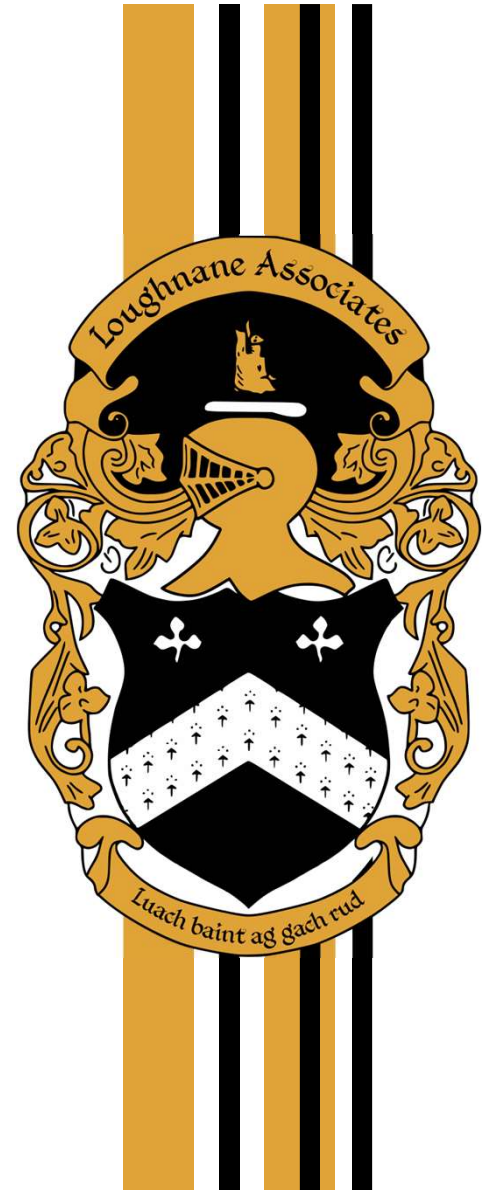


Cryptocurrency and More

Loughnane Associates LLC
Value Touches Everything



Huxley Orion



Agenda

- What are Virtual Assets
- Virtual Asset Service Providers
- The Process
- Intangible Property and NFT's
- Discussion of Surface, Deep, Dark Web
- The Onion Router



Virtual Currency





Convertible Virtual Currency

- A medium of exchange that operated like a currency in some environments
- Does not have legal tender status
- “Convertible” virtual currency – has an equivalent value in real currency or acts as a substitute for real currency

“New types of anonymity-enhanced CVCs have emerged that further reduce the transparency of transactions and identities as well as obscure the source of the CVC through the incorporation of anonymizing features, such as mixing and cryptographic enhancements”

“Mixing or tumbling involves the use of mechanisms to break the connection between an address sending CVC and the addresses receiving CVC. “



The Most Popular Cryptocurrencies 2021

1. Bitcoin
2. Ethereum
3. Cardano
4. Polkadot
5. Chainlink
6. Ripple
7. Tether
8. Monero
9. Litecoin
10. USD Coin
11. Bitcoin Cash
12. IOTA
13. Dogecoin

Date	Price
December 31, 2020	\$29,001.72
December 31, 2019	\$7,193.60
December 31, 2018	\$3,742.70
December 31, 2017	\$14,156.40
December 31, 2016	\$963.74



Privacy Coins



Dash



Monero



Zcash



Beam



Grin

What they are:

- Cryptocurrencies that power private and **anonymous blockchain transactions**
- **They obscure their origin and destination.**
 - Impossible to determine who owns how many coins, or who is sending and receiving transactions.
 - Only transaction participants (senders, recipients, or those with certain "view" keys) can view transaction data.
 - Mixing multiple transactions with each other to elude chain analysis.
- While privacy coins are not banned as of yet, they are making things difficult for both countries and exchanges that are subject to information-sharing requirements due to regulations like the FATF Travel Rule.
 - Many exchanges have delisted

The challenge is how these coins will align with FATF compliance requirements

How they work:

- **Stealth addresses** require a sender to generate a new address for every transaction sent in order to avoid being linked to a receiver.
 - Monero uses a version called the **dual-key stealth address protocol (DKSAP)**.
- **CoinJoin** A coin mixer that merges transactions from various individuals into a single transaction and then disburses them to their respective users using new addresses.
- **Zk-SNARKs** (Zero-Knowledge Succinct Non-Interactive Argument of Knowledge) allow cryptocurrency holders to prove a transaction's validity without divulging critical identifying information such as the parties involved and the account balances.

Chainalysis and CipherTrace both say they have tools to trace Privacy Coins



Revision to Recommendation 15 New Technologies (updated 2018)

Money laundering or terrorist financing risks that may arise in relation to

- (a) the development of new products and new business practices, including new delivery mechanisms, and
- (b) the use of new or developing technologies for both new and pre-existing products.

Financial institutions should conduct risk assessment prior to the launch of the new products, business practices or the use of new or developing technologies and take appropriate measures to manage and mitigate those risks.

To manage and mitigate the risks emerging from virtual assets, countries should ensure that virtual asset service providers are regulated for AML/CFT purposes



Virtual Asset Service Providers





Department of the Treasury Financial Crimes Enforcement Network

Guidance

FIN-2013-G001

Issued: March 18, 2013

Subject: Application of FinCEN's Regulations to Persons Administering,
Exchanging, or Using Virtual Currencies



FinCEN ADVISORY

FIN-2019-A003

May 9, 2019

Advisory on Illicit Activity Involving Convertible Virtual Currency

Criminals continue to exploit virtual currency to support illegal activity, money laundering, and other behavior endangering U.S. national security, including through entities facilitating its anonymous use.



“Virtual Assets” and “Virtual Asset Service Providers”



Virtual Asset Service Providers

- Are classified as Money Services Businesses
- Remember the requirement for foreign registration
- FATF defines Virtual Asset Service Provider (VASP) as:
 - Any natural or legal person who is not covered elsewhere under the FATF Recommendations
 - As a business conducts one or more of the following activities or operations for or on behalf of another natural or legal person:
 - exchange between virtual assets and fiat currencies;
 - exchange between one or more forms of virtual assets;
 - transfer of virtual assets;
 - safekeeping and/or administration of virtual assets or instruments enabling control over virtual assets;
 - and participation in and provision of financial services related to an issuer's offer and/or sale of a virtual asset.



Travel Rule

All financial institutions are required to pass on certain information to the next financial institution, in certain funds transmittals involving more than one financial institution

Transmitter Side

- ✓ Name, Address
- ✓ Account Number if used
- ✓ Identity of Financial Institution
- ✓ Amount Transmitted
- ✓ Execution Date
- ✓ Identity of Recipient's Financial Institution

Recipient Side

- ✓ Name, Address
- ✓ Account Number
- ✓ Any other specific identifier

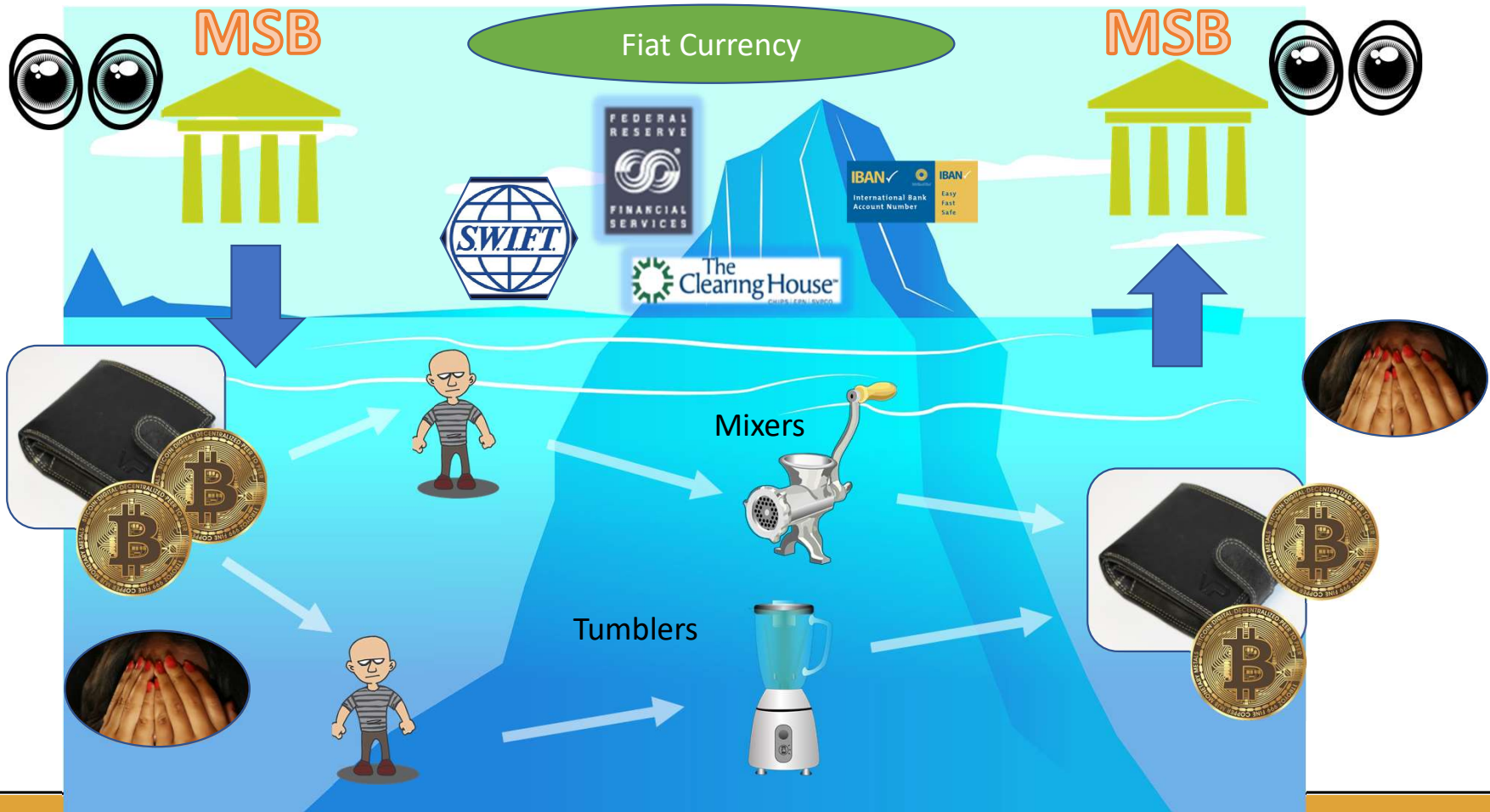
Intermediary Bank:

- ✓ Required to pass on all information from Transmitter Bank
- ✓ Or proceeding Intermediary

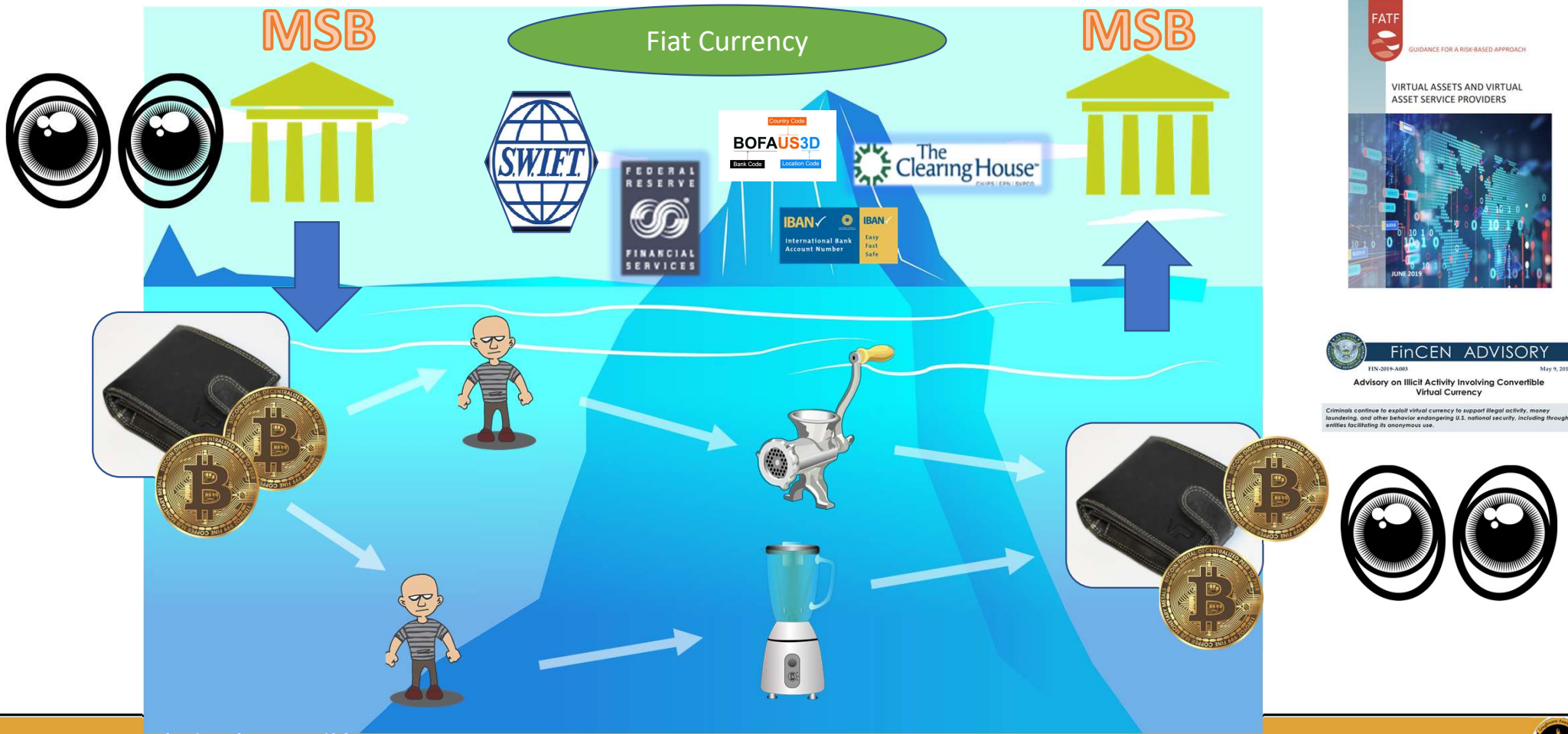
Exception - If Transmitter and Recipient are the same Financial Institution



Where are we were



The New





TRADEOGRE Markets Help

Fee Schedule

TradeOgre currently implements a 0.2% trading fee on all fulfilled orders.

Withdrawal fees are dynamically calculated based on the specific coin technology, we strive to have minimal withdrawal fees.

Withdrawal Fees

ACM Actinium 0.01000000	ADA Cardano 0.20552803	AEON Aeon 0.03290744	ARQ ArQmA 0.00000644	ARRR Pirate 0.01000000	BBS BBSCoin 50.00000000
BCN Bytecoin 0.50000000	BEAM Beam 0.00100000	BITC BitCash 0.01000000	BKC Balkancoin 0.10000000	BLOC BLOC.money 0.10000000	BTC Bitcoin 0.00005000
BTCP Bitcoin Private 0.01000000	CASH Litecash 0.00000100	CCX Conceal 0.10000000	CIV Civitas 0.01000000	COAL BitCoal 0.01000000	CUT ClfCoin 0.00268981
D Denarius 0.10000000	DASH Dash 0.01000000	DERO Dero 0.00696600	DOGE Dogecoin 2.47892608	ERG Ergo 0.10000000	ETH Ethereum 0.01844042
ETN Electroneum 0.36192000	ETNX Electronero 0.00072000	ETNXP ElectroneroPulse 0.36000000	FBF FreelaBit 0.10000000	FLUX Flux 0.01000000	GHOST Ghost 0.01000000
GPKR Gold Poker 0.01000000	GRFT Graft 0.00781161	GRIMM Grimm 0.00000100	GRIN Grin 0.02884800	GRLC Garlicoin 0.01000000	INC Incognito 0.00002100
INTU INTUcoin 10.00000000	IRD Iridium 1.00000000	KRB Karbo 0.20000000	LNS Lines 0.10000000	LTC Litecoin 0.01000000	LTHN Lethan 0.02240615

© 2021 TradeOgre Online: 1131 BTC: \$39,726.00 LTC: \$144.22

TRADEOGRE Markets Help

BTC Markets

Search:

Currency	Market	Change	Price	Volume	High	Low
Pirate	BTC-ARRR	▲ 0.50%	0.00008289	22.23424701	0.00009130	0.00008153
Dero	BTC-DERO	▼ 1.41%	0.00027899	6.43157984	0.00029738	0.00026983
Monero	BTC-XMR	▼ 0.82%	0.00585179	5.11470150	0.00610000	0.00584000
Ethereum	BTC-ETH	▲ 4.31%	0.06753244	2.02610646	0.06890000	0.06461576
Litecoin	BTC-LTC	▼ 0.5%	0.00359533	1.69652014	0.00364975	0.00354095
Ergo	BTC-ERG	▲ 16.26%	0.00016160	1.69407104	0.00016600	0.00013761
Haven	BTC-XHV	▼ 4.34%	0.00009909	1.49262863	0.00011197	0.00009900
PRCYCoin	BTC-PRCY	▼ 7.82%	0.00002368	1.48678033	0.00002607	0.00002305
Ripple	BTC-XRP	▼ 1.07%	0.00001849	1.14758463	0.00001897	0.00001815
Wownero	BTC-WOW	▼ 0.96%	0.00000617	0.48844337	0.00000632	0.00000599
Dogecoin	BTC-DOGE	▼ 1.29%	0.00000460	0.35885775	0.00000480	0.00000444
Aeon	BTC-AEON	▼ 0.94%	0.00002317	0.32850383	0.00002430	0.00002034
Zano	BTC-ZANO	▲ 8.86%	0.00005984	0.27004970	0.00006256	0.00005496

© 2021 TradeOgre Online: 1129 BTC: \$39,726.00 LTC: \$144.22

PROS

- Simplest registration ever
- No KYC verification
- Low fees
- Neat trading interface
- Accepts worldwide customers

CONS

- No way of buying crypto with fiat
- No official support
- No way of marking favorite coins
- Ugly charts






Use of P2P as an MSB

Eric Powers willfully violated the BSA's registration, program, and reporting requirements from December 6, 2012 through September 24, 2014.

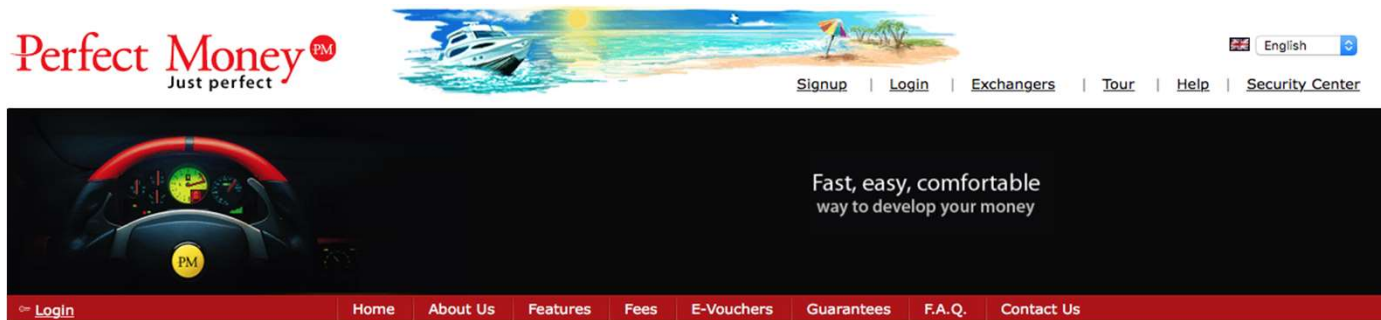
Mr. Powers failed to:

- (a) register as an MSB with FinCEN;
- (b) establish and implement an effective written anti-money laundering (AML) program;
- (c) detect and adequately report suspicious transactions;
- (d) report currency transactions

Civil Penalty of \$35,350

-  Over 200 transactions involving the physical transfer of more than \$10,000 in currency, yet failed to file a single CTR
-  160 purchases of bitcoin for approximately \$5 million through in-person cash transactions, conducted in public places such as coffee shops, with an individual identified through a bitcoin forum
-  150 cash transactions were in-person and were conducted in separate instances for over \$10,000 during a single business day. Each of these 150 transactions necessitated the filing of a CTR





Access to Perfect Money accounts from the United States is not allowed.

Services of Perfect Money are not available to US citizens or US residents. This includes US residents/citizens leaving overseas. In short, if you live in the USA,

- In operation since 2007
- Says it is based in Panama, but the Panamanian government says no
- Once a user obtains an account, they can transfer Perfect Money units to other users inside the system
- Southern Methodist University 2011 study- Liberty Reserve and Perfect Money were two of the most widely accepted digital currencies for online Ponzi schemes
- Of 1,000 websites that linked to Perfect Money, they found 70 percent that were Ponzi schemes

All Account that belong to US Citizens/Residents/US Companies will be disabled within 15 days
15.06.13

Dear Customers,

In line with our policy, all accounts that belong to US Citizens/Residents/US Companies will be disabled on 1st of July. If you still have funds on your account, please take appropriate and timely steps to withdraw the balance. Please note that after 1st of July, no transactions can be executed at accounts that fall into the above mentioned category.

Please do not postpone taking action to withdraw you balance.



The Process



Let's work with Bitcoin

What is Bitcoin?

- An electronic payment system based on mathematical proof
- Decentralized
- Low transaction fees?
- Built on a "Blockchain" technology which ties to a PKI infrastructure
 - Public Key
 - Private Key
 - Proof - of - Work
- Owner is determined by the last transaction

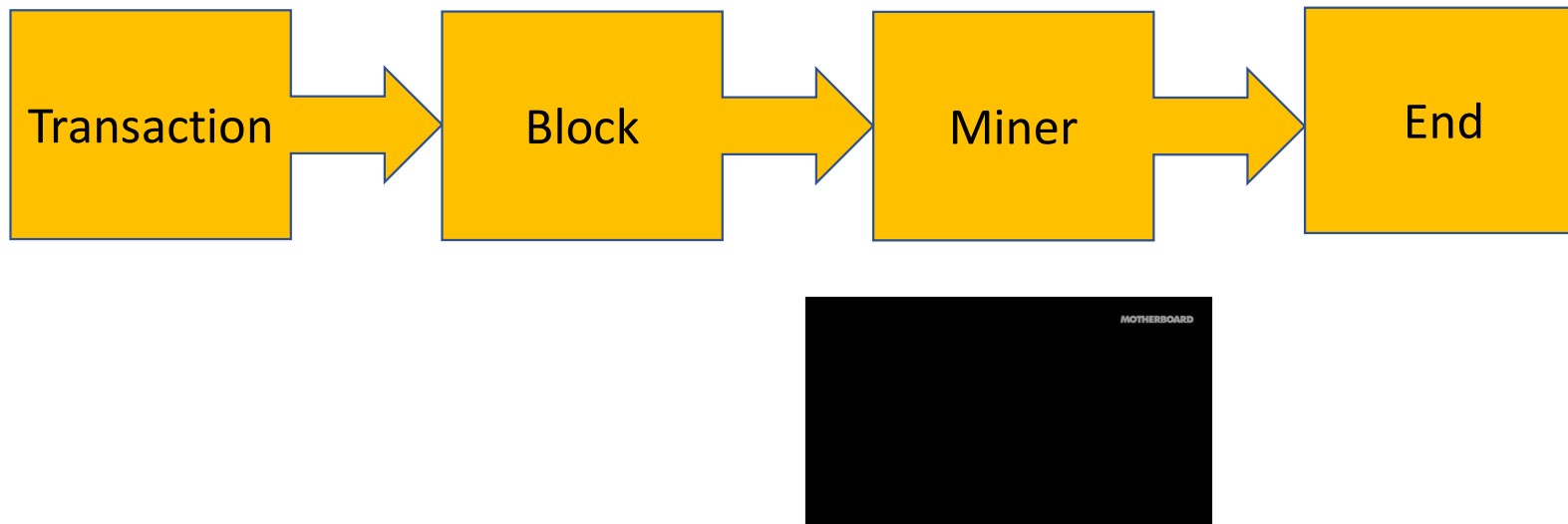
How Does a Transaction Work?

- Requires a Bitcoin wallet, a Bitcoin and a wallet address
- Transaction is placed in a Transaction Block
- Authenticated by "Bitcoin Miners" who get paid in Bitcoin as they authenticate a transaction
- Transfer is verified and distributed to public ledgers

Who is Satoshi Nakamoto?



Process Flow



Sponsored Content

Explorer > Bitcoin Explorer > Block

Search your transaction, an address or a block

USD

Block 680045

This block was mined on April 21, 2021 at 2:57 PM EDT by [BTC.TOP](#). It currently has 1 confirmations on the Bitcoin blockchain.

The miner(s) of this block earned a total reward of 6.25000000 BTC (\$346,854.88). The reward consisted of a base reward of 6.25000000 BTC (\$346,854.88) with an additional 3.18375474 BTC (\$176,688.14) reward paid as fees of the 3162 transactions which were included in the block. The Block rewards, also known as the Coinbase reward, were sent to this [address](#).

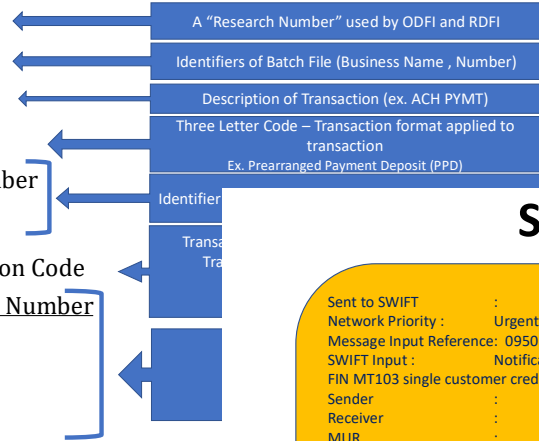
A total of 62,295.57728239 BTC (\$3,457,203,947.41) were sent in the block with the average transaction being 19.70132109 BTC (\$1,093,359.88). Learn more about [how blocks work](#).

Hash	000000000000000000000000000000008ef389946235866b69b2b7a1859b8e1b540e0702a629b
Confirmations	1
Timestamp	2021-04-21 14:57
Height	680045
Miner	BTC.TOP
Number of Transactions	3162



ACH Data (formatted to NACHA guidelines)

- Trace Number
- Batch Name/Number
- Company Entry Description
- Standard Class Entry Code
- ODFI/RDFI Identification Number
- ODFI/RDFI Account Numbers
- Type of Transaction/Transaction Code
- Recipient Name/Identification Number
- Recipient Account Number
- Sender Name
- Sender RDFI Account Number



SWIFT Message Data

```

Sent to SWIFT      :      ACK
Network Priority   :      Urgent
Message Input Reference: 0950 date BNGRGRAAXXX 0027 007653
SWIFT Input       :      Notification
FIN MT103 single customer credit transfer
Sender            :      BNGRGRAA
Receiver          :      ABBCCHZA
MUR              :      BANK PRIORITY
20 : PAY/001
23B: CRED
23E: PHOB/555-333-1111
32A: 033018EUR111757
50K: COLOMBO COMPANY
      FREE TRADE ZONE
      DUBAI, UAE
59 : /12345678901234
      ANTHONY ZABARA
      100 CRIME STREET
      ATHENS GREECE
70 : PAYMENT OF DIRECTOR BONUS
71A: SHA
    
```

Response Acknowledgement (NACK, FIN)

Message Type **103**: Order to Pay Beneficiary

ODFI: Bank of Greece, Greece, Athens

RDFI: ABB Capital, Switzerland, Zurich

Phone Number

Amount

Sender: Company Location

Recipient: Anthony Zabara, Address

Free Text Area



Summary ⓘ

USD **BTC**

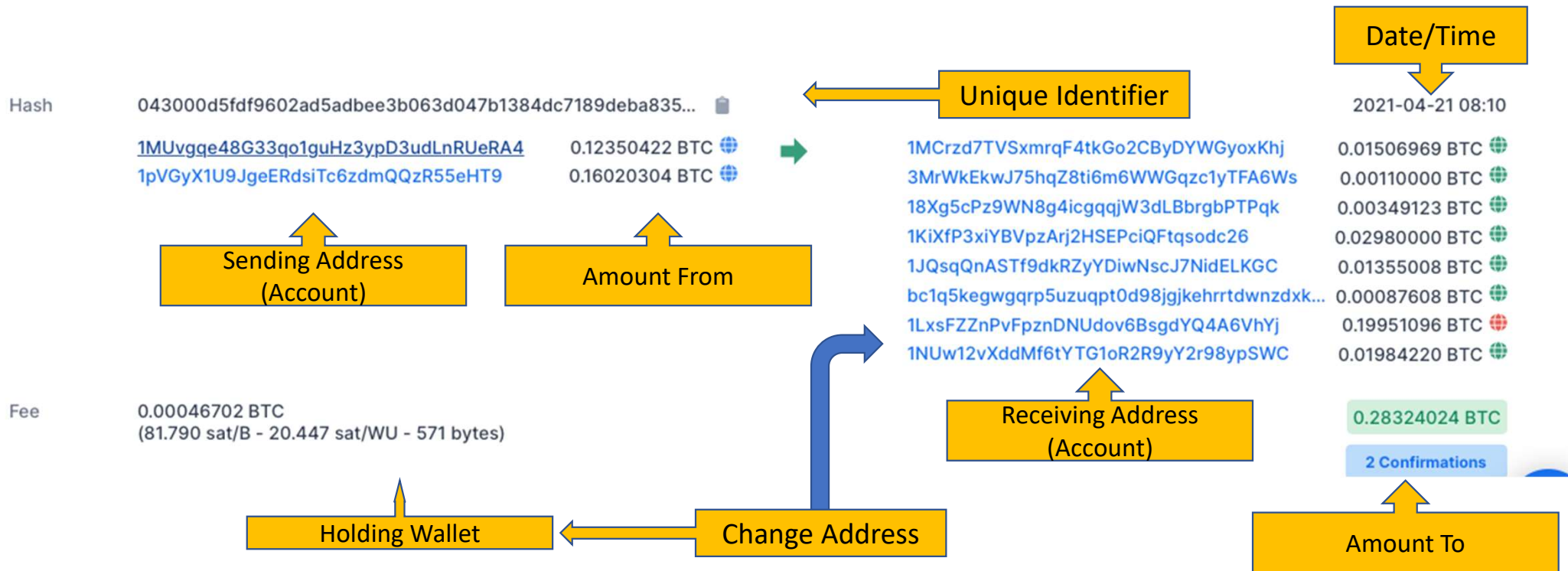
This transaction was first broadcast to the Bitcoin network on April 21, 2021 at 8:10 AM EDT. The transaction currently has 2 confirmations on the network. At the time of this transaction, 0.28324024 BTC was sent with a value of \$15,526.79. The current value of this transaction is now \$15,718.92. Learn more about [how transactions work](#).

Hash	043000d5fdf9602ad5adbee3b063d047b1384dc7189deba835...		2021-04-21 08:10
	1MUvgqe48G33qo1guHz3ypD3udLnRUeRA4	0.12350422 BTC	1MCrzd7TVSxmrqF4tkGo2CByDYWGyoxKhj
	1pVGyX1U9JgeERdsiTc6zdmQQzR55eHT9	0.16020304 BTC	3MrWkEkWJ75hqZ8ti6m6WWGqzc1yTFA6Ws
			18Xg5cPz9WN8g4icgqqjW3dLBbrgbPTPqk
			1KiXfP3xiYBVpzArj2HSEPCiQFtsodc26
			1JQsqQnASTf9dkRZYDiwNscJ7NidELKGC
			bc1q5kegwgqrp5uzuqpt0d98jgkkehrtdwnzdxk...
			1LxsFZZnPvFpznDNUdov6BsgdYQ4A6VhYj
			1NUw12vXddMf6tYTG1oR2R9yY2r98ypSWC
			0.01506969 BTC
			0.00110000 BTC
			0.00349123 BTC
			0.02980000 BTC
			0.01355008 BTC
			0.00087608 BTC
			0.19951096 BTC
			0.01984220 BTC
Fee	0.00046702 BTC (81.790 sat/B - 20.447 sat/WU - 571 bytes)		0.28324024 BTC

2 Confirmations



The information is here (Blockchain.info)



August 5, 2020
Case 1:20-cv-02142-RC

Placement:

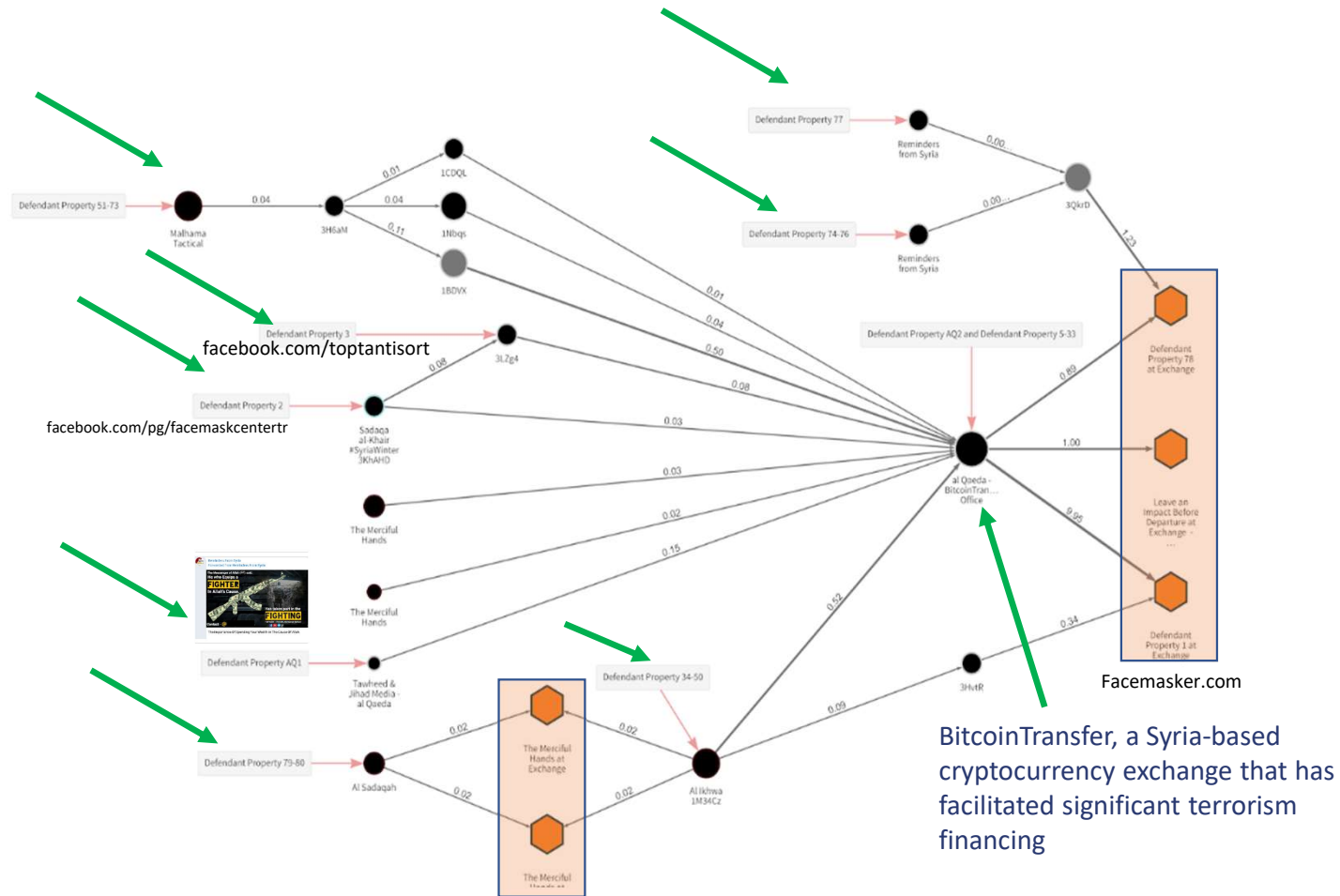
Money is generated from a number of sites

Layering:

Transferred to the Bitcoin Transfer Exchange in Syria.

Layering/Integration:

From there, the money is moved to accounts at larger, international exchanges



Source: Chainalysis blog:
 "Chainalysis in Action: Department of Justice Announces Takedown of Two Terrorism Financing Campaigns with Help from Blockchain Analysis" August 13, 2020



Transaction Views

Public View

Sender's bitcoin address
Recipient's bitcoin address
Amount
Timestamp

Blockchain.info

MSB View

Sender ID (on file)
All MSB users that have
transacted with the
address
All transaction notes
ID information, complete
profile and transaction
history

KYC Requirements
Transaction Monitoring

3rd Party Services

Mapping addresses on
the blockchain to identify
source and destination of
funds



Public View



Blockchain.com Wallet Exchange Explorer Buy Bitcoin Trade

Sponsored Content

Explorer > Bitcoin Explorer ▾

15K9Zj1AU2hjT3ebZMtWqDsMv3fFxTNwpf USD ▾

Bitcoin

Blockchain information for Bitcoin (BTC) including historical prices, the most recently mined blocks, the mempool size of unconfirmed transactions, and data for the latest transactions.

\$55,496.78 Price →	127.777 EH/s Estimated Hash Rate →	242,727 Transactions (24hrs) →	1.949m BTC Transaction Volume →	127,892 BTC Transaction Volume (Est) →
--	---	---	--	---

Price 1 Day ▾ Mempool Size (Bytes) 1 Day ▾



Method to Identify/Track a Bitcoin Address Owner

- Personal Information Posted: Collecting donations on a personal blog
- Posting an address on a website using their real name as owner of registered domain
- Use real identity in a forum with address
- Use of address in social media (facebook, LinkedIn, etc)
- Tracking Outside Purchases (name and shipping information?)
- Searching for Thin Client or Hosted Wallet Usage
- IP transactions traced by the Internet Service Provider
- Identify the exchange holding the account who logs transactions
- Using Transaction Analysis software firms such as Elliptic or Chainalysis



Blockchain Analysis: Suspect Addresses





Address	15K9Zj1AU2hjT3ebZMtWqDsMv3fFxTNwpf
Format	BASE58 (P2PKH)
Transactions	23
Total Received	0.09036343 BTC
Total Sent	0.08945595 BTC
Final Balance	0.00090748 BTC

Payment Request Donation Button

Transactions

Hash	7adc6ea16065560d2bb89c1fdd8b04847ecd5c145af3b631... 16wBGWBW7JSBxgjPZqHXa2GaJtLsB...	2020-11-05 08:31
Fee	0.00067122 BTC (297.000 sat/B - 74.250 sat/WU - 226 bytes)	+0.00006300 BTC
Hash	f73a83969fca2ffc4ff3fec4e9b7579d5d1c3300bf41f913889... 1M6qucdUbrqhs544uZvEtTRWLxaNVe... 1M6qucdUbrqhs544uZvEtTRWLxaNVe...	2020-11-05 08:05
Fee	0.00111078 BTC (297.796 sat/B - 74.449 sat/WU - 373 bytes)	+0.00004200 BTC
Hash	504ee1adf4c2211b5f3cf4ce3b27a3d9b305e67ad6c431fce... 19aoKUoE6cdgzXwB2hDBWeVjYKwN...	2020-10-28 01:59
Fee		+0.00011816 BTC

Money going to...
Money coming from...

Identify other suspect
addresses





Blockchain Analysis: Clustering

Association with suspect addresses

Pull history of the use of these addresses

1MCrzd7TVSxmrqF4tkGo2CByDYWGYoxKhj
3MrWkEkwJ75hqZ8ti6m6WWGqzc1yTFA6Ws
18Xg5cPz9WN8g4icgqqjW3dLBbrgbPTPqk
1KiXfP3xiYBVpzArj2HSEPCiQFtqsodc26
1JQsqQnASTf9dkRZyYDiwNscJ7NidELKGC
bc1q5kegwqrp5uzuqpt0d98jgjkehrtdwnzdxk...
1LxsFZZnPvFpznDNUdov6BsgdYQ4A6VhYj
1NUw12vXddMf6tYTG1oR2R9yY2r98ypSWC



Address ⓘ

USD **BTC**

This address has transacted 402 times on the Bitcoin blockchain. It has received a total of 767.11468021 BTC (\$29,102,044.97) and has sent a total of 767.11468021 BTC (\$29,102,044.97). The current value of this address is 0.00000000 BTC (\$0.00)



Address	1AVKdnyWRGJBqSsH3GrvG5fapdTapBnW9u ⌵
Format	BASE58 (P2PKH)
Transactions	402
Total Received	767.11468021 BTC
Total Sent	767.11468021 BTC
Final Balance	0.00000000 BTC


Transactions ⓘ

Hash	19d0e4c4f79f3d907e05fa2654e571ab9767b8efc968ba33ecc3 ...1AVKdnyWRGJBqSsH3GrvG5fapdTapBnW9u	2.272727 BTC ⊕	→	1QEojScgoRXJfwMfdWFeVtLWCQoo6BFUXg	0.08899316 BTC ⊕	2021-03-15 11:20
					-1.14116106 BTC	5 Confirmations
Fee	0.00026502 BTC (81.046 sat/B - 20.261 sat/WU - 327 bytes)					
Hash	e6c4eab972d736864480f684a7c07080afeac20fc7b489cffaf2f1 1AVKdnyWRGJBqSsH3GrvG5fapdTapBnW9u	1.4343443 BTC ⊕	→	1QEojScgoRXJfwMfdWFeVtLWCQoo6BFUXg		2021-03-24 09:40
					+1.14116106 BTC	
Fee	0.00023755 BTC (81.075 sat/B - 20.269 sat/WU - 293 bytes)					



 Search your transaction, an address or a block


**CLASS
EXHIBIT**


 Search for things like address, transaction, block

All Blockchains ▾

Search

There are 2 blockchains with result(s) to your search
1QEojScgoRXJfwMfdWFeVtLWCQoo6BFUXg :

 BTC Address

 BCH Address



You've thought about it, now it's time.

Create a Wallet. Sign up for the Exchange. Buy Bitcoin in minutes.

[Get Started](#)



CLASS EXHIBIT

Explorer > Bitcoin Explorer > Address

Sponsored Content

Search your transaction, an address or a block

Address



USD

This address has transacted 15 times on the Bitcoin blockchain. It has received a total of 0.29560047 BTC (\$11,214.20) and has sent a total of 0.20660731 BTC (\$7,838.00). The current value of this address is 0.08899316 BTC (\$3,376.14).



Address	1QEojScgoRXJfwMfdWFeVtLWCQoo6BFUXg
Format	BASE58 (P2PKH)
Transactions	15
Total Received	0.29560047 BTC
Total Sent	0.20660731 BTC
Final Balance	0.08899316 BTC

Transactions

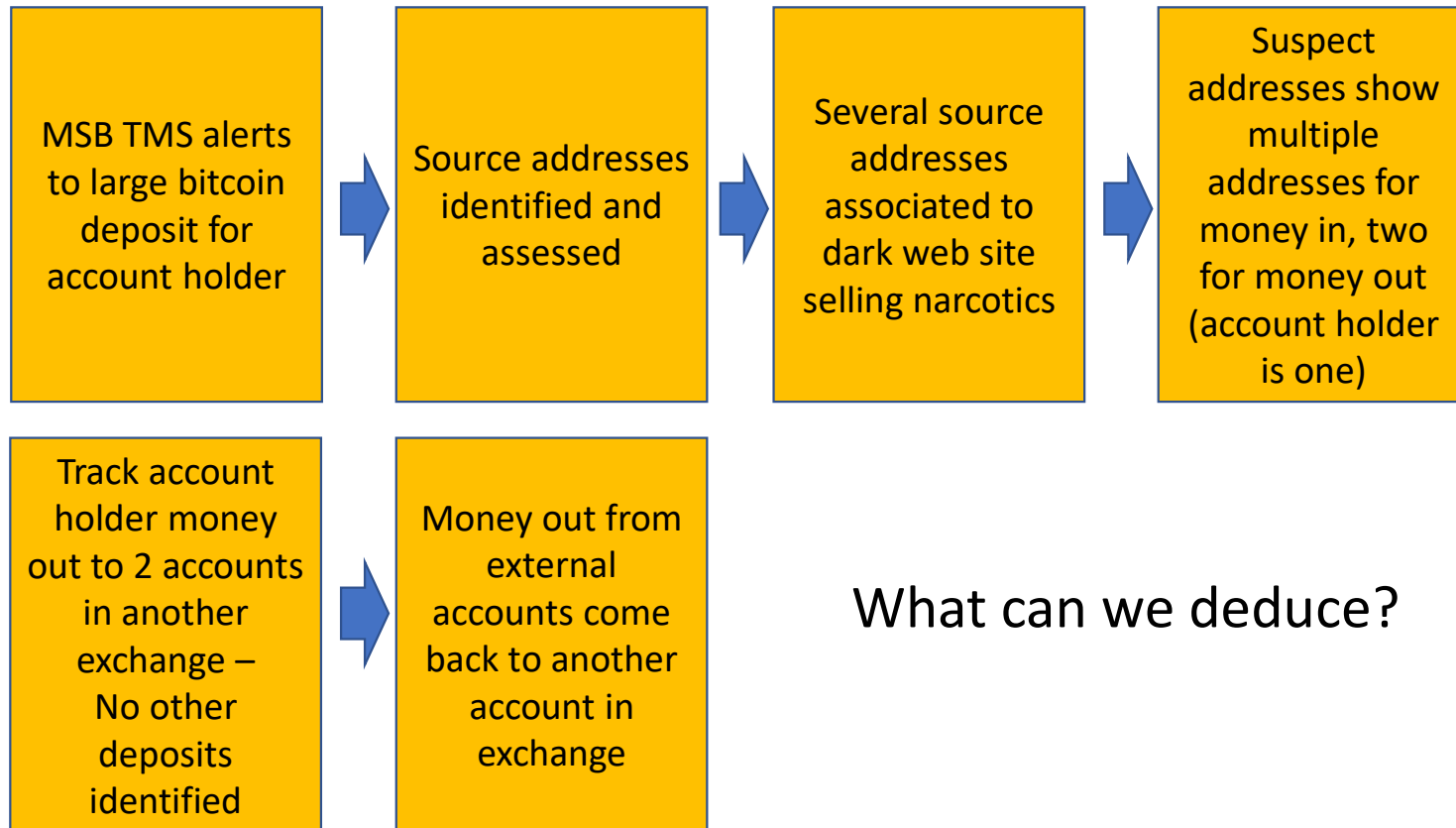


Transactions 1

Hash	bc8339e27493e7d12d5725da5b87e73ba3d165e82e69244fbadf25...			2021-05-
	1Cdbg44GsMMKrk1wLTwrrVFowBomsZ4Pqn	0.01932200 BTC	→	1GMkLqxaNkQ64gTe9A7kMU9dvqxiKq1NEf
	1HyU6o5UegF2yWYsK31LL3WEMnstNPFPM1	0.00497700 BTC		0.35348201
	1BNF6K8ADxx6V4Hf33wjT75uZd9hMpU2GN	0.00450000 BTC		
	1AdrrsLiaqhJgaJui45S3z3fSnNa3XMTCK	0.05460632 BTC		
	1KSxdv8NRA2r4XoxASgAwKouptLWBUpYxZ	0.00511352 BTC		
	1w7eZ6LM4vzemwmKeVuxdXyJjHmpThdmN	0.01515251 BTC		
	1AR9PNzRxsorw1KRnoGbCnwFSsY51GnFO	0.00153112 BTC		
	1Kk6j1sPDsg2yFxa7iBS7dv8Wly6RWWsT	0.00539101 BTC		
	13KX1QiwKsJ8Mm3e1pbkkv3Y9em1Qnm43x	0.02548423 BTC		
	1PyDCfDxdYydrVnqmpaYrrggRsJDqTMSZr	0.00132391 BTC		
	Load more inputs... (10 remaining)			
Fee	0.00430206 BTC (144.171 sat/B - 36.043 sat/WU - 2984 bytes)			-0.124267
				1 Confirm
Hash	19d0e4c4f79f3d907e05fa2654e571ab9767b8efc968ba33ecc369b...			2021-05-
	1AVKdnyWRQJBqSsH3GrvG5fapd1ap8nW9u	1.14116106 BTC	→	1QEoj5cgoRXJfwMfdWFeVtL...
				0.00000311
				0.00000000
				0.00300000
				0.00000000



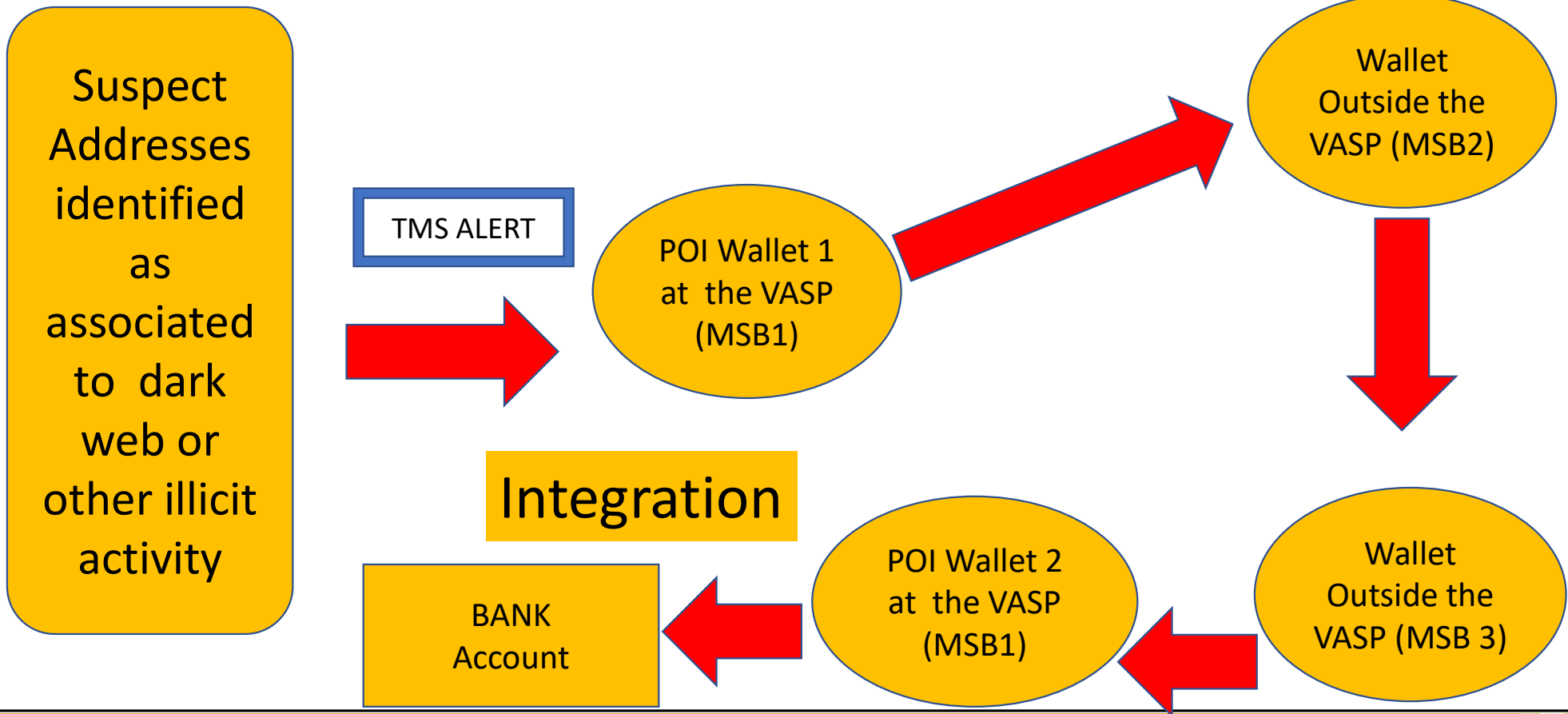
Money Laundering Scenario



Generator

Placement

Layering



Consider Third Party Options

- Fast way to identify suspect clusters
- There are analyst providers who have prepared the attribution to addresses and have them clustered
- OSINT third party providers such as
 - Blue Lights Digital Training,
 - Flashpoint,
 - others



Chain of Custody

- Know your organization's policies
- There needs to be complete audit trails
- Chain of custody and accountability for activity is critical
- Consult, team with experts, especially if you are building a case
 - You need the tools
 - You need the testimony



Don't Forget the "Old School" Financial Investigation Methods

- How does the suspect purchase equipment and material related to the crime?
- Shipments – How paid? Cash? Credit Card? Debit Card? Prepaid Access?
- Track the credit card transactions
- Track the prepaid access cards?
 - How is he loading them? At the counter at Walmart? What is he doing to load them?
- Is the Exchange account associated to a bank account?
 - Do the bank records show transfers/receipts from a VASP?
 - Where does the cryptocurrency convert to fiat? And what happens to the money?

Subpoenas, Warrants, Seizures, Interviews, Informants, Cellphone and Surveillance, and so much more



Pocket Litter!

Element peach process pyrrhic...

Keep it!



Intangible Property and Non-Fungible Tokens

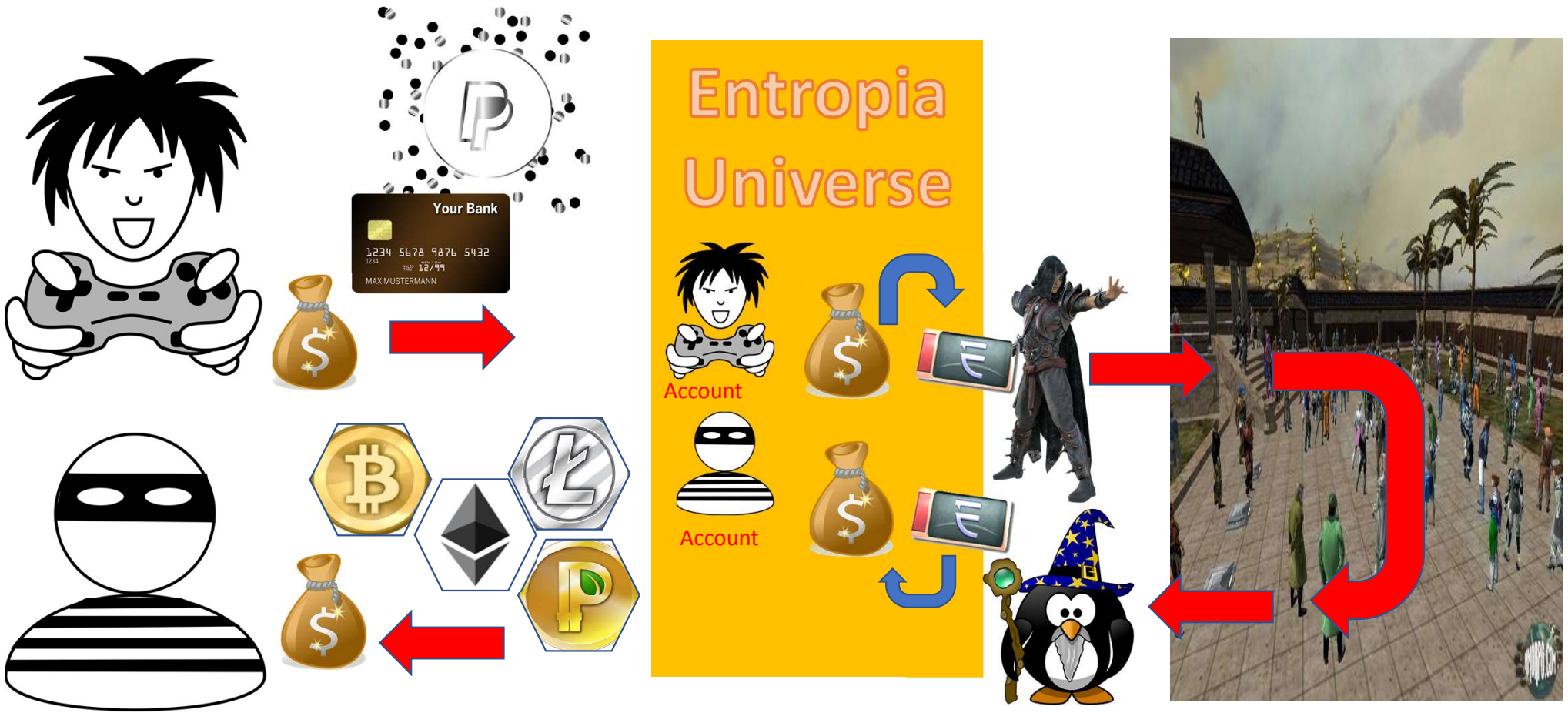


“Intangible Property” No physical substance



- Intellectual property
- Non-fungible tokens
- Copyrights
- Trademarks
- Patents
- Virtual World Assets





Non-Fungible Tokens

- NFTs are unique cryptographic tokens that exist on a blockchain and cannot be replicated.
- NFTs can be used to represent real-world items like artwork and real-estate.
- "Tokenizing" these real-world tangible assets allows them to be bought, sold, and traded more efficiently while reducing the probability of fraud.
- NFTs can also be used to represent peoples' identities, property rights, and more.



CryptoPunks Overview

Punks for Sale



CANDY



MLB Stadium Series

Collect NFTs of all 30 Major League Ballparks

[DETAILS](#)

Yankees & Cubs & Rays & Nationals available now

BID NOW

BID NOW

Safari



CryptoPunk 3621

One of 3840 Female punks.

Accessories

Mohawk

441 punks have this.

Earring

2459 punks have this.

Cigarette

961 punks have this.

Current Market Status

This punk is currently owned by address [0xf4a775](#).
 This punk is currently for sale by owner for 20E (\$38,123).
 There are currently no bids on this punk.

Transaction History

Type	From	To	Amount	Txn
Offered			20E (\$33,764)	Mar 28, 2021
Offer Withdrawn				Mar 12, 2021
Offered			25E (\$44,471)	Mar 11, 2021
Offered			20E (\$36,995)	Mar 10, 2021
Sold	0xb6be4d	0xf4a775	0.09E (\$42)	Dec 03, 2017
Offered			0.09E (\$26)	Nov 01, 2017
Claimed		0xb6be4d		Jun 23, 2017



Non-Fungible Token (NFT)

- Cryptographic assets on blockchain **with unique identification codes and metadata that distinguish them** from each other
- Unlike cryptocurrencies, they cannot be traded or exchanged at equivalency. This differs from fungible tokens like cryptocurrencies, which are identical to each other and, therefore, can be used as a medium for commercial transactions. They can be traded or exchanged, one for another.
- For example, one Bitcoin is fungible because it is always equal in value to another Bitcoin
- Made unique and irreplaceable, thereby making it impossible for one non-fungible token to be equal to another
- They are digital representations of assets and have been likened to digital passports because each token contains a unique, non-transferable identity to distinguish it from other tokens
- Just like Bitcoin, NFTs also contain ownership details for easy identification and transfer between token holders
- Owners can also add metadata or attributes pertaining to the asset in NFTs. For example, tokens representing coffee beans can be classified as fair trade. Or, artists can sign their digital artwork with their own signature in the metadata



Key Takeaways

- Pseudo Anonymous
- Watch for external disclosures
- Watch the Pocket Litter
- MSBs have a special value
- Consider using experts for darkweb and virtual assets



Questions

Loughnane Associates LLC
Value Touches Everything



Huxley Orion

