AMERICAN FAMILY VENTURES

CRYPTO APPLICATIONS FOR INSURANCE

VIK SASI

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Informing IoT and the Connected World

WHO AM I

- WI
- BA – Biology
- Intl. Development/Consulting
- MBA – Finance & Entrepreneurship
- Investment Banking/VC
- AmFam

AGENDA

Part I: Level-setting & Token Model

- Assumptions
- Cryptocurrency
- Tokens/ICOs

Part II: Insurance Applications & Future Trends

- Etherisc
- iXledger
- Implications for Insurance

AUDIENCE ASSUMPTIONS

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- Blockchain
- Bitcoin
- Ethereum

Bitcoin: A Peer-to-Peer Electronic Cash System

Satoshi Nakamoto
satoshin@gmx.com
www.bitcoin.org

Abstract. A purely peer-to-peer version of electronic cash would allow online payments to be sent directly from one party to another without going through a financial institution. Digital signatures provide part of the solution, but the main benefits are lost if a trusted third party is still required to prevent double-spending. We propose a solution to the double-spending problem using a peer-to-peer network. The network timestamps transactions by hashing them into an ongoing chain of hash-based proof-of-work, forming a record that cannot be changed without redoing the proof-of-work. The longest chain not only serves as proof of the sequence of events witnessed, but proof that it came from the largest pool of CPU power. As long as a majority of CPU power is controlled by nodes that are not cooperating to attack the network, they'll generate the longest chain and outpace attackers. The network itself requires minimal structure. Messages are broadcast on a best effort basis, and nodes can leave and rejoin the network at will, accepting the longest proof-of-work chain as proof of what happened while they were gone.

1. Introduction

Commerce on the Internet has come to rely almost exclusively on financial institutions serving as trusted third parties to process electronic payments. While the system works well enough for most transactions, it still suffers from the inherent weaknesses of the trust based model. Completely non-reversible transactions are not really possible, since financial institutions cannot avoid mediating disputes. The cost of mediation increases transaction costs, limiting the minimum practical transaction size and cutting off the possibility for small casual transactions,

BLOCKCHAIN USE CASES

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	Product development and distribution	Pricing/ underwriting	Payment & collections	Claims	Policy/ administration and back offices	Risk capital & investment management
Potential						
Potential use cases		▪ Use blockchain as a reliable registry for on-demand / usage-based insurance or micro-insurances	▪ Using blockchain as payment infrastruc-ture (especially across multiple countries)	▪ Leverage blockchain for information about insured goods and events in order to fight fraud	▪ Use blockchain for onboarding of new customers or verification of policy-holder identity	▪ Make data available for re-insurers or other parties in a controlled way
Potential use cases with smart contracts	▪ Offer P2P insurance via blockchain for customer to customer promotion and sales, and automated ops with smart contracts	▪ Use blockchain for P2P insurance underwriting, include external data, smart contracts and peers (humans) to determine tariff	▪ Automate payments through smart contracts evaluating conditions for paying out claims	▪ Automate claims triggering and handling with smart contracts, and e.g., with sensors (IOT)		▪ Use smart contracts to automatically determine payouts – e.g. triggering process of catastrophe swaps and bonds
Key benefits	▪ Reduce cost related to commission and sales and operations ▪ Increase trust of customers due to open, distributed system	▪ Reduce cost of operations ▪ Reuse platform for other types of insurances ▪ Include external data for (semi-) automatic pricing	▪ Reduce cost and increase speed for payments	▪ Reduce average claims cost related to – Claims administration – Damage from fraud and fraud detection ▪ Improve identification of claim events	▪ Reduced admin cost and speed-up process for onboarding	▪ Reduce admin costs ▪ Automate and increase reliability, auditability and speed for financial instruments transactions based on defined events
Examples[1]	InsurETH, RISKebiz, DYNAMIS, safe share, DYNAMIS	ripple, coinbase, RSK, ETHEREUM SmartContract	everledger, edgelogic, BLOCKVERIFY, RSK, ETHEREUM SmartContract	ONENAME, ShoCard, Tradle, CRYPTID, DNA.Bits, Genecoin	BLEM, Allianz Risk Transfer	

Source: McKinsey

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WHY CRYPTOCURRENCY?

- Decentralized Internet where value accrues to infrastructure, protocols and applications that serve market needs

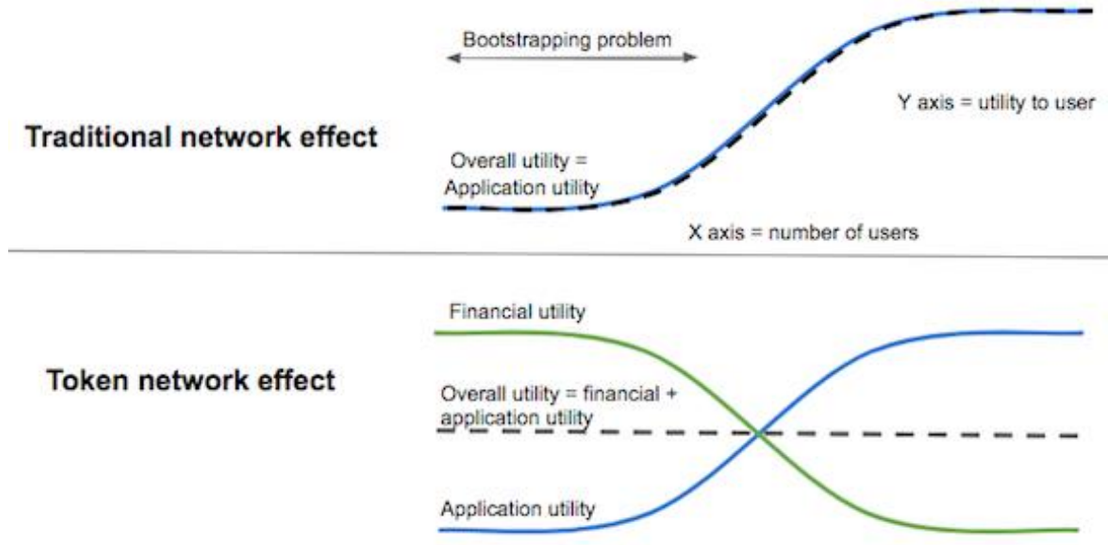
- Electronic trade across actors without middlemen who take a heavy toll / tax on the transaction

- *Potentially* a more stable currency than one's own government (Venezuela, Zimbabwe, NK) or store of value

TOKEN MODEL/ICOs

- Fundamentally new business model
- "Fat" protocols, "thin" applications
- Token network effect

Source: Smith & Crown

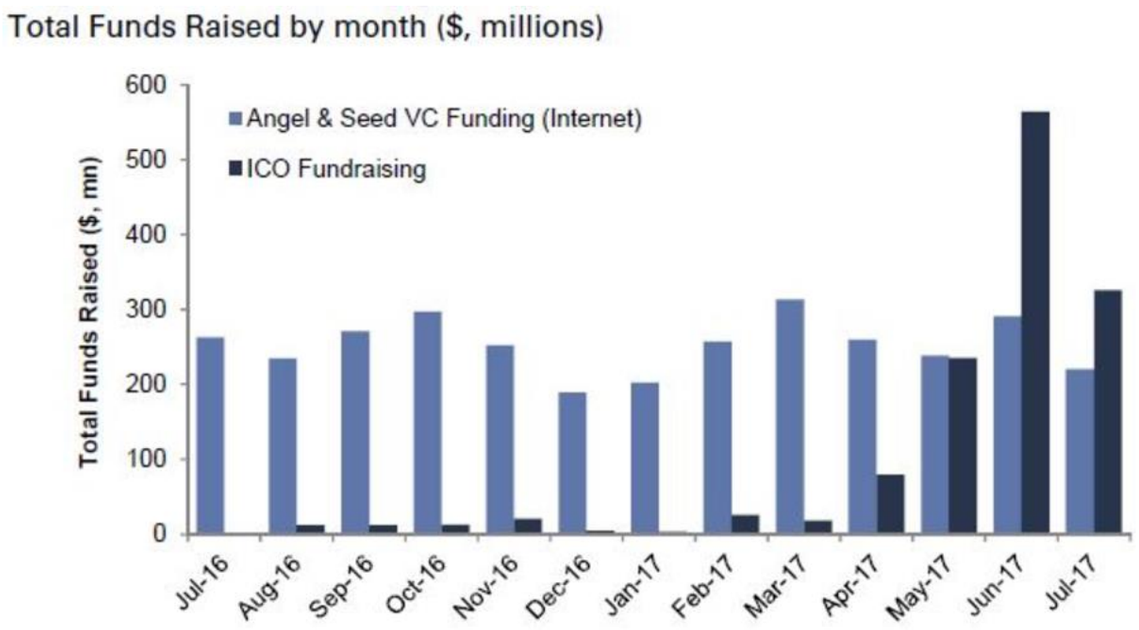


Source: Chris Dixon

ICO RAMIFICATIONS

- ~~Disrupting~~ Democratizing VC
  - Liquidity vs. governance
  - R.I.P. Accredited Investor
- Scams, bubbles, and winter

Source: Twitter



Source: CoinSchedule, CB Insights, Goldman Sachs Global Investment Research

INSURANCE APPLICATIONS

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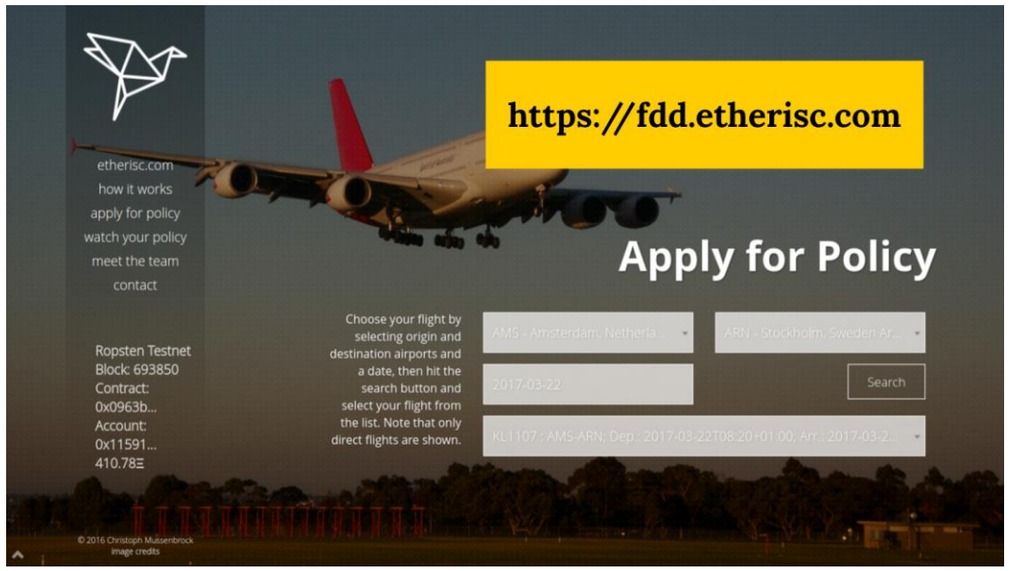
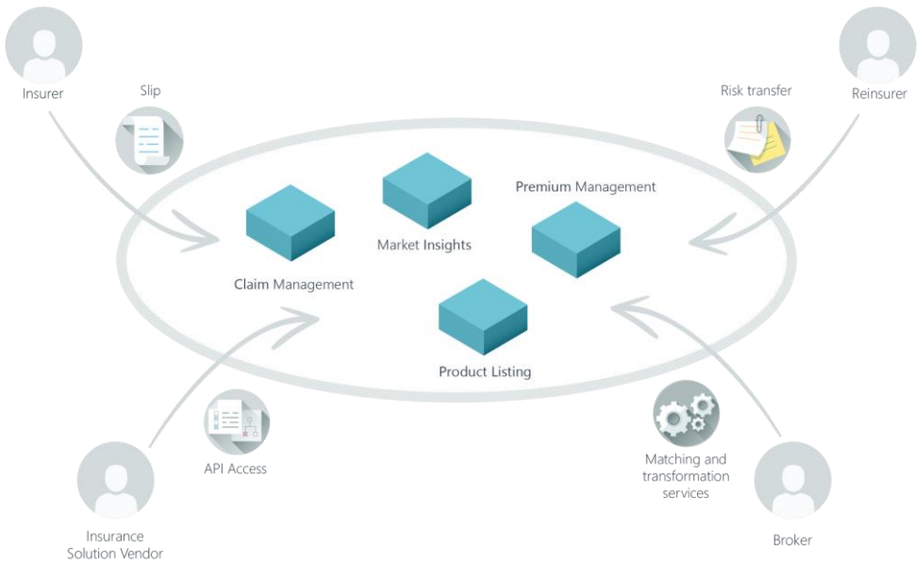
- Etherisc
  - Flight/Crop Insurance dApp
  - Decentralized Insurance Platform



Source: Etherisc

- iXledger (fka InsureX)
  - B2B Insurance Marketplace
  - IXT Token



Source: iXledger

FUTURE TRENDS

- If internet was invented in 1969, consider it 1982 for blockchain
- Goodbye regulation (capital reserves, filing rates, etc.)
- Insuring speculative risk becomes possible (controlling for moral hazard)
- New business models through interoperability
  - Parachains/Sidechains
  - Oracles (parametricizing products)

FURTHER READING/BIBLIOGRAPHY

Ledra Capital – The bitcoin series

Balaji S. Srinivasan — Thoughts on Tokens

Fred Wilson — ICOs and VCs here, Ethereum in 25 minutes, Polychain

Joel Menegro — Fat Protocols

Nick Tomaino — Cryptoeconomics 101 , Some Blockchain Reading, Tokens, Tokens and More Tokens

Fred Ehrsam — The dApp Developer Stack

Albert Wenger — Crypto Tokens and the Coming Age of Protocol Innovation

Chris Dixon — Crypto Tokens: A Breakthrough in Open Network Design, podcast with Vitalik Buterin, podcast with Olaf Carlson-Wee

Regulatory discussions — Coincenter

BD Tech Talk/Smith and Crown – What is an ICO?/ICOs Explained

CoinDesk – Framework for Valuing Cryptotokens