

BEYOND THE WEB: BLOCKCHAIN AS THE THIRD DISRUPTION OF THE WEB

Presenter

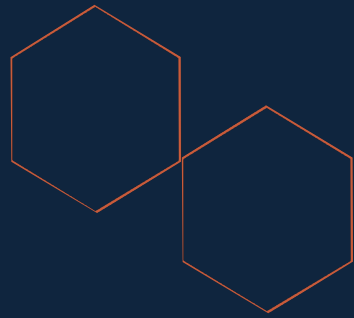
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**Can Blockchain Usher
in a New Era of the
internet?**



WEB1, WEB2, WEB3

THE EVOLUTION OF THE INTERNET



A Quick Recap: The Evolution of the Web

Web 1.0 (1991-2004): Read-only web, static websites with limited user interaction

Web 2.0 (2004-present): Read and write Rise of social media, user-generated content

Web 3.0 (Future): Read write own.
Decentralized web powered by blockchain technology



Blockchain

Blockchain is a system for recording information in a way that makes it difficult or impossible to change, hack, or cheat the system



BITCOIN

Bitcoin (BTC) is the first and most well-known cryptocurrency, introduced in 2008 by an anonymous entity known as Satoshi Nakamoto.



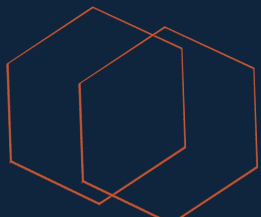


**EXPLORING THE POSSIBILITIES:
LEVERAGING STRENGTHS
FROM BOTH PARADIGMS,
BLOCKCHAIN FOR WEB 2.0**



ETHEREUM
NAME SERVICE

Ethereum Name Service (ENS): A Decentralized Domain System



WHAT IS ENS?

- The Ethereum Name Service (ENS) is a blockchain equivalent of the popular internet naming convention known as the Domain Name System (DNS) but for Web 3.0. But rather than replace the old way of doing things, ENS is designed to complement the existing DNS system.

Proposed Architecture for a Blockchain-Enhanced DNS

- The architecture of a blockchain-enhanced DNS (Domain Name System) aims to improve the security, transparency, and resilience of the DNS infrastructure by leveraging blockchain technology hence complimenting the existing frameworks.

WHAT MAKES BLOCKCHAIN SPECIAL AND HOW DOES IT RELATE TO ITS APPLICATIONS?

Its unique features include decentralization, transparency, and security. These features make blockchain suitable for a wide range of applications beyond cryptocurrencies, such as supply chain management, voting systems, and digital identity verification



UNDERSTANDING THE DIFFERENCE: Public vs. Private Blockchains and Their Applications

Feature	Public Blockchain	Private Blockchain
Access	Open to anyone	Restricted to specific participants
Decentralization	Highly decentralized	Partially decentralized or centralized
Transparency	Transactions are transparent and visible to all	Transactions are visible only to authorized participants
Security	High	High
Control	No single entity has control	Controlled by one organization
Use Cases	Cryptocurrencies, DeFi, public dApps	Enterprise solutions, supply chain management, business processes
Examples	Bitcoin, Ethereum	Hyperledger Fabric, R3 Corda

Main Features of a Private Blockchain for DNS

Governance Framework

- Centralized Governance: Managed by a governing body (e.g., ICANN).
- Policy Enforcement: Implements policies for network operation, updates, and dispute resolution.

Securities

- Encryption and Privacy for data confidentiality and integrity through advanced cryptographic techniques.
- Immutable Ledger that maintains an immutable record of all transactions.

Auditability

- Transparent Logs: Provides transparent and tamper-proof logs for audit and compliance.
- Traceability: Enables tracking of all transactions and changes.

Access Control

- Restricted Access and Role based permissions: Only authorized entities can join the network and perform transactions and specific roles and permissions are defined for network participants (e.g., registrars, registries, users).

Smart Contracts

- Domain Management: Automates processes such as registration, renewal, and transfer of domain names.
- Resolution Services :Maps domain names to IP addresses in a transparent and automated manner.

Consensus Mechanism

- Efficient Consensus Algorithms
- Fast and Secure Validation

Interoperability

- Cross-Chain Communication: Enables interaction with other blockchain networks and existing DNS systems.
- API Integration: Facilitates smooth integration with existing internet infrastructure.

Limitations and Drawbacks

Complexity and Cost of Implementation

Performance and Scalability

Integration with Existing Systems

Governance and Regulation

Resistance to Change



REFERENCES

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**Thank
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