John Greaves wants to tell you that he is…

…WORKING ON A CHAIN GANG

Manage your value chain more quickly, effectively, and efficiently than ever.

RAIN™ RFID

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WORKING ON A CHAIN GANG

Your very own Y2K

John Greaves “Doctor Blockchain”
RAIN in the Blockchain Economy

WORKING ON A CHAIN GANG

Blockchain has arrived and with it, another mass of data acquisition challenges

IIoT, when effectively enabled, has an ongoing and important role in a Blockchain program

The question is can your IIoT be your Chain Gang

Or do you need more work or better tools?

Let's find out……

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- IoT (2010) or IIoT
- Should not be a question!
- 3 years and moving on

- The Industrial Internet of Things (**IIoT**) is the use of Internet of Things (IoT) technologies in manufacturing
- In manufacturing specifically
- **IIoT** holds great potential for quality control, sustainable and green practices, supply chain traceability and overall supply chain efficiency **Gartner**

March 18, 2015

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WHAT IS BLOCKCHAIN?

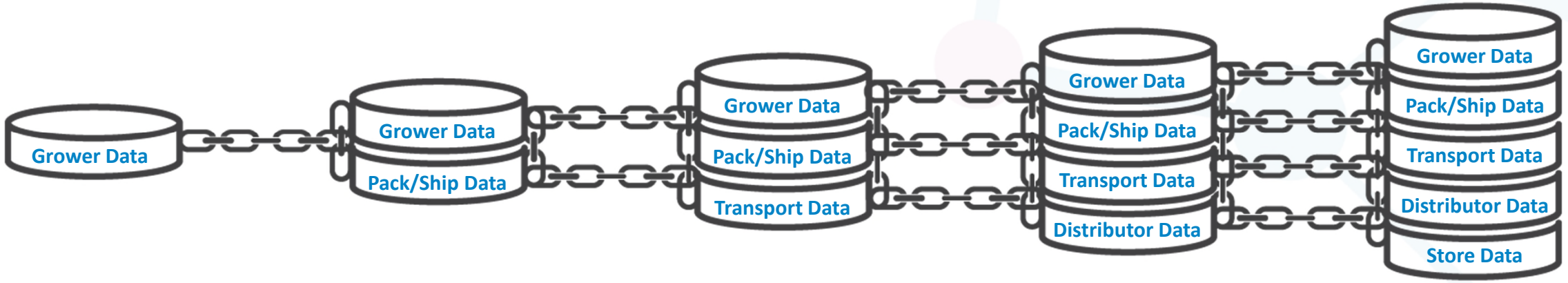
Grower

Packer/Shipper

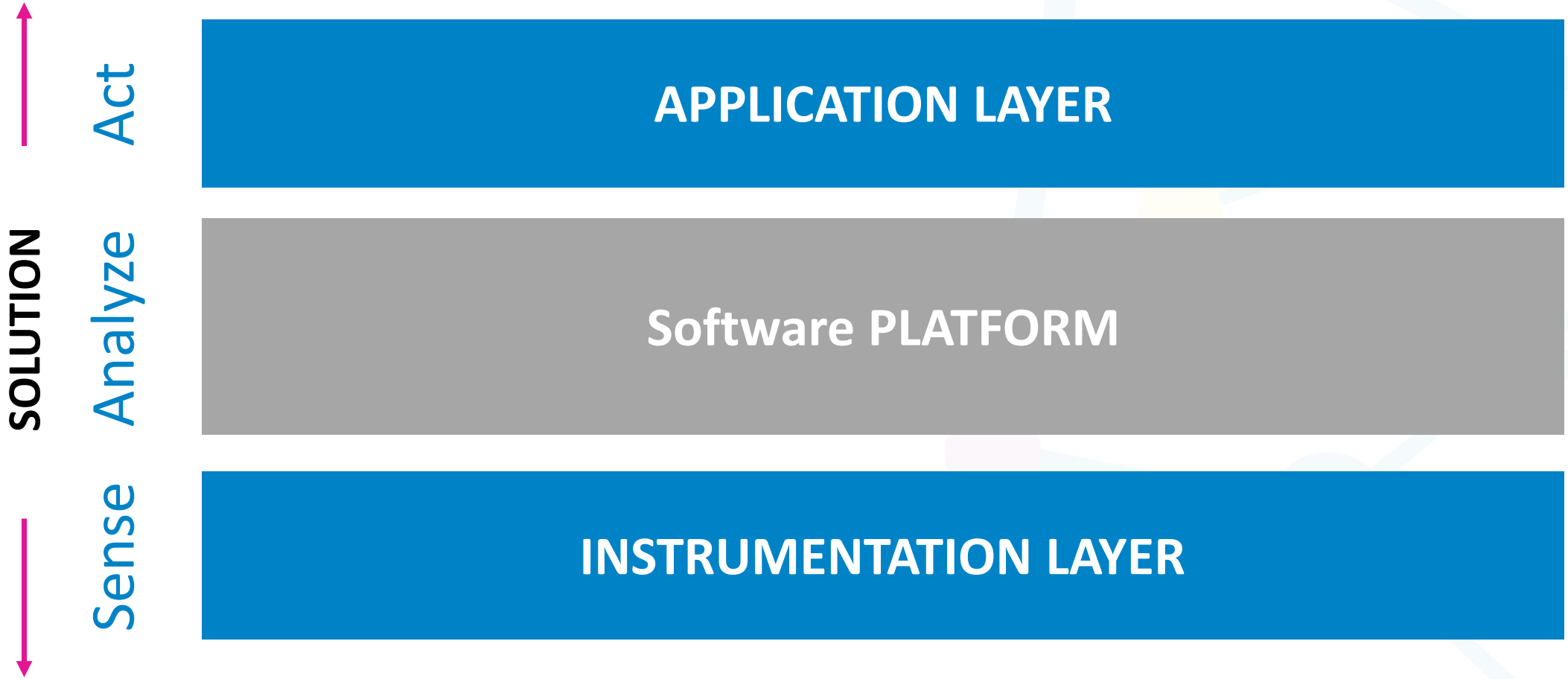
Transportation

Distribution

Store



Blockchain Leveraging Common Components



BLOCKCHAIN IS ONLY FOR FINANCIAL TRANSACTIONS

True in 2010

Then reality, like Y2K, or the next generation cell phone sets in and you find yourself stranded

The most challenging side of Blockchain is the pace of implementation, of consideration

Industry bodies, standards bodies, regulators, corporations, SME and even a remote coffee plantation are on board……NOW

- Blockchain is a physical event, generating proof positive that in agreeing the event a simultaneous transaction may advance
- Blockchain is not a technology. In itself it has no leg to stand on
- You must decide, **now**, with legitimate guidance, private or public?

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CENTRALIZED vs. DISTRIBUTED vs. DECENTRALIZED

CENTRALIZED

- One database, one owner
- Not resilient to organizational failure
- Not resilient to technical failure — Airline Example

DISTRIBUTED

- Many database copies, one owner
- Resilient to technical failure
- Not resilient to organizational failure — Government Systems

DECENTRALIZED

- **Many database copies, many owners, no one "master"**
- **Resilient to technical failure**
- **Resilient to organizational failure — Common Sense**

SILOS

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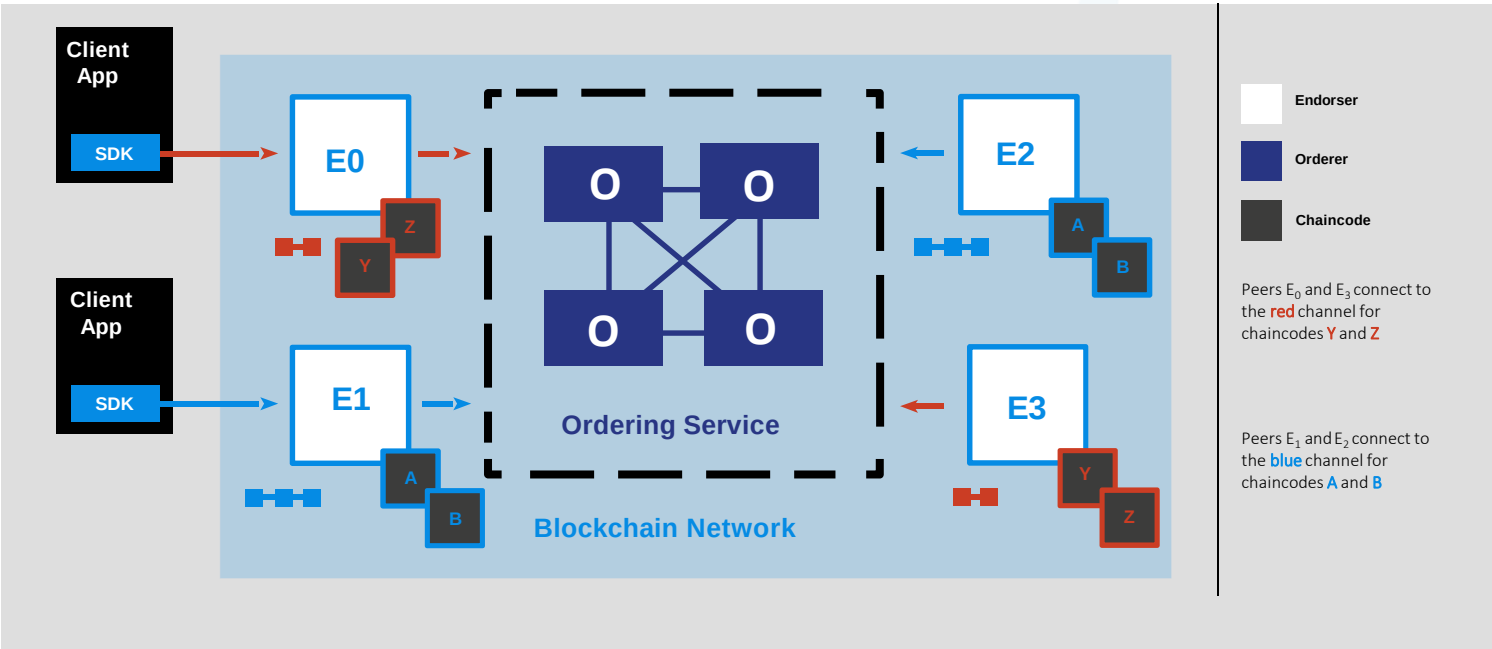
Multi-Ledgering

Permissioned

Blockchain



Source: www.altoros.com

OBJECTIVES

- Creating a vision – not a product. Fulfillment is the word.
- Goal is a stronger, more efficient, & sustainable Supply Chain
- Blockchain + GS1 standards = Scalable Traceability with RAIN
- Traceability → Transparency → Accountability → Responsibility

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BLOCK CHAIN IS FOR REAL

- **Supply chain data transparency**
  - What data should be shared with consumers?
  - What data should be only shared with trading partners?
- **Private versus Public Blockchain networks**
  - Cost
  - Performance
  - Ability to select privacy levels
- **Benefits to each trading partner should be greater than the cost**
- **Regulators right to access to Blockchain data**

BLOCKCHAIN IS NOT FOR REAL

- PMA BLOCK CHAIN Task Force
- Walmart
- Kroger
- Wegman
- P & G
- Trimble Transportation

- IBM
- Deloitte
- Microsoft
- Google
- Accenture
- Lowry Chain

BLOCKCHAIN IS NOT FOR REAL

- RABID
- Registration Authority for Blockchain Identities.
- T shirts
- Adapted to improved Logo now show Rain pouring down on dogs head

- BRA
- Blockchain Registration Authority
- Simple
- Straightforward
- Uplifting

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Alibaba, JD tackle China's fake goods problem with blockchain

IBM and Walmart Launch Blockchain-Based Food Safety Alliance for China

December 21, 2017, 02:07:17 PM EDT By Giulio Prisco, Distributed

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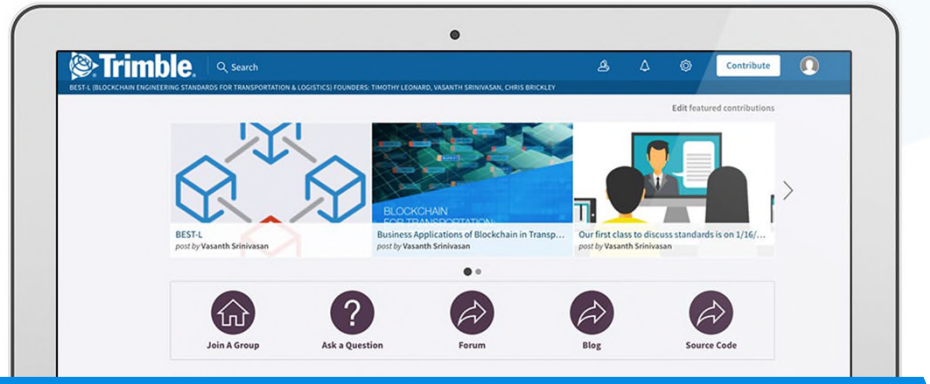

Blockchain Engineering Standards for Transportation & Logistics

Several consortiums have formed in recent months to address the various business problems facing each industry. Some of them are outlined above. However, as a leading transportation technology provider, we feel that there isn't an organization to address the technical challenges associated in using Blockchain to solve transportation problems. Hence, a few of us have stepped forward and formed an association named BEST-L, which purely focuses on establishing open standards for the transportation and logistics industry.

The organization isn't restricted to TMW and its affiliates, but open to all technology enthusiasts. We invite business users, developers, architects, network administrators, executives, professors, college students, research staff, entrepreneurs and blog writers to join the organization and become a part of the Blockchain journey. As a first step, we have a web portal set up for everyone to collaborate and share ideas. There are also virtual classes to stimulate the collaboration.

For more information: best.bloomfire.com

TMW
A TRIMBLE COMPANY

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SAMPLE OF CONTRACT ENFORCEMENT UTILIZING BLOCKCHAIN TECHNOLOGY

The customer was able to improve its profit by

$70,000 a week

TMW
A TRIMBLE COMPANY

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What blockchain technology trial in tomatoes could mean for produce industry

Intrigued by how blockchain was changing finance, an ex-banker at Wells Fargo & Co. and a former executive at Nasdaq Inc. began looking for other opportunities. They looked at applying the technology to insurance, law, even music. Then they hit on farming.

Raja Ramachandran and Phil Harris met when they were both working on Wall Street, in 2005 after Citigroup Inc. acquired electronic trading company Lava Trading. The pair remained friends for more than a decade, and decided to leave finance to start Ripe.io, which uses blockchain in agriculture, and has big aspirations to weave it through the food supply chain.

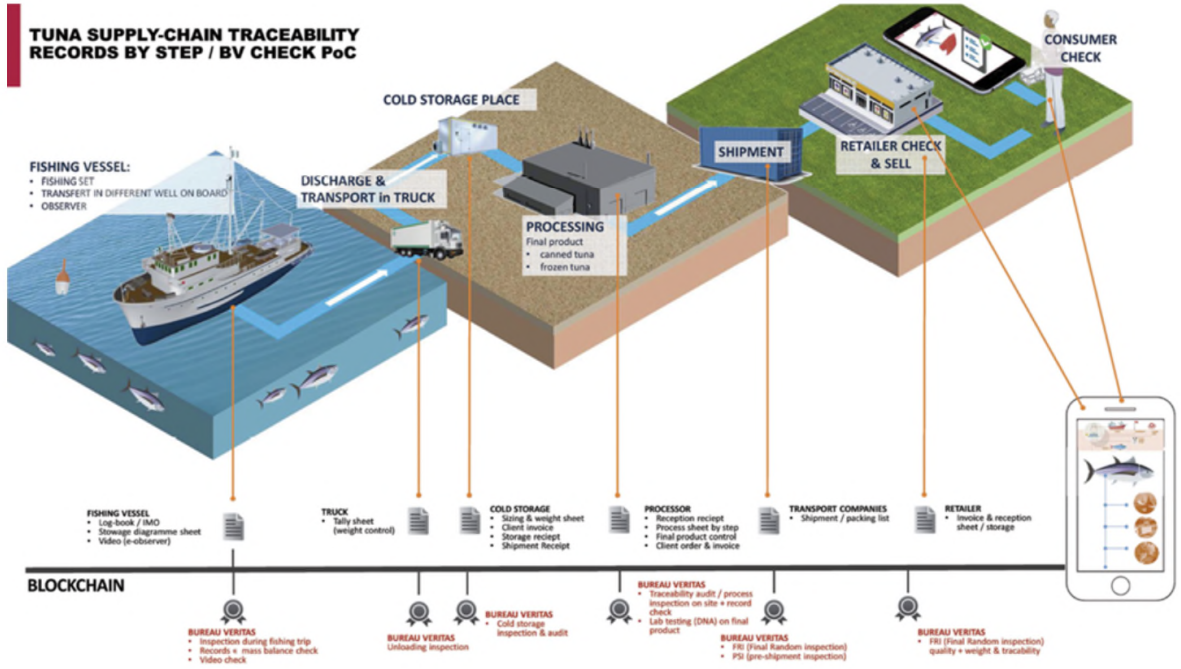
Blockchain

Traceability and Technology - Traceability and Technology

An Emerging Food Traceability Technology

April 7, 2017

SUBSCRIBE



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The Abacus

- Thousands of years
- Hundreds of iterations
- Latin for a few signatories

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- Carbon Paper Duplicate Book
- Several Decades
- Several Innovations like Paperless

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- Barcode
- Of the modern, pseudo digital era
- 4 decades and counting
- Multiple iterations
- Standards
- Lynchpin of global commerce

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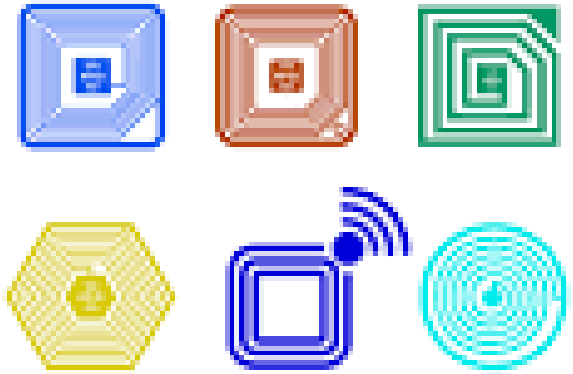
RFID RAIN



- RFID
- EPC
- SC31
- AIM
- RAIN

- A genealogy of Technology

Types of APIs

Sense

Triggers

Events from devices & infrastructure

Scan

or

Diagnostics

Analyze

Searches

Historical, real-time & 3rd party data with AI & ML

Historical Search

Battery

Act

Actions

Do something with devices, solutions, users, or ecosystem

Buy

Print

APIs as Products

Triggers

Scan

Print

Read

Diagnostics

Location

Actions

Print

Configure

Task

Blockchain

Buy

Support

Searches

Analytics

Handhelds

Tablets

Printers

Scanners

Readers

Batteries

Scans

Prints

Reads

Partners

Catalog

Supplies

Accessories

Tools

Users

Assets

Items

Pallets

Packages

AIDC AND BLOCKCHAIN

Bar Code	RFID	RTLS	XXX	YYY
String length	Which one	FUNDAMENTAL	50 BILLION DEVICES CONNECTED BY 2020	2020
Content	What for			2020
Standard	Where		1 TRILLION BY 2035	2020
Conforming	When			
Can you read it	Who		1% EXIST	2020
Can you process it	Whose		Protocol Platform Process	2020

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O.H.I.O.™

There is nothing without OHIO.™

Zero Human Intervention Operations.

Successful, cost effective, IIoT based on

OHIO Principle™

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O.H.I.O.™

OHIO.™ is the perfect RAIN Storm?

Effective Labor Force Shrinkage

AI impact, lower cost, more able.

Simple economics –L X IAI ➗ RAIN =

Blockchain a.k.a Loads of $ <Alexei Sayle>

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Software **FOR BLOCKCHAIN**

Leverage Precise Tracking & Monitoring of Business Transactions Into Blockchain Hyper Ledger Value

Monitoring?

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Platform **FOR BLOCKCHAIN**

The Platform combines state of the art data capture and IIoT Data Integration with the most current enhancement in Blockchain Hyper Ledger Integration. **The Coco Framework**.

Blockchain leverages the Trusted Execution Environment (TTE) The Platform combines state of the art data capture and IoT Data Integration with the most current enhancement in Blockchain Hyper Ledger Integration. **The Coco Framework**.

Coco Framework increases transactional throughput into the Ledger from the meager 10-20 TPS to 1000 TPS or more. Blockchain leverages the Trusted Execution Environment (TTE)

Got CoCo?

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TRUST **FOR BLOCKCHAIN**

Blockchain is a secure, transparent way to digitally track the ownership of assets across trust boundaries.

Trust Boundaries? Trust RAIN?

We enable users to achieve cross-organizational collaboration.

No Silos, Golden rule of BlockChain!

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BLOCKCHAIN

Needs to model business needs providing a platform meeting performance, scalability, availability, security and governance requirements inclusive of RAIN.

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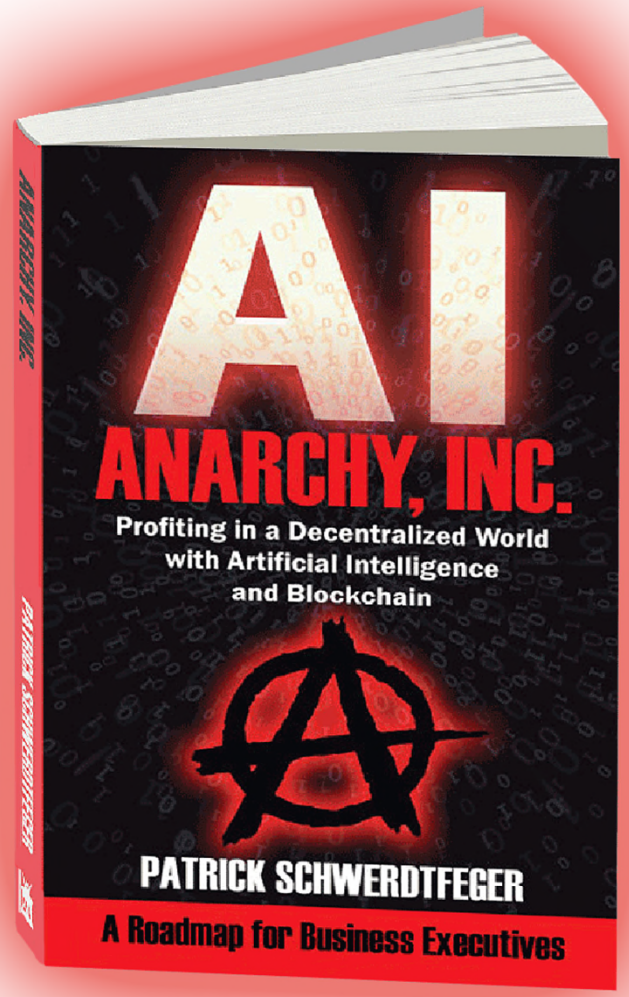

Anarchy Is Coming

Will You Be Ready?

Now Available from Amazon and other fine booksellers