



Black Tier Solutions, LLC
Blockchain Consultancy



Question 1

**WHAT IS
BLOCKCHAIN?**

Answer...



Question 1

**WHAT IS
BLOCKCHAIN?**

Answer...

A LEDGER



Question 2

**WHEN WAS THE
FIRST
BLOCKCHAIN
PATENT?**

Answer...



Question 2

**WHEN WAS THE
FIRST
BLOCKCHAIN
PATENT?**

Answer...

AUGUST 16, 1996
(Developed in 1995)



Question 3

**WHO FILED THE
PATENT?**

Answer...

- a. Bitcoin
- b. US D.O.D
- c. NET1 Inc



Question 3

**WHO FILED THE
PATENT?**

Answer...

NET1 Incorporated



THE INTENTION?

**INTERNET BASED
PAYMENTS**

ORIGINAL NAME?

NetChex™

**“CRYPTOGRAPHIC
PAYMENT SYSTEM”**

NET09003-6

PCT**REQUEST**

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference
(if desired) (12 characters maximum)

NET09 003

Box No. I TITLE OF INVENTION SECURE TRANSMISSION OF SENSITIVE INFORMATION OVER A PUBLIC/INSECURE COMMUNICATIONS MEDIUM

Box No. II APPLICANT

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (i.e. country) of residence if no State of residence is indicated below.)

NET 1 Incorporated
3236 E. Chandler Blvd.
#2051
Phoenix, AZ 85044 US

☐ This person is also inventor.

Telephone No.

602 706 8200

Facsimile No.

Teleprinter No.



FUN FACT

RSA

**Conducted The First
Review and Audit Of
The Cryptography**

FUN FACT

RSA

**Still Uses A
Variation Of This
Cryptography With
SecureID™ Soft
Token**



The **BLOCKCHAIN** Momentum



How Is **BLOCKCHAIN** Used

2018 CNBC Report

Blockchain Bandwagon

INSTITUTIONAL INTEREST

(Banks, FI's, Credit Cards, Exchanges)

84%

Exploring and Experimenting

MAJOR ADOPTION

BY

2025



How Is **BLOCKCHAIN** Used

INDUSTRY INTEREST

COMMERCIALLY

PAYMENTS
BANKING
INVESTMENT
FINANCE
REAL ESTATE
ENERGY
SMART CITIES
TRADE and FINANCE

ENTERTAINMENT

GAMING
MUSIC
GAMBLING
REWARDS
ROYALTIES
PAYMENTS



Types Of **BLOCKCHAINS**



Types Of **BLOCKCHAINS**

PUBLIC

PRIVATE

HYBRID



Types Of BLOCKCHAINS: **PUBLIC**

PUBLIC BLOCKCHAINS

Complete Transparency

TIME STAMP

Tx DETAILS

SECRETS

PARTICIPANTS



Types Of BLOCKCHAINS: PUBLIC

Height	Time	Relayed By	Hash	Size (kB)
570359 (Main Chain)	2019-04-05 17:50:52	BTC.TOP	0000000000000000010b6a7800c1d2385612071620daac6355b8771f15cc421	1,265.04
570358 (Main Chain)	2019-04-05 17:36:28	Unknown	00000000000000000027c21df803308ebec82ce71ddcb314552e26152fa652	1,143.93
570357 (Main Chain)	2019-04-05 17:36:12	Unknown	0000000000000000016663a885818bdb25944507e8be0964aa3f3b3126c107f	1,208.06
570356 (Main Chain)	2019-04-05 17:32:52	Unknown	000000000000000001b9635a929b6ee7cd12178d3b4dd50c05e315870921122	1,369.9
570355 (Main Chain)	2019-04-05 17:30:43	BitClub Network	00000000000000000218657d677427e03b9046ecb7a2f9b0aaa073f255f09a3	1,215.82
570354 (Main Chain)	2019-04-05 16:53:48	ViaBTC	0000000000000000028b9d9955f935ee0e6880644e6c72b31cee0c5c5e417e	1,300.68
570353 (Main Chain)	2019-04-05 16:44:45	BitClub Network	0000000000000000029bb03c0f678ed5e1e77fc956524d534282514b28a692b	1,326.35
570352 (Main Chain)	2019-04-05 16:17:37	Unknown	00000000000000000203511b5f981c2f6566c239541fb9123956e6ed4ac9c34	1,426.45
570351 (Main Chain)	2019-04-05 16:15:07	Unknown	0000000000000000009fe7b3883c869ce3f007e3f6806a45afaf7f22042575d	1,379.83
570350 (Main Chain)	2019-04-05 16:13:56	BTC.com	00000000000000000279117f2f7e1f09039bf05d5917239d197ce60d0b0d5f3	1,253.22
570349 (Main Chain)	2019-04-05 16:11:52	KanoPool	00000000000000000110dc47d36f3b493b60ca4ed5b7a93b2af029f0adfa8c6	1,280.8
570348 (Main Chain)	2019-04-05 16:04:36	Unknown	0000000000000000020842093cbaddf9118c661224dcbe7b4122ddd10fce02b	1,159.75
570347 (Main Chain)	2019-04-05 16:01:02	F2Pool	00000000000000000658ece9be0ad55d64cace67481a87e1ae9ae7a2628403	1,289.57
570346 (Main Chain)	2019-04-05 15:59:36	Unknown	00000000000000000131cde639f1f40c2807eb3fea207b45ac510274c5e9f46	1,189.47
570345 (Main Chain)	2019-04-05 15:55:11	BitClub Network	00000000000000000b238f250e4f9a0c189bb7c768c9bcdae5774c80b950c8	1,433.7
570344 (Main Chain)	2019-04-05 15:53:56	BTC.com	000000000000000008edfca957aebb52f9896d02107f1a796508f708fc23af	1,220.03
570343 (Main Chain)	2019-04-05 15:46:39	Unknown	00000000000000000117cfcad398084b74830bd36708c7484d1c45d1810f85e	1,260.39



Types Of BLOCKCHAINS: PUBLIC

Transaction View information about a bitcoin transaction

9a9aa587c509a3efeea133a0650333d0ca43b0840dbc95903c16fbaf311d5621

3Pjh14b9PdBL6gPM2TWgTRKyqi5mmUYkgv
31nvUjmGe9i8miY9drwEbyAywn8R1MRK66
328CoQVWNxVLnzashpCBQwuYp1N3V6TCNv



32NPBpWcRVhzKkpenvm8HkXyenLFecmJAA
3JAZPhHg2BaAii3FFpPaF69D8aKgjeZAsG
3MQRkgzygKspihk8y4KJhw1t45Mvb16KV
37D2pV6bWnuSvUaBFvMSi59yjdHHyy1nap
3E6bsSzQZpkceyemvf2GcMfMbmwgB5oVQ3

0.04409729 BTC
11.86651819 BTC
11.86651819 BTC
16.46226837 BTC
11.86651819 BTC

1 Confirmations

52.10592023 BTC

Summary

Size 686 (bytes)

Weight 1772

Received Time 2019-04-05 17:48:53

Included In Blocks **570359** (2019-04-05 17:50:52 + 2 minutes)

Confirmations 1

Visualize [View Tree Chart](#)

Inputs and Outputs

Total Input 52.10768149 BTC

Total Output 52.10592023 BTC

Fees 0.00176126 BTC

Fee per byte 256.743 sat/B

Fee per weight unit 99.394 sat/WU

Estimated BTC Transacted 0.04409729 BTC

Scripts

[Show scripts & coinbase](#)



Types Of BLOCKCHAINS: **PRIVATE**

PRIVATE BLOCKCHAINS

ZERO Public Transparency
Permissioned Parties Only

TIME STAMP

Tx DETAILS

SECRETS

PARTICIPANTS



Types Of BLOCKCHAINS: **HYBRID**

HYBRID BLOCKCHAINS

1 Blockchain
2 States: Private and Public

PUBLIC

TIME STAMP

X

X

X

VS

PRIVATE

TIME STAMP

Tx DETAILS

SECRETS

PARTICIPANTS



How Does **BLOCKCHAIN** Work?



How Does **BLOCKCHAIN** Work?

1

2

3





Tools On The **BLOCKCHAIN**



Tools On The **BLOCKCHAIN**

1. Smart Contracts

FUNCTION:

1. Fully Programmable Contracts
2. Self Executing - Automated

BENEFIT:

1. Reduced Human Error
2. Saves Manpower
3. Saves Cost
4. Saves Energy
5. Saves Money

Example -Post Trade Processing

Currently There Are 12 Steps in Clearing and Settling.

T+2 Settlement Is Standard. T+1 is slowly integrating.

Smart Contracts are being experimented with by the DTCC and Barclays reduce Trade Settlement to T+0.

GOALS:

1. Eliminate Redundancy (front to back end)
2. Fully Automate The Clearing Process
3. End User Has Quicker Access To Capital
4. More Liquidity To Capital Markets



Tools On The **BLOCKCHAIN**

2. KYC - AML Nodes

FUNCTION:

1. All Existing Participants Approve New Members
2. Real Time AML Scan

(Scans: Global Sanction Lists, Red Flags from World Check, LexisNexus, Dow Jones and others.)

BENEFIT:

1. Regulatory Compliance
2. Visibility To Regulators
3. Ease Of Mind
4. Time Efficient

Example -XinFin Full Nodes

XinFin's nodes come equipped with KYC enforcement built in, thus solving substantial problems with traditional Enterprise KYC providers. The Self-KYC feature enables corporate clientele to manage their own identity by uploading all documentation and allowing participants access to the KYC data.

GOALS:

1. Enterprise Peace of Mind
2. Regulatory Compliance
3. Private Network Hosting



How Is **BLOCKCHAIN** Currently Used In The **FINANCE** Industry?



How Is **BLOCKCHAIN** Used

1. Digital Bonds

FUNCTION:

1. Sovereign Backed Assets
2. Asset Tokenization

BENEFIT:

1. Immutable Proof of Ownership
2. Less Write Offs and More Profit
3. Transparency



Tokenized infrastructure bonds provide direct liquidity access to global institutional investors regarding infrastructure projects such as: Power, Water, Energies and Transportation.

Estimated at \$250- \$400m of AAA rated, sovereign backed, post-risk infrastructure bonds from both Development Banks and Government Treasuries.

Benefit: De-Risked Loans Become Tradable Assets
(Projected \$10-\$20 Billion in Volume)



How Is **BLOCKCHAIN** Used

11:00 PM EST

Showcase of Bond Digitization begins with:

r3. corda

Invitation to all **200+ Finance Members** to take part over a 7 week period during the Corda Trials. Bond Digitization as a solution to offload derisked loans will play a major role in the future of Blockchain.



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Benefit: De-Risked Loans Become Tradable Assets
(Projected \$10-\$20 Billion in Volume)



How Is **BLOCKCHAIN** Used

2. Trade and Finance

FUNCTION:

1. Platform for the Beneficiary, Supplier and Financier
2. Smart Contract based Payments and Processing
3. Eliminates Intermediary
4. Shortlisted Participants Only

BENEFIT:

1. Minimized Cost
2. Lower Transaction Fees
3. Transparency and Automation
Improves Participant Trust



TradeFinex, launched in 2017, is the **World's First Blockchain Based Trade and Finance Platform.**

With a hedge pool to protect from price volatility, Beneficiaries, Suppliers and Financiers can enjoy instant settlements, automated processing without the need for Intermediaries, all in a completely trusted environment.



How Is **BLOCKCHAIN** Used

3. Invoice Finance

FUNCTION:

1. Quicker Access To Cash
2. Smart Contract based Payments and Repayments
3. KYC Verified Participants

BENEFIT:

1. Minimized Cost
2. Lower Transaction Fees
3. Transparency and Automation
Improves Participant Trust
4. Shortlisted Participants Only

InFactor

InFactor is an online invoice factoring platform where suppliers can factor their unpaid invoices. InFactor aims to improve security and remove operational inefficiencies in the invoice factoring process by leveraging smart contracts.

InFactor places the Supplier, Buyer and Financer on the same platform allowing visibility and real time communication between all parties.



How Is **BLOCKCHAIN** Used

4. Insurance

FUNCTION:

1. Accurate Traceability
2. Interoperability
3. Smart Contract Automation
4. Reduce \$2M Deficit.

BENEFIT:

1. Reduced Need For Intermediary
2. Streamlined Process
3. Transparency Among Participants
4. Save Overhead Cost

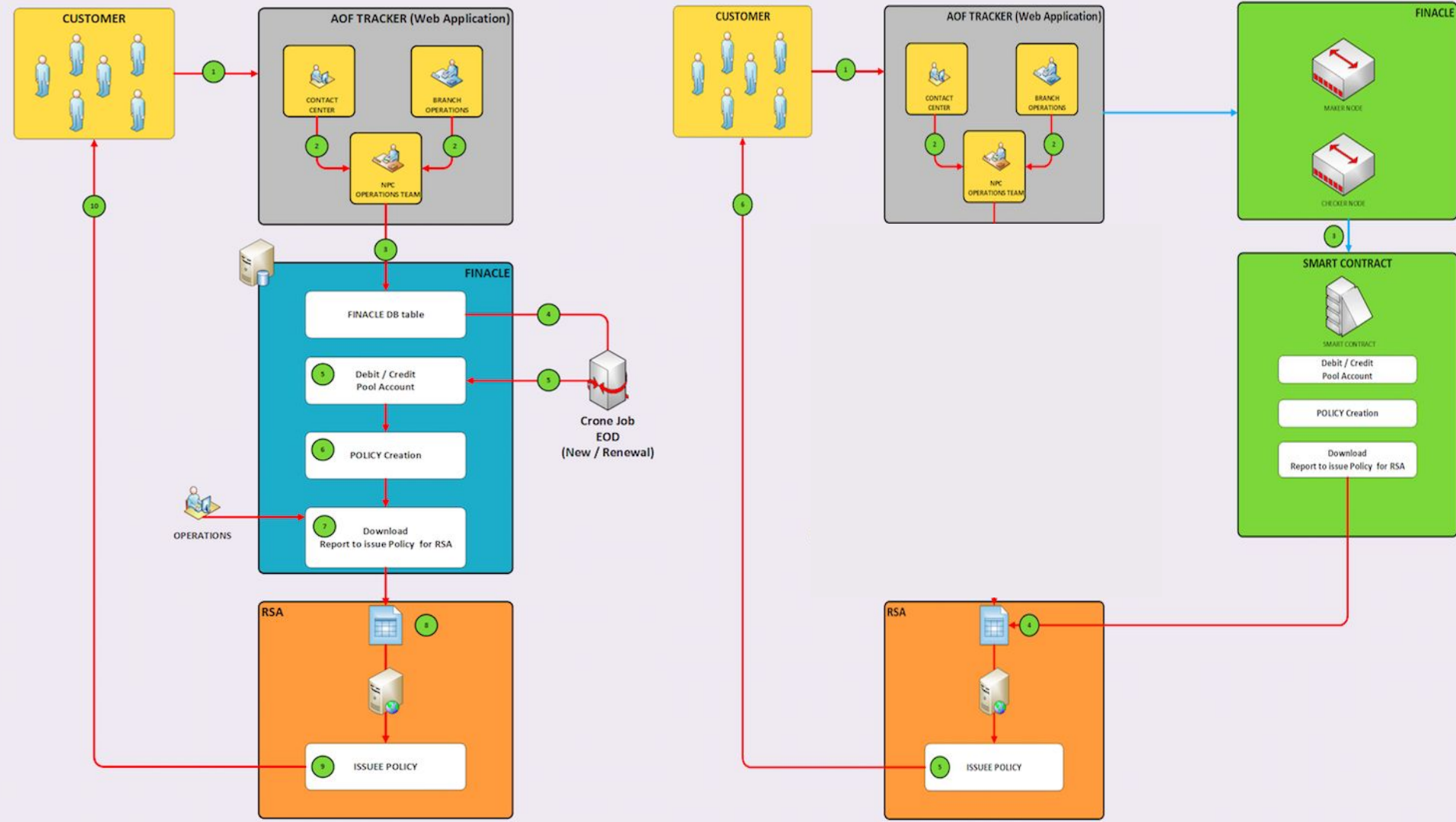
DCB Bank Ltd.

Challenges

1. Integration Issues
3. Transactional Delay
4. Data Sharing Delay
5. Poor Client Experience Due To Latency
6. Poor Traceability System
7. Errors by Intermediaries

Solution (Reduce 10 Steps to 6 Steps)

1. Smart Contract Automation among Maker / Checker
2. Available Traceability
3. No Intermediary Errors
4. Streamline Process
5. Lesser Operational Overheads
6. Better Customer Experience





How Is **BLOCKCHAIN** Used

5. Supply Chain

FUNCTION:

1. Smart Contracts
2. Real Time Tracking
3. Automated Processing

BENEFIT:

1. More Accurate Tracking
2. Reduced Human Error
3. Removing Intermediary
4. Fraud Prevention



Global enterprise software specialist **Ramco Systems** and Singapore-based open-source blockchain developer **XinFin** will use the latter's proprietary XDC01 distributed ledger protocol to build a new architecture based on Ramco's software solutions for the three sectors and help provide blockchain led solutions to Ramco's global enterprise clients.

"The logistics business requires that service providers coordinate with multiple parties in the supply chain, from shipping companies to couriers, to transport goods. Blockchain provides the ability to trace the entire chain of movement and changes to each individual item throughout its lifetime. It increases trust and fights fraud by verifying product authenticity, reducing human error and improving capacity utilisation while eliminating middlemen in the system. Through our association with XinFin, we will work towards building many such Blockchain use cases to address business pain points."

-Ramesh Sivasubramanian
Head, Air France - KLM – Ramco



How Is **BLOCKCHAIN** Used

6. Health Finance

FUNCTION:

1. Identity Creation
2. Automated Process

BENEFIT:

1. Access To Quality Education
2. Quality Jobs
3. Quality Health Care
4. Identity Protection



ChangerInc is the world's largest hyper-collaborative blockchain project. With over 18 companies working together to provide an identity, quality education and jobs for the Ageing HealthCare Community.

Currently there are:

1. **6 Blockchain Companies**
2. **1 Philanthropic Company**
3. **5 Strategic Partnerships, Including the United Nations**
4. **3 Smart Technology Providers**
5. **3 Investment Groups**

All building upon XinFin's Hybrid Network, to reach 13% of the earth's population. Which is also a **\$3.3T** market in China and the Asia Pacific region alone.

Identity protection on XinFin's private network.



Concerns Of **BLOCKCHAIN** Adoption.



How Is **BLOCKCHAIN** Used

A COMMON STANDARD

CONSORTIUM ISSUES

CHALLENGES

- 1. Business Migration**
(Bringing layers of partnerships on to network)
- 2. Cost of Overhaul**
(Infrastructure isn't cheap)
- 3. Scaling**
(Business Economy is too small. Not worth it)

SOLUTIONS

Common Domain Model

**ONE STANDARD TO CONNECT
ENTIRE INDUSTRY NETWORKS**



How Is **BLOCKCHAIN** Used

JAPAN 2018 REPORTS

Population: 126,800,000

Crypto Users: 3,000,000

Cases of Alleged Money Laundering by Source:

FINANCIAL INSTITUTIONS: 410,465

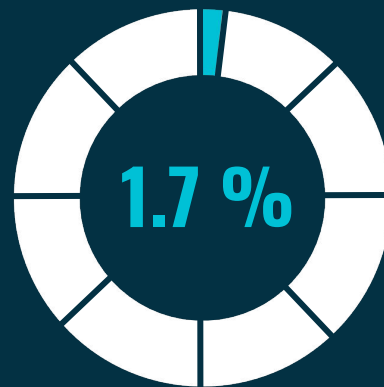
(Banks, FI's, Credit Cards, Exchanges)

DIGITAL CURRENCY: 7,000

(HNI's and Retail Users)

www.japantimes.co.jp/news/2019/02/28/national/crime-legal/cases-money-laundering-linked-cryptocurrency-japan-tenfold-2018/#.XKf0ky3Mw0p

World's Largest Crypto Retail Market.



Only 1.7% Of All Money Laundering Schemes are by Digital Currency.



How Is **BLOCKCHAIN** Used

JAPAN 2018

Cases of Alleged Money Laundering Per User

FINANCIAL INSTITUTIONS

(Banks, FI's, Credit Cards, Exchanges)

1 in 314

DIGITAL CURRENCY

(HNI's and Retail Users)

1 in 428



THANK YOU

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