



**murmur**

The better microblogging platform.

## **Building a Token Economy**

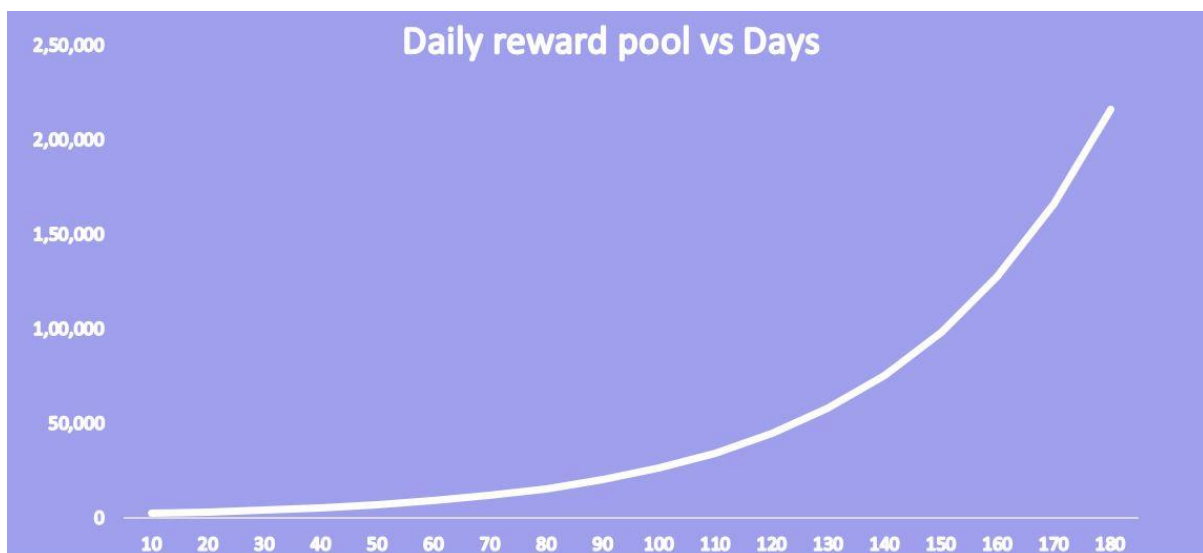
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## Building a Decentralized Token Economy on Murmur

Murmur aims to be a fully decentralized, microblogging social network, operating on the blockchain -- but with a twist. There is a token at play. This token, the MUR token will be used to incentivize users to perform actions, and participate in the network. Basically, Murmur rewards users for participating and taking part in this social game – it helps them monetize their own data and attention – something that was always in the hands of a central authority.

### Initial parameters

Murmur aims at distributing 300 million MUR tokens over a period of 3 years. That is our total supply for incentivizing first degree user actions. For the next six months, there will be a fixed daily reward pool, which goes up every 10 days in the following manner.



Users will draw rewards as fractions from the pool on a daily basis, depending on the amount of activity they have had on that day.

### Priorities

The priorities with the design of this token are as follows:

- facilitate the overall working and flow of the social platform
- incentivize users to engage with the rest community
- form a mode of value transfer between external partners and the mass community
- act as a mode of peer to peer payment

## Token utility

- A form of peer to peer payment
- Employ and pay for partner services on Murmur such as Ads, Polls and Games

## Token economy

Users come over to murmur and participate by creating and sharing murmurs, commenting on them and snooping on them. People also follow each other to keep up with different streams of information. All this user attention, activity and due data generated amounts to a lot of real world value. The MUR token captures this value, by rewarding users for the actions performed.

The value that justifies the price of the MUR token, comes from the external world. Partner apps, games and programs, buy MUR tokens from the economy, at exchanges, or even through direct means from any of the token holders.

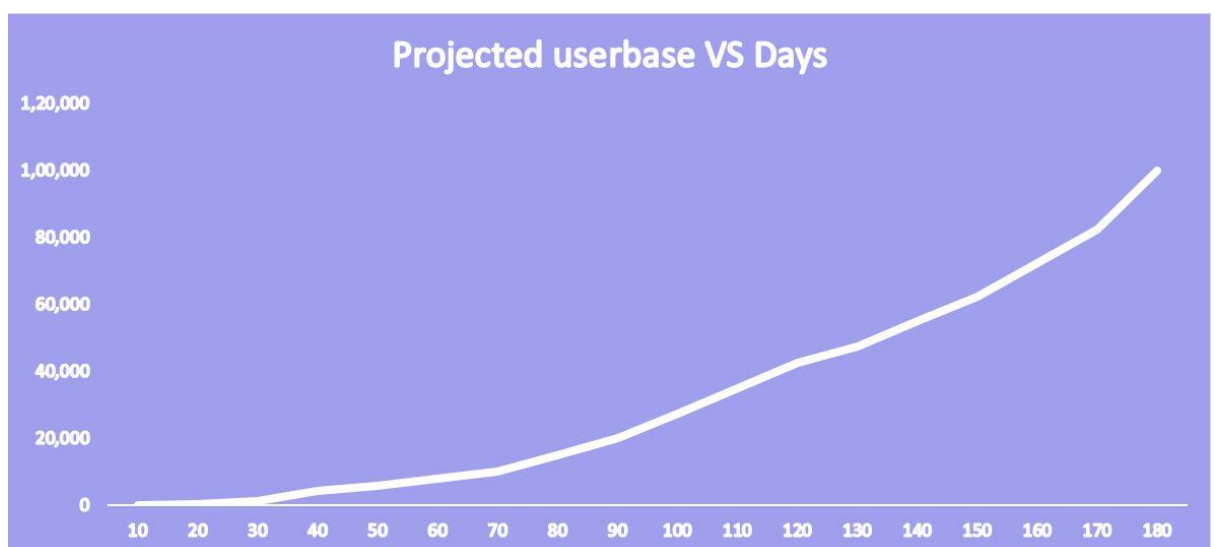
When this happens, the value proposition of the token goes up. This gives the token a meaningful input side.

For the output, again, the same users can throw ads and surveys to the rest of the population. This is merely the start, and many more useful output utilities are in order, as Murmur expands its partner and integration programs.

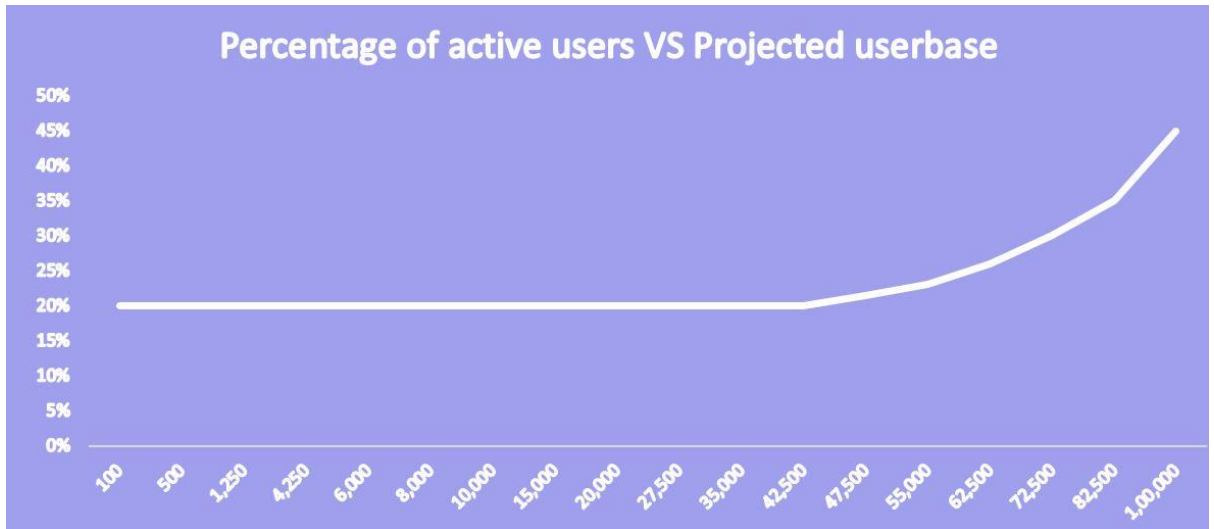
## Assumptions

The following assumptions were made keeping the worst case scenario in mind. The platform will perform well when these are attained or surpassed.

- The platform will acquire 100,000 users in the first six months of operation.



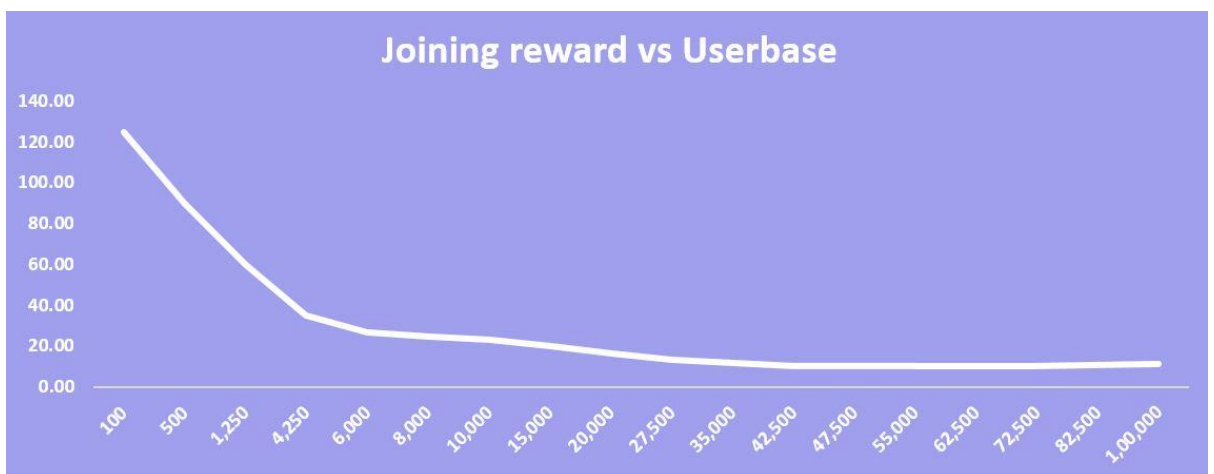
- The percentage of active users will go up from 20% to 45% in this time period.



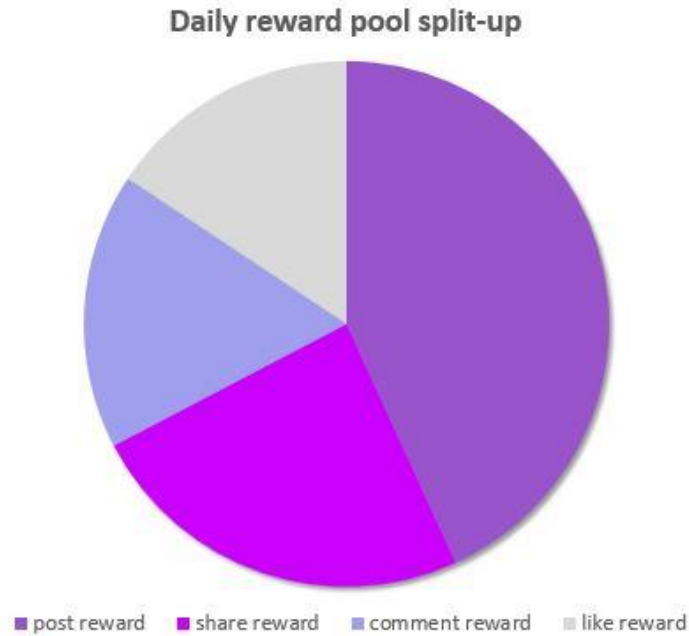
- The same active user-base will also take part in the token economy through token output means such as curated advertisements, polls and surveys and partner apps.
- The number of partners offering such unique token output means will increase from a handful to 25 in six months.

## Metrics

- All projections for this token model were charted over the metric of user-base size. The logic being that a social network is the most dependent on this single metric, compared to say, the flow of time.
- All new users receive a one-time joining reward on Murmur. This reward amount is 5 times the average daily reward per user. As the user-base increases, the joining reward goes down. After a critical mass of users is attained, further incentive for new users to participate would not be required.

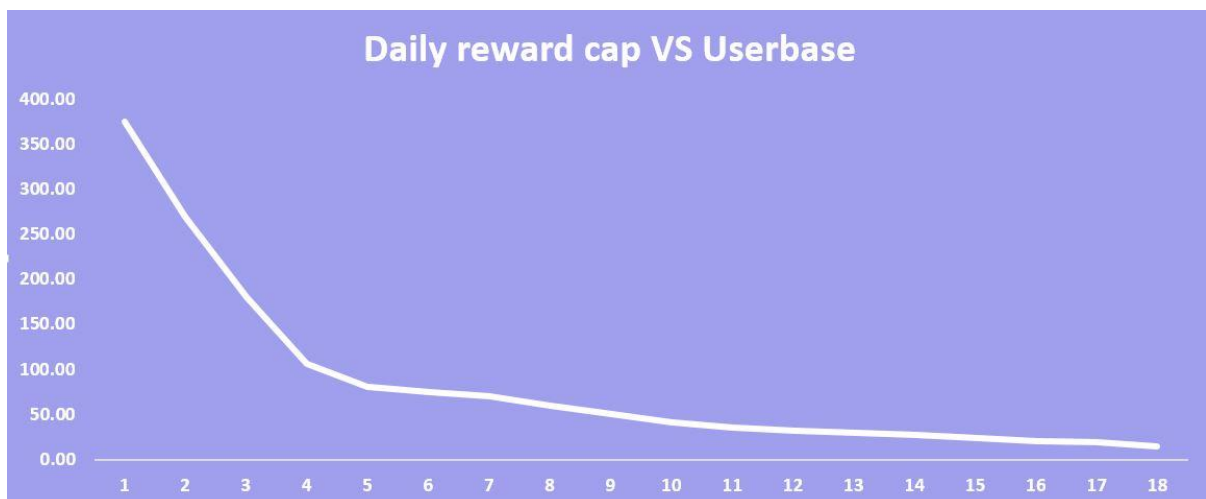


- The daily reward pool is divided into sections as shown below. This is to incentivize different actions such as murmurs (posts), whispers (messages), comments and yells (shares) appropriately.

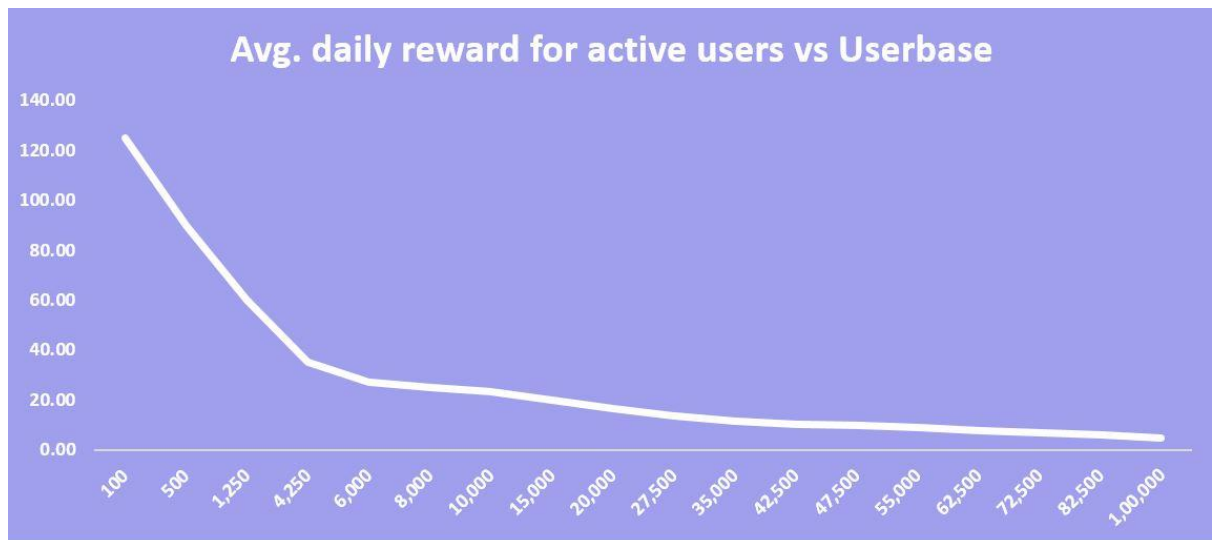


Relative reward reserve weightage	post reward	share reward	comment reward	like reward	<b>Total</b>
	43.17%	24.17%	17.00%	15.67%	<b>100.00%</b>

- To prevent network imbalance and token concentrations, the maximum reward a user can earn per day is capped to 375 MUR tokens for the first 10 days. This number drops to 40 MUR on the 100<sup>th</sup> day, and to 15 tokens on the 180<sup>th</sup> day. This downward trend was set in place to compensate for a faster growing user-base, which would mine tokens more rapidly due to increased network effects.



- The daily reward cap was calculated to be 3 times the average reward per user gained by the active user-base. This gives a safe upper limit to the highest reward a user can gain even on the days with most concentrated activity.



- If any part of the reward pool goes unclaimed on a certain day, then it is added to the total reward supply available.
- The actions murmur (post) and yell (share) will not fetch any direct gains for the user, and warrant for a compound rewards model, calculated based on the amount of traction the murmur/yell receives. This is to prevent spamming and the abuse of direct rewards.

### Murmur/Yell reward

= (visibility component) + (traction component)

= (**0.5x** weightage if 75% of the user's followers saw the post) + (**1x** weightage X % of followers who engaged with the post)

**E.g.:** A user creates a new post which all his followers have seen, and the number of likes and comments it has are equal to half the follower base by number. Then, Post reward weight =  $0.5x + 0.5x = 1x$ . This weight draws a proportional token reward from the daily pool, as a fraction of the cumulative population's weights.

## Incentivizing ideal actors

Apart from incentivizing plain user actions, it is also important to similarly promote the ideal kind of user on the platform – which would lead to further growth of the economy. Such an ideal actor can be described by various degrees of *loyalty*, *activity* and *frequency*.

*\*\*Metrics for token output and actor-based modelling will be released in a later article.*

## **Conclusion**

We come from a background of hyper-centralized social media; a world where corporate giants make tons of money out of crowd sourced data, and the user takes home nothing beyond acceptable user experience and spam.

Where we are, is a time where a lot of people are very tired of what these centralized players are doing. They are tired of the breaches in security, privacy, and plain rules of conduct.

Where we are going, is where ideas like Murmur and the blockchain itself will take us. We hope to see a world where individuals govern their own identity online, and are appropriately rewarded for the social value they create by subscribing to and participating in various platforms. All that, while still maintaining a healthy discussion on privacy, security and community.