Understand Etherium

Lesson 8

While Bitcoin introduced the world to cryptocurrencies, Ethereum has expanded on that vision. They both operate on blockchain technology, ensuring:

- Security,
- Transparency, and
- decentralization.

The core purpose and functionalities differ, however.

Bitcoin's primary purpose was to be a storage of value. Instead of keeping money in the bank, or holding onto gold, Bitcoin provided people with an opportunity to hold a new type of asset class, and participate in peer-to-peer transactions without the need for a central authority–anywhere in the world. The Bitcoin blockchain primarily recorded transaction data, serving as a decentralized ledger for the currency.

With Bitcoin, a person could travel anywhere, and always have access to the digital asset.

Founders of Ethereum, on the other hand, developed this cryptocurrency for decentralized applications (DApps) and smart contracts. The cryptocurrency, abbreviated as ETH, serves as a global, decentralized computing platform.

Ethereum's blockchain not only records transactions but also hosts and executes smart contracts and DApps. These smart contracts run exactly as programmed without any possibility of downtime, fraud, control, or interference from a third party.

The key contrast between Bitcoin and Etherium is in functionality:

- Bitcoin focuses on being a decentralized digital currency.
- Ethereum provides a broader platform for developing applications that can operate without the need for centralized control, extending beyond financial transactions to include any type of decentralized application.

Ethereum's capability to run decentralized applications "DApps" and smart contracts without downtime or interference introduces a wide range of applications, from decentralized finance (DeFi) platforms to non-fungible tokens (NFTs). In other words, they are more than a store of value, or cryptocurrency. They're part of a comprehensive platform for decentralized technology solutions.

The Backstory of Ethereum

Since people primarily used Bitcoin as a digital currency, Vitalik Buterin, a programmer and co-founder of Bitcoin Magazine, proposed the development of a new platform that would go beyond the financial use cases of Bitcoin. The founders of Ethereum envisioned a platform that could execute smart contracts and decentralized applications (DApps), powered by its own cryptocurrency, Ether (ETH). They launched Ethereum in 2015 as a decentralized platform for building and running applications without downtime, fraud, control, or interference from a third party.

What Makes Ethereum Different?

Smart Contracts

The heart of Ethereum's platform are smart contracts. That means the computer code of each smart contract includes the terms of the agreement, and they self-execute. These Smart Contracts run on the blockchain, making

them unchangeable and distributed, which means they are executed automatically when conditions are met, without the need for a middleman.

Example of a Smart Contract

Imagine you want to buy a house using a smart contract on the Ethereum blockchain. The smart contract is set up to manage the transaction between you (the buyer) and the seller. Here's a simplified version of how it might work:

Agreement Creation

Both parties agree on the sale price and conditions, which are then encoded into the smart contract. The contract is deployed on the Ethereum blockchain.

Escrow Functionality

Instead of using a traditional escrow service, the smart contract acts as the escrow. You transfer the agreed purchase amount in Ether (ETH) to the smart contract. The contract holds the funds securely and automatically, ensuring that neither party can access the funds until all conditions are met.

Condition Verification

The smart contract is programmed to verify if certain conditions are met. For example, it could require a digital signature from a third party verifying that a property inspection has been completed satisfactorily or that the title transfer has been prepared. These conditions are public and transparent, and the verification process is automatic.

Transaction Completion

Once the smart contract verifies that all conditions have been met, such as property inspection, approval, and title transfer readiness, the Smart Contract automatically releases the funds to the seller. If the conditions are not met by a specified deadline, the contract automatically refunds the Ether back to the buyer.

Record of Transaction

The transaction, including the fulfillment of all conditions, is recorded on the Ethereum blockchain, providing a permanent, immutable, and transparent record of the sale.

This example demonstrates how smart contracts can automate and secure transactions, reduce the need for intermediaries (like escrow services), and

provide a transparent and immutable record of agreements and transactions on the blockchain.

In the next lesson, we'll continue our discussion of Etherium, discussing more about decentralized applications and the expected evolution of Etherium.

Investment:
In time, I intend to add Etherium to my cryptocurrency portfolio. First, in anticipation of the halving event scheduled for April, 2024, I wanted to build a larger position in Bitcoin, adding gradually.

On February 14, 2024, Bitcoin traded at $52,159.68 per coin. I purchased .25 BTC for $13,039.92. Coinbase charged $293.40, which brought the total acquisition price to $13,333.32.

- Total investment in BTC at end of day, February 14, 2024: $178,780.35.
- Total holdings: 3.75 BTC
- Total value: $195,598.8
- Gain or Loss: $16,818.45

The value of my holdings surpassed the total amount that I had paid by $16,818.45.

Disclaimer:
For full transparency, I am not an investment advisor. Our nonprofit, Prison Professors, offers these lessons for the singular purpose of helping people learn more about the digital economy. I provide information on my personal investments to show that even a person who served 26 years can participate in the digital economy. I am an investor and a speculator, understanding the risks. No one should invest in any asset class without a strategy and a plan, as shown through our introductory course: Preparing for Success after Prison. Always develop an understanding of investment risks—especially with cryptocurrency.

Critical Thinking Questions:
How do smart contracts on Ethereum differ from traditional contracts, and what implications do they have for businesses and individuals?

In what ways could Ethereum's transition to proof-of-stake (PoS) impact its adoption and the broader cryptocurrency market?
Consider the potential of decentralized applications (DApps). How could they change the way we interact with digital services and content online?

Advocacy Initiative:

Please share your story and responses through the manner that works best for you:

1. Send through email to Interns@PrisonProfessorsTalent.com
   Subject line: Digital Economy Course
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   Dana Point, CA 92629
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