

PREPARING THE CADASTRAL APPLICATION FOR A FIRST LAND BOOK REGISTRATION OF THE PROPERTY 'LAKE WITH RECREATIONAL FACILITIES' IN MIERCUREA NIRAJULUI, MUREŞ COUNTY

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ABSTRACT: *The aim of this paper is to review the application for a first property registration with the assignment of new cadastral numbers for a lake with recreational facilities located in the town of Miercurea Nirajului in Mureş County.*

Keywords: *measuring; contour points; property; registration; cadastral documentation;*

Introduction

A GPS device was used for field mapping, namely a STONEX S10 and a total station Sokkia Set630RK3. In order to download the data from these devices, the following specific software were used: Windows Mobile Device Center and Prolink 1.15. After the field data was retrieved, we needed licensed processing software to be able to continue the office work, namely: Toposys 5 and Autocad 2008.

Field mapping

The field measurements were performed with the total station Sokkia Set 630 RK by the method of traversing supported at the ends on coordinate points and radial points. The connection in the Stereo 70 system was made by reading the stations with the help of GPS technology, namely with the Stonex S10 device, while the related coordinates were received from the ROMPOS station in Tîrgu Mureş .

Stages of survey:

- The first stage consisted in collecting the details using GPS, and measuring the contour points of the property.

- The second stage consisted in the ground study, before setting up the total station and mapping the buildings.
- The third stage consisted in the materialization and signalling of the new station points, with the help of survey nails. In the fourth stage, the coordinates of the station points were determined using the available GPS equipment.
- The fifth and final stage consisted in measuring the buildings, using the polar method based on the known coordinate points, with the help of the total station.

The measurements were downloaded with the help of two specialised software, and namely:

- Windows mobile device manager (GPS)
- Pro link 1.15 (Total station)

The data from the GPS was downloaded using a cable and the Windows mobile device manager. The device's memory was accessed and with the help of the 'Copy-Paste' function, it was downloaded into the computer.

The data from the total station was downloaded using the software Pro link 1.15. The device was connected using a special cable and the software was accessed following these steps:

- After the device and the computer were connected, Pro link was accessed and the 'Connect' command was given.
- The following steps were performed from the station:
 - Memory/Job/Comms output was selected;

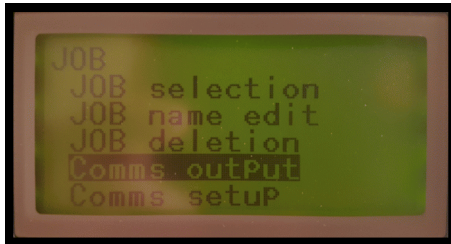


Fig. 1. Downloading the data measured with the total station¹

- The 'Lake' job was selected;

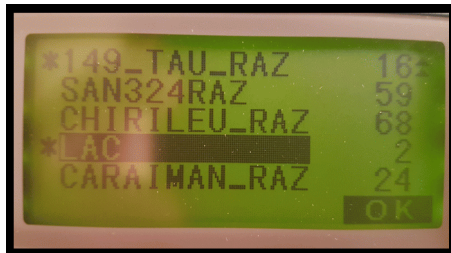


Fig. 2. Downloading the data measured with the total station²

- Then, the option SDR33 and Obs data were selected; this was the final step in downloading the data from the total station.

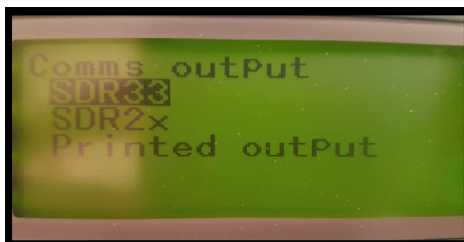


Fig. 3. Downloading the data measured with the total station³

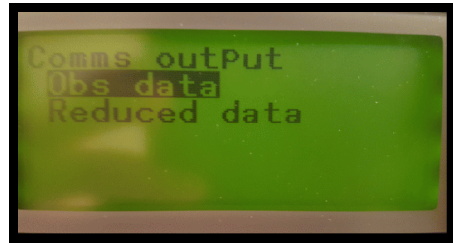


Fig. 4. Downloading the data measured with the total station⁴

Data processing and setting up the layout plan

The setup of the layout plan was possible after the data were processed in Toposys 5 and after use of Autocad 2008 for data upload and for the graphical aspect of the project.

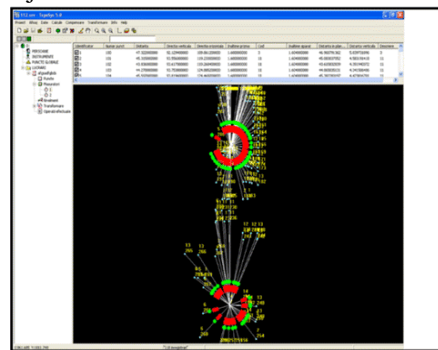


Fig. 5. The processed data⁵

In order to process the measured data graphically, the downloaded points from the GPS were reported as well as those processed in Toposys. They were input into AutoCad in the form of files with the .txt extension, using a specific command: 'Lin+insxy+insxy'.

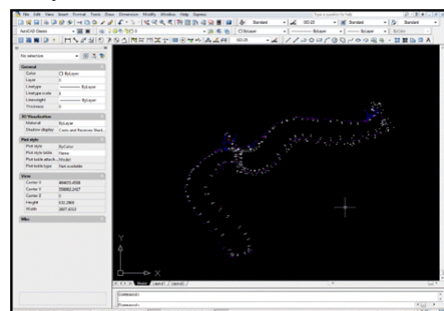


Fig. 6. Reporting of points⁶

After the original points were reported, they were then joined so as to show the on-site reality. For this, we used Polyline.

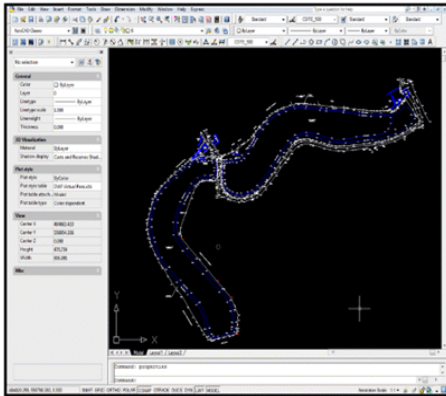


Fig. 7. Graphical processing of points⁷

The next step was the setup of the Property Layout Plan, with indication of borders to adjoining properties, with mention of area, address, neighbours and plan scale. The present paper included two layout plans, as the property was divided by a road.

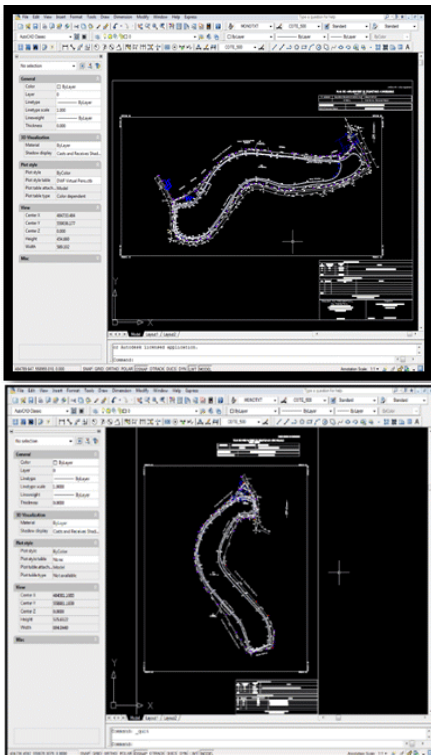


Fig. 8. Setting up the layout plan⁸

The property area was determined with the software AutoCad through the command: 'lin+tb+tb'.

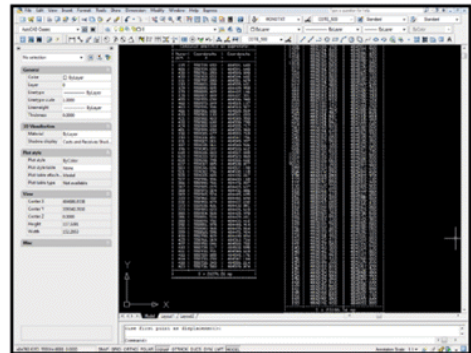


Fig. 9. Calculus of the areas' size⁹

Conclusions

For the registration of the property in the land book, a cadastral documentation of first registration was made, which was positively endorsed by the Office of Cadastre and Land Registration of Mureş County, with the following content: registration note; proof of fee payment; application for reception and registration; affidavit regarding the identification of the mapped property; copies of the identity documents of the owners and of other holders of real rights, natural persons; copy of the land book excerpt for information or copy of the land book; the fiscal certificate issued by the Town Hall where the respective building is located; the original or notarised copy of the documents on the basis of which the registration is requested; inventory of coordinates of station points and radiated points, analytical calculation of areas; technical report; and the layout plan.

Notes:

1. Căndea Tiberiu - Bachelor's Degree Thesis: Întocmirea documentației cadastrale de primă înscriere cu atribuire de numere cadastrale noi pentru imobilul "lac de agrement" situat în orașul Miercurea Nirajului din județul Mureș, Universitatea "1 Decembrie 1918" din Alba Iulia, 2020.

2. Căndeș Tiberiu - Bachelor's Degree Thesis: *Întocmirea documentației cadastrale de primă înscriere cu atribuire de numere cadastrale noi pentru imobilul "lac de agrement" situat în orașul Miercurea Nirajului din județul Mureș, Universitatea "1 Decembrie 1918" din Alba Iulia, 2020.*
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2. https://cn.sokkia.com/sites/default/files/sc_files/downloads/series_30rk_operators_manual_-_10th_ed_06-2009_-_sm_0.pdf
3. Căndeș Tiberiu, (2020), *Întocmirea documentației cadastrale de primă înscriere cu atribuire de numere cadastrale noi pentru imobilul "Lac de Agrement" situat în orașul Miercurea Nirajului din județul Mureș*, Bachelor's Degree Thesis, Universitatea "1 Decembrie 1918" din Alba Iulia, scientific coordinator: Assoc. Prof. Eng.D. Magdolna Eva Koncsag.