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.
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........................
• 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

March 18, 2015
WHAT IS BLOCKCHAIN?

Grower Data

Packer/Shipper Data

Distribution Data

Transportation Data

Store Data
Blockchain Leveraging Common Components

APPLICATION LAYER

Software PLATFORM

INSTRUMENTATION LAYER
**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?
CENTRALIZED VS. DISTRIBUTED VS. DECENTRALIZED

**CENTRALIZED**
- One database, one owner
- Not resilient to organizational failure
- Not resilient to technical failure

**DISTRIBUTED**
- Many database copies, one owner
- Resilient to technical failure
- Not resilient to organizational failure

**DECENTRALIZED**
- Many database copies, many owners, no one “master”
- Resilient to technical failure
- Resilient to organizational failure

Airline Example

Government Systems

Common Sense
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
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
Alibaba, JD tackle China’s fake goods problem with blockchain
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
SAMPLE OF CONTRACT ENFORCEMENT UTILIZING BLOCKCHAIN TECHNOLOGY

The customer was able to improve its profit by $70,000 a week
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.
The Abacus

- Thousands of years
- Hundreds of iterations
- Latin for a few signatories
• Carbon Paper Duplicate Book
• Several Decades
• Several Innovations like Paperless
• Barcode
• Of the modern, pseudo digital era
• 4 decades and counting
• Multiple iterations
• Standards
• Lynchpin of global commerce
RFID RAIN

- RFID
- EPC
- SC31
- AIM
- RAIN

- A genealogy of Technology
Types of APIs

**Sense**
- Triggers: Events from devices & infrastructure

**Analyze**
- Searches: Historical, real-time & 3rd party data with AI & ML

**Act**
- Actions: Do something with devices, solutions, users, or ecosystem

- Scan or Diagnostics
- Historical Search, Battery
- 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
<table>
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<tr>
<td><strong>Bar Code</strong></td>
</tr>
<tr>
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<tr>
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<td>YYYY</td>
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There is nothing without OHIO™
Zero Human Intervention Operations.
Successful, cost effective, IIoT based on OHIO Principle™
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>
Software FOR BLOCKCHAIN

Leverage Precise Tracking & Monitoring of Business Transactions Into Blockchain Hyper Ledger Value Monitoring?
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?**
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!
Needs to model business needs providing a platform meeting performance, scalability, availability, security and governance requirements inclusive of RAIN.
Anarchy Is Coming
Will You Be Ready?

Now Available from Amazon and other fine booksellers