

# Animal Adoption DApp

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## Description:

We proposed to develop an animal adoption DApp, which can help stray animals to find their new home, and missing animals to find their original hosts. This DApp would offer great opportunities for stray animals to be posted by warm-hearted people who discover them, to be recovered by their owners who lost them by accident, to be adopted by animal lovers who want to give them a new home, and even to be rescued by organizations which are professional in dealing with stray animals.

## Stakeholders:

1. stray animal finders;
2. Information viewers, including adopters;
3. Developer (local Ganache account 10);
4. (Tentative) Animal adoption agency/organization;

The potential users of this DApp would be animal lovers, specifically, stray animal finders, who can post stray animal information, information viewers, developers, who can earn some website maintenance fees, and even some animal adoption organizations.

## Approach:

### Basic Functionalities:

1. Invoke Google Maps APIs to display where stray animals have been found.
2. Users can post animal information, including position, pictures, description etc., on the map;
3. Users can check the map for the stray animal nearby to adopt/retrieve(approving info required) it;
4. The web interface will automatically update every 30 sec, or users can manually update it;
5. Users can click the pop-up points on the map to check brief descriptions (photos, animal types) and pay some tokens to see detailed animal information;
6. If one finds his/her missing animal information through this web, he/she can retrieve it with the highest priority on the condition that they prove that they are the host.

### Token Transfer:

1. (Viewer -> Finder/Developer) The viewer needs to pay to view finders' posted information;
2. (Developer -> User) Every user holds a certain amount of tokens. When they spend all of them, they need to buy tokens from the developer with real ethers;
3. (Host -> Developer) The owner needs to pay verification fees to avoid fraud.
4. (Developer -> Host) If identification is verified, the host can receive a refund for the information viewing fee.

### Gas payment (-> miner):

1. Posting stray animal information;

2. Adopter/Host/Organization retrieves/adopts the animal;
3. Verification process;

## Future Work:

### Advanced Functionalities (If time permits):

1. Referee Awards: for every other user a current user introduces, a certain amount of tokens will be offered as a reward for expanding our community.
2. Non-profit organizations responsible for dealing with stray animals are more than welcomed to use our Dapp to do goods to animals. After we verify their identities(we won't tolerate frauds in our Dapp), every successful adoption they make will be appreciated and their cost of token during the adoption process will be fully refunded.

### Advanced token transfer:

1. (Organization -> Developer) The organization needs to pay verification fees to avoid fraud;
2. (Developer -> Host) If identification is verified, the organization can receive a refund for the information viewing fee.