USING THE PLANIMETRICAL APPROACHES IN AGRICULTURAL CADASTRE, IN ORDER TO APPLY 247/2005 LAW FOR IDENTIFYING AND PARCEL AN OUT OF THE LAND ZONE FROM SACOSU TURCESC, TIMIS DISTRICT

UTILIZAREA METODELOR PLANIMETRICE ÎN CADASTRUL AGRICOL PENTRU APLICAREA LEGII 247/2005 ÎN VEDEREA IDENTIFICĂRII ŞI PARCELĂRII UNEI PORȚIUNI DE TEREN EXTRAVILAN DIN LOCALITATEA SACOŞU TURCESC, JUDEȚUL TIMIŞ

LUMINIȚA LIVIA BÂRLIBA*, G. ELEŞ,C.BÂRLIBA*,**

**Agricultural and Veterinary University of the Banat, Timişoara, Romania*
***Politehnical University of Timisoara*

Abstract: *The paper purpose consist in the execution of a planimetric topographical survey of an arable area, for land identifying and propriety assignment, according to the parcel register in order to noting in the cadastral register of a land owner, by parcelling works executed in Sacosu Turcesc, Timis district, by applying 274/2005 law.*
In order to identify the land limits, the topographical survey, combined with coordinates resection has been applied by using the TRIMBLE 5500 GDM total station.

Rezumat: *Elaborarea lucrării are drept scop executarea unei lucrări de ridicare topografică de planimetrie a unui teren arabil pentru identificarea şi punerea în posesie conform registrului parcelar în vederea înscrierii în cartea funciară cu caracter nedefinitiv a unui proprietar, prin lucrări de parcelare executate în localitatea Sacoşu Turcesc, judeţul Timiş, prin aplicarea Legii 247/2005.*
Pentru identificarea limitelor terenului ce face obiectul acestei documentații, s-a procedat la ridicarea topografică a zonei folosind retrointersecția pe un punct de staţie şi radieri pentru fiecare colț de parcelă, utilizând stația totală TRIMBLE 5500 GDM şi panglicile de 30 şi respectiv 50 m.

Key words**:** *TRIMBLE 5500 GDM total station, cadastral work,*
Cuvinte cheie: *staţie totală* ***TRIMBLE 5500 GDM****, plan cadastral,* ***ortofotoplan***

INTODUCTION

The harmonious development of human sites, whether they are urban or rural, and also the development of all branches of national economy are strong related with the execution of cadastre works and territory arrangement.

The future demands assign for topography, cadastre and territory arrangement important tasks that reclaim a more complex activity, organize and lead by specialists having a high scientifically and professional training activity.

The propriety right is very important not only for the holder but also the whole society. Considering this social function, it is logic and necessary that the holder of propriety right to be stimulate in a rational exploitation of his good by obtaining efficient economical achievements, preserving it carefully, and using it in his personal interest and also in the interest of the community.

Propriety represents a social report between two persons in strong connection with appropriation of material goods and production means.

Since the 1865 Romanian Civil Code, define the propriety right considering the juridical attributes which made up its juridical contents. “Propriety is the right of somebody to enjoy and dispose of a thing exclusively and absolutely according to the law limits” (art480 Civil Code).

Romanian Constitution at art.41, pct.6 dispose that the propriety right oblige the owners to respect the tasks regarding the environmental protection in order to ensure a good neighbourhood and also to respect other collateral tasks that according to the law or habit are for the owner.

However, the Propriety Right from the Civil Code is incomplete, due to the fact that there are numerous situations when parts or even all propriety rights attributes are exercised by other person not from owner itself on basis of a real right derivate from the propriety right. By instance the usufructar has the attributes of possession and usufruct. Moreover the superficiar can exercise attributes of possession and usufruct and on certain considered limits even the attributes of material and juridical disposal. Also, the owners of real administration right exercise the quasi-totality attributes of public propriety for goods of public domain assigned by the public authority.

Comparative with the owners of other subjective rights over the same good, the proprietary exercises its juridical attributes of propriety rights by himself (the owner is not subordinated to anybody) and in self interest.

Other definition of the propriety right: the real right that confer to the holder the possession attributes, usufruct and disposal over a good, attributes which can be exercised by respecting the juridical frame.

On this context the paper present the influence and the applying mode of topography in the agricultural and industrial fields.

MATERIALS AND METHOD

The purpose of the paper consist in execution of a planimetric topographical survey work for a arable area in order to identify and put into possession according to the parcel register and also record the hold title with his propriety into the land register. The area were the works are executed is Sacoşu Turcesc, Timiş county and the legal frame is by applying the 247/2005 law.

Considering the juridical point of view the area from in the outside Sacoşu Turcesc locality is the propriety of Local Council of Giroc at the Local Commission of applying the law 247/2005.

The beneficiary of the work is the Sacoşu Turcesc Mayoralty, Timiş County.

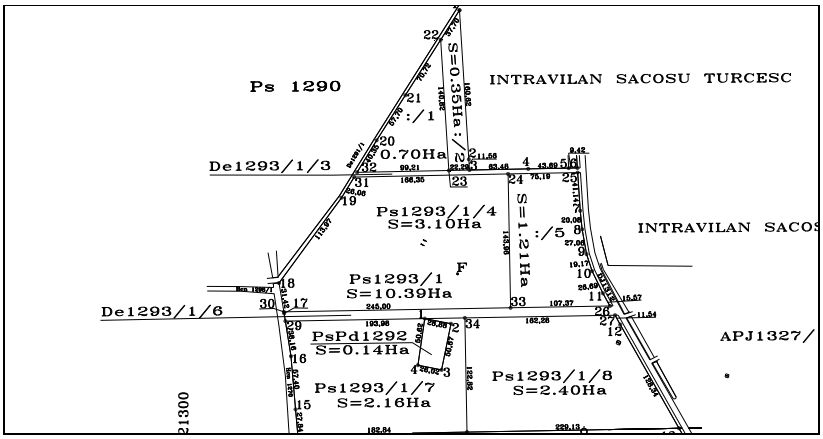

Figure1. Framing plan. Scale 1:5 000

The plot is situated in the West-South-West of Sacoşu Turcesc locality and is having a length of 900m on the North-South direction and 650m on the East-West direction. The plot is also situated in the close neighbourhood of Sacoşu Turcesc (fig.1).

To identify the land limits, which is one of the object of this documentation, a topographic survey using the total station TRIMBLE 5500 GDM and 30m, 50m measuring tapes were use.

In order compute the coordinates and the parcel surface the following points of knowing coordinates from the geodesic network were use (tab.1).

Table 1

Points of knowing coordinate from the geodesic network

NR. PCT.	DENUMIRE PUNCT	X	Y
1	BIS. SACOŞU TURCESC	467837.16	221727.28
2	BIS. BACOVA	468518.51	231462.60
3	BIS. STAMORA ROMÂNĂ	462685.38	219390.78
4	BIS. ICLODA	466927.67	218400.64

For this zone of land, in order to determine the points coordinates in the projection system of coordinates STEREO-70 the technical solution was the resection in the station point St 1 and surveys of every corner of the plot (tab.2).

Table 2

The points coordinate of St 1

NR. PCT.	DENUMIRE PUNCT NOU	X	Y
1	ST 1	466718.607	221721.774

After choosing and marking the points, the horizontal angles and horizontal distances were measured using the prisms and standard measuring mode (fig. 2 and tab.3).

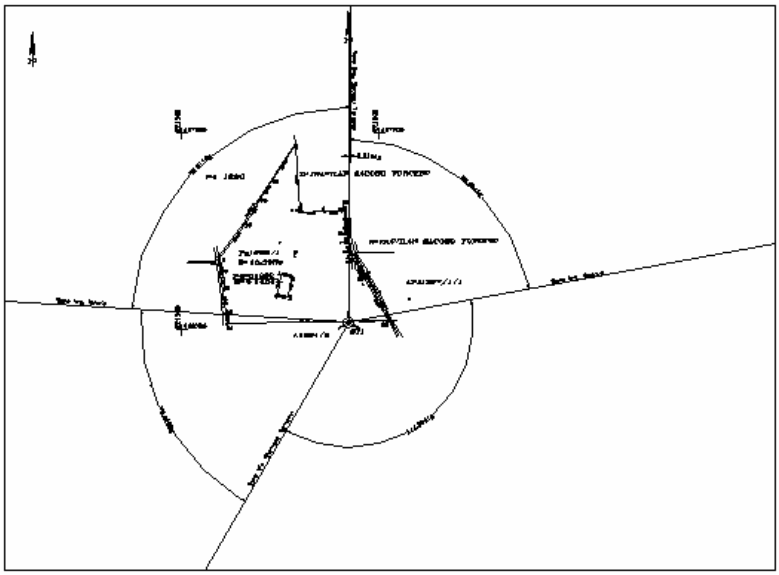

Figure2. The resection plan use to determine the ST1 coordinates

Table 3

Polar coordinates of surveyed points

Sight point	Distance (m)	Horizontal angles
1	472,57	381.6143
2	318,07	374,3974
3	307,19	373,5998
4	288,81	386,6093
5	283,74	396,2699
6	283,52	398,3830
7	237,42	398,9002
8	217,42	399,4092
9	190,78	0,9032
10	172,77	3,2033
11	149,98	8,6962
12	121,48	20,8820
13	102,71	97,8407
14	309,28	299,2010
15	312,63	304,8615
16	326,87	315,9484
17	348,03	323,7891
18	366,22	328,7185
19	363,13	348,6885
20	385,01	360,4463
21	409,95	368,7907
22	216,52	356,9157
23	267,84	355,6072
24	265,99	354,4531
25	210,63	339,1085
26	184,68	343,2032
27	167,63	325,8863
28	193,14	324,0794

RESULTS AND DISCUSSION

To achieve the documentation, the stored and recorded data from the internal memory of the electronic tachymeter were transfer into computer memory by using the dedicated Teramodel software.

To achieve the situation plan, the data transferred into the computer memory were processing later on by using AUTOCAD.

By using the polyline the points coordinates and the situation plan area were determined (fig.3).

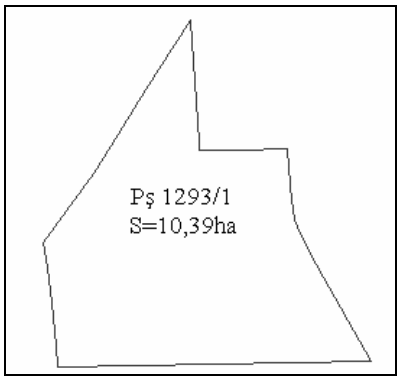

Figure3. The plot contour

Later, in order to verify and control the cadastral work the work is super positioned with the appropriate orthophotoplan (fig.4).

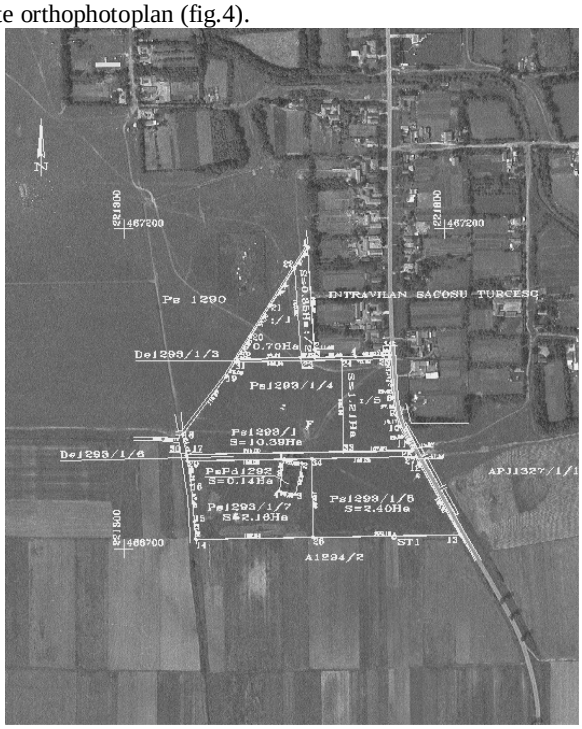

Figure 4. Superposition on orthophotoplan

By using AutoCAD software the detail points were joint according to the land draft and the following documents were created:

- Geodesic network draft, station point description
- guide mark draft
- The situation plan necessary to identify a parcel the plot Pş 1293/1
- The points coordinate inventory on Stereo 70 projection system
- extract of cadastral plan for SACOŞU TURCESC locality

The documentation has been achieved in 3D coordinate system in digital format on optical support and also plotted on appropriate paper format.

CONCLUSIONS

Considering the main aspects presented in the paper some of the advantages use by measure with total stations in agricultural field, but not only the following conclusions can be obtained:

A well known in using modern technologies lead to achieve the informational system of general cadastre.

By using new technologies on the national economy and by creating new branches the survey specialist must face more complex challenge.

The future evolution of topography will emphasize the precision in obtaining the data results, and a high rate of efficiency.

LITERATURE

1. BARLIBA, L., 2005, Topografie, Editura Solness, Timisoara, 2005.
2. MICLEA, M. , Cadastrul şi cartea funciară, Editura All Bucureşti, 1995.
3. NEUNER, J., Măsurători Terestre-fundamente, Volumul I, Instrumente şi metode de măsurare, Editura Matrix Rom, Bucureşti, 1995.
4. xxx., LEGEA nr.247 din 19 iulie 2005 privind reforma în domeniile proprietății şi justiției, precum şi unele măsuri adiacente, Bucureşti, 2005.