

# Automation on the blockchain (stores, ATM, gambling etc)

crypto251.0 Cryptocurrency and the Smileycoin

Gunnar Stefansson (editor)

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# Doing stuff on the blockchain

The blockchain can be used for a lot more than transactions:

- Sending data, using the data fields
- Coding data into the amounts
- Monitoring transactions
- Executing code as a response to transactions

## So how do you do stuff?

Method 1: the config file...

option to monitor incoming transactions:

```
walletnotify=/home/user/bin/command %s
```

code everything into the transactions

Benefits: No changes to the wallets

Method 2: Change the wallet, add wallet commands

Benefits: No changes to the protocol

Method 3: Change the protocol

# Gambling on the blockchain

## basics...

```
sendtoaddress BCJW4iZw7PechFHgtqqSdHmymjnFA6LjNJ 10  
etc
```

vanity address: Betzy...

```
sendtoaddress BEtZyyYqDXqmRJJ45nnL15cuASfiXg9Yik 10  
... needs to be written up
```

See <https://steemit.com/blockchain/@gstefans/double-or-nothing>

## Messages on the blockchain

See github thread `sendwithmessage` for Smileycoin

Can send messages by coding it into the blockchain

```
smileycoin-cli sendwithmessage BEtZyyYqDXqmRJJ45nnL15cuASfiXg9  
1000 "Hello, Betzyy"
```

See transaction `daf75d1ae31877b51856b4dee931600a5a5db819f52a5d986`

<https://chainz.cryptoid.info/smly/search.dws?q=daf75d1ae31877>

Note how the coding uses ASCII characters 32-128 (0x20-0x7F), requiring 2 bytes per character, see <http://www.asciitable.com/> (subtracting 32 dec from each ASCII code)

## A very simple ATM on the blockchain

An Automatic Teller Machine, ATM, dispenses money when you put in a credit card.

An ATM could also dispense Euro when you put in USD.

A blockchain ATM could dispense SMLY when you put in LTC.

For this you need to use two chains, the LTC and SMLY chains.

- To “put in LTC” means to send LTC to an address.
- To “dispense SMLY” means to send SMLY to a SMLY address.

For this to work (1) the ATM needs to have a LTC address and (2) the ATM needs to be told about a SMLY address.

This can be done by sending a SMLY address encoded in a LTC transaction.

For more info see

<https://steemit.com/blockchain/@gstefans/more-messing-around->

## A more elaborate ATM on the blockchain

for more info see

<https://steemit.com/crypto/@gstefans/on-line-atm-looking-for->

## Traditional data

Normal use is through the op return  
usually limited to 80 characters, but see

<https://bitcoin.stackexchange.com/questions/78572/op-return-m>  
and example below



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