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~~ Bitcoin Consolidation Transactions ~~

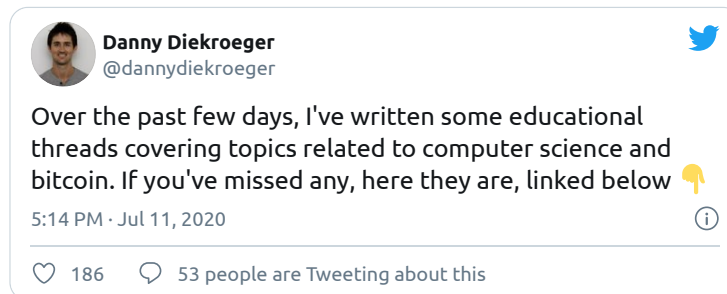
These can help you Save Money on Fees!

What are they? How do they work? 🙋

Before we start, this thread requires a little bit of background knowledge.

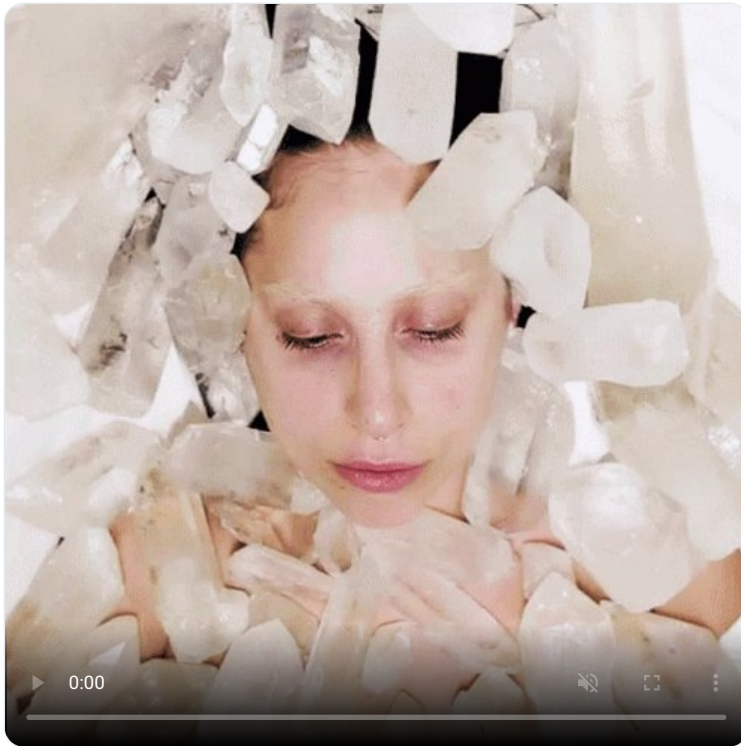
If you're new, I recommend checking out my threads on Bitcoin Transactions and Transaction Fees if you haven't already

They are the 3rd and 4th links on this link:



To explain Consolidation Transactions, let's consider somebody named Alice, who runs an online store selling crystals.

Her crystal bundles sell for 0.01 BTC each, and she generally sells about 1 per day.



Now imagine that a year has gone by, and she'd like to spend all of her Bitcoin to buy a new car!



Before she makes this purchase, let's look at the contents of her wallet.

1 receive per day for 365 days, means her wallet will contain 365 UTXO's, each worth 0.01 BTC...

That's a lot of UTXOs!



Lets see how much data her transaction will use:

365 inputs each cost 68 bytes

1 output costs 32 bytes

10 bytes of overhead

So total bytes = $(365 * 68) + (1 * 32) + 10 = 24,862$ Bytes!

Now imagine the current bitcoin transaction volume is above average, so to get a fast confirmation she needs to pay a fee rate of 200 sats/byte.

The total cost of her transaction will be:

$(24,862 \text{ bytes}) * (200 \text{ sats/byte}) = 4,972,400 \text{ sats}$

Thats about \$450, yikes!!



Luckily, Alice knows about Consolidation Transactions!

She knew she was getting ready to make a big purchase, so about two weeks before purchasing her car, she fires off a Consolidation Transaction within her wallet....

What this means is that she simply sends her entire balance to herself, but pays a super low fee rate!

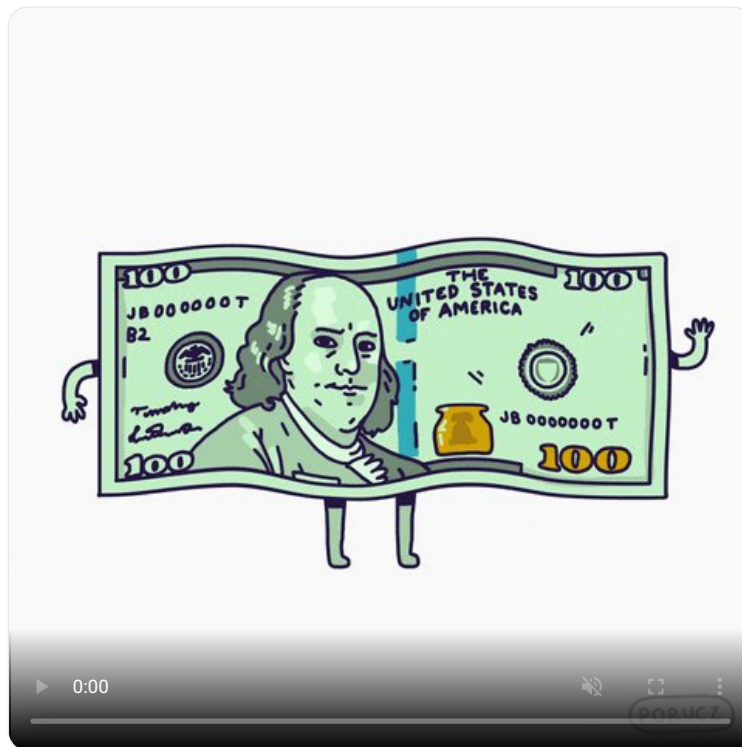
This transaction will still be 24,862 bytes, but she'll pay a fee rate of only 2 sats/byte.

$$(24,862 \text{ bytes}) * (2 \text{ sats/byte}) = 49,724 \text{ sats}$$

$$\sim \$4.50$$

By sending her own bitcoin to herself, she is essentially turning her 365 UTXOs into a single UTXO.

It's kind of like going to the bank and trading in 400 quarters for a single 100 dollar bill



The tradeoff here is that this Consolidation Transaction will take a long time to confirm (because of its Low Fee Rate)... It might take days or even a week to confirm

But Alice is willing to make that tradeoff, because she has plenty of time, and knows about the massive savings



Now when Alice is ready to purchase her Car, she has prepared her wallet, and her wallet only has a single UTXO, worth 3.65 BTC.

Now lets look at her transaction to the car seller:

1 Input costs 68 bytes

1 Output costs 32 bytes

10 bytes of overhead

$68 + 32 + 10 = 110$ bytes

She'd like this transaction to confirm quickly, so she'll pay a high fee rate of 200 sats/byte.

$(110 \text{ bytes}) * (200 \text{ sats/byte}) = 22,000 \text{ sats}$

$\sim \$2$!!



So to recap, without consolidation, Alice would have spent \$450 dollars on a single transaction to purchase her car..

But by preemptively doing a Single consolidation transaction (and being patient enough to wait), she spent \$4.50 on the consolidation and \$2 on the purchase!

So by maintaining her wallet properly and performing a single Consolidation transaction, Alice was able to save about \$443 on transaction fees.



That's the basics of how Consolidation transactions can create huge savings...

Hope it makes sense, and make sure to follow for future educational threads... there is so much more to cover!!

[@threadreaderapp](#) unroll

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