

Abstract

The aim of this thesis is to design and create a complex community geoinformational system for mobile devices with Android OS. The first part presents currently available software tools, with an emphasis on user friendliness and minimal financial costs. The following sections deal with design of client-server system, selection and processing of data into databases and creating algorithms, ensuring the entire system. Emphasis is also placed on optimization for mobile devices, bilingualism and user friendliness.

The practical outcome and application of ideas from previous parts of this work is the creation of a mobile application DoPřírody!, which allows outdoor users to search the database of natural areas (parks, forests, cemeteries and others) and also is able to navigate the shortest route to the selected destination in real time. For registered users it is possible to rate, comment and edit existing areas and add new ones.

The conclusion contains comparison with large map servers, the results of publishing application on the Google Play website and conclusions of testing in the community of users.

Keywords:

Android, network analysis, server, database, nature, mobile applications