OVERLAPPING VIRTUAL CADASTRAL DOCUMENTATION

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Abstract
Two cadastrale plans of buildings, can overlap virtual. Overlap is highlighted when digital reception. According to Law no. 7/1996 as amended and supplemented, to solve these problems is by updating the database graphs, the repositioning.
This paper addresses the issue of overlapping virtual cadastre in the history of the period 1999-2012.

Keywords: overlap, virtual, real estate register, topographic coordinates.

1. INTRODUCTION

Law on Cadastre and Real Estate Publicity changed numerous times between 1999-2012.
Numerous works have reached virtual overlay in 2012 without knowing the area for which reason this happened.
This paper aims to clarify the situation to be understood and beneficiaries cadastral works. We directly compared the two cadastral documentation, one conducted in 2005, the second being in 2012.
We conclude that the result can be used as a model reconciliation 2 neighboring property owners.

2. MATERIAL AND METHOD

We have studied the premises of the owner of A - surface 1805mp and the owner B - surface 1652mp, A and B are neighbors.
A cadastral documentation for the owner was achieved in 2005. Under legislative rules at the time, under "Operations topo-cadastral made" in the technical memorandum at the time, was found the following description:"To do the work required to recognize body ownership, the location in the field, identifying area network support and picket traverse stations. Traverse terrain with machine made Theo 020 by radiation from two stations in the local system. Recognizing the land and surroundings, to identify points of known coordinates geodetic network enabling connection to Stereographic 1970 system and ensure the required accuracy was found in the absence of coordinated Stereo 70 points, whichever is thus the system of local work followed by a binding stereo graphics. Surface and contour distances between points were calculated from coordinates. Contour distances were checked and metallic tape (L = 30m). Case plan has been drawn to a scale of 1: 1000 and the plug body ownership, which includes the site plan and delineation of body ownership decreased 1:1000 scale convenient. Plan 1:5000 scale employment in the area."
The layout and separation of body ownership (figure 1) has coordinated Stereo '70, because of that graphic bindings referred to the technical memorandum. In unscientific terms, was marked with a given precision "eye" on the map, property posture. From there they took 2 points coordinates Stereo 70 so positioned on orthophotomap. This way of linking graphic was not specific to all areas of the country. He brought only errors. Measurement errors are not outline, is just positioning.

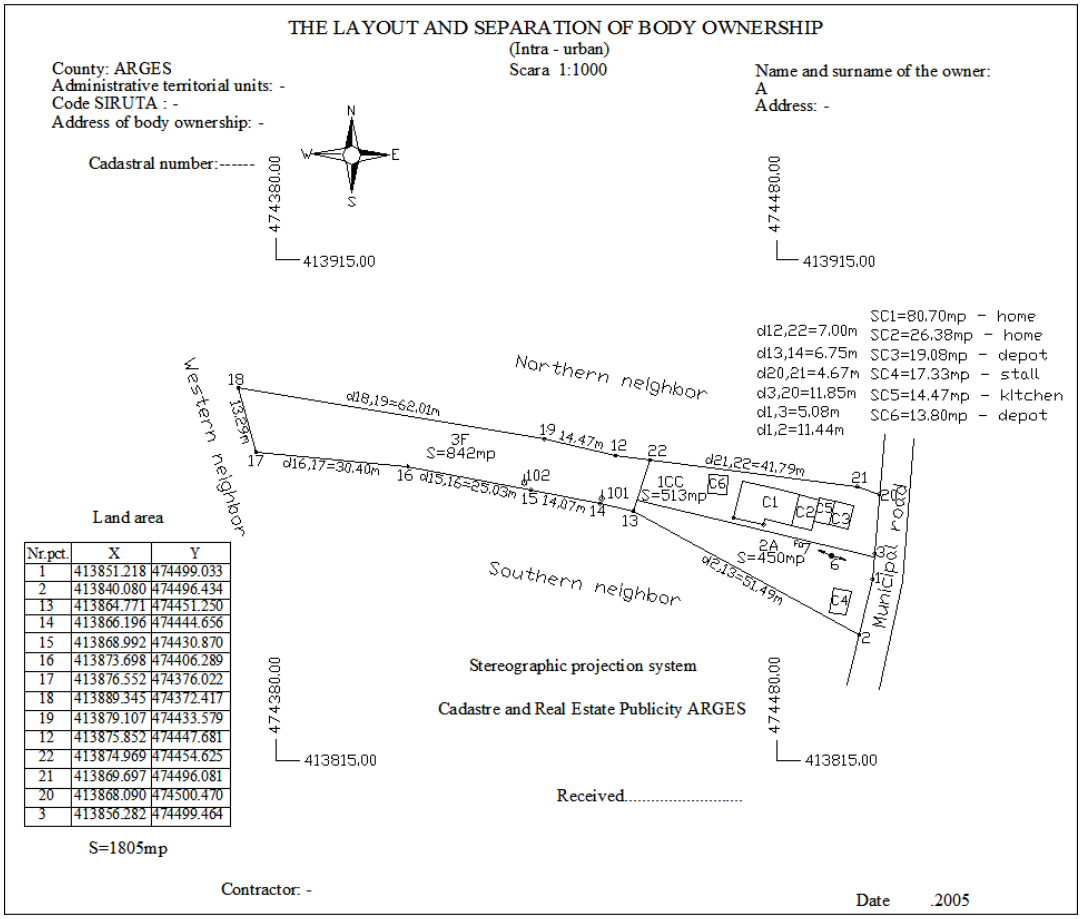

Figure 1. The layout and demarcation of the real estate A

Documentation B, made in 2012, has, according to updated laws, a new formulation of the pleading, in which we extract the topo-cadastral operations performed:

"The work was carried out with GPS SOUTH S86-T with the following specifications: Satellite signals tracked simultaneously- GPS: L1 C/A, L2E, L2C, L5 (reserved) / - GLONASS: L1 C/A, L1 P, L2C/A (GLONASS M only), L2 P / - SBAS: L1 C/A, L5 (reserved) / - Galileo: (reserved) / supports GIOVE-A: L1BOC, E5A, E5B, E5AltBOC / supports GIOVE-B: L1CBOC, E5A, E5B, E5AltBOC - Compass: (reserved) /

B1 (QPSK), B1-MBOC (6,1,1/11), B1-2 (QPSK) / B2 (QPSK), B2-BOC (10, 5), / B3 (QPSK), B3BOC (15, 2.5)

L5 (QPSK). Code differential GNSS positioning. Horizontal: 25mm+1ppm RMS. Vertical: 50mm+1ppm RMS

SBAS differential positioning accuracy: typically <5m 3DRMS

Static and FastStatic GNSS surveying . Horizontal: 3mm+1ppm RMS. Vertical: 5mm+1ppm RMS.

Realtime Kinematic surveying. Horizontal: 10mm+1ppm RMS.

Vertical: 20mm+1ppm RMS. Initialization time: typically < 15s

Initialization reliability: typically > 99.9%

There were plane coordinate values, respectively X, Y for each point station. We photographed the building site. Coordinate system: Stereographic 1970 ".

It is obvious technological leap that interests us especially Stereo positioning technique. This time, the GPS is one that solves the problem accurately.

The result (figure 2) partial overlapping of A to B. The overlap is a virtual, not real.

Figure 2. Virtual overlay between buildings A and B

Virtual Stereo Positioning as work required technology level in 2012, the work coordinated moves north, leaving the overlay.But the law requires repositioning work wrong (ie the old one). How do you explain to the owner that he, in good faith and made even the 2005 cadastral documentation? The relevant fees paid then and now have to agree with the upgrade work. First you need to not pay. Who put the money? State? No. Authorization? Yes, because otherwise sanctioned, although it was not directly his fault. If you performed work authorization does not work in the field, dealing the carrying documentation B.

3. RESULTS AND DISCUSSIONS

Virtual overlay can be solved only through movement and / or rotation of misplaced property without affecting the size recorded in the Land Registry or Cadastre documentation. It is the best case. It is complicated when the boundary between the two properties changed eg by restoring the fence, he just disregard old limit, of 2005. However, it is difficult to explain and demonstrate owners A and B real situation. Keep in mind that clients have no knowledge topo-cadastral and more than that, it can reach where they can blame each other frivolity in identifying boundaries. Calling from Figure 2 that the overlap situation and figure 3 showing the solution. Basically, the solution is a graphic, only the consent of the owner to make any changes, be it strictly technical.

Inventory coordinates the initial plan will contain coordinate new, altered reality. Any amendment shall be recorded in the Land Registry when buildings are tabulated and communicated (Law no. 7/1996 cadastre and real estate publicity, republished) all interested persons. If you explain the problem occurred during the beneficiaries of the two works heard expressions like "... have an overlap of x cm ...." on the northern side of the border, the understanding of A and B will not be an immediate one.

Figure 3. Exiting from virtual duplication of buildings A and B

If you explain the fact that will not change any surface and that it is a graphics error, then the owners will remove suspicion between A and B.

4. CONCLUSIONS

There is a huge amount of work that runs continuously sustained. There may be even more overlap in a day. If they are virtual, can be solved quickly.

The contents of cadastral documentation is voluminous, but it does not matter as long as the technical side is solved using modern technology. It gives you further peace. Special problems are where meanwhile was drawn and built on land A.

Plotting is done after coordinated by a specialist surveyor. Most often, however, becomes more reliable tracing made by the manufacturer of Executive cadastral documentation that it is possible to be done by an expert, another detachment, another update. Different specialists, trained more or less.

Topo-cadastral expert to be a professional to enjoy credibility with beneficiaries.

Problems related to exposure methods must maintain confidentiality as much as possible about the information on assets held by beneficiaries A and B.

6. REFERENCES

*** Law no. 7/1996 of Cadastre and Real Estate Publicity, republished.

*** Ordinul directorului general al ANCPI nr. 634/2006.