

The use of TopoL for forestry in the Czech Republic

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TopoL is a general Land/Geographic Information System software which can be adjusted for applications in many areas. It allows the creation, maintenance and analysis of geographical data. This original Czech product was first developed for the purposes of providing desktop-mapping and querying capabilities in forest-management applications. Now TopoL can meet many needs for GIS and remote-sensing image-analysis software.

Available for four years, TopoL has now nearly 1000 users in governmental bodies, commercial industry and agriculture in the Czech Republic, Slovakia, Germany and Italy. Forestry is the most frequent area of TopoL applications in the Czech Republic and all three versions of the system are simultaneously used in forest management. In this paper, we would like to show our experience with the use of TopoL in forestry.

TopoL for DOS is the oldest version of the system as far as the development is concerned. The current version TopoL 3.0 represents a common analytical tool for intensive work with geographical information. Its applications in forest management range from data digitizing, timber cruise and maintenance of forest management records to preparations of forest management plans and statistical analyses. The widespread use of this version enables intensive change-over to digital processing of forest management data.

TopoL for Windows is extended for complex raster data manipulations and provides a wide scale of image processing and classification methods. It is used for remote-sensing data processing in forest management. Starting from the beginning of the 1980's, remote-sensing in forestry has a long tradition in the Czech Republic. At present, there are three organizations (Lesprojekt, Help Service and Stoklasa Tech), which are engaged in this field. "Atlas of Forests" for the Czech Republic represents their joint project, which shows both species composition as well as forest health condition (vitality and damages).

TopoSkop represents a powerful viewer for display and analyses of geographical data created in TopoL. It enables quick information retrieval and navigation through analysed data. In 1994, the Ministry of Agriculture bought an unlimited multilicence for its use in forestry, so that TopoSkop has become a mass tool for forest management in the Czech Republic. Then the use of Toposkop and grants of the Ministry of Agriculture for data digitizing constitute essential bases for the development of information technologies in forestry.