

## Abstract:

The aim of this bachelor thesis is to design and implement peer-to-peer version of a service for commenting of internet resources. From a functional point of view it is an implementation of P2P discussion forum. We attempt to achieve the highest possible degree of decentralization while meeting these requirements: usage of distributed hash table to store data content and deployment of user identity concept while protecting this identity against theft. In the analysis we came to realize that in the environment where users do not establish any bindings and content distribution is broadcast in nature there is need for globally trusted authority. For this reason it is deployed PKI with certification authority (CA). Our pursuit of maximum decentralization is reached by multiple measures in the design of the application. We allowed simultaneous operation of multiple CA instances, we have also minimized the power of CA to monitor user activities or to censor the content of the system. User interface of the software is integrated into web browser what helps us to shield user from complexity caused by P2P design.