

УДК 378

Iukhno Dmytro, Kharkiv, Ukraine

National Aerospace University named after M.E. Zhukovsky "HAI"

**USE OF GEODESIC AND LAND SURVEYING PROGRAMS
IN THE TRAINING OF SPECIALISTS IN THE SPECIALTY
193 "GEODESY AND LAND SURVEYING"**

The study of the software during the training of specialists in the specialty 193 "Geodesy and land management" is the key to the training of a highly qualified specialist who is focused on the maximum automation of all geodetic and land management processes.

Over time, land management and cadastral works require more and more use of modern software.

To date, the most popular programs used in land management and geodesy and with which students should be introduced as future specialists are CAD and Digital programs. AutoCAD is a program for automated design in 2-D and 3-D modes.

The Digital software complex provides automation of field work and processing of geodetic measurements (it helps to align theodolite and tacheometric surveys, create topographic and special plans and maps, create relief models, use satellite images, create text and graphic parts of land management documentation, XML a file for a land plot for its registration in the DZK database).

To date, the most popular programs used in land management, geodesy and cadastre are CAD programs. ArchiCAD is a program for architectural design. MicroSurvey CAD is a full-

featured program for processing engineering and geodetic surveys and designing planar and linear objects. ProgeCAD is a program with a built-in three-dimensional modeling system, the ability to process raster images, import raster images into vector. AutoCAD is a program for automated design in 2-D and 3-D modes. There are several versions of the program aimed at the development of specific industries. The main file format is dwg (Fig. 1).

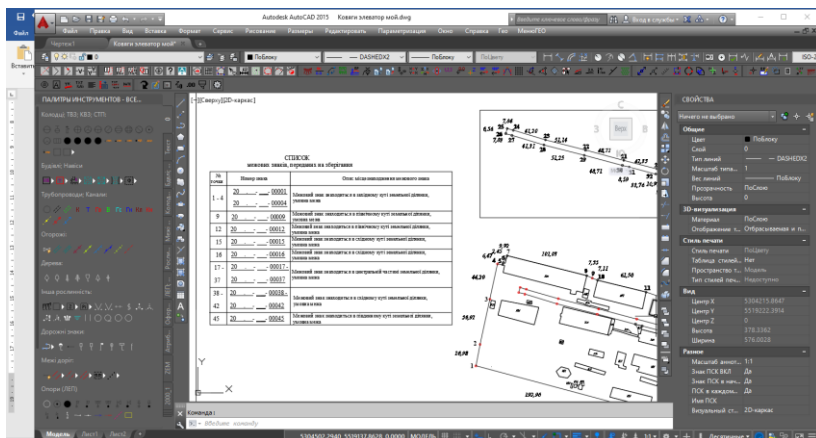


Figure 1 – Appearance of AutoCAD

The Digital software complex (Fig. 2) provides automation of field work and processing of geodetic measurements. It helps to level theodolite and tacheometric surveys, create topographic and special plans and maps, accumulate a cadastral database, create relief models and build horizons, calculate areas and volumes, use satellite images, create text and graphic parts of documentation. Digital allows you to create an XML file for a land plot for its registration in the DZK database.

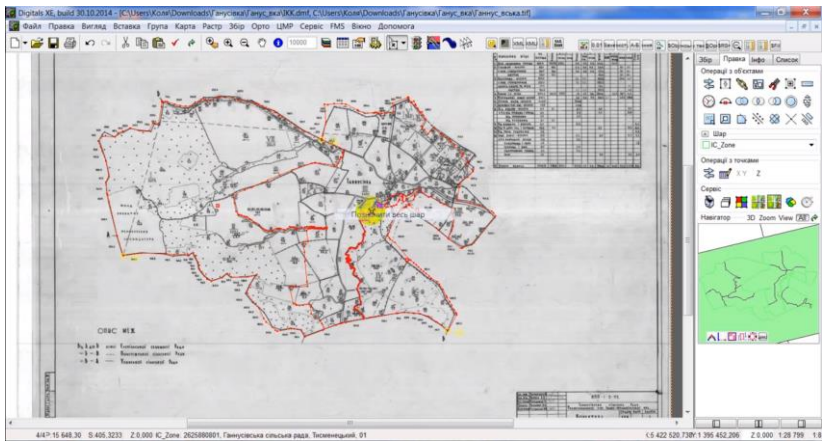


Figure 2 – Appearance of Digitals

Editing and filling XML files allows you to run the XML Viewer program in the most user-friendly interface.

XML Viewer (Fig. 3) is one of the most reliable and reliable options for viewing XML files, according to business and individual users. MindFusion is a trusted name in the software industry and its XML Viewer product has been around for quite some time. In fact, it sees several hundred downloads almost daily, and they are considered among the best by users. This user community support can be primarily associated with uncompromising performance.

XML nodes now support bookmarks, wrapping, and line numbers. In addition, the upload process is streamlined, which means that large files can be analyzed and presented quickly. In addition, XML can be modified in a number of ways, such as removing and inserting nodes, and removing and adding attributes to current elements.

geodetic courses and networks containing GNSS, tacheometric and neutral observations.

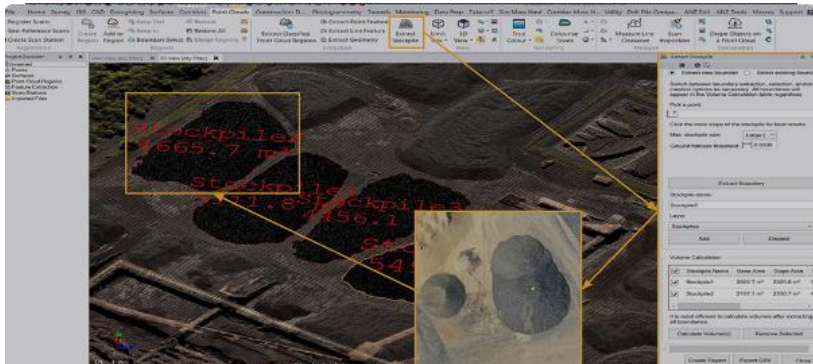


Figure 4 – Appearance of Trimble Business Center

TBC helps ensure the accuracy of breakdown work and record the results for control. Allows direct import of route and object projects from various CAD and BIM formats. Creation of points, lines, layout elements, surfaces and corridors of routes for layout using Trimble Access, systems of automated management of construction equipment and other solutions.

Existing software is used by land management and surveying organizations to facilitate and speed up data processing. The study of software by specialists - future specialists in geodesy and land management is a very important direction on the way to training a highly qualified specialist who would be in demand on the labor market.