The goal of this master thesis is to suggest a methodology for a visualization history of changes in cadastral maps. The suggested methodology takes into account a selection of original historical and contemporary data, processing workflow and follow-up visualization using existing open source web technologies. The greatest contribution of this thesis is in the design of the spatio-temporal database, because currently there does not exist workable editor similar to it, which could be used for creating such data. The suggested procedure is based on database updating method of ISKN database utilizing amendment records. However this method is significantly simplified with the use of PostgreSQL/PostGIS geospatial functions.

The available literature and other informational sources to the topic are overviewed in the first part of the master thesis. The term “spatio-temporal data” is thoroughly defined and also the ways of integrating temporal features into spatial data, methods of visualization of spatio-temporal data and recent state of their implementations into desktop platforms and web applications are noted. Furthermore historical and current data sources and their usability for the master thesis are described.

The full methodology of pre-processing and processing of data and a subsequent visualization using a combination of several open source technologies are described in detail in the second part of the master thesis. The (practical) output of the master thesis is an interactive web application for the visualization of the processed data.