

# Telos worker proposal: Smart Contract for Community Membership Management

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September 27<sup>th</sup> 2019

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## Introduction

People perform their activities in groups and communities. This could be a small team of volunteers, or a group of neighbors, or a student organization. Quite often there's a need for inputs from most members of the group, such as voting, crowdfunding, money spending.

This worker proposal is aiming to develop an open-source, free to use EOSIO smart contract that would allow groups of people to organize themselves and use the on-chain information to improve their efficiency.

## The worker proposal

This worker proposal is aiming to collect a one-time donation of 100000 TLOS in order to develop a smart contract, as specified below. The smart contract will be released under Apache open-source license, and is expected to be ready within 2 months after the WP approval. Along with the smart contract code, full documentation shall be delivered.

- Anyone will be able to register a new community on the smart contract. A community is characterized by the following attributes:
  - Community name up to 12 symbols;
  - Short one-line description;
  - Website URL;
  - Manager account (the creator of community is its first manager). Later on, the manager function can be transferred to a multi-signature account.
  - Membership policy: open (anyone may join or leave), self-managed (join or purge requests need confirmation by 2/3 of voters), managed (only the manager account can add or remove members).
- Members would join and leave according to the group policy;

- Member flags. Each member account is associated with a 16-bit flags field, allowing the manager (or 2/3 of voters) to set or clear specific flags. One flag, “Voter”, is predefined. Other flags can be added by the manager. The Voter flag is automatically set to true for managed and self-managed communities, and set to false for open communities.
- Member attributes: each member has a 12-symbol role attribute, and a memo string. These attributes are only editable by the manager. The memo may contain a hash of member’s identity documents.
- Voting. Any community member can start a voting, and it would be approved if 2/3 of voters approve. The same mechanism is used if a new member wishes to enter a self-managed community.

## Further development

Additional features could be developed as companion services to the community management smart contract (outside of the scope of this WP):

- Community spending: a smart contract would act as an escrow agent, accumulating fees and donations from community members and spending the tokens upon 2/3 voters approval;
- Opinion polls can be done off-chain, using the blockchain data for member verification;
- Merchants can offer discounts or distribute coupons to members of a community.

## About myself

I’m a senior engineer with over 20 years in the industry of software and network engineering. I started working on various EOSIO related projects in June 2018, and I tried to share and publish as much as possible of anything useful for the community. You may find details of my work in my Medium blog and on GitHub:

<https://medium.com/@cc32d9>

<https://github.com/cc32d9>

<https://github.com/eos-geneva/escrowescrow>

<https://github.com/eosio-standards-wg>

<https://github.com/eosio-ecosystem>

<https://github.com/EOSChronicleProject>

The nickname “cc32d9” is the beginning of SHA256 hash from my real name.

You can reach me in Telegram at @cc32d9 or via email: [cc32d9@gmail.com](mailto:cc32d9@gmail.com)

My previous Telos work proposals:

<https://chainspector.io/dashboard/worker-proposals/8>

<https://chainspector.io/dashboard/worker-proposals/28>