

# PoSToken Whitepaper

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*The World's First Proof-of-Stake Smart Contract Token.*

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## 1. Background

In the world of crypto currency, Proof-of-Work(PoW) and Proof-of-Stake(PoS) are the two most important algorithms, although more and more algorithms are being proposed. Bitcoin is the first p2p crypto currency and is also the first crypto currency to use Proof-of-Work algorithm. Soon after, Peercoin was created in 2012 and is the first implementation of Proof-of-Stake algorithm.

In simple terms, coin holders can earn some extra coins just by holding some coins for a period of time in the Proof-of-Stake system. To ordinary users, this is the biggest difference between Proof-of-Stake and Proof-of-Work.

Now, PoSToken first implements the Proof-of-Stake mechanism as an Ethereum Token. Holders of PoSToken can get revenues by holding PoSToken for a period of time. It works the same way as Peercoin and any other coin with Proof-of-Stake algorithm do.

## 2. Introduction

### **POSTOKEN**

PoSToken is the world's first Proof-of-Stake smart contract token on Ethereum platform. It's based on the ERC20 Token Standard and implements all standard methods. As an Ethereum token, PoSToken first implements the Proof-of-Stake mechanism, meaning that every holder can earn some extra tokens just by holding PoSToken for a period of at least 3 days, greater than or equal to The Minimum Coin Age.

### **POSTOKENSTANDARD**

Furthermore, the idea of PoSToken is not only to issue a simple Ethereum Token with Proof-of-Stake but also to define a brand new Token Standard for Proof-of-Stake tokens. A interface including some standard functions was defined in the code of PoSToken, we call it PoSTokenStandard, which is like the ERC20 standard. PoSTokenStandard is a new Token Standard devised specifically for issuing Proof-of-Stake tokens and maintained by PoSToken Dev Team. Although it's an unofficial Token Standard, we will do our best to build an entire and healthy ecosystem based on PoSTokenStandard. A series of services and applications that use PoSTokenStandard will be created in the near future. This future of Proof-of-Stake tokens starts here and we believe that a new era of Crypto Tokens is coming.

## 3. Specifications

- **Name:** PoSToken
- **Symbol:** POS
- **Decimals:** 18
- **Standard:** ERC20 & PoSTokenStandard
- **Platform:** Ethereum
- **Maximum Total Supply:** 10,000,000 POS

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- **Initial Supply:** 1,000,000 POS
- **Distribution:** Free Airdrop
- **Minimum Coin Age:** 3 Days
- **Maximum Coin Age:** 90 Days
- **PoS Annual Interest:**

• Year	• Annual Interest	• Total Supply After
• 1 Yr.	• 100%	• 2 Mil.
• 2 Yr.	• 50%	• 3.5 Mil.
• 3-15 Yr.	• 10%	• 10 Mil.

## **MAX TOTAL SUPPLY**

The Max Total Supply of PoSToken is set to 10 Million, but we just created 1 Million POS as the Initial Supply. The Max Total Supply will only be reached in about 15 years or a little longer at the set PoS interest rate. Once 10 Million is reached, no more PoSToken will be generated via PoS.

## **4. PoS Mining**

By considering the convenience of use and the consumption of less gas, PoSToken provides two methods to trigger PoS mining. However, the basic premise of starting PoS mining is that you must have held some tokens at least 3 days. Then you can start PoS Mining by:

- Sending a transaction to your own address with any amount of POS.**
- Using MyEtherWallet.com or Mist or any other software that can interact with contracts to execute *mint()* function in PoSToken smart contract.**

The following is the contract code for *mint()* function:

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```
function mint() canPoSMint returns (bool) {
    if(balances[msg.sender] <= 0) return false;
    if(transferIns[msg.sender].length <= 0) return false;

    uint reward = getProofOfStakeReward(msg.sender);
    totalSupply = totalSupply.add(reward);
    balances[msg.sender] = balances[msg.sender].add(reward);

    delete transferIns[msg.sender];
    transferIns[msg.sender].push(transferInStruct(uint128(balances[msg.sender]),uint64(now)));

    Mint(msg.sender, reward);
    return true;
}
```

## QUERY TOOLS

If you are not sure about your account's coin age or current PoS interest? PoSToken defines two functions for query:

### *annualInterest()*:

```
function annualInterest() constant returns(uint interest) {
    uint _now = now;
    interest = maxMintProofOfStakeAsPercent;
    if((_now.sub(stakeStartTime)).div(1 years) == 0) {
        //first year reward 100%
        interest = (695 * maxMintProofOfStakeAsPercent).div(100);
    } else if((_now.sub(stakeStartTime)).div(1 years) == 1){
        //second year reward 50%
        interest = (215 * maxMintProofOfStakeAsPercent).div(100);
    }
}
```

Return current annual interest.

### *coinage()*:

```
function coinAge() constant returns (uint myCoinAge) {
    myCoinAge = getCoinAge(msg.sender,now);
}

function getCoinAge(address _address, uint _now) internal returns (uint coinAge) {
    if(transferIns[_address].length <= 0) return 0;

    for (uint i = 0; i < transferIns[_address].length; i++){
        if( _now < uint(transferIns[_address][i].time).add(stakeMinAge) ) continue;

        uint nCoinSeconds = _now.sub(uint(transferIns[_address][i].time));
        if( _now > uint(transferIns[_address][i].time).add(stakeMaxAge) ) nCoinSeconds = stakeMaxAge;

        coinAge = coinAge.add(uint(transferIns[_address][i].amount) * nCoinSeconds.div(1 days));
    }
}
```

Return coin age of your account. Return 0 means that your coin age doesn't meet the min coin age now.

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## 5.Distribution

After the contract deployed, only 1Million POS, 10% of the Max Total Supply, will be created as the Initial Supply.

- **Development:** 100K
- **Marketing:**50K
- **Bounties:**50K
- **Free Airdrop:** 800K

## 6.Free Airdrop

800K POS will be distributed to the community through free airdrop. To read more details about airdrop, please visit our official website.

## 7.Roadmap

**PoS Token Creation Service** Q3/2017

**Multi-PoS-Token Wallet** Q3/2017

**PoS Token Block Explorer** Q4/2017

**PoS Token Decentralized Exchange** Q1/2018

**PoS Mining Pool** Q2/2018

*This is a summary of our roadmap, more details will be updated soon.*

## 8.Resource

### WEBSITE

<https://postoken.org>

### GITHUB

<https://github.com/PosToken>

### TWITTER

<https://twitter.com/PosToken>

### EMAIL:

[contact@postoken.org](mailto:contact@postoken.org)