SETUP OF THE TOPOGRAPHIC-CADASTRAL DOCUMENTATION CORRESPONDING TO THE CADASTRAL SECTOR NUMBER 108 FROM THE VILLAGE OF SĂLIŞTEA, ALBA COUNTY, IN VIEW OF LAND REGISTRATION

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ABSTRACT: In order to prepare the cadastral technical documentation for land registration, several stages must be completed. This documentation is set up after field measurements have taken place, after data has been processed and the cadastral plan related to a cadastral sector from a territorial administrative unit (LAU) has been obtained. **Keywords:** cadastral sector; local administrative units (LAUs);

Introduction

Following the topographic-geodetic measurements, the processing of the measured data and the obtaining of the cadastral plan (figure 1), the set up of the technical cadastral documentation related to a sector is carried out for the purpose of land registration.

This takes place in two stages, namely the first stage - for publication and the second stage - the final documentation, documents presented in this paper. According to the requirements of Order number 1427/2017 of the National Agency for Cadastre and Land Registration, the



Fig. 1. Cadastral plan of the cadastral sector 1081

documents necessary for the preparation of the final documentation are the following:

- data sheets in accordance with Annex number 4 of Order 1427/2017;
- the cadastral register of the property in accordance with annex number 2 of Order 1427/2017;
- the alphabetical description of the holders in accordance with Annex number 3 of Order 1427/2017;
- the cadastral plan in accordance with annex number 7 of Order 1427/2017 cgxml files;
- technical report;
- georeferenced cadastral plan.

Data processing

The CADGen software also runs within the AutoCAD 2006 graphics software. On launching the AutoCAD 2006 software and opening the .dxf file containing the cadastral plan of cadastral sector 108, a new layer was created, which was called "LAND", and all the properties resulting from the subdivision on this newly created layer were moved later. This operation is in fact a requirement of the CADGen software. To enter the general data related to the cadastral sector, the CADGen software was accessed and the option "Edit general sector data" was chosen (fig. 2).

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Fig. 2. Introduction of general data referring to the cadastral sector

Materials and methods

Specialized software can be used to complete the documents, and in this paper, the CADGen software was used, the data being made in a unitary way for each field.

Starting from the cadastral plan related to the cadastral sector no. 108 from Săli tea, Alba county, which has a total area of 40,095 hectares and 166 real estate properties, the documents for each property were made using CADGen. In order to be able to enter the data of all the plots separately, the function "Add / Edit building data" was accessed, following the selection of the polygonal contour of the building for which the data needs to be entered. A main window appeared that led to filling in the field data, enrolment data, person data, and construction data where needed (there are no constructions in this paper) (fig. 3).

The field data was then entered. From the main window, "Plots" - "Edit" were selected and the data for each plot was entered, in turns, data collected from the property deeds (fig. 4).



Fig. 3. The main window of the function Add/Edit property data



Fig. 4. Entering field data

Further on, data related to registrations was input: "Registrations part 2" – "Edit" (Fig. 5). The following is the entry of the data referring to the rightful property owners: from the window "Entering/editing registrations" - "People" - "Edit" (Fig. 6).

After entering the data of all the 166 properties, the cgxml files were generated, using the entire CADGen software. CADGen was generated and the "Generate CGXML

files" function was chosen. One cgxml file was generated for each property according to the data entered previously, thus obtaining 166 cgxml files (Fig. 7).

The next step was to generate the attachments. First, the real estate data sheets were generated. For this, CADGen was accessed and the "Generate cadastral annexes" function was used, followed by ticking "Real Estate Data Sheets" (Fig. 8).

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Fig. 6. Input of data referring to people



Fig. 7. Generated cgxml files

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Fig. 8. Generate cadastre annexes - Real estate data files

The 166 data sheets that were in .xls format were thus obtained. In order to be able to view and use these data sheets, it was necessary to convert them to a .pdf format. They were attached in each .pdf that contained the data sheet, and the property titles of each real estate. A specialized software was used in order to create these. The 166 .pdf files containing real estate data were obtained. document, numbered in .doc and .pdf format. In order to convert and merge the registers into a single document, the company producing the CADGen software provided a specialized software. CADGen was launched again, the "Generate cadastral annexes" option was chosen again and "Individual cadastral registers" were checked, resulting in the final cadastral property registers (Fig. 9).

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Fig.9. Annex no. 2 – The cadastral register of real estate

After generating the data sheets, the cadastral registers were generated for each property. For the submission of cadastral registers, they had to be in a single The alphabetical index was also generated with the help of the CADGen, choosing the option "Generate cadastral annexes" and this time ticking "Alphabetical index of the Holders". The alphabetical index was generated in an .xls format, and then copied to a .doc document (Fig. 10).

copy" were marked "Final documents". This statement had to be written on each page.

All the documents necessary for the

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Fig. 10. Annex no.3 - The alphabetical index of holders of the real estate rights

The technical report was completed according to the requirements of Order 1427/2017.

Then followed the geo-referencing of the cadastral plan. The boards and the graphic information were eliminated from the cadastral plan, remaining only the geometry of the plotted cadastral sector. With the help of a software, the geometry from AutoCAD was printed in a .tiff format, then a new worksheet was opened in the AutoCAD graphics software where it was imported with the help of the "Raster Design" function, the .tiff file with the geometry that is georeferenced with the cadastral plan by calling the ALIGN command.

The technical documents of the cadastre handed over to the delivery "Technical documents of the cadastre - copy for publication" were marked "For publication", and those handed over to the delivery "Technical documents of the cadastre - final elaboration of the technical documentation had to be printed and filed in volumes, which were in the order of their ID.

Before delivering the documents, the town hall of Săli tea drew up two letters to the attention of the Local Land Registration Office Alba through which they appropriated the documents to be delivered and a note through which they informed them of the documents' submission.

However, before handing over the forwarding letter with all the documents on the CD, the following archives needed to be uploaded to the e-Terra 3 platform: real estate data sheets accompanied by property deeds, cgxml files and cadastral sector geometry. For this, the e-Terra 3 platform was accessed, the role of the user from "Authorized Individual" to "CadGen User Provider" was changed and "General cadastre delivery list" was chosen, where the "Create" button was accessed.



Fig. 11. Accessing the General Cadastre Delivery List and creating a job within the e-Terra platform

Next, the name of the delivery, the LAU and the source of funding was entered in the new window. The "Select file" button was pressed and the .zip archive was chosen, that actually contained the data files accompanied After fully checking the cgxml files and data sheets, the topology was checked using the "Spatial Validation" button located at the top right of the window. This function checked for any topology errors such as

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Fig. 12. Importing files to the e-Terra platform

by the property documents and the cgxml and "Import" files (Fig. 12).

After uploading the archive to the site, each cgxml file was checked for errors together with the property data sheet.

Next, the archive with the geometry of the cadastral sector was uploaded, by accessing the "Cadastral sectors" window and pressing the "Import" button (Fig. 13). overlapping property or gaps. No errors were reported in this paper (Fig. 14).

After the stage of uploading and validating the online data, the following documents were transferred to a CD: the alphabetical description, the technical memory, the cadastral register containing an extract from the register, the data sheets, the cgxml files, the cadastral plan and the



Fig. 13. Importing the geometry corresponding to the sector to the e-Terra platform

georeferenced plan, which they submitted to the Local Land Registration Office Alba for verification. they reported errors regarding the documentation.

After the 60 days, the final delivery of the



Fig. 14. Spatial topology validation within the e-Terra 3 platform

Following the verifications, a notification was received informing us that the cadastral sector has been verified and has been declared admitted for submission in an analogue format. This verification can also be inspected within the e-Terra 3 platform, by accessing the "Real Estate" section.

All the documents from the delivery were printed, such as: the alphabetical description, the technical report, the cadastral register, the data sheets and the cadastral plan, which were submitted to the Local Land Registration Office of Alba county.

After verifying the submitted analogue delivery, the Local Land Registration Office Alba together with the town hall from Săli tea commune started the procedure of displaying the data to inform the public. The data were displayed at the mayor's office in the village of Săli tea.

The data display period was 60 days, during which the citizens were able to submit their rectification requests, in case technical documentation for delivery was prepared.

As in the case of the previous stage "For publication", the documentation was handed over in two stages. Thus, in the first instance, the following data were uploaded to the e-Terra 3 online platform: real estate data sheets, cgxml files and cadastral sector geometry number 108. These were re-verified and declared admitted as in the case of the "For publication" stage.

Conclusions

After receiving the notifications about the admission of the final data of the sector, the deliverables were prepared for the analogous submission. After the validation and admission of the delivery, the Office of Cadastre and Land Registration from Alba Iulia drew up a report of quantitative and qualitative commissioning of the work, and the land books were issued.

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