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NanCoin: A Peer-to-Nothing Electronic Cash System

The Nullar Protocol

1 Abstract

Bitcoin solved decentralized ownership. Ethereum introduced programmable value. Stablecoins attempted to stabilize value.

NanCoin removes value entirely.

By fixing supply, balances, rewards and market value at zero, NanCoin achieves perfect stability, universal maximum ownership and complete immunity to speculation. The protocol requires no energy, no hardware, no participation and no trust. It was complete at the moment of its creation.

2 Problem

Contemporary currencies, including digital ones, are exposed to:

- volatility;
- inflation;
- unequal distribution;
- manipulation;
- speculation;
- loss of access;
- theft;
- complexity of custody;
- energy expenditure.

Each of these problems has a common origin: value.

3 Solution

NanCoin removes from the system: value; supply; transfer of value; the possibility of scarcity; the possibility of growth; the possibility of decline; the incentive to attack; economic gain.

```
Problem:  Value is unstable.
Solution: Remove value.
Result:   Perfect stability.
```

4 Supply

```
Maximum Supply:      ¤0
Total Supply:        ¤0
Circulating Supply:  ¤0
```

No unit of NanCoin has ever been issued. None will be. Any issuance above zero produces a different asset, which is not NanCoin.

5 Ownership

Let `S` be the total supply and `B(a)` the balance of address `a`. Then:

```
S = 0
∀a: B(a) = S = 0
```

The balance of every address, existing or possible, equals the maximum supply. Therefore every participant owns the maximum possible amount of NanCoin, simultaneously and permanently.

```
Ownership: 100%
```

Ownership is the only non-zero value in the protocol.

6 Consensus: Proof of Nothing

Proof of Work demonstrates that work was performed. Proof of Stake demonstrates that an economic stake exists. Proof of Nothing demonstrates that nothing needs to be demonstrated.

```
1. Do nothing.
2. Wait.
3. Receive nothing.
```

Participation requires no computing power, electricity, hardware, tokens, capital, server, network connection or activity. Consensus was achieved before participation began.

7 Blockchain

The NanCoin blockchain consists of a single block: Genesis Block #0. Further blocks are unnecessary: there are no transactions to record, no state to change and no rewards to distribute. The only block is not the beginning of the history. It is the entire history.

```
Block Height:   0
Transactions:   0
Block Reward:   ¤0
Previous Hash:  None
Next Block:     None
Finality:       Absolute
```

The genesis block is a public file. Its SHA-256 hash is:

```
da4198d55bbba273dd4b9bb6e28e20108b72af9facd1552eb6c94af6d09d6dd4
```

Anyone can verify it. See NanExplorer.

8 Transactions

A transfer of ¤0 from one address to another leaves both addresses with the maximum possible balance. The state of the network is identical before and after. Transactions are therefore not required, and none are recorded.

```
State(t) = State(0)   for every t
```

9 Security

Theft. After a complete theft, the victim retains the maximum balance. The attacker gains nothing. The state is unchanged.

Key loss. Keys do not affect balances. Recovery always succeeds.

Counterfeiting. Additional issuance violates the protocol and produces something that is not NanCoin.

Rug pull. The liquidity cannot be removed because it was never added.

10 Economics

The system has no economic activity. Consequently it carries no market risk, no liquidity risk, no inflation risk, no risk of insolvency, no risk of default and no risk of losing its peg below zero.

```
Market Cap:               $0
Fully Diluted Valuation:  $0
Volatility:               0%
```

11 Environmental Impact

```
Energy consumption:     0 kWh
Hardware requirements:  None
Carbon emissions:       0
```

12 Conclusion

NanCoin does not attempt to create value. It creates a perfectly stable protocol in which everyone already owns the maximum possible amount.

Nothing remains to be done.

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