William Leaf--[will@willleaf.com](mailto:will@willleaf.com)

**A decentralized cryptocurrency with a stable price.**

**Summary:**

This plan describes a hypothetical “TargetCoin.” Each TargetCoin is worth a constant target value established at the coin’s creation. When the value of a coin falls below the target value, the supply of coins decreases. When the value of a coin rises above the target value, the supply of coins increases. These changes in supply occur in a decentralized manner.

**1. Each coin has a target value of 1 U.S Dollar in July 2015.**

The target value for a TargetCoin is 1 U.S Dollar in July 2015. That means that 100 TargetCoins should always be able to buy the same goods and services that 100 U.S dollars could buy in July 2015.

**2. A miner who solves a block changes the block-reward for the next miner. If there has been inflation, the miner decreases the next block reward by 1. If there has been deflation, he decreases the reward by 1.**

Each miner gets a reward of 1000 coins per block, plus transaction fees. When each miner solves a block, he can choose whether the reward for the next block will go up or down by 1 coin. His instructions are to make the next block's reward go up if the value of a coin is worth more than the target value, and down if a coin is worth less than the target value. To be clear, a miner cannot change the reward for the block he solves, but only for the next block.

To follow these instructions, miners could look at the current exchange rate of the coin to U.S dollars, and the U.S consumer price index. They'd say, "a TargetCoin costs $1.10 on the exchanges, and $1.10 today is worth $0.90 2015 dollars. That means a TargetCoin is worth $0.90 2015 dollars, which is below the target value. I should decrease the reward for the next person." However, if the consumer price index broke down, people could switch to some other index. If people used different indexes, that would be fine, because any serious inflation or deflation would be reflected in every index.

**3. Miners are instructed to build off blocks that roughly agree with their estimate of inflation or deflation.**

Miners are instructed to build off any block that agrees with their estimate of the coin's value minus the target value with a margin of error of 1%. For example, If you think the value of a Targetcoin is one July 2015 U.S dollar, then the difference between them is 0%. Therefore, you will mine off anyone's block, whether they increase or decrease the reward. If the value of a coin is $1.1 2015 U.S dollars, the difference is 10%, so you will only mine off blocks that decrease the reward.

**4. A constant demurrage ensures that there is a net-decrease of coins in inflationary periods.**

There is a constant demurrage, say 0.5% a month. For example, 100 coins in January are worth 99.5 coins in February, and so on. Each month, there is a net-creation of coins when miners' total rewards are greater the losses from demurrage. There is a net-reduction in coins when miners' total rewards are smaller than the losses from the demurrage. If there is ever inflation, rewards gradually fall to zero, and the constant demurrage drains coins out of the system.