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National Report

THE ROMANIAN COMMITTEE FOR PHOTOGRAMMETRY AND REMOTE SENSING

PHOTOGRAMMETRY AND REMOTE SENSING IN ROMANIA (1976-1980)

During 1976-1980, the photogrammetry and remote sensing have undergone a rapid and permanent development in accordance to the requirements of various scientific, technical and economic fields of activity, aiming at achieving the national development programmes, as well.

During this period of time, the main activity concern is related to efforts made to improve and up-to-date automatic data recording and processing and to enlarge applications of photogrammetry and remote sensing, particularly, in various economic fields of activity.

The Romanian Committee for Photogrammetry and Remote Sensing has contributed to establish trends concerning scientific research activity, to develop proper technology and to educate and train specialists.

The most important achievements of the photogrammetry and remote sensing field of activity during 1976-1980, are further presented, considering the seven technical commissions of the Romanian Committee for Photogrammetry and Remote Sensing.

COMMISSION I: PRIMARY DATA ACQUISITION

Some studies and experiments, concerning aerial camera calibration, the best development conditions, quality improvement of aerial images used in photogrammetry and remote sensing have been made. Colour conventional and infrared aerial photography technologies, proper to our country conditions, have been established. Aerial photography has been largely used to monitor floods. Recurrent aerial photography has been used to study excess moisture lands and the secondary effects of large irrigation and drainage systems.

COMMISSION II: INSTRUMENTATION FOR DATA REDUCTION

Concurrently with analytical equipment endowment of the photogrammetric activity units the automatic data measuring and processing methods have been improved; photogrammetric equipment testing works have been further achieved; studies to establish development rate of the photogrammetric equipment have been carried on; some simple instruments used in topographic map updating have been improved; new instruments to be used in the above mentioned works are underway; experiments regarding the use in production of some plastic and photosensitive materials, to be made in our country, are completed.

COMMISSION III: MATHEMATICAL ANALYSIS OF DATA

Analytical aerial triangulation is mainly used in control network establishment, without exception, in order to compile topographic maps; premarking of points of minor control used in aerial triangulation has been completed; Romanian Felix C-256 computer-assisted programmes used in all photogrammetric activity units have been achieved.

COMMISSION IV: TOPOGRAPHIC AND CARTOGRAPHIC APPLICATIONS

Technological process used in aerial photograph analytical evaluation, aimed at cadastral map compilation, especially in town mapping, has been improved; possibilities to set up integrated systems for aerial photograph evaluation, using analogical and analytical equipment, computer and plotter, to be found in all photogrammetric activity units, are investigated; conversion programmes to transfer data between Felix C - 256 computer and plotter computer have been derived; these programmes are used to call data from geodetic data bank methods to up-to-date topographic and cadastral maps, using aerial photograph evaluation in proper photogrammetric equipment have been achieved; digital terrain models used in land reclamation works have been tested.

COMMISSION V: NON-TOPOGRAPHIC PHOTOGRAMMETRY

Studies to establish methods used to control ground and underground minings, aiming at excavation and heap of debris evaluations to control earth crust movements and their material damages have been achieved; investigations regarding behaviour of buildings, harbour works and transportation in special conditions, using photogrammetric methods, have been carried on; anthropometric studies, using bio-stereophotogrammetry, have been made.

COMMISSION VI: ECONOMIC, PROFESSIONAL AND EDUCATIONAL ASPECTS OF PHOTOGRAMMETRY

Besides secondary and higher education aimed at training specialists, we must mention some training courses for graduated engineers and candidates for a doctor degree's and their theses, applicative researches to set up and introduce new methods, equipment, technologies, products, as well as, to enlarge photogrammetry and especially remote sensing applications are to be emphasized. Books, dictionaries, scientific works, which are the object of the special - subject national bibliography, have been published.

COMMISSION VII: INTERPRETATION OF DATA

Besides studies aimed at improving analogical and visual interpretation methods of aerial photographs and space images, we must mention studies related to apply and set up programmes and technologies used in automatic data processing and classification, employing the existing equipment. So, conventional photogrammetric equipment, Felix C-256 computer, and a plotter have been investigated, in order to process, interpret and

display data automatically.

After studies, researches and experimental works have been accomplished, techniques related to data interpretation have been used in various fields of activity: agriculture, forestry, geology, hydrology, environmental monitoring, archaeology, land uses, topographic and thematic map compilation and updating, a.s.o.

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