

# TRUSTLESS TRUST is DIGITAL TRUST

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## ABSTRACT:

This paper we will discuss about trustless trust refer to system. Primarily block chain and distributed ledger technology. That eliminate the for centralized intermediaries (bank, brokers) by replacing them with cryptographic transparent and decentralized protocol .it is a form of digital trust. Where confidence in placed in decentralized code mathematical consensus and immutable record rather than fallible human institution . the trustless system such as Bit coin and bock chain serve as a foundational technology for establishing secure , permission less environment.

**KEY WORDS:** Bit coin, block chain smart contact , dApp, De Fi,web3.

## INTRODUCTION:

The trustless does not mean "no trust" at all .it implies a minimization of reliance of human intermediaries shifting that need to trust in the code and network security . the participants in a network do not need to know or trust of each of others , instead of , they trust the underlying code (eg. smart contractor). While operate exactly as programmed it represent a shift form trusting institution to trusting decentralized digital system . Traditional are recorded on public ledger that can not be alter , ensuring accountability and reducing the fraud risk .

The decentralized finance(DeFi) allow user to transact without third parties , relying an automated , self-executing agreement /because the trustless trust is not a trust at all. It implies minimization of reliance an human intermediaries.

## ZERO TRUST vs TRUSTLESS:

Zero trust and trustless system both eliminate the implicit trust , but serve different purposes . zero trust is cyber security frame work requiring strict , continuous automation for user/devices accessing private network . trustless refer to decentralized system(eg. Block chain)where to single entity is trusted, relying an code and public consumes focus an zero trust focus on servicing enterprise permitting by verifying every one trustless system removes the need for trust third parties or middleman.

Zero trust is commonly used in traditional centralized or hybrid IT environment trustless operate an decentralized peer-to-peer networks .IT relies an identity management and access policy . trustless relies an cryptography , smart contract and decentralized ledger .zero trust and trustless trust both aim to remove the implicitly trust but differ in scope and implementation IT is a cyber security frame work for network (never trust , always verify ) user / devices trust less mean common in block chain crypto use centralized public cryptography to eliminate the need for third – party intermediaries (eg .bank)

Zero trust is used to enterprises IT and cloud security (eg VPN,IAM) trustless is used an web3 crypto currency and block chain networks . zero trust is “verifying continuously “. The trustless is “ trust the math /protocol”. While both aim to reduce risk they are fundamentally different approaches are secure centralized system which other enable decentralized one .

### **TRUSTLESS TRUST:**

Trustless trust architecture (often exemplified by block chain and distributed ledger technology) removes the need for the central authority or trusted third party by using cryptography census based mechanism. To ensure the security and validity the edge ledger individual or IoT devices transaction without need for trust each other. The nodes are communicate directly to the exchange the data and eliminating intermediaries brokers. The multiple record of transaction shared memory among all nodes. in some context this is distinct from “zero trust”(security models) through both removes implicit trust with zero trusty requiring continuously verification every access point

### **BLOCK CHAIN IS TRUSTLESS:**

The block chain is consider “trustless” because it eliminate the need for user to trust a central audits or intermediaries to facilitate transaction , instead of relying on a block or third party ,participate trust the underlying , decentralized technology cryptography , algorithm and distributed network consensus to validate the serial transaction .

Trustless block chain means no single entity control all network the data is shared across multiple nodes once recorded data cannot be altered or deleted ensuring the secure tamper-proof ledger. Because it is immutable transation any added often validation by network nodes.. self executing node trigger action automatically removing the need for intermediaries to enforce agreement.

The block chain replaced the need for human trust with variable cryptographic proof allowing stronger to in that security . trust is block chain is a combination of algorithmic trust and trust towards peers. Building trust in block chain follow the process from initial to knowledge – based trust trusting beliefs in block chain camping trust in the platforms dApp and peers, block chain required building a trustee edge above trustless technology.

### **CAN BLOCK CHAIN BE TRUSTED :**

Block chain can itself is legitimate long- standing company in crypto (since 2011) known for its wallet and explore . but it is frequently impress by sophisticated phishing scam using fake ads and web-site that look like the real one so user must be extremely continuous to log through verify direct URLs. The companies often targeted because of its popularity leading regulation to issue warning about fraudulent sites posing as block chain can to steal login details.

### **AVOID THE SCAM:**

1. manually type block chain in to use browse or use trusted book mark. new click link from e mail, social media or suspicious ads
- 2.ur the site has padlock icon and http:// in the address bar.
- 3.similar name scammer user like block chain .co.com or misrepresents old company entity

4.official web site don't promises guaranteed return ask for upfront fees to "recover" last fraud or poor grammar \design.

Block chain comes in a real company .but they name is heavily used by scammer always be vigilance and verify you are on the official site before entities any information.

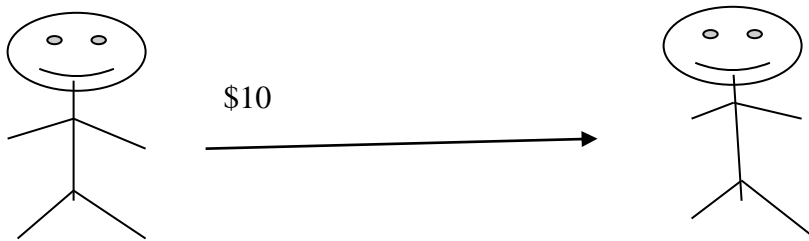
**TRUSTLESS SYSTEM MEANS:**

The trustless system means requires no party to know are another or trust one another . the concept of trustless is consider the bedrock of crypto currency .it was first introduced by bit coin the flagship and first crypto currency that was created.

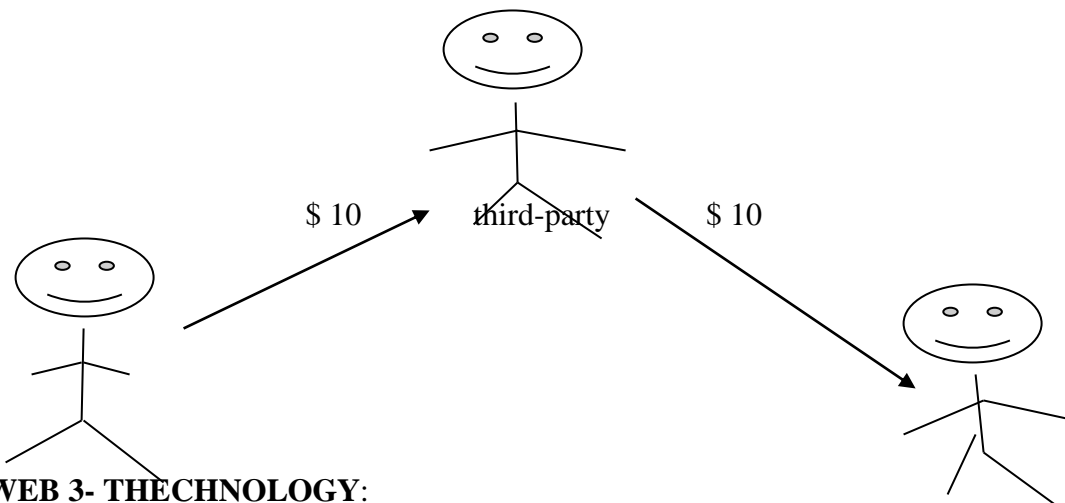
**ETHEREUM TRUSTLESS:**

Ethereum is still not fully "trustless" ethereum co-founder sad that network still fully shoet of being truly "trustless" are going that decentralized is not just about open- source code or decentralized validation , but also about how many people can understand how they system work.

**The trustless transaction system means :**



**Really want to this**



**WEB 3- TECHNOLOGY:**

Web3 also is trusted interaction and transaction without need trusted third party and instead of rely on the smart contract and immutability of decentralized block chain.

## TRUST MEANS:

The trust means essential of social life and enable co-operation, exchange, fairness ,honesty and other form of pro-social behavior examine predictor of behavior an on out come of social interaction and mediator of the relationship..

## TWO TYPE OF TRUST TECHNOLOGY:

- human like trust contractor . (benevolence, integrity, ability)
- system like trust contractor. (helpfulness, reliability& functionality)

Trust is also no interpret factor that influence technology adaption .the evaluation of web3 technologies to grad “a coloration mediator “ a place where we can all next and read and write . web3 has under gone the serious of iteration evaluation . the collaboration goal .

## TRUST IN WEB 3:

This is also evaluate of web3 large social media network increased their control of web 2.instruction consensus and broad were focused to trust these service of operate . trust accelerator shift towards decentralized wen3 . despite the propose trustless nature of web3 . as such as there is a need for branded to balance the drive to invariant via web3 technology .

Whether customer service or buying new one commence via digital channel is becoming more common with technology advance and reliance for consumer to determine where to place trust despite the so called trustless nature of the web 3 technology.

## DeFi:

Transaction and agreement can be verified monitoring and enforced without need for trusted third party or intermediary any one can create use or interest in DeFi application or system without need approval from a central authority .

## dApp:

this decentralized application integrated multiple component to create coherent and user friendly experience as its come a dAPP utilize a block chain network for secure and immutable data storage . smart contractor to automata and enforce business logic front end interfaces for user interaction the dApp may also incorporate back end services and decentralized storage for added functionality and efficiency . by leveraging these element dApp provide the transparent secure and decentralized solution that stored in contract to traditional application its from traditional service to digital market places.

Meta mask is eco system of decentralized application by servicing as a bridge between using and block chain and web provide meta mask act as awe3 enabling dApp to interact with ethereum block chain via. JavaScript libraries like web3.js or ethers.js. this integrated allows dApp to real block chain data an send transaction.

## CONCLUSION:

In conclusion the “ trustless trust“ is the context of digital trust repeated a paradigm shift in digital trust moving away from relying in centralized fallible intermediaries (bank, government , institution) to relying cryptographic algorithm and transparent mechanism.)block chain, smart contract ) while often marketed as “removing trust” is more accurately decentralized as of human redaction shifting confidence from human actors to cryptography protocol and censuses mechanism like block chain . the trustless trust reconfiguration digital trust from a model based or reputation and accountability to are based and verification and technologies algorithm certainty . the future of digital trust like lies a hybrid model where trustless system ( like block chain ,co exists, with traditional which relying an governance for broader social interaction. The trustless trust refer to a system where instead of relying an trusted intermediaries (bank, authentication) participate trust in cryptography protocol code , decentralized network .autonomous transaction without needing to know or trust the other party from the traditional ti digital trust block chain and DeFi.

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