How to Read Blockchain Information

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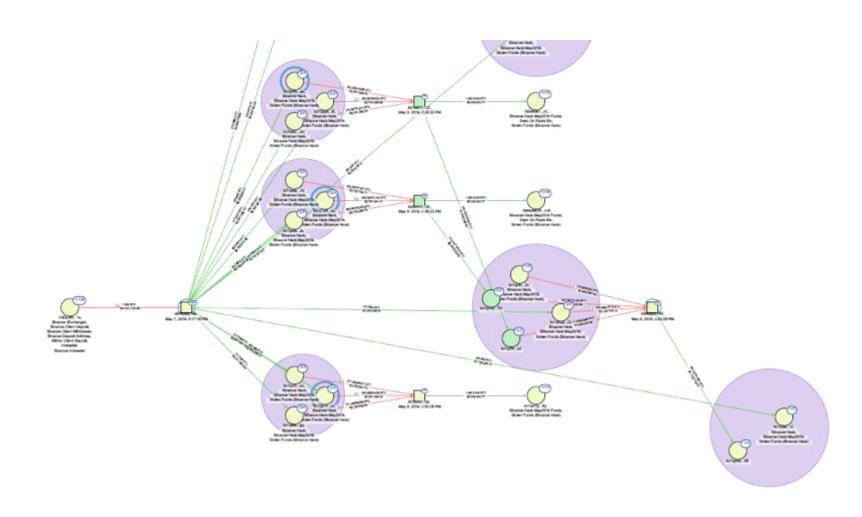


Tools For Investigating Unknown Addresses In The Market

- Big Data Blockchain Analysis Services
 - Reactor by Chainalysis
 - 。 QLUE
 - Elliptic
 - CipherTrace
- www.walletexplorer.com
- www.bitcoinwhoswho.com

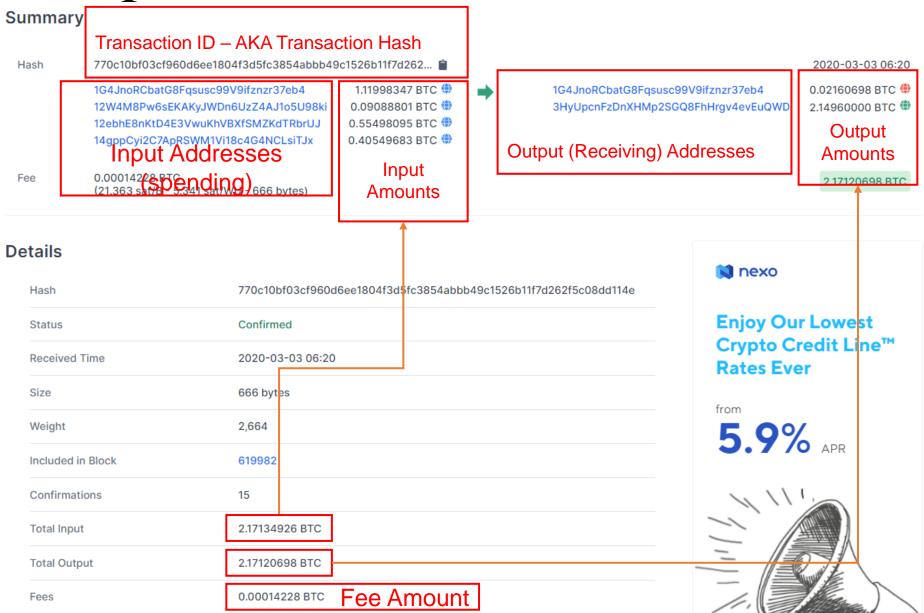
- www.oxt.me
- www.bitcoinabuse.com
- Google
- Known websites used by target
- Dark web searches

QLUE Graph Example





Components of a Bitcoin Transaction



Source: https://blockchain.info

Bitcoin Examples

Item #	Link	Transaction Hash	Transaction
1	<u>Link</u>	2b6fe6bf636c8b8c52aec0016da5d5ffab88f7d6 dc0d07d0c95f4f9b0da6a5b5	Distribution
2	<u>Link</u>	c787cce6b94f6c7d04335a97ee541919e54d1a 1cd2b24829d534c27a032c4427	Relay
3	<u>Link</u>	349ac15ea08e943f13370c5b80b1282b8ac7f75 e06f282297b83ff10525a5041	Transfer with Change Address
4	<u>Link</u>	7645200f354c41fa642950f62667d62affd6befd 5e2f13f32bb0a4e0201042d3	Sweep Transaction - Multiple Clustered Inputs
5	<u>Link</u>	1b0a15bc6c489b6f9df97c074fe1b7895e91759 2ccfc489ec12c1ba0f9080e4c	"Peel Chain"
6	<u>Link</u>	7e92e90f221ad28daf42b5b8bda4c8e244e37af 48527fcd12b2518db5d3315bd	OP_Return

Further Reading:

https://diyhpl.us/~bryan/papers2/bitcoin/A%20preliminary%20field%20guide%20for%20bitcoin%20transaction%20patterns.pdf

Ethereum Examples

Item #	Link	Transaction Hash	Transaction
1	<u>Link</u>	0xc04563c0bc1f957a860f09061c75cab7b792ca5c382b87cad42f03a379c2d5d2	Transfer
2	<u>Link</u>	0x0b6cc90f5a7c3407756b6145cb07cdf2883888b0e5cd60752099816c37e0ac71	Self-Transfer
3	<u>Link</u>	0x323b0f4e96abec8a16c924d62ca5d614271e71231406af14df293abd1a75b66c	Uniswap
4	<u>Link</u>	0x119ccda8a33321f68631e1ea91cff246b8226d0122d62de9fa31df2f905990f5	Smart Contract Call
5	<u>Link</u>	0x6b48823a48ff1eedba0a2f557b4a35361cf460bc211e29d1d0fd926a9f58f78d	Contract Creation
6	<u>Link</u>	0x75fe86a870cd84149e62bf2751d28e7cf3b9e6056d6ff1aeb61556f672ab7cea	Wrapping a Token
7	<u>Link</u>	0x79c58d59027948913fa8e3744e3f79f3560285a59c832ed89cf88dc0fbd487f8	Airdop
8	<u>Link</u>	0xdb3cfa7566ef7d9e00a0a3b25ecee2abde30fb23a76129a425dca8f296c92892	Token Staking in an LP
9	<u>Link</u>	0x5f7177d76aa5b0a7921e97e7b1a9563bbfe342fb443baf017a6bf704e1249f6d	Token Withdrawal from an LP
10	<u>Link</u>	0x43ee2903e027b334ef6571200bea6608d33449b242f2f1fc2e01f14f99985aef	Minting NFTs
11	<u>Link</u>	0x071300e36c704976bc63db56bd3900850b46872baeae40b9c695270ce370e987	NFT Purchase/Sale
12	<u>Link</u>	0xb9ec02fca390c056695f0dc5894220ca9f197f827d21a818a5141359a29fbfd2	Cancel a Bid

NFT Fraud Case Study

- https://opensea.io/collection/frosties-nft
- Contract Address 0x3C99F2A4b366D46bcf2277639A135A6D1288EcEB
- Who created it?
- Where did the proceeds go?
- Smart Contract review
- Token Tracker:
 - · Who owns the tokens?
 - Discuss the Top 5
 - Past Trades

NFT Fraud Case Study – Hash Examples

Method ID	Category	Hash	Hash Link
Not available	Contract Creation	0xac6b77fe67afbfc3bcb8c16d73e8417003d6010414b5de2786f4c2bd5a2c41b2	<u>Link</u>
pause(bool)	Administrative	0x028be8fced163b41abfcee38f3c0aa1b3aa96f903bd014f0951d1501cf856243	<u>Link</u>
mint(uint256)	NFT Minting	0xdf9035fca553126e0c8f310e36b03b7849ac032d8838a1a07932cbe2f4688a66	<u>Link</u>
		0x943310a8ef1a93c0d121b443c7d755934d14fd255000bc95c46bd150721944	
whitelistUsers(address[])	Privileged user to get benefit from NFT	6f	<u>Link</u>
setApprovalForAll(address,bool)	NFT approval for trade	0x31cccac640714aa502b2f9ee3ff3a01899ea7e581e7b19c5ed6b29a8e28515e2	<u>Link</u>
transferFrom(address,address,uint256)	Transfer of Frosties NFT	0x9235a70919507c2faf82335e9877849d7a8348a58335c03274bcb78d8ccff64f	<u>Link</u>
setNftPerAddressLimit(uint256)	Administrative	0x63838a6c24f8d48db3e2ff61fd2b11638b8b1e3512e3b3faa72497e3704c1917	<u>Link</u>
setmaxMintAmount(uint256)	Administrative	0xd0c76abf7271ffd04d5bd8f32e47085100ee5ff2fbf77b41f8c8cdc22f6a518f	<u>Link</u>
		0x6cd663791960d5c1bedb141788d702432317f0db5c309dda0c7f2f1f3831f7a	
setOnlyWhitelisted(bool)	Administrative	b	<u>Link</u>
reveal()	Administrative	0x4e85b498908ed8d6233112a7a72c7d488cc99bd42b380ded07fd222c0b58da e5	<u>Link</u>
		0x467b211a153f59182dbe8fee27346ec2dee03046c83f90d7be30c4607cddc6b	
withdraw()	Creator Cashing Out	e	<u>Link</u>
safeTransferFrom(address,address,uint256)	Transfer of Frosties NFT	0xdc521cd57c7e881c3a37df34f776c2cad552a81f121a3e8e34f63a2b9689ce7c	<u>Link</u>
		0xed7ef10ed731630bb897b3a4f360d60224d8ee4389c329bfcf839911b0a0ec3	
safeTransferFrom(address,address,uint256,bytes)	Transfer of Frosties NFT	9	<u>Link</u>
		0x00295b88cd6265622472adabba29e4f0612bcbcab44eefe78075e10db9fa31e	
approve(address,uint256)	NFT approval for trade	7	<u>Link</u>

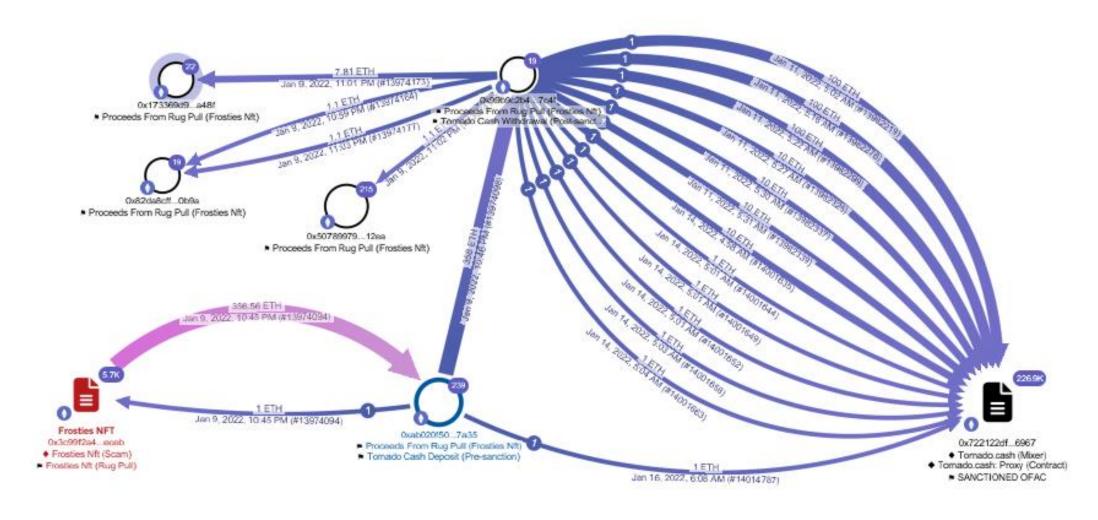
NFT Fraud Case Study – Count By Method ID

					Fros	ties I	NFT.	Analy	sis												
	-							•													
	⊡ 2022												2022 Total	al						2023 Total	
▼	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		Jan	Feb	Mar	Apr	Aug	Sep	Oc t	
■ Incoming																					
NFT Minting	2,934	1					9						2,944								
Failed transaction	5												5								
Creator Cashing Out	1												1								
Incoming Total	2,940	1					9						2,950								
☐ Outgoing																					
Creator Cashing Out	1												1								
Outgoing Total	1												1								
⊜ Zero																					
NFT approval for trade	1,854	289	83	26	16	7	18	6	4	12	7	22	2,344	6	5	2	4	1	1	2	21
NFT Minting	1												1								
Transfer of Frosties NFT	251	44	37	1	2			1		1	10		347			3					3
Privileged user to get benefit from NFT	9												9								
Administrative	13												13								
Contract Creation	1												1								
Zero Total	2,129	333	120	27	18	7	18	7	4	13	17	22	2,715	6	5	5	4	1	1	2	24
Grand Total	5,070	334	120	27	18	7	27	7	4	13	17	22	5,666	6	5	5	4	1	1	2	24

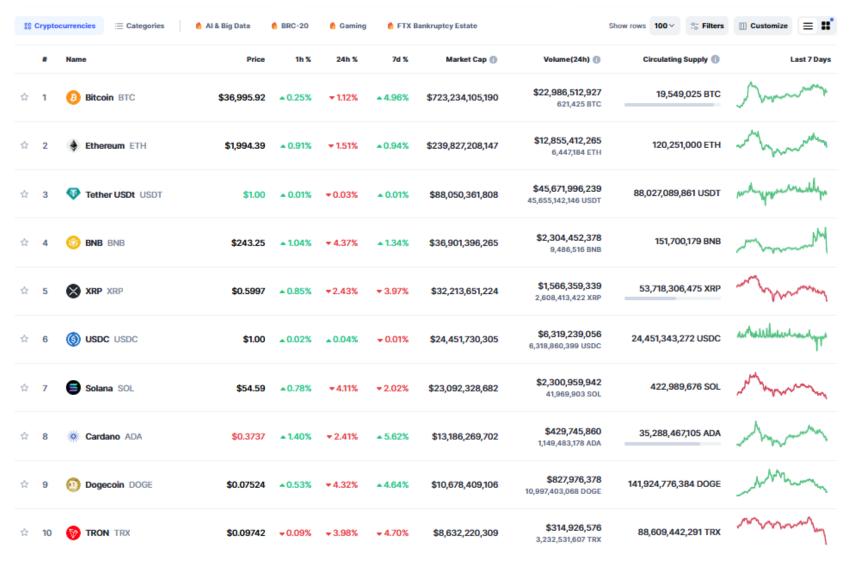
NFT Fraud Case Study – Sum By Method ID

						Fro	sties	NFT	Analy	vsis											
	-								•												
		□2022											2022 Total		2023 Total						
▼	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		Jan	Feb	Mar	Apr	Aug	Sep	Oct	
□Incoming																					
NFT Minting	379	0					0						379								
Failed transaction	0												0								
Creator Cashing Out	1												1								
Incoming Total	380	0					0						380								
■ Outgoing																					
Creator Cashing Out	357												357								
Outgoing Total	357												357								
∃Zero																					
NFT approval for trade	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NFT Minting	-												-								
Transfer of Frosties NFT	-	-	-	-	-			-		-	-		-			-					-
Privileged user to get benefit from NFT	-												-								
Administrative	-												-								
Contract Creation	-												-								
Zero Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grand Total	736	0	-	-	-	-	0	-	-	-	-	-	737	-	-	-	-	-	-	-	-

NFT Fraud Case Study – Tracing Proceeds on Blockchain



Other Coins





QUESTIONS?



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For Watching & Listening



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