Decentralized election platform

1. The purpose of developing blockchain voting system is to provide the opportunity to conduct the most transparent and honest procedure for electronic voting. It also can reduce the financial costs of voting organizing for various organizations and communities, this system can help citizens of some countries realize their legal right to take part in honest electoral processes (elections of the president, local leadership, various referendums, etc.). With the help of this system, the counting of votes will be as transparently as possible, and at the same time, the human factor (errors and falsifications) will be completely excluded from this process. By this way, the implementation of this electronic voting system based on blockchain technology can increase voter's confidence and increase their interest in electoral processes;

2. The voting process can be organized in a specialized application on mobile devices or on website.

3. If the electoral process is carried out at the national level, this system can become a part of the public services portals through which voters will be verified. Also, before organizing the electoral process, it will be necessary to create a database of voters, the data source for which will be taken from state structures. If the electoral process will take place in some communities, interaction with other applications / software products is also possible.

4. Product features:

- Reduction of financial costs for conducting electoral processes and time for counting results;
- The voters get the opportunity to vote remotely and ability to check the result of their votes;
- Verification of voters, maintaining their confidentiality (it is possible to use the algorithm described in the article was provided after lecture No. 11 [1])
- The possibility of organizing electoral processes of various scales: from state referendums and intra-party elections to opinion polls of student communities and trade unions;
- Both a particular voter and any audit company have the opportunity to check and verify the data obtained during the voting process.

5. Blockchain voting system must meet the following security requirements:

- Lack of outside influence. The system should completely exclude the possibility of changing the results of voting;
- Legality. Only voters meeting certain criterias should be allowed to vote, and only once;
- Privacy. The secrecy of the voting must be guaranteed to all voters. After voting, no one but the voter himself should be able to associate him with his choice;

- Availability and reliability. During the electoral process, the system must work stably without failures;

6. The end users of this system are residents of countries, employees of companies, members of various communities and trade unions participating in electoral processes;

7. Restrictions:

- System scalability. Depending on the participants in the electoral process, the system must be able to process a significant number of transactions without decreasing in performance and reliability;

- It is necessary that the final results of the votes were carried out only after the end of the electoral period, by this way, decision of late voters won't be affected by intermediate voting results;

- In the case of the implementation of this system for conducting state electoral processes, it is obvious that at the first stages, not all citizens will be able to go through the verification process and take part in voting using the electronic system, so they will vote offline, and therefore it is impossible to completely guarantee the absence of falsifications in the electoral process. In addition, one of the main restrictions of this system in this case is the opposition of officials of various levels who took part in the falsifications during previous electoral processes and illegally occupy their positions nowadays.

8. References:

- https://distributed-lab.medium.com/how-to-prove-that-you-are-21-and-not-reveal-anything-else-9ad5b56a7cbc