk of fraudulent exchanges, particularly when dealing with high-value intellectual property, scientific data, or proprietary research materials. Unlike some existing systems, the process is designed to operate without relying heavily on external intermediaries, off-chain coordination, or additional verification services.

Controlled Access Through View Keys

Selective access systems already exist within privacy-focused blockchain technologies. For example, certain privacy-oriented cryptocurrencies use “view key” models that allow limited transparency

whilst maintaining overall confidentiality.

CIPNFT incorporates a similar concept by allowing intellectual property owners to generate optional view keys for controlled disclosure. This enables collaborators, reviewers, institutions, or potential partners to access limited or permissioned information without transferring full ownership or unrestricted access rights.

Whilst inspired by existing cryptographic privacy tools, the integration of controlled view-key access directly into blockchain-based intellectual property management remains relatively uncommon within DeSci and NFT ecosystems.

Post-Quantum Security Considerations

Post-quantum cryptography refers to security systems designed to remain resistant to future advances in quantum computing technology.

Most NFT and blockchain-based intellectual property systems today do not place significant emphasis on post-quantum resilience. CIPNFT distinguishes itself by incorporating post-quantum encryption approaches such as ML-KEM, a cryptographic standard associated with emerging post-quantum security frameworks.

This is designed to help protect encrypted on-chain data against potential future “store now, decrypt later” attacks, where encrypted information collected today could theoretically become vulnerable if sufficiently powerful quantum computing systems emerge in the future.

Whilst quantum computing remains an evolving field, this forward-looking security approach represents one of the more distinctive aspects of the CIPNFT framework compared to many current blockchain-based intellectual property systems.

Is CIPNFT Technology Truly Unprecedented?

Not entirely. Elements of the underlying technology already exist across various parts of the blockchain industry. Concepts such as encrypted NFTs, intellectual property tokenisation, privacy-focused blockchain systems, and secure digital asset exchanges have all been explored independently in different forms.

Within the Decentralized Science (DeSci) sector specifically, a growing number of projects are already using blockchain technology to support scientific funding, ownership structures, and collaborative research. However, many of these systems focus primarily on governance, monetisation, or fractional ownership models rather than the secure storage of encrypted intellectual property directly on-chain.

What potentially distinguishes CIPNFT is the way these existing technologies are combined into a single framework specifically designed for confidential intellectual property and scientific research.

The proposed architecture combines:

- fully encrypted on-chain intellectual property storage,
- post-quantum cryptographic security,
- controlled disclosure through optional view keys,
- and decentralised “fair exchange” mechanisms designed for sensitive research data and high-value intellectual property transactions.

Importantly, the framework is also designed to remain compatible with EVM-based blockchain ecosystems, allowing integration with widely adopted blockchain infrastructure whilst maintaining privacy-focused functionality.

Whilst the individual concepts themselves are not entirely unprecedented, the combination and application of these technologies within a decentralised intellectual property framework — particularly for scientific, biomedical, and research-driven use cases — appears relatively uncommon within the current blockchain landscape.

If successfully implemented through working infrastructure, published technical documentation, and real-world deployment, CIPNFT could represent a meaningful advancement in how confidential intellectual property is protected, shared, verified, and commercialised within decentralised environments.

More broadly, it reflects a growing evolution within blockchain technology itself — moving beyond purely financial applications towards infrastructure capable of supporting secure ownership, collaboration, and long-term data integrity in high-value industries such as biotechnology, research, and scientific innovation.

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