Paideia DAO contracts

The contracts support fully on chain dao creation, profit sharing, proposal creation and treasury management.

1 High Level Requirements

For Paideia we have the following High Level Requirements (HLR) that we would like the contracts to fulfill.

1. Bootstrapping a DAO should be open to anyone
2. DAO should be highly configurable
3. DAO members can vote on multiple proposals in parallel
4. DAO's should be able to provide a staking setup
5. DAO's should be able to share profit with it's members
6. Treasury spending
7. Updateable DAO config

1.a HLR 1 - Bootstrapping a DAO should be open to anyone

Bootstrapping a DAO should be easy for the user and not require indepth technical knowledge.

1.b HLR 2 - DAO should be highly configurable

Many different factors can weigh in on how a DAO desires to operate, so things such as profit sharing, quorum and minimum proposal duration should be configurable by each individual DAO

1.c HLR 3 - DAO members can vote on multiple proposals in parallel

It is important to ensure a DAO member does not vote twice on the same proposal, it should be possible to vote on multiple proposals that are active at the same time.

1.d HLR 4 - DAO's should be able to provide a staking setup

A DAO should be able to reward it's members through a configurable staking setup

1.e HLR 5 - DAO's should be able to share profit with it's members

A typical usecase for a DAO besides governance is profit sharing. This should be possible to achieve without human interaction.

1.f HLR 6 - Treasury spending

The DAO should be able to spend from a treasury through a proposal that is voted on by it's members

1.g HLR 7 - Updateable DAO config

A DAO should be able to reconfigure itself through proposals voted on by it's members

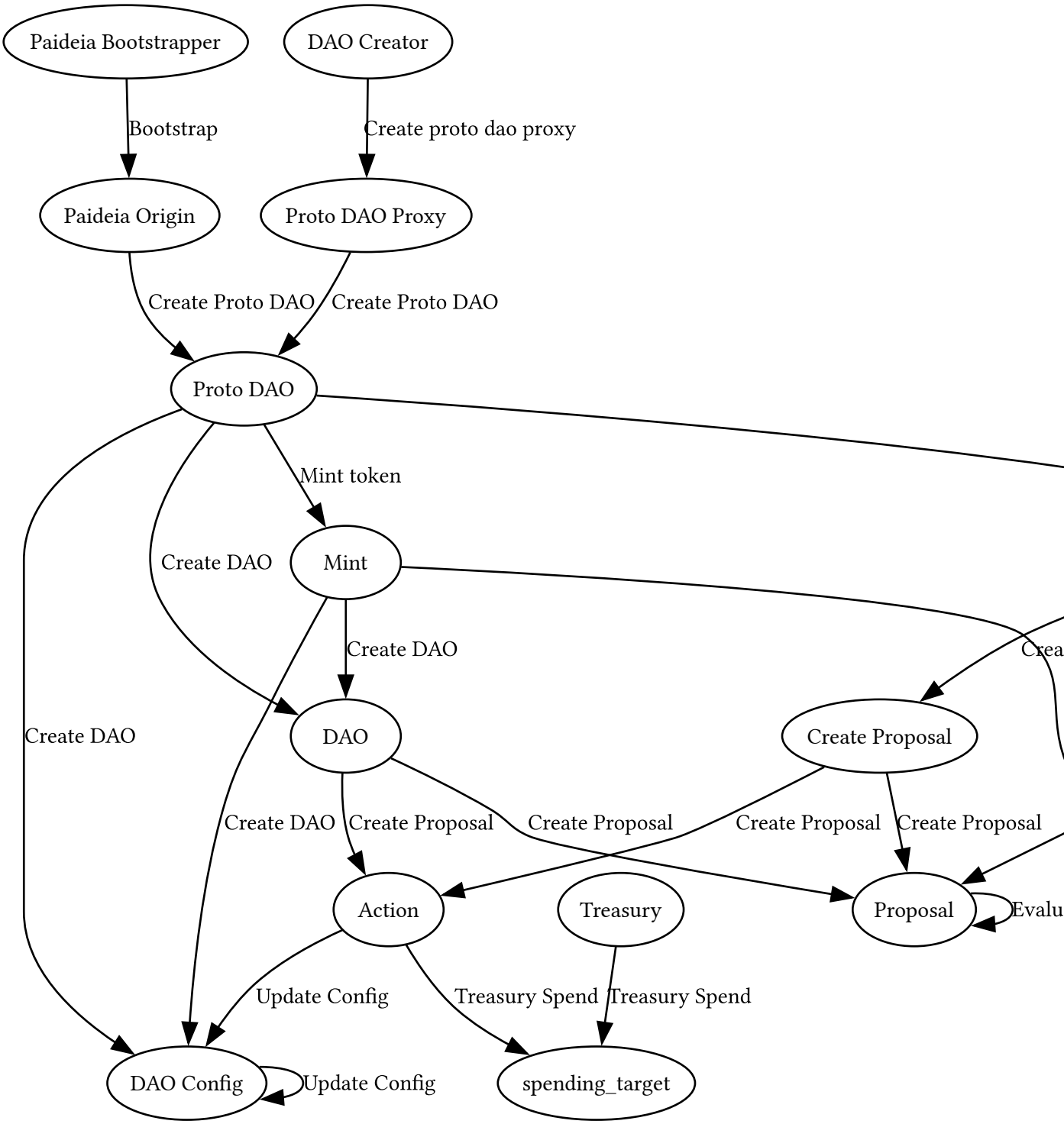
2 Protocol overview

Test

2.a Actors

Actor name	Actor description
Paideia Bootstrapper	Wallet that initiates the Paideia protocol
Paideia Origin	Ensures that newly created DAO's are correct and supply them with token verifying this
DAO Creator	User initiating DAO creation process
Proto DAO Proxy	Contains the assets needed to create a DAO and the desired intial configuration
Proto DAO	Ensures the correct tokens are minted
Mint	Simple contract holding minted tokens until they can be deposited in their correct DAO contract
DAO	Holding proposal and action tokens and verifies new proposals are valid according to the dao configuration
Stake State	Holds the stake state and all staked tokens. Logic exceeds maximum script size so is broken up into sub contracts.
DAO Config	Contains the dao configuration, usually used as a data input
DAO Member	(Potential) member of a DAO interacting with it
Stake Proxy	Avoids singleton contention and ensures the stake is created according to DAO members' wishes
Create Proposal	Avoids contention on DAO utxo and ensures the proposal is created as the user intends it
Action	A whitelisted action type, such as spend from treasury or update configuration
Proposal	A whitelisted proposal contract type, keeping track of votes and state (passed, failed, etc.)
Treasury	Holds funds owned by the DAO. Spending is done through proposals and actions
Vote	Avoids contention on proposal utxo and ensures the vote is cast according to the user's wishes

2.b Visual Protocol Overview


Paideia Bootstrapper
DAO Creator
Bootstrap
Create proto dao proxy
Paideia Origin
Proto DAO Proxy
Create Proto DAO
Create Proto DAO
Proto DAO
Mint token
Create DAO
Mint
Create DAO
Crea
Create DAO
DAO
Create Proposal
Create DAO
Create Proposal
Create Proposal
Create Proposal
Create Proposal
Action
Treasury
Proposal
Evalu
Update Config
Treasury Spend
Treasury Spend
DAO Config
Update Config
spending_target