Blockchain

FTA Technology Conference
Pittsburgh, PA
August 9, 2016 (2:45 – 3:45)
Agenda

• Premise:
  – do we agree?
  – Consider these two ideas together ...

• Five Fraudsters

• Blockchain via Bitcoin

• VAT

• Cigarettes
Do we agree?

• Tax compliance systems are:
  – Highly centralized – single point of failure
  – Highly secure – are attacked and they attract attacks
  – Highly data driven – tax is naturally data-intensive
  – Concentrate power – susceptible to internal abuse
  – Slow – enforcement does not work in real-time

• Low level of Trust:
  – Among jurisdictions
  – Between the tax authority and the public
Blockchain is coming

- At the World Economic Forum more than 800 executive and technology experts were asked when a particular “tipping point” would be reached ...
  - When would we see a government collect tax with blockchain?
  - ANSWER: 2023
  - 73% expected “by at least 2025”.
  - Which tax?
  - Which country?
Five Fraudsters
Who took advantage of tax systems

Could they be stopped in real-time with BLOCKCHAIN?
Funded by Tax Fraud

Hizballah Sheikh Muhammad Hussein
$20 million/ 4 yr.
RST (Michigan)

Osama bin Laden
€1.5 billion/ 1 yr.
VAT (Italy)
Samir Azizi €61,104,368/ 1 yr.

Germany
Taha “Saleh” Mutaher
20,000 cigarette ctn/wk = $65m (16 arrested)
North Carolina to NYC

September 10, 2001         20 hours before         September 11, 2011
Mohamad Youssef Hammoud
30 years (jury = 155 yrs) – $8m cigarette smuggler – 37 yr old
Virginia to Michigan
What is Blockchain / What is Bitcoin

• Distributive Ledger Technology & an App
• It all began with Bitcoin (2008) [cryptography mail list]
  
  – Previous digital currency (1996)
    • E-GOLD
    • Liberty Reserve

  – 2001 Patriot Act tightens “Money Services Business”
  – 2013 both are shut down (money laundering)
Digital Currency (before Bitcoin)

• Prior to Bitcoin all digital currencies had central control [just like a traditional finance system]
  – A could not pay B without relying on an intermediary

• For “A” to pay “B”
  – “A” asks the center to update the general ledger in favor of “B”
  – “A” must trust that center will do it faithfully
  – The problem for Satoshi Nakamoto was the system puts too much power (and money) in the hands of the central authority
“A” asks “C” to update the central ledger in favor of “B”
Satoshi Nakamoto:
“A” sends X-amount to “B”
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.
Problems with Centralized Systems

- A centralized ledger of balances is controlled by a single [trusted] entity, but the system....
  - Has a single point of failure
    - Government could shut it down (e-GOLD; Liberty Reserve)
    - Disgruntled employee could do the same
    - A cleaning person’s accident could do it too <joke>
  - Is prone to corruption
    - Embezzlement
  - Is inherently insecure
    - Hackers
  - But it is designed to stop Double Spending
Double Spending

• Biggest problem in a decentralized digital cash system:
  – How can you prevent the same balances in a ledger from being spent twice without resorting to a central authority?
  – Essentially the ledger is all data (it can be manipulated) ... must have a “trusted party,” right?

• Byzantine Generals Problem
Bitcoin/ Blockchain
This is all about “consensus”

• Every participant has a record of every transaction that has ever happened
  • Example: 10 btc to Hal Finney from Satoshi Nakamoto (1-12-2009)
  • Any participant can use computing resources to work a math problem – problem is designed for the network to produce a correct answer once every 10 minutes – Massive brute force guessing
  • In the meantime people are using the network to exchange coins, -- if you solve the problem above you get the right to collect all transactions into a block and submit them for a bitcoin reward.
  • Every node will get a copy of the block and decide if it is valid or not.
  • Validating = comparing the block w/ list of transactions received.
  • If it is fine, add it to the chain, and begin working on the next block

• Bitcoin Consensus = Proof of Work

• There are many others:
  – Proof of Stake;
  – Proof of Identity;
  – Proof of Elapsed Time (POET)
  – Quorum Voting (QV)

Developed by INTEL for the Sawtooth Lake blockchain platform
Proof of Work

• First:
  – Collect unconfirmed transactions (maybe 1,000)
  – Perform “consensus rule validation” on each
    • List of 30-40 rules for each transaction
    • List of 30-40 rules for each block.

• Second:
  – Take the header of the previous block
  – Plus a number (called a “nonce”) a 32-bit (4 byte) field whose value is set so that the hash of the block will contain a run of zeros.
  – Use SHA256 .... 10 minutes .... Perform 500 quadrillion hashes per second ... find a number less than the target

• Third:
  – Incur costs ... announce to world you have the next block ... wait for validation (other nodes will check the “consensus validation”)

• Fourth:
  – get a reward (new Bitcoin)
Re-cap – What is Bitcoin?

- Bitcoin is:
  - First real cryptocurrency
  - Using a peer-to-peer network
  - Creating a decentralized ledger
  - Solving the “double spend” problem
Re-cap – What is Blockchain?

- Blockchain:
  - Is a decentralized database (ledger) with network enforced processes for updating the database.
  - Is a general purpose technology that can be applied to disrupt (i.e., provide exciting computer-based alternatives to) any centralized system that coordinates valuable information.
  - Is secure even in the presence of powerful 3rd parties who would like to prevent users from participating.
  - Is especially applicable to data intensive, rather than capital intensive industries/activities.
Blockchain “takeaways”

- High transparency
  - All participants can see all transactions (but encrypted)

- High resilience/availability
  - No central point to bring the network down (censorship resistant)

- High trust/security (trust the code)
  - Network enforced properties – cannot hack the network

- High efficiency/Low cost
  - Compared to centralized systems which have a lot of intermediaries that need to be paid:
    - Moore’s Law: cost of processing a bit (half in 18 mo.)
    - Kryder’s Law: cost of digital storage (half in 12 months)
    - Nielson’s Law: cost of bandwidth (half in 24 months)
Data Intensive Industries

- **Finance**
  - Cash/bank deposits ... inflation [limited currency]; slow transfers [5x faster]; expensive transfers [Western Union 10% fee]; ease of seizure [need private key]; difficulty of micropayments [easy])
  - Provability of reserves ... no Ponzi schemes (Madoff)
  - Trustless P2P markets ... banks & market manipulation

- **Gaming**
  - Provably fair gambling ... [Bitzino.com – verifiable card game], [Chance Casino – full casino fully virtual]

- **Communications**
  - Censorship resistant ... [Bitmessage ... P2P decentralized encrypted message mimics Bitcoin ... anonymous & broadcast to whole network, with proof-of-work]; Domain Name Service – Internet ICANN can pull domain names (WikiLeaks) & internet could be attacked here at Root DNS Servers to take down the net... NameCoin (.bit))
  - P2P cloud – because the cloud is highly centralized ... could be hacked (STORJ.IO allows you to share excess hard-drive capacity for capacity in the cloud ... paid in STORJ coins) ... files are cut into small chunks and spread across the network ... no admin privileges ... only you have keys)
  - Share economy – Uber; Lyft; AirBNB [ripe for disruption, because the value in not in the technology, but the network – see LaZooz... a decentralized Uber – a decentralized autonomous network; not a taxi like Uber, but make use of rides already underway in exchange for La’Zooz Tokins earned like Bitcoin by giving others’ rides]

- **Future**
  - P2P energy network (solar bought & sold) – rate rigging & over financialization increasing prices.
  - P2P Communications networks (alternative to the Internet) ... based on rewards for sharing bandwidth
  - P2P Logistics Networks delivery technology (drones, etc.)
  - Backbone to a future IoT (see IBM) building chips for the toaster & refrigerator with shared bandwidth paid in micro bitcoins

- **No one mentions taxation**
Two Kinds of Blockchain

Distinguished by the consensus mechanism

- **Permissionless** – public or un-restricted
  - Bitcoin
  - Bitzino
  - LaZooz
  - Bitmessage

- **Permissioned** – private or restricted
  - European Central Bank
  - Bank of Canada
VAT

In the EU MTIC fraud is a €100 billion/yr problem
The Problem

• Missing Traders
  • MTIC fraud
  • MTEC fraud
  • Bankruptcy

• Estimated losses
  • €100 billion fraud (annually) Europol, SOCTA (Serious and Organized Crime Threat Assessment) March 2013.
  • €193 billion (in 2011) $258 billion VAT gap Study to Quantify and Analyze the VAT Gap in the 27 Member States (TAXUD/2012/DE/316) (July 2013).
VAT

France
VAT = 20%

Input = €100,000 + VAT = €20,000
Output = €110,000 + VAT = €22,000

Return

Output VAT Collected ....€22,000
Input VAT paid ..........<€20,000>
Net........................................€2,000

1-3 months to 1 year later

Notice: Value added by “A” is €10,000 and rate is 20%, so net due is 20% x €10,000 = €2,000
Cross Border 1/4

French VAT = 20%

Dutch VAT = 21%

Supply Chain

1 2 3

A Seller

Goods

VAT Invoice

Customer Chain

1 2 3

B Buyer

€

French Tax Admin

Dutch Tax Admin

Customer Chain
Cross Border 2/4

Output VAT Collected .......€0
Input VAT paid ...........<€20,000>
Net..........................<€20,000>

A Seller

+VAT €20,000

+VAT €100,000

VAT Invoice

B Buyer

+VAT €0

€110,000

Refund

French Tax Admin

Dutch Tax Admin

France
VAT = 20%

Netherlands
VAT = 21%
Cross Border 3/4

1. A Seller
2. Goods
3. VAT Invoice
4. VAT Invoice
5. €110,000
6. +VAT €0
7. €125,000
8. +VAT €26,250
9. €23,100
10. €3,150
11. €26,250
12. €23,100
13. €0
14. French Tax Admin
15. Dutch Tax Admin
16. France VAT = 20%
17. Netherlands VAT = 21%
Cross Border 4/4

Output VAT Collected .......€0
Input VAT paid ..........<€20,000>
Net..........................<€20,000>

Supply Chain

1 2 3

A Seller

+VAT €20,000

€100,000

+VAT €0

110,000

B Buyer

+VAT €26,250

125,000

1 2 3

French VAT = 20%
Netherlands VAT = 21%

VAT Invoice

Refund

€23,100

<€0>

€23,100

€26,250

<€23,100>

3,150

France

Input VAT paid

<€20,000>

Netherlands

Output VAT Collected

€0

Net

<€20,000>
MTIC

France
VAT = 20%

Netherlands
VAT = 21%

Supply Chain

A Seller

VAT Invoice

French Tax Admin

Dutch Tax Admin

1

2

3

Goods

+VAT €0

+VAT €20,000

+VAT €110,000

Refund

€26,250

Output VAT Collected .......€0
Input VAT paid ..........<€20,000>
Net..........................<€20,000>
Carousel

A Seller

French VAT = 20%

Dutch VAT = 21%

VAT Invoice

1  2  3

Goods

1  2  3
VIES

VAT ID of buyer & seller
Total value of goods/services per recipient
All adjustments made

BUT NOTE VIES is:
Not invoice-specific
Request-based
2 months or longer

France
VAT = 20%

Netherlands
VAT = 21%
Solution(s)

• Central collection of B2C data:
  • Quebec (CGI), Ontario, Sweden (R/I), Germany (INSIKA),

• Central collection extended to B2B – DICE
  • Real-time, encrypted, shared public key (cross-border ?)
  • Rwanda (DTI); Ceará, Brazil (SmartCloud Inc.); Croatia; GCC; EAC
  • Modeled on Brazilian (federal) SPED

• Decentralized distributed ledger – Blockchain DICE
  • Proposal (only) ... so far
  • Least expensive; most secure; high trust
  • Permissioned blockchain
    – Follow European Central Bank; Bank of Canada ...
VAT Blockchain with 75% consensus threshold [1/7]

Mfg. 100 Autos €10,000 each → Export A Seller

French
Tax Admin

Export A Seller

VAT Invoice

10 Autos €11,000 each → Import B Buyer

Dutch
Tax Admin

Import B Buyer

Dlr.
VAT Blockchain with 75% consensus threshold [2/7]
Not just a VAT Invoice, we want a VAT Invoice with CONSENSUS
VAT Blockchain with 75% consensus threshold [3/7]

France 20%  
Netherlands 21%

Mfg. 100 Autos €10,000 each  
→ Export  
→ Seller  
→ A  
→ VAT Invoice w/Consensus  
→ B  
→ Import  
→ 10 Autos €11,000 each  
→ Dlr.  
→ +  

Blockchain

with 75% consensus threshold [3/7]
VAT Blockchain with 75% consensus threshold [4/7]

- Export: 100 Autos €10,000 each
- Import: 10 Autos €11,000 each
- VAT Invoice w/Consensus

France 20% Dutch 21%

Mfg. to Export:
- 100 Autos €10,000 each

Import to Dlr.:
- 10 Autos €11,000 each

Blockchain with 75% consensus threshold [4/7]
VAT Blockchain with 75% consensus threshold [5/7]

French GDP €2,183.6 billion

Dutch GDP €678.5 billion

Mfg. → Export A Seller

100 Autos €10,000 each

French Tax Admin

France 20%

10 Autos €11,000 each

Import B Buyer

Dutch Tax Admin

Netherlands 21%

VAT Invoice w/Consensus

Dlr.

Block 1 + Block 2 + Block 3 + Block 4 + Block 5

French GDP

Dutch GDP

AI

VAT

Blockchain

with 75% consensus threshold [5/7]
VAT Blockchain with 75% consensus threshold [6/7]

France 20%  Netherlands 21%

A Seller  B Buyer  Dlr.

French Tax Admin  Dutch Tax Admin

VAT Invoice w/Consensus

Mfg. to Export A Seller 

100 Autos €10,000 each

Import B Buyer 

10 Autos €11,000 each

[21 nodes]  [7 nodes]
VAT Blockchain with 75% consensus threshold [7/7]

- **France**: 20%
- **Netherlands**: 21%

**Seller**
- French Tax Admin

**Buyer**
- Dutch Tax Admin

**Mfg.**
- Export A SELLER
- 100 Autos €10,000 each

**Import B BUYER**
- 10 Autos €11,000 each

**VAT Invoice**
- w/Consensus

**Cloud**

**Consensus**
- 75% +

**AI**

**Blockchain**
- [7/7]
Audits/ Investigations will change

• Consensus forces closer domestic examinations of businesses:
  • Letter box entities
  • Hijacked businesses
  • Financial capacity to accept risk
  • Payments sent off-shore

• Example: Deutsche Bank involvement in CO2 MTIC fraud (2009-2010)
  • Afghan, Pakistani, UK, French, UAE investigations
  • On-going litigation in 2016
To “get” the examples, you need to know ...

- **CO2 permit**
- **EU-ETS** [European Union – Emissions Trading System] – this is “cap & trade”
  - Not a tax system – just digital record-keeping of trades in real-time
  - No prices of CO2 permits recorded, no VAT amounts recorded, just volumes of sales (seller & buyer) and precise time of sale (down to the millisecond)
  - And the specific number of the permit
Time-line: CO2 MTIC fraud cases and law changes considered before & after collapse of the BlueNext

- 4-9 June BlueNext Closed due to CO2 fraud
- 10 June French exemption w/o deduction
- 19 August Dosanjh arrested
- 15 July Dutch Reverse Charge
- 1 August UK zero-rate
- 18 November Rod Stone (HMRC) Visits Deutsche Bank
- 28 April Police Raid Deutsche Bank
Post-Blue Next collapse (June) & Pre-Zero-rate (August)
UK feeder company selling to UK Deutsche Bank (then export for UK refund)

Volume of Purchases (By Month) - SVS Securities PLC (SVS Trading) - GB
What does Deutsche Bank do with the purchases from SVS? Sell in France

UK refund

Volume of Sales (By Month) - HURST (Deutsche Bank AG London Branch)

- FR

What does Deutsche Bank do with the purchases from SVS?

Sell in France

UK refund

Volume of Sales (By Month) - HURST (Deutsche Bank AG London Branch)

- FR
CITIBank (UK) – Does the same thing (Note June & July activity)
UK sales to France (from FR account) – **UK refunds**

**Volume of Sales (By Month) - CITIGROUP GLOBAL MARKETS LTD (CGML1) - FR**

CITIBank (UK) – Does the same thing (Note June & July activity)
UK sales to France (from FR account) – **UK refunds**
Reverse Plumbing
Deutsche Bank German sales to Deutsche Bank UK – German refunds

Volume of Sales (By Month) - Deutsche Bank AG (1973 - Deutsche Bank AG Personenkonto) - DE
Seen from the other side
Deutsche Bank UK Purchases from Deutsche Bank Germany (internal Deutsche Bank)
UK can see huge German refunds – UK is zero-rated

Volume of Purchases (By Month) - Deutsche Bank AG London (1974 - Deutsche Bank AG London Personenkonto) - DE
Who did the German Deutsche Bank purchase CO2 from (after the UK zero-rate)?

<table>
<thead>
<tr>
<th>DB-AG 1973</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lösungen 360 GmbH</td>
<td>31%</td>
<td>52,323,771</td>
<td></td>
</tr>
<tr>
<td>Vektor Energie GmbH</td>
<td>14%</td>
<td>24,385,000</td>
<td></td>
</tr>
<tr>
<td>Dr. Plathner – New Energy Markets</td>
<td>14%</td>
<td>23,332,000</td>
<td></td>
</tr>
<tr>
<td>BECOMAC GmbH</td>
<td>8%</td>
<td>13,440,000</td>
<td></td>
</tr>
<tr>
<td>Grant Bank GmbH</td>
<td>7%</td>
<td>11,158,831</td>
<td></td>
</tr>
<tr>
<td>Roter Stern GmbH</td>
<td>6%</td>
<td>8,740,420</td>
<td></td>
</tr>
<tr>
<td>AEM Alternative Energy Markets GmbH</td>
<td>5%</td>
<td>7,002,000</td>
<td></td>
</tr>
<tr>
<td>DB-AG Personenkonto (2)</td>
<td>3%</td>
<td>3,767,686</td>
<td></td>
</tr>
<tr>
<td>Advantag Aktiengesellschaft</td>
<td>2%</td>
<td>2,150,000</td>
<td></td>
</tr>
<tr>
<td>DB-London Branch</td>
<td>2%</td>
<td>1,170,468</td>
<td></td>
</tr>
<tr>
<td>Lösungen 360 GmbH</td>
<td>1%</td>
<td>1,000,000</td>
<td></td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>74%</td>
<td>123,221,191</td>
<td></td>
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<tr>
<td>x €15</td>
<td></td>
<td>1,848,317,865</td>
<td></td>
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<tr>
<td>x 19%</td>
<td></td>
<td>351,180,394</td>
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</tr>
</tbody>
</table>

- **DE account** - Convicted & sentenced
- **DE account** - Convicted & sentenced
- **DE account** - Liquidation/ insolvency
- **DE account** - Dr. Pilgrim “mystery” came from exchanges infiltrated CO2 markets
- **DK account** - Convicted & sentenced
- **DK account** - Convicted & sentenced
Cigarettes

$5 \text{ billion/yr} – \text{US States}

$50 \text{ billion/yr} – \text{global}
Commercial Chain [1]
Commercial Chain [2]

- Mfg
- Federally Bonded Warehouse
- Stamping Agent
- Imported Cigarettes
- Exported Cigarettes
Commercial Chain [3]
Commercial Chain [4]
Fed tax

Federal Tax
$1.01/pack
No stamp
Based on bulk Tobacco Prior to Mfg.

Imported Cigarettes

Mfg

Cigarettes

Exported Cigarettes

Federally Bonded Warehouse

Federally

Stamping Agent

Non-Stamping Wholesale Agent

Chain Store Retailer

Individual Retailer

Consumer
State Tax

**Imported Cigarettes**

Federal Tax
$1.01/ pack
No stamp
Based on bulk Tobacco
Prior to Mfg.

**Federally Bonded Warehouse**

**Cigarettes**

**Mfg**

**Exported Cigarettes**

**Stamping Agent**

State Tax
$0.07 (SC) to $3.46 (RI)
City & county
NYC = $4.25
Chicago = $3.66

**Non-Stamping Wholesale Agent**

**Chain Store Retailer**

**Individual Retailer**

**Consumer**

$1.01/pack
No stamp
Based on bulk Tobacco
Prior to Mfg.
Primary source of Smuggled Cigarettes

Federally Bonded Warehouse

Federally
Bonded
Warehouse

Federal Tax
$1.01/ pack
No stamp
Based on bulk Tobacco
Prior to Mfg.

Imported Cigarettes

Mfg

Cigarettes

Exported Cigarettes

Stamping Agent

State Tax
$0.07 (SC) to
$3.46 (RI)
City & county
NYC = $4.25
Chicago = $3.66

Chain Store Retailer

Non-Stamping Wholesale Agent

Individual Retailer

Smuggler

Smuggler

Consumer
Secondary Sources of Smuggled Cigarettes

(2) Acquire Imports before federally bonded warehouses

(3) Acquire “exports” that never leave
Problem

• Enforcement is needed by jurisdictions that will not benefit financially from it:
  • Enforcement resources:
    – US Federal
    – Virginia
    – North Carolina
    – South Carolina
  • Revenue benefits:
    – NYC
    – Chicago
    – Rhode Island

Car load = $23,000 (10 cases)
Van load = $90,000 (50 cases)
Small truck load = $465,000 (200 cases)
Primary Legal Tools (federal)
State Statutes Apply Also

- IRC (26 USC Ch. 52)
- Contraband Cigarette Trafficking Act (CCTA) (18 USC Ch. 114, 2341 - 2346)
- Jenkins Act (15 USC 375-378)
- Prevent All Cigarette Trafficking Act (PACT Act) (amends Jenkins Act and CCTA)
- Family Smoking Prevention and Tobacco Control Act
CCTA

• Federal crime to ship, sell transport or possess more than 10,000 cigarettes (500 packs) per month not bearing the tax stamp of the jurisdiction where found
  – 5 years
  – Seizure
  – Predicate crime for RICO
Jenkins Act

• Requires interstate cigarette retailer:
  – Register with state where it sells or advertises
  – File a report with state
    • Quantity
    • Name & Address
  – Federal misdemeanor
    • $1,000
    • 6 months (increased to 3 years under PACT)

• Limited effectiveness – retailers ignore
PACT Act

• Internet-based evasion
  – Requires internet sellers to collect state and local taxes
  – Bans (most) US Post Office delivery of cigarettes
    • State agreements with major private carriers (also) block internet sellers from shipment.

– Penalties
  • 3 years
  • Civil & monetary fines
Blockchain Solution

• Federal platform
• Mandate transmission of transaction data (at each stage of the commercial chain) to cloud
• Adopt a consensus mechanism:
  a) Permissioned consensus (limited to state & federal enforcement agency employees)
  b) Permissionless consensus (include public)
  c) Hybrid consensus is possible
Step-by-Step

• **STEP 1**: put secure “trusted bar code” on each pack (inside & out)
  - Regulate under IRC § 5741

• **STEP 2**: require essential data of all cigarette transactions (B2B and B2C) to be encrypted, and sent to the cloud (free app)
  - License (mandatory registration) of resellers (nationally)
  - Driver’s license scan for all B2C transactions
  - Condition tobacco-related business licenses on compliance;
  - Adopt “smart contract” enforcement.

• **STEP 3**: secure/ validate the commercial chain through a blockchain consensus mechanism (private/public/hybrid)

• **STEP 4**: require retail to install public “tax paid” verification scanners (free & available on net also)

• **STEP 5**: allow public access to the blockchain and reward “miners” who find instances of fraud under various False Claim statutes – **Find A Fraud Get A Reward** campaign.
IRC § 5741 - Records to be maintained

• Every manufacturer of tobacco products, processed tobacco, or cigarette papers and tubes, every importer, and every export warehouse proprietor shall keep such records in such manner as the Secretary shall by regulation prescribe. The records required under this section shall be available for inspection by any internal revenue officer during business hours.

• [Regulate use of a secure trusted bar code under IRC § 5741]

Into the Cloud [1]
Into the Cloud [2]

Mfg

Imported Cigarettes

Federally Bonded Warehouse

Re-supply

Acquisition

Exported Cigarettes

IRS

Stamping Agent
Into the Cloud [3]

- IRS
- Federally Bonded Warehouse
- State
- Acquisition
- Re-Supply
- Mfg
- Stamping Agent
- Non-Stamping Wholesale Agent

- Imported Cigarettes
- Exported Cigarettes
Into the Cloud [5]

Mfg

Federally Bonded Warehouse

Stamping Agent

Non-Stamping Wholesale Agent

Chain Store Retailer

Individual Retailer

Consumer

State

State

State

State

IRS

IRS

Consumer's Direct Inquiry

Acquisition

Final Sale

Imported Cigarettes

Exported Cigarettes
With SmartCloud, Inc. type of artificial intelligence (AI)
Final Details

• Where do you get the blockchain platform?
  – Sawtooth Lake ... see: HyperLedger Project (its free)

• How do you securely encrypt data, and get it to the cloud?
  – Try the INTEL chip (for a hardware solution)
  – Try a fully digital solution [Data Tech International] a free app for iPhone, or tablet.

• How do you monitor the commercial flows?
Faisal Zahoor Ahmad
36 years old & €58 million
Final Example

• Vektor Energie GmbH
  • Founded by 29 y/o UK national on March 31, 2009
  • One-man rented office – only bought & sold CO2
  • Transactions from September 28, 2009 – April 27, 2010
    – UK zero-rate August 1, 2009
    – German raid on Deutsche Bank April 28, 2010
  • Purchased CO2 (mostly from fraudsters) in Germany
  • Sold CO2 93.79% (24,385,000 units) to DB-Frankfurt
  • @€15/unit this is €365,775,000
  • Most days have single (rarely more than 5) transactions
  • Surrendered (voluntarily) in 2016 (currently in jail)
If you knew that CO2 fraud was common, and if SmartCloud Inc. gave you the following report ... what would you do in October?

Volume of Sales (By Month) - Vektor Energie GmbH i. I. vertr. durch den IV Arno Wolf (Vektor Energie) - DE
Thanks

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