Ethereum - As Opposed to Coins

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About Speaker

Taha Sajid – PMP® , PMI-ACP®

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- Certified Blockchain/Agile/Fintech/5G Trainer
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Helped a no of companies to generate million dollar funding, built successful business models and Solution Architecting for Blockchain/Fintech Projects
Workshop Contents

Objectives

- Principle of Smart Contract
- Understanding Ethereum
- Dapps and Architecture
- Tokenization in Blockchain
- Qualification of Use case
- Value preposition and Usecase for Legal Industry
- Use case Demo – Real Estate Transaction
- Legal Considerations and Recommendations
Principle of Smart Contract

“IF This Than That”

- Turing Complete
- EVM
- Consensus Mechanism
- GAS
- IPFS
So What is Ethereum?

- A Platform where DaPP can be built using Smart Contract – removing 3rd Party.
- The cost of running the DaPP – ETHER (Gas Fees)

A sample of decentralized applications being built on top of Ethereum
Engaging with DaPPs

• **Essentials**
  Browsers, wallets, and must-have utilities- METAMASK, uPort.

• **Platforms and Markets**
  Buy and Sell goods – Augur, Ujo, RentBerry

• **Decentralized Finance and Health**
  Web3 world – BlockFi, Marble, Ethheal

• **Work**
  Do stuff, get paid – GitCoin, OpenLaw.
Ethereum Architecture

A sample of decentralized applications being built on top of Ethereum
Tokenization in Blockchain

Type of Token

- Currency Token
- Investment Token
- Utility Token

Why do we need Token

Creation of Token→

```solidity
class MyToken {
  /* This creates an array with all balances */
  mapping (address => uint256) public balanceOf;

  /* Initializes contract with initial supply tokens to the creator of the contract */
  function MyToken(
    uint256 initialSupply
  ) {
    balanceOf[msg.sender] = initialSupply; // Give the creator all initial tokens
  }

  /* Send coins */
  function transfer(address _to, uint256 _value) {
    if (balanceOf[msg.sender] < _value) throw; // Check if the sender has enough
    if (balanceOf[_to] + _value < balanceOf[_to]) throw; // Check for overflows
    balanceOf[msg.sender] -= _value; // Subtract from the sender
    balanceOf[_to] += _value; // Add the same to the recipient
  }
}
```

A sample of decentralized applications being built on top of Ethereum
Ethereum Standards for Tokens

- **Fungible Tokens**
  - ERC-20 / ERC-223/ERC-777
  (Crowd Funding- ICO/STO)

- **Non-Fungible Tokens**
  - ERC-721
  (Digital Assets-Crypto Kitties)
Security Token and STO

- Passes Howey Test
- Subjected to security regulations D, A+ and S
- Brings Back credibility to ICO

**ERC 1400/ST-20 - Security Token Standard**
Bridging the Line

ICO

Crowd Funding

STO

Tokenizing the assets and equity

Legalization

Security Token Creation

Token issuance through smart contracts

Capital Fund Raising

Accredited Investors

Open to All

Token Launch & sales

Listing Token On Exchanges

Utility Token Creation

Token Marketing

White Paper Creation

Listing Token On Exchanges
Qualification of Use case for Ethereum

START

Can a traditional database technology meet your needs?

Yes → Does more than one participant need to be able to update the data?

Yes → Does the data need to be kept private?

Yes → Do you need to control who can make changes to the blockchain software?

Yes → YOU MIGHT NEED A PUBLIC BLOCKCHAIN (SLOW TRANSACTION SPEED)

No → YOU MIGHT NEED A PERMISSIONED BLOCKCHAIN (MEDIUM TRANSACTION SPEED)

No → YOU DON'T NEED A BLOCKCHAIN (FAST TRANSACTION SPEED)

No → Is this database likely to be attacked or censored? Do you need redundant copies in multiple distributed computers?

Yes → Do you and all those updaters trust one another?

Yes → Would all the participants trust a third party?

Yes → YOU MIGHT NEED A PERMISSIONED BLOCKCHAIN (MEDIUM TRANSACTION SPEED)

No → YOU DON'T NEED A BLOCKCHAIN (FAST TRANSACTION SPEED)

No → No → YOU DON'T NEED A BLOCKCHAIN (FAST TRANSACTION SPEED)
Value Preposition for Legal Industry

I. The legal sector more accessible and transparent

II. Reduce costs in the legal industry

III. Bring automation to the legal industry

IV. Legal industry more efficient – Removing Duplications

V. Data integrity and transparency to the legal industry
Ethereum Use cases for Legal Industry

• Electronic Signatures
• Intellectual Property
• Property Rights
• Chain of Custody
• Tokenization
• Automated Regulatory Compliance
• Machine to Machine Payments
• Blockchain-Based Arbitration System
Case Study – Real Estate Transaction

**Objective**: Manage, automate, and streamline the sale of land, reducing commercial friction and transaction costs.

**Solution**

1- Use ERC-721 or Security Tokens

2- Sale of Land Contract

3- Call to Smart Contract (Escrow)

4- Transfer Property Rights on Blockchain
Case Study Demo – Real Estate Transaction

Land Registry
This land registry is managed by 0x6b6ace42f01.7f6857d5e9330fe02ad30c405ce7f678. There are currently 9 properties recorded.

Look Up A Property
Property ID
ChUJbU82dNW6MloRMk-GdoYr1NQ
Submit

Property Details
123 Saint Georges Terrace, Perth, Western Australia 6000
Sale Pending
Owner: 0x686eabeec7d953bba5086f19a6142201c26c137de
Contract Terms:
Buyer: 0x1f65b2c45ebf424ca49f1a06be79405002f3ce33
Purchase Price: 5 ether
Deposit Amount: 2 ether
Loan Amount: 3 ether
Escrow Balance: 5 ether

Complete Sale
The sale must be completed from the owner's address. The escrow balance must equal the purchase price under the contract terms. The sale price is 5 ether.

Complete
The sale has been completed. The owner is now 0x1f65b2c45ebf424ca49f1a06be79405002f3ce33.
Legal Challenges and Considerations

- Formal Requirements
- Signing requirements
- Immutability
- Quality assurance
- Oraclize
- Price Instability
- Legal Status
Conclusion and Recommendation

Usable definitions of the technology

Choose the right regulatory approaches

Harmonize the law and interpretations of it.

Help policy makers understanding of the technology

Regulate Exchanges and Notarization

Enforcement AP and Stable Coin-Pegged with GOLD or USD

Government entities as Blockchain Participants.
Thank You

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