

# Building slightly more complex transactions on the command line

crypto251.0 Cryptocurrency and the Smileycoin

Gunnar Stefansson (editor)

August 30, 2023

## A simple transaction

Recall how to create a simple transaction, with just one input and one output Use `smileycoin-cli listunspent` to find an UTXO

Suppose this includes the output lines:

```
"txid" : "cf808bcc1f38fdaa4930cb0bdf0ad71f970cd253994d4c571ad1
"vout" : 0,
"amount" : 13493.00000000,
...
},
{
...
"address" : "B69QTo216bcaA3SD2Da7Q9arThMy7Z8ayJ",
...

```

Then the following one-line Linux command will aggregate the two addresses:

```
smileycoin-cli createrawtransaction
' [{"txid": "cf808bcc1f38fdaa4930cb0bdf0ad71f970cd253994d4c571ad1
["B69QTo216bcaA3SD2Da7Q9arThMy7Z8ayJ", 13493.00000000]

```

## Maintaining a single address

It is often useful to maintain a single main address.

Example:                    Anonymous                    user                    'Pine'                    used  
 3P3QsMVK89JBNqZQv5zMAKG8FK3kJM4rjt as the Bitcoin address for a  
 fund of 5104 Bitcoin, as described at <https://pineapplefund.org/>  
 A                    typical                    transaction                    is                    Bitcoin                    transaction  
 f065cc0bbede00d3fb56d1dd704fb8e85e706f7d22cee5ec554136d4526973  
 where Pineapplefund transfers 300 BTC to a destination address and  
 sends the entire remainder of the fund back to the original address,  
 3P3QsMVK89JBNqZQv5zMAKG8FK3kJM4rjt.

This transaction is seen in <https://www.blockchain.com/btc/tx/f065cc0bbede00d3fb56d1dd704fb8e85e706f7d22cee5ec554136d4526973>

Such transactions are very easy to generate on the command line.

Keeping the entire fund at a single address makes it extremely easy to publicly verify the development of the fund as grants are dispensed to recipients.

# Making a non standard transaction using P2SH

**Copyright** 2023, Gunnar Stefansson (editor)

This work is licensed under the Creative Commons Attribution-ShareAlike License. To view a copy of this license, visit

<http://creativecommons.org/licenses/by-sa/1.0/> or send a letter to

Creative Commons, 559 Nathan Abbott Way, Stanford, California 94305, USA.