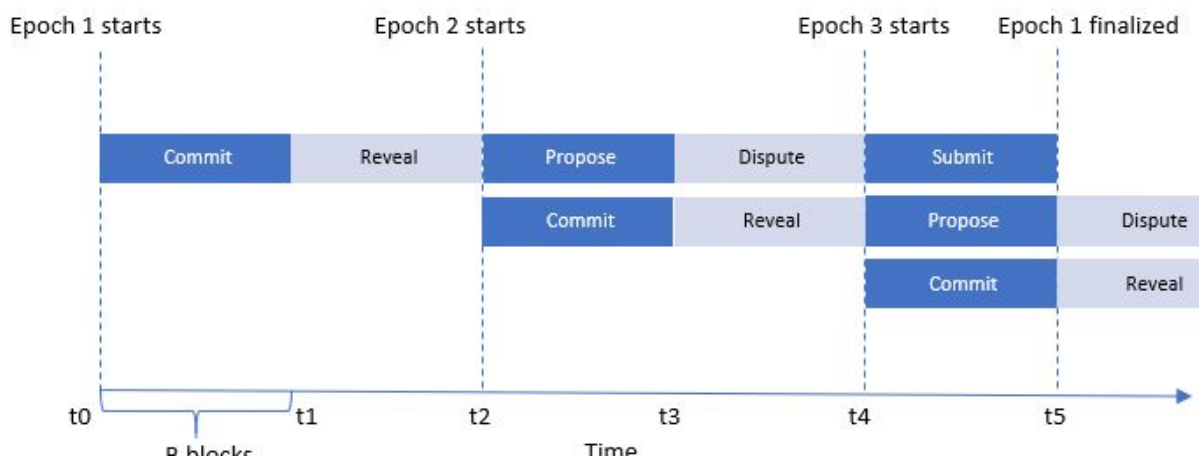


Razor network - technical summary

Razor network is a general purpose oracle platform. Later multiple applications can be developed e.g. platform for creating delta one instruments. Schell is the native utility coin.

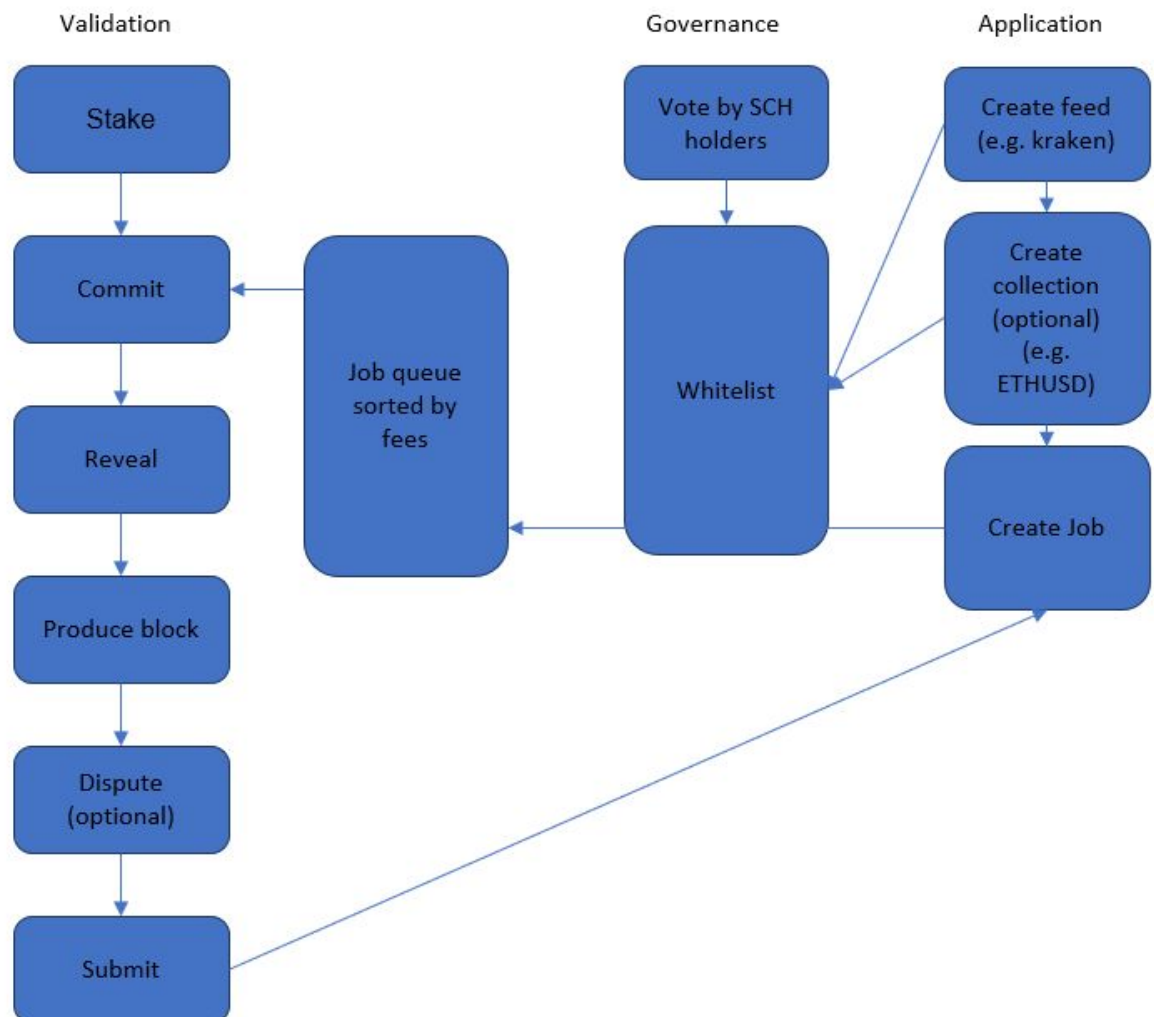
Oracle platform

1. Validators stake their schelling coins (SCH)
2. Each epoch consists of 50 blocks (12.5 minutes) (subject to change)
3. First 25 blocks are commit periods and next 25 are reveal period.
4. To stake, F schells must be burned. And minimum of Smin schells must be staked.
5. Influence: 1 when you stake. Increases logarithmically.
6. If withdrawn, influence becomes 0.
7. $\text{Influence} = \text{Reputation} * \text{stake}$
8. $\text{Reputation} = \text{Log}(\text{maturity})$
9. Maturity is the age of stake of deposit in epochs, but may decrease on penalty.
10. During commit period, following actions can be performed: stake, commit vote, unstake, withdraw, propose block for epoch (N-1), submit block for epoch (N-2)
11. During reveal period, following actions can be performed: reveal vote, dispute block proposed in epoch (N-1)
12. Incentives (schells): get block reward (e.g. 5 schells)
13. Penalties (schells) producing incorrect block: 100%, revealing secret in commit period: 100%.
14. Incentives and Penalties: 100% maturity penalty for voting $0 * M$ or $2 * M +$. In between a quadratic curve will be used. For $\pm 1\%$ for weighted median, no penalty & will be awarded reputation cut from those not in consensus.
15. Median is a weighted median of votes. Weight = influence
16. Probability of becoming block producer $= \text{influence} / (\text{total influence})$



Governance platform

1. Governance platform is necessary because malicious jobs can be created to hurt validators. E.g. creating a job for a url which gives random values. Since there would be no consensus, lot of validators will be penalized.
2. To use oracle, the URL must be whitelisted through governance process.
3. A vote will be taken using schell tokens to whitelist or blacklist a URL.
4. SCH holders should whitelist a URL if it is: reputed, consistent, can handle high load, if it is exchange, it is not having withdraw/deposit/trading/regulatory issues, response is not too big, is free, not hidden in darknet, not geo-restricted, etc.
5. Another feature of this platform will be to use collections. E.g. ethusd collection can contain 5 exchange feed URLs. if any of those exchanges are compromised or become defunct, governance process can remove the URLs from the collection and add new ones.
6. Decentralized assets can be minted using this collective feed and they don't have to rely on a specific feed.
7. In beginning this process will be centralized and will be decentralized over time.



Application example: Delta one platform

1. This platform will use above two layers to create synthetic assets. Any collections on the governance platform can be used to mint assets.
2. Users can provide collateral to mint new assets according to price-feed values. Collateral can be sch, eth and sUSD (schelling usd). Schelling usd stablecoin will be a preferred collateral (except for ETHUSD) since it will likely be least volatile compared to all assets.
3. Users can burn assets anytime according to price-feed values to get back their collateral.
4. When assets are requested to be minted/burned the next future available price-point will be taken as reference.
 1. E.g. if I request to mint TSLA 10am, the last traded price at the beginning of next epoch will be used as reference.
5. When a position is under collateralized, anyone can liquidate a position by creating an update job for the oracle.
6. To long, buy a synthetic asset off the market. To short, mint it and sell it on market.

