

PHOTOGRAMMETRY AND REMOTE SENSING IN THE ROMANIAN SPECIALIZED
TECHNICAL DICTIONARIES

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ABSTRACT: Several technical dictionaries containing geodetic-topographic, photogrammetric-remote sensing, cartographic-mapping, and cadastral terms have been developed by teams of specialists, in Romania. These bilingual, multilingual, and explanatory dictionary outlooks and developments, as well as, the way in which photogrammetry and remote sensing are illustrated in them, are presented in this paper.

The first attempt to prepare and print a specialized technical dictionary in Romania - just a success of those old times - has occurred in 1942, when professor doctor engineer Gheorghe V. Nicolau-Bîrlad published "Dicționar tehnic pentru fotogrammetrie, topografie și cadastru" (The Technical Dictionary for Photogrammetry, Topography and Cadastre). The dictionary was a multilingual one (in German, Romanian, French and Italian languages) and contained 2916 photogrammetric, topographic, geodetic, astronomic, cadastre, and cartographic terms as the author - a Romanian remarkable personality in photogrammetry - had mentioned.

This dictionary was published both as a paper in certain issues of the "Buletin de Fotogrammetrie, Cadastru și Agrimensură" (The Bulletin of Photogrammetry and Cadastre) and an extract. The author's intention to further publish an alphabetical index for each language of the dictionary has not been brought to an end.

During 1976-1987, bodies of specialists have edited six bilingual, multilingual and explanatory dictionaries containing technical terms in various branches, such as: geodetic astronomy, cadastre, mathematical cartography, photogrammetry, photointerpretation, geodesy, geodetic gravimetry, map compilation and editing, remote sensing and topography. These dictionaries can be mentioned chronologically as follows:

1. "Dicționar poliglot de geodezie, fotogrammetrie și cartografie" (The Multilingual Dictionary of Geodesy, Photogrammetry and Cartography). Authors: Mihail Albotă, Dimitrie Filotti, Octavian Molea and Ioan Salariu. This dictionary was published in 1976, in five languages (English, Romanian, German, French and Russian). It will be further mentioned as M (multilingual).

2. "Dicționar de geodezie, fotogrammetrie-teledetectie și cartografie englez-român" (The English-Romanian Dictionary of Geodesy, Photogrammetry-Remote Sensing and Cartography). Authors: Mihail Albotă, Nicolae Zegheru and Paraschiva Suroiu. This bilingual dictionary was published in 1980. It will be further mentioned as ER (English-Romanian).

3. "Dicționar de geodezie, fotogrammetrie-teledetectie și cartografie german-român" (The German-Romanian Dictionary of Geodesy, Photogrammetry-Remote Sensing and Cartography). Authors: Gherasim Marton, Dimitrie Filotti and Dumitru Ghițau. This bilingual dictionary was published in 1980. It will be further mentioned as GR (German-Romanian).

4. "Dicționar de geodezie, topografie, fotogrammetrie și cartografie" (The Dictionary of Geodesy, Topography, Photogrammetry and Cartography). Authors: Mihail Albotă, Mircea Atudorei, Anton Năstase, Mircea Neamțu, Eugeniu Ulea and Nicolae Zegheru. This explanatory dictionary is edited and is to be published in 1988. It will be further mentioned as E (explanatory).

5. "Dicționar de geodezie, fotogrammetrie-teledetectie și cartografie român-german" (The Romanian-German Dictionary of Geodesy, Photogrammetry-Remote Sensing and Cartography). The same authors as for GR. This bilingual dictionary is edited, handed over to the Publishing House and is to be published in 1988. It will be further mentioned as RG (Romanian-German).

6. "Dicționar de geodezie, fotogrammetrie-teledetectie și cartografie român-englez" (The Romanian-English Dictionary of Geodesy, Photogrammetry-Remote Sensing and Cartography). The same authors as for ER. This dictionary undergoes its last editing stage and it may be published in 1989. It will be further mentioned as RE (Romanian-English).

In short, a multilingual dictionary, four bilingual dictionaries and an explanatory dictionary are on the carpet in this paper. Specialists working in educational, scientific researching and technological engineering institutes have edited in cooperation all the above mentioned dictionaries. Just a mention on our specialists intention for editing other bilingual dictionaries, such as: French-Romanian, Romanian-French, Russian-Romanian and Romanian-Russian.

Some data related to these dictionaries and their contents are presented synthetically in Table 1.

All the authors of the above mentioned dictionaries have judged it right to introduce besides the proper specialized technical terms corresponding to the fields of activity mentioned in Table 1, some other terms of the fields of activity kindred to geodesy, such as: photography, geography, hydrology, meteorology, building, geophysics, magnetism a.s.o., as well as, the basic terms from: mathematics, physics, automatics, computing technics, electronics, a.s.o. This requirement has been accomplished in the bilingual dictionaries at a great extent as against the multilingual one.

A large documentary material consisting of: bilingual and multilingual specialized technical dictionaries, treatises, manuals and books, papers presented in various international scientific meetings, and papers published in different specialized periodicals, as well as, available indices of terms and

definitions given in some works were all used to establish the corresponding terms in the above mentioned dictionaries. It is worthy of noting the method used to edit these dictionaries, that is, the proper corresponding terms were preserved not a mere translation from one language into the other one was made, after a thorough selection depending on their importance and frequency in the specialized technical literature considering the large general basic stock of the above mentioned fields of activity.

Table 1

The Specialized Technical Romanian Dictionaries

Dictionary	Type of dictionary	Year of publication	Number of terms					
			Total	Fields of activity				
				Geodesy, astronomy and gravimetry	Topography and topometry	Photogrammetry, photointerpretation and remote sensing	Cartography, map compilation and editing	Cadastr
M	multilingual	1976	4 751	1 490	1 630	1 680	590	160
ER	bilingual	1980	26 200	3 160	2 520	7 250	3 650	290
GR	bilingual	1980	27 000	5 800	3 900	4 980	5 530	720
E	explanatory	1988	1 779	334	473	571	343	58
RG	bilingual	1988	28 600	5 950	3 970	5 100	5 480	800
RE	bilingual		30 000	4 500	3 500	8 500	5 000	500

Proposals and recommendations for terminology made by both various international scientific associations and societies, such as: The International Union of Geodesy and Geophysics, The International Federation of Surveyors, The International Society of Photogrammetry and Remote Sensing, The International Association of Cartography and The Romanian Committee of Photogrammetry and Remote Sensing were taken into account, when a dictionary edition was envisaged. As regards the Romanian terms, they have been considered The Standards of Terminology and Symbols for geodesy, topography, photogrammetry and cartography and the spelling rules of the Spelling Modern Romanian Language Dictionary edited by The Academy of the Socialist Republic of Romania.

In the last time, in Romania, there is a particular concern for scientific and technical publications, among which we can

mention "Manuals of Engineers" for various scientific and technical branches, "The Manual of the Geodetic Engineer" (1973-1974, 3 volumes containing 2150 pages) being one of the first published manuals followed by three types of various multilingual, bilingual and explanatory dictionaries; those listed in Table 1 are some of them.

M dictionary was presented to the XIIIth Congress of The International Society of Photogrammetry (Helsinki, 1976). The English language was the basic language, which together with the other four ones are presented alphabetically as "groups" in the first part of the dictionary. The second part contains four alphabetical indices for the other languages which connect them to the first part, using some order numbers. Thus, the multilingual dictionary is equivalent to twenty bilingual dictionaries. In the first part, there are mentioned 1-4 main specialized fields of activity for the basic geodetic terms. Just one more mention, the specialized terms represent 75 per cent of the whole number, and photogrammetric photointerpretation and remote sensing terms represent 30 per cent of the whole specialized terms.

The bilingual dictionaries are large works, which terms a ranging from about 26,000 (ER) and 30,000 (RE). As we have known, the bilingual dictionaries for geodesy, photogrammetry and cartography published till now in the other foreign countries have not contained more than 11,000 terms. Data listed in Table 1 are for terms of the basic language; values are just informative, because the fields of activity could be subjectively established, each term having 1-3 principal fields of activity, in which it is used. Values for RE are approximate because the dictionary is only in an editing stage.

Although a correlation in editing the two groups, namely ER and RE, GR and RG dictionaries, does not exist, and their terms vary, the photogrammetric, photointerpretation and remote sensing terms as against the total number of the specialized terms represent about 24 per cent (RG) and 43 per cent (ER), the latter ranging from 64 per cent (ER) to 77 per cent (RE) of the all terms contained by the dictionary. On the face of things, there is an impression that terms belonging to kindred and basic branches are in a more great number, but as a matter of fact, their branches have been strictly established considering the proper specialized terms, depending on their importance and frequency in the specialized literature and the present-day activity.

E dictionary, containing fewer terms, is, in fact, an encyclopaedic one; sketches and photographs are included for an illustrative purpose. There are just proper specialized technical terms from the same branches and it contains: methods, instruments and their constituent parts, products and materials, institutes and organizations, national and international personalities, periodicals, a.s.o. Terms used in photogrammetry, photointerpretation and remote sensing represent 32 per cent from the whole number to be found in the dictionary.

Analyzing the six dictionaries mentioned above as regards the proper specialized terms, the average composition of the limited branches can be established, i.e: geodetic astronomy 6 per cent, geodetic gravimetry 2 per cent, common and space geodesy 15 per cent, topography and topometry 16 per cent, photogrammetry and photointerpretation 28 per cent, aerial and space remote sensing 7 per cent, mathematical cartography and map compilation and editing 23 per cent and cadastre 3 per cent.

The ever increasing of the information volume, and technical terminology in a short period of time required these dictionary compilations and editings, thus, facilitating these information and terminology understanding and being a real help for researchers and engineers, technicians and students, translators working in researching, educational, technological engineering, designing or production institutes in various fields of activity, in which geodesy, topography, photogrammetry, remote sensing, cartography and cadastre are investigated and applied.

RÉSUMÉ: En Roumanie ont été élaborés, dans les collectifs de spécialistes, plusieurs dictionnaires comprenant les termes de: géodésie et topographie, photogrammétrie et télédétection, cartographie et édition des cartes, cadastre. On présente la conception et la réalisation de ceux dictionnaires - bilingues, polyglottes et explicatifs - aussi que le mode où la photogrammétrie et la télédétection sont représentées dans leur contenu.

ZUSAMMENFASSUNG: In Rumänien haben Fachmännerkollektive mehrere Wörterbücher ausgearbeitet für Fachwörter der: Geodäsie und Topographie, Photogrammetrie und Fernerkundung, Kartographie und Kartenherstellung und Kataster. Es wird das Konzept und die Realisierung dieser Wörterbücher - zwei-und mehrsprachige und solche mit Erläuterungen - so wie auch die Vertretung der Photogrammetrie und der Fernerkundung in deren Inhalt, präsentiert.