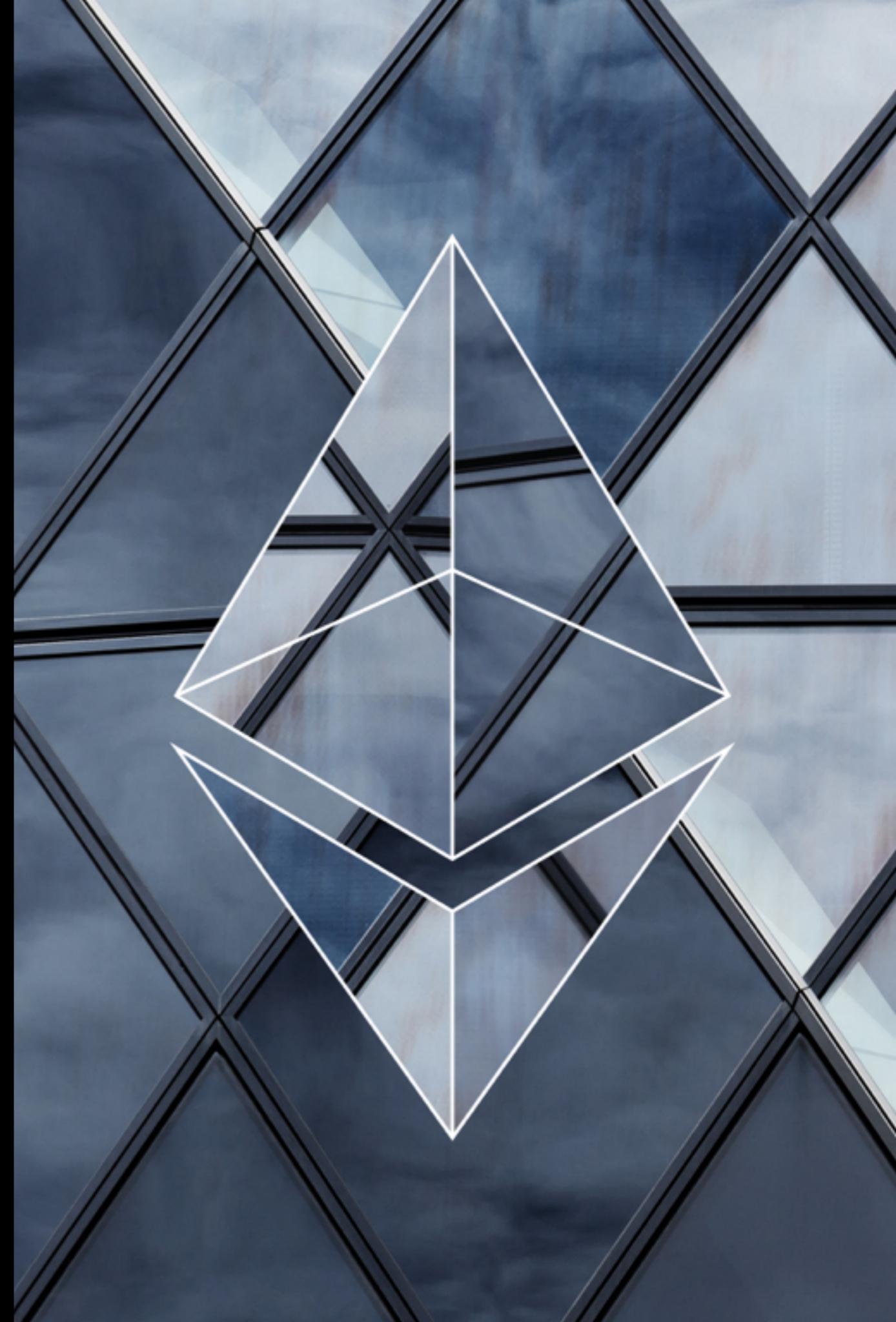


ETHEREUM

IMPROVING THE WORLD
THROUGH DECENTRALIZATION



CHAIN OF BLOCKS
SATOSHI'S
GIFT TO THE
WORLD



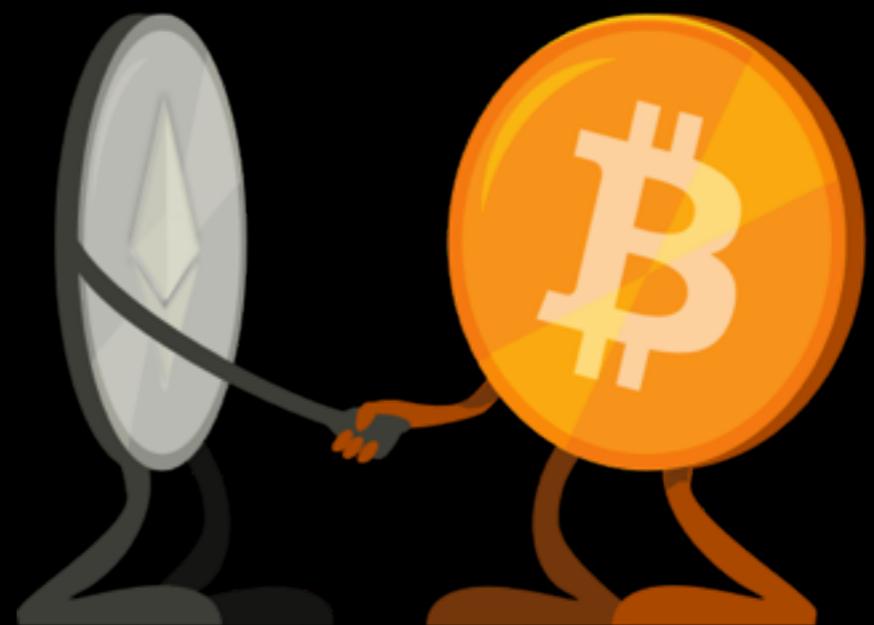
BITCOIN

- Released January 3, 2009
- Intentionally-limited scripting language
- 10 minute verification time
- First transaction of value May 22, 2010

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ETHEREUM

- Envisioned November 2013
- Turing-complete programming language
- 15 second verification time
- Released July 30, 2015



BLOCKCHAINS

- Distributed immutable ledger
- Excels at coordination
- Especially between mutually distrusting entities
- Digital uniqueness under owner authority



SMART CONTRACTS

- Term coined by Nick Szabo 1993/1994
- Code/contract enforcement on blockchain
- Mitigate loss & forgery
- Many applications with IoT
- M2M



DAOS

- Distributed Autonomous Organizations
- Community-supported digital entity
- Organized around Schelling points of functionality
- Allows for transparent governance on-chain



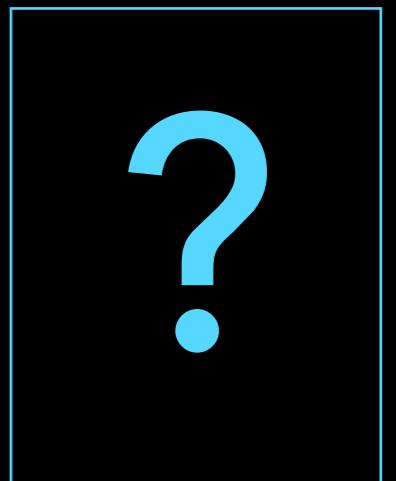
BLOCKCHAINS

A SOLUTION IN
SEARCH OF A
PROBLEM?



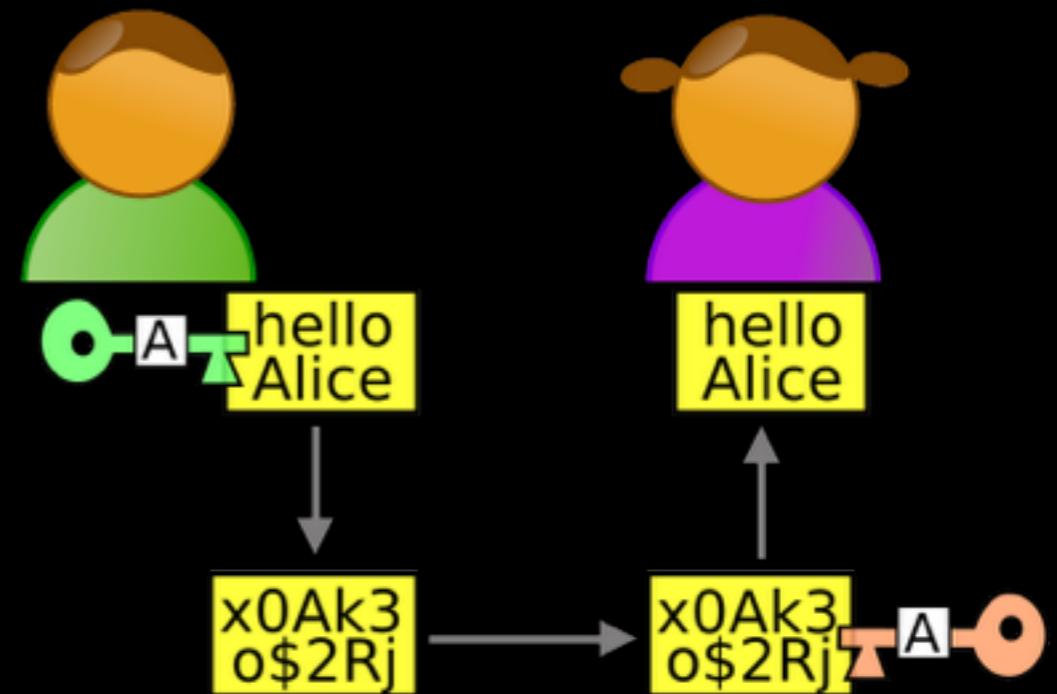
PROBLEM STATEMENTS

- Lack of transparency in certain areas
- Lack of privacy in other areas
- Lack of access/free-speech for some



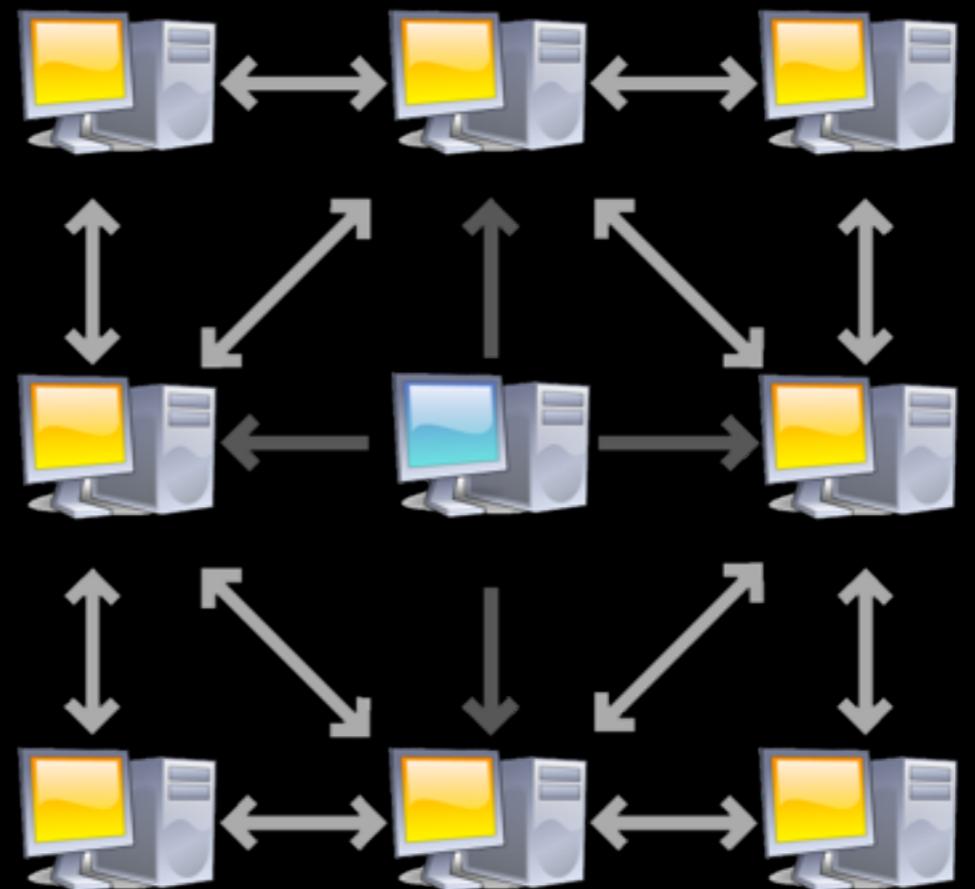
HOW TECHNOLOGY CAN HELP

- Asymmetric cryptography
 - Signing & verifying
 - Encryption & decryption



HOW TECHNOLOGY CAN HELP

- Peer-to-Peer
 - Censorship resistance
 - Fault-tolerance



HOW TECHNOLOGY CAN HELP

- Triple-entry accounting
 - Cryptographic digest as receipt
 - Immutable record of transactions



IMPORTANCE

- Individually important, but not exclusive to blockchains
- Opportunity is to combine these technologies for maximal benefit
- Provide concrete benefits to overcome less-secure legacy technologies



THE WORLD COMPUTER
BEYOND
PROGRAMMABLE
MONEY



OPPORTUNITIES

- Today's cloud consists of service layers owned and operated by large corporations
- Vision is to recreate these possibilities atop modern technology
- Allow for a re-engineering of the web
- Resist control by malicious entities



THE ETHEREUM VISION

- Processor (100k mainframes)
- Processor + Disk (10m PCs)
- Processor + Disk + Network (6.5b laptop/mobile)



- Logic + Storage + Messaging (>26bn IoT)

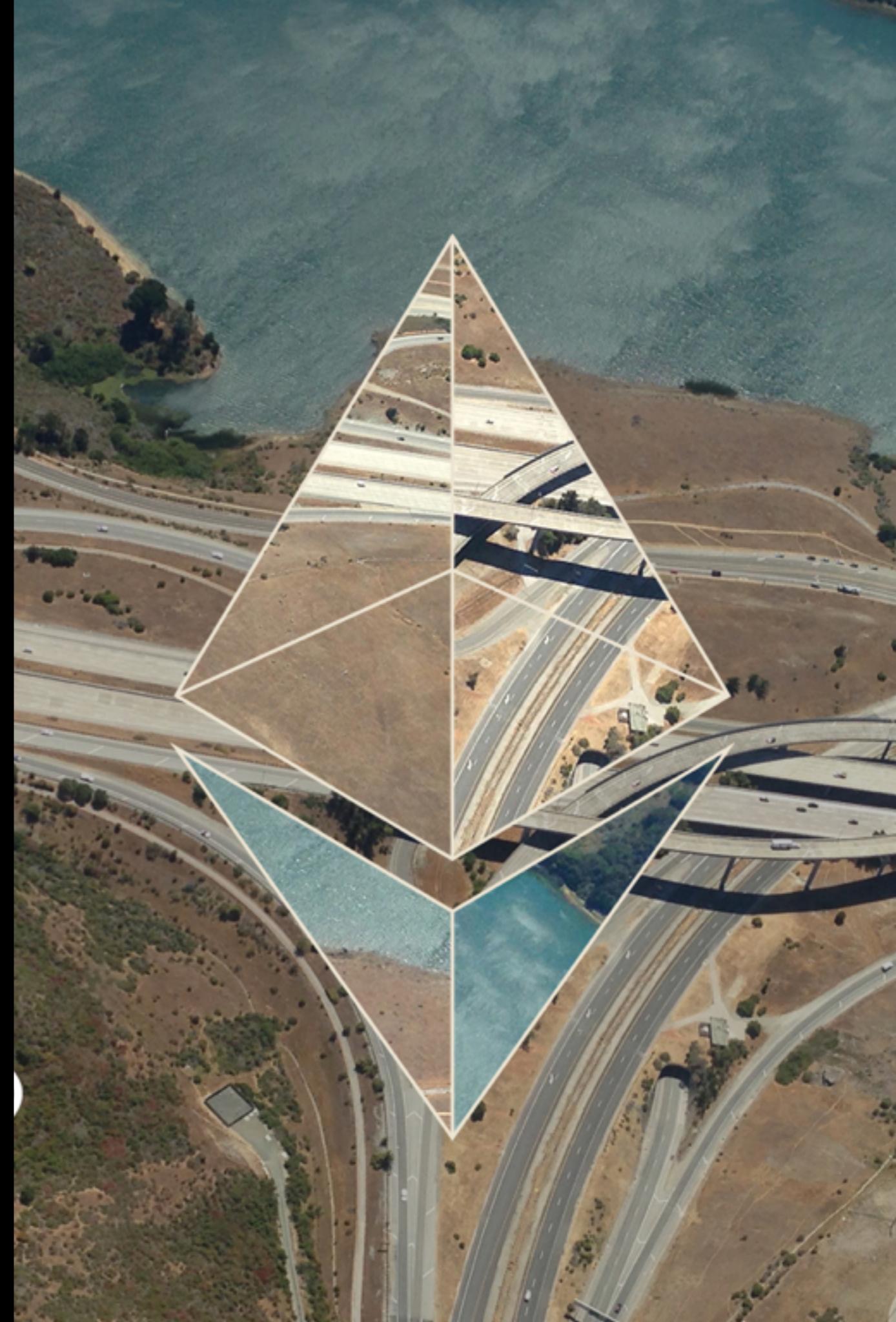


A FEW POSSIBILITIES

- Documents as self-describing unique identifiers
 - IPFS/Swarm
- Track changes over time with shared ledger
 - Perfectly auditable log of events
- Granular access control with modern cryptography
 - Improving upon what PGP & OTR attempted



BEYOND METAPHORS PRACTICAL USE CASES



TWENTIETH CENTURY INROADS

- Move beyond “digitized desk” metaphor
- Solidify “semantic web” with rich metadata and linking of correlated data
- Throw off the shackles of 1970s system design
- Build an “Internet OS”



REIMAGINING THE BACK OFFICE

- No need to email documents—just send an identifier
 - Globally unique
 - Universally accessible
- Eviscerate fax once and for all
 - Paper copies introduce loss of fidelity
 - Independence from provider shutdown/seizure

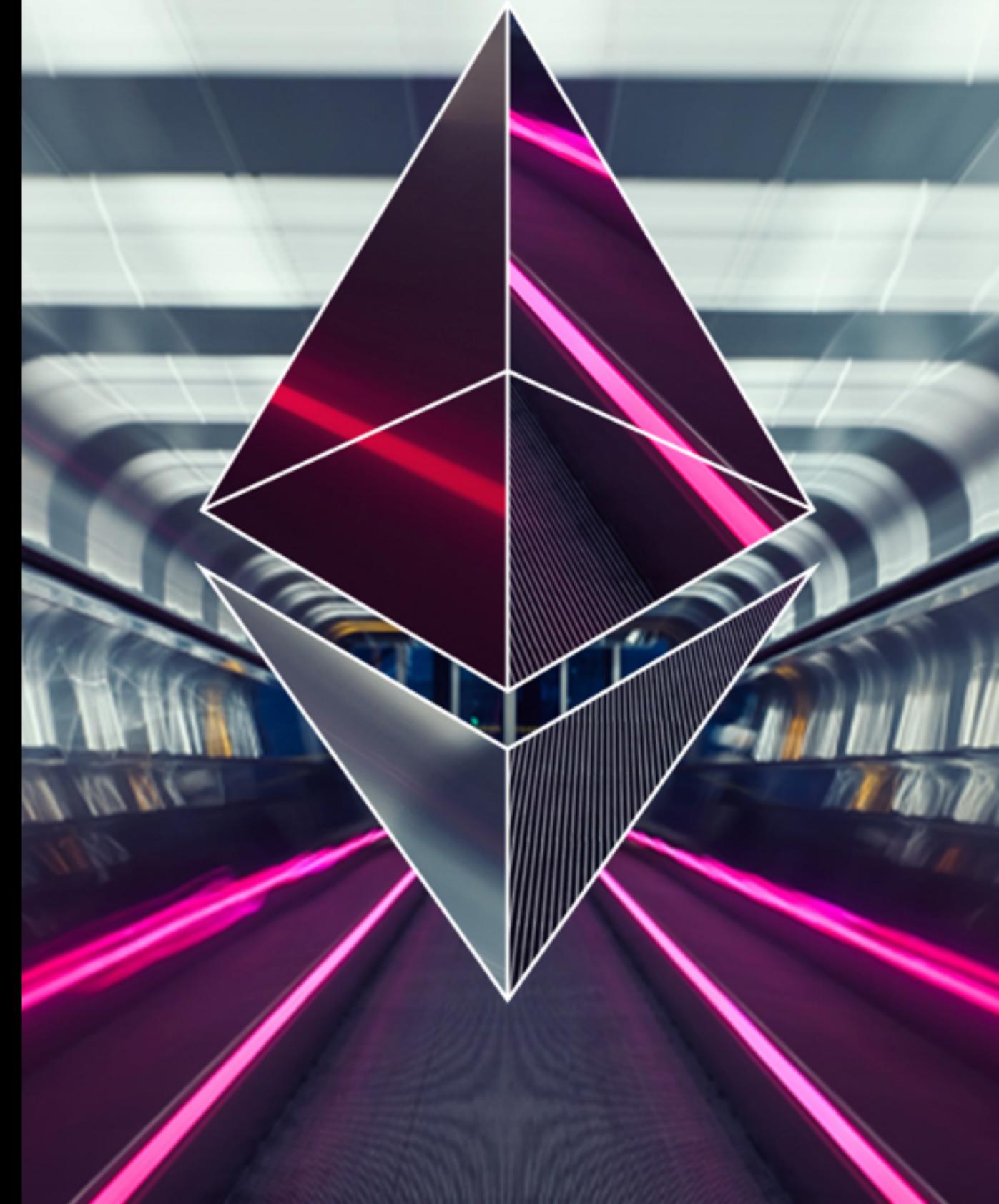


INDUSTRY IMPACT

- Healthcare: individual ownership of medical records
- Legal system: efficient execution of contracts
- Title tracking: incorruptible log of ownership
- Supply chain management: provable sourcing & manufacturing



DREAMING FORWARD
A GLIMPSE OF
THE FUTURE



THE WORLD COMPUTER: WHAT IS IT?

- Global trust machine
- Guaranteed execution
- Secure by default
- Censorship-resistant



TIP OF THE ICEBERG

- IoT
- VR/AR
- Futarchy
- Sharing economy
- Prediction markets
- Autonomous personal assistants



WORLD IMPACT

- Bring low-cost coordination technology to impoverished areas
- Ensure privacy for all netizens
- Guarantee access through anti-censorship principles
- Encourage collaboration from local to global



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