



Welcome and Opening Remarks

Michael Watson

April 4, 2018



ISOAG April 4, 2018

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| I. Welcome & Opening Remarks | Mike Watson, VITA |
| II. Blockchaining Government | Blake Carpenter, Grant Thornton LLP |
| III. Archer Updates | Mark Martens, VITA |
| IV. Upcoming Events | Mike Watson, VITA |
| V. Operations Update | NG |



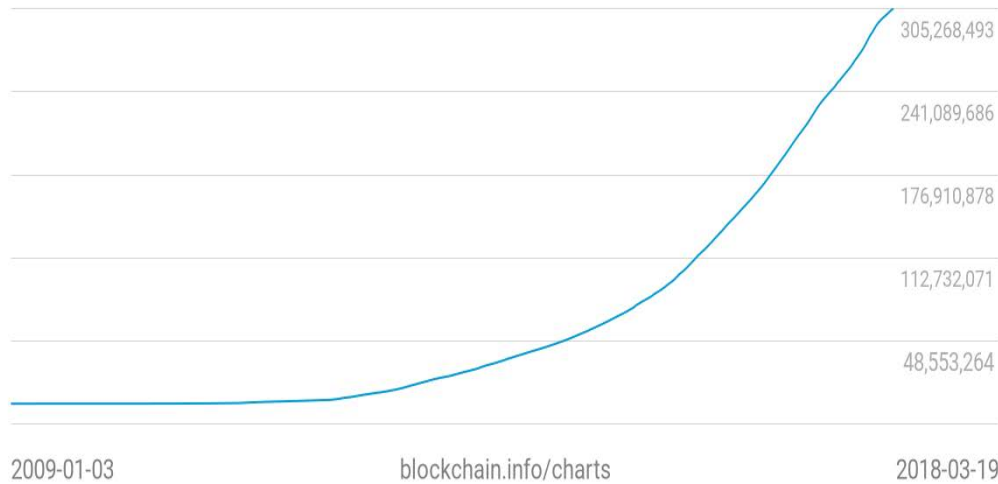
Blockchains and Government

A presentation to VITA ISOAG

April 4, 2018

Why should governments care?

Total Number of Transactions
305,613,369



A collage of images and text related to government and cryptocurrency legislation. The top image shows the Wyoming State Capitol building. Below it, a banner reads "Wyoming House Approves Utility Token Securities Exemptions Bill". Another banner reads "New York Lawmakers Open to Revisiting the BitLicense". A third banner reads "Texas Issues Another Cease-and-Desist over Alleged Crypto Fraud". A fourth banner reads "Georgia Becomes Latest State to Consider Bitcoin for Tax Payments". The bottom banner reads "Hawaiian Bills Would Capture Crypto Under Money Transmission Law". The background of the bottom banners features images of Bitcoin coins and a map of Hawaii.

Wyoming House Approves Utility Token Securities Exemptions Bill

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Texas Issues Another Cease-and-Desist over Alleged Crypto Fraud

Georgia Becomes Latest State to Consider Bitcoin for Tax Payments

Hawaiian Bills Would Capture Crypto Under Money Transmission Law

Agenda

- How do blockchains work?
- Regulation and law enforcement
- Governmental use cases

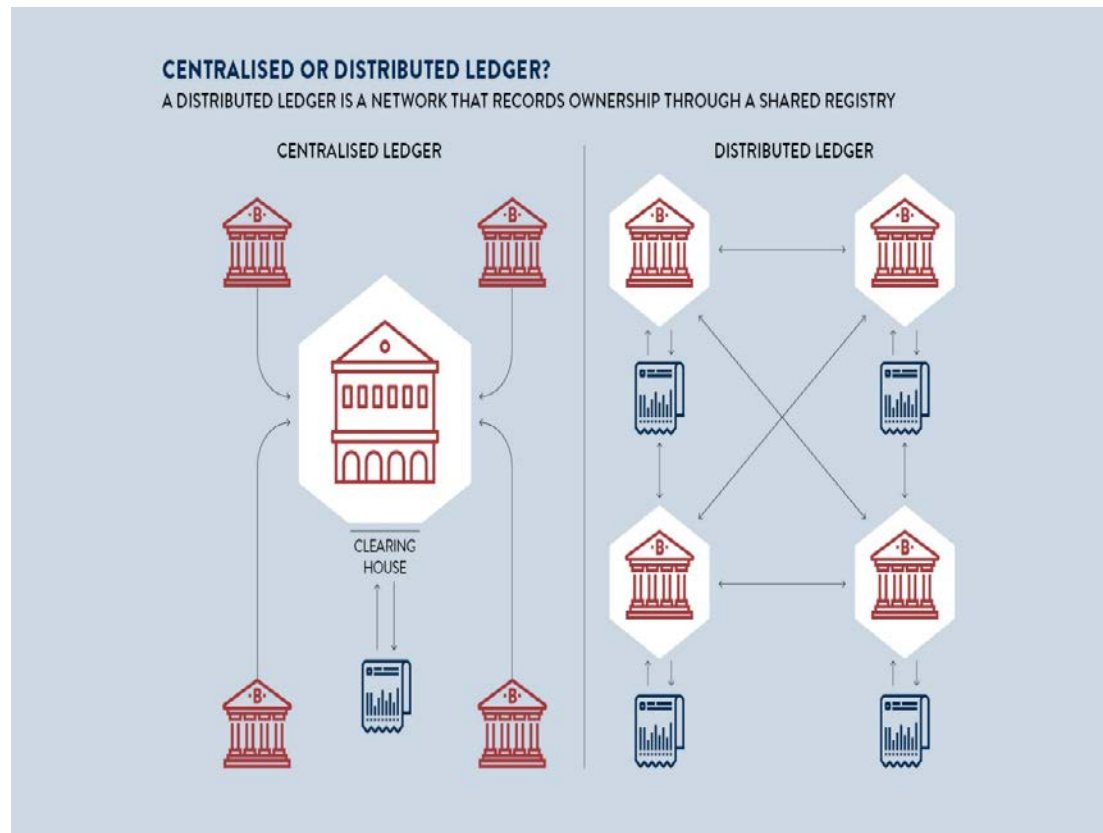




How do blockchains work?

What is blockchain technology?

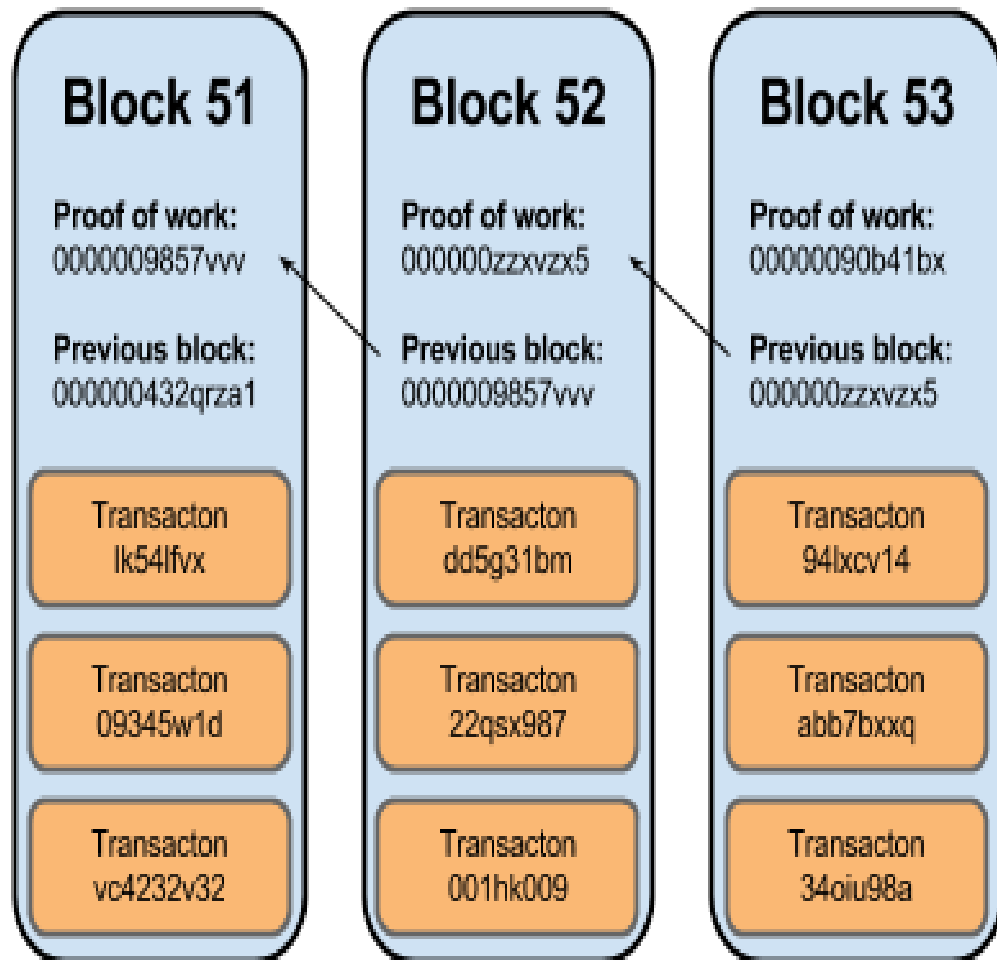
- Distributed ledger of transactions
- Enables the peer-to-peer exchange of value



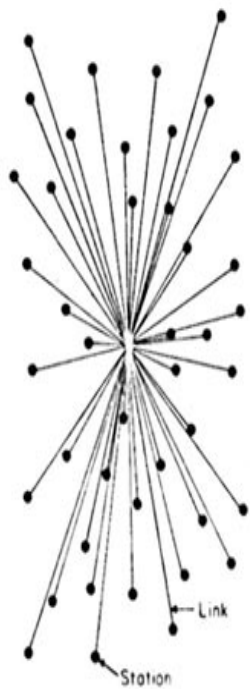
How do blockchains prevent cheating?

- Tamper-evident, unforgeable record

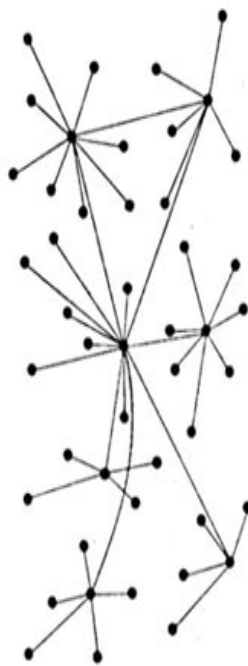
- [Demonstration](#)



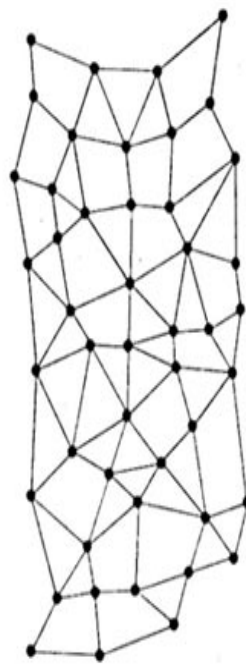
Properties of distributed networks



CENTRALIZED
(A)



DECENTRALIZED
(B)



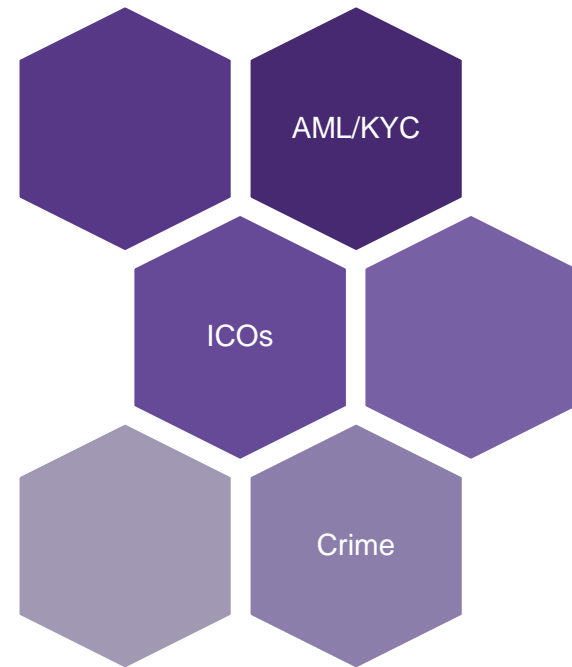
DISTRIBUTED
(C)

- Note the pattern of connections does not revolve around a single or handful of nodes
- Full nodes maintain a complete copy of the ledger (going back to the "genesis" block)
- Taking down one (or even many) nodes may slow the network temporarily, but not stop it
- For public blockchains, anyone with the appropriate hardware can run a node
- Many distributed chains can continue to run even if there is only *one* computer running it

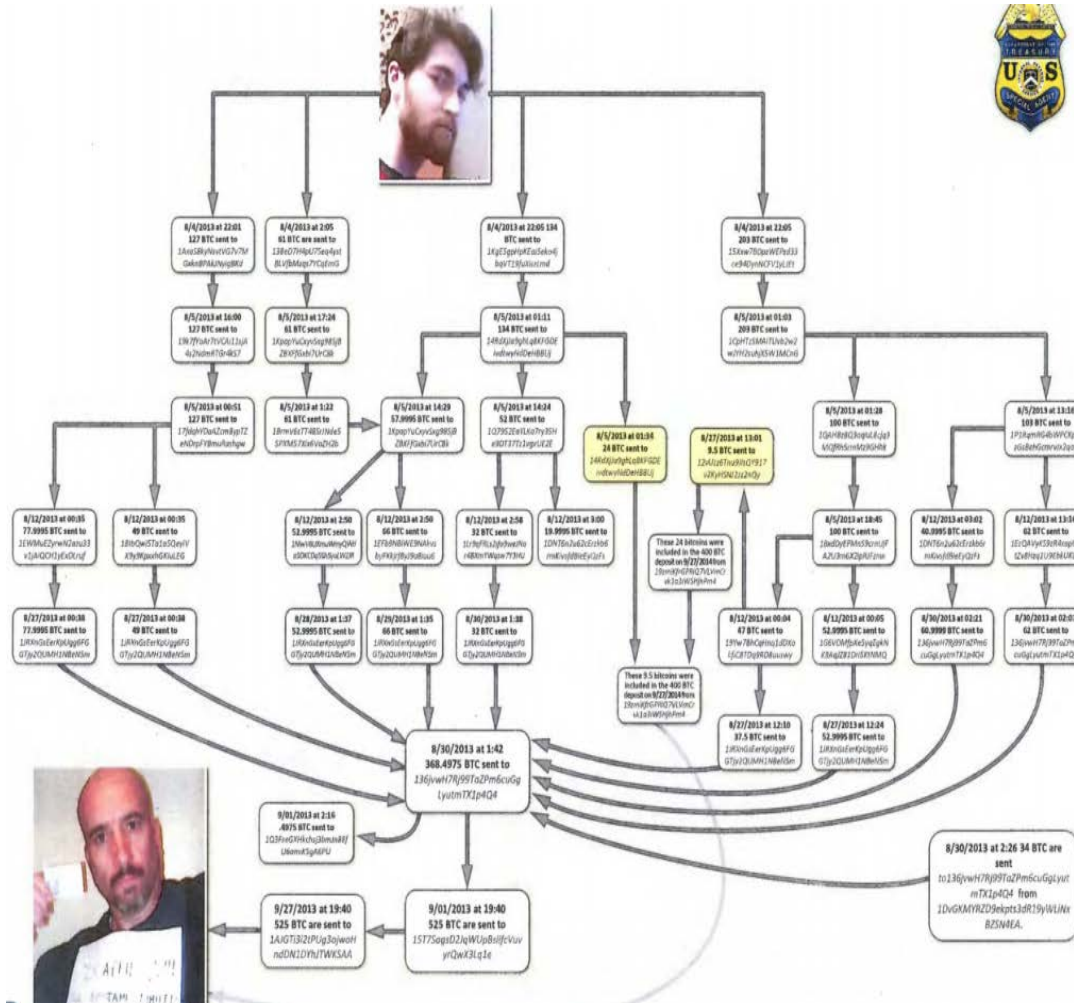


Regulation and law enforcement

Regulatory issues



Law enforcement





Governmental use cases

Recordkeeping

- Transparent, secure authentication of records
- Treasury's equipment
- Land registry
- E-voting/survey data



Smart contracts – how do they work?



Offer: computer code is programmed

- defines the terms of the agreement
- deployed to a blockchain, e.g. Ethereum



Acceptance: of premium or dep

nsurance

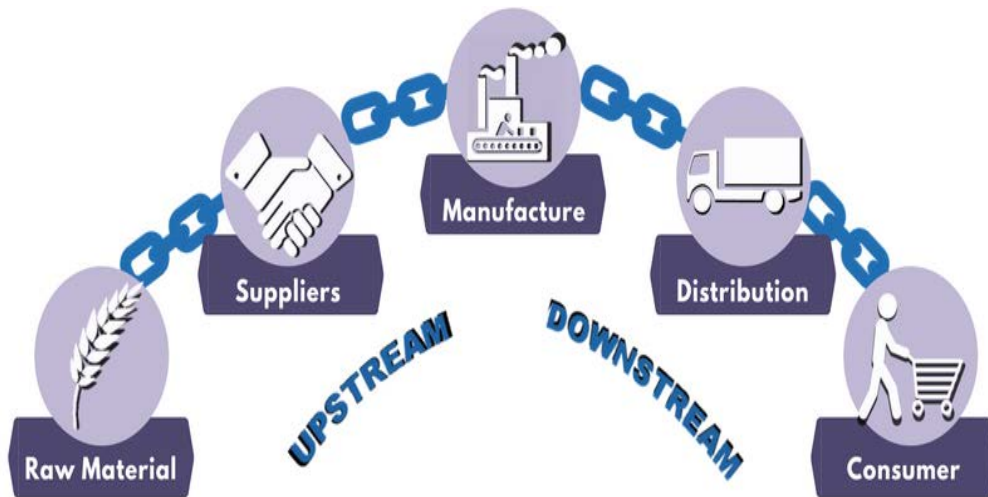
Execution: smart contract monitors the blockchain and oracles for an acceptance. Once satisfied, code executes:

- **Payment alone:** when funds are received, the contract delivers the goods/services
- **Time-based:** e.g. a smart bond makes interest payments on pre-defined schedule
- **Oracle data:** third-party or program (IoT) which supplies external info, e.g.
 - Prime interest rate on Jan. 1
 - Did it rain in Richmond on Tuesday?

Supply chain and digital identity

Supply chain provenance

- **USPS package delivery**



Digital identity

- Unforgeable, digital credentials
- DHS & first responders
- UN & refugees
- Links to other use cases such as e-voting or digital health records

Payments and accounting

Digital payments

- **Receipt of tax payments**
- **Grants and entitlements**
- **Transparent execution of government business**



Accounting and audit

- **Creation of audit evidence**
- **Automated internal controls**
- **Reducing reconciliations**
- **Impact on audits**

Questions?



Contact Information

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[LinkedIn.com/in/blakemcarpenter](https://www.linkedin.com/in/blakemcarpenter)





Archer Update

Mark Martens
CSRM Analyst
Risk Management

ISOAG
April 4th , 2018



Agency Layout

- Removed Previous Year
- Consult Annual Report for previous year results



Products and Services

- See risks and findings associated with your vendor's platform
- Share RTO, RPO, Regulatory and Compliance mandates with the supplier through your associated business process and data sets



Risk Assessments

- This week marks the end of the quarter
- Submit your risk treatment plans
- Two new members recently joined the risk team



Questions

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You may also send any questions to :
CommonwealthSecurity@VITA.Virginia.Gov



Upcoming Events





Registration closes April 4

**“2018 COVA Information Security
Conference: “Expanding Security
Knowledge”**

April 12 & 13

Location: Altria Theater

<https://wm.irisregistration.com/Site/VITA2018>

Registration Fee - \$175

***Contact CommonwealthSecurity@vita.virginia.gov for more
information**



IS Conference Committee Members

Ray Usler, Chair

Hope Adams – VCU

Janice Akers - VITA

Chandra Barnes – VITA

Chandos Carrow – VDH

Dan Han – VCU

Tina Harris-Cunningham – VITA

Rosario Igharas – VA529

Lourdes Lunsford – DJJ

Mike MacEwen – DOLI

Bradley Paul – DHRM

Zeta Wade - VITA



Future ISOAG

May 2, 2018 @ CESC 1:00-4:00

**Speakers: Shana Bumpas, General Data Protection
Regulation**

&

Wes Kleene, VITA

ISOAG meets the 1st Wednesday of each month in 2018

ADJOURN

THANK YOU FOR ATTENDING

