SUMMARIES

Sabina Źróbek, Radosław Cellmer, Jan Kuryj: **Land value map as a source of information about local real estate market** • Geodezja • Tom 11 • Zeszyt 1/1• 2005

The objective of this study is to present the principles and methodology of drawing up a land value map, which consists of economic layers, such as a layer of transaction price monitoring, layer of purchaser preferences, layer of uniform value zones. While drawing up the land value maps, special attention was paid to the spatial analysis of the factors which determine the prices and value of a real estate property. Such a study results in drawing up a map which consists of a layer of transaction price monitoring, a layer of purchaser preferences and a layer of uniform value zones.

Keywords: real estate, market, land value map

Andrzej Pokrzywa, Józef Beluch, Józef Mróz, Tadeusz Szczutko: **The measurement of the stability of the sight axis of both theodolite and tacheometer telescopes by means of the laser interferometer** • Geodezja • Tom 11 • Zeszyt 1/1• 2005

The article presents the concept of the application of the Hewlett-Packard intrferential measurnring system in studying stability of the visual axis of the teleskopes. These teleskopes are parts of geodetic instruments that serve for angle measurment. In order to extend the measuring range of the system the authors suggest uniqueconstruction solutions concerning the assembly of the meassuring elements of this system. The recording of readings based on measuring systems of the examined instruments was replaced, in the presented measuring technique, by readings from the interfential measuring system which are far more precise. This allows one to get better accuracy in studying the stability of the visual axis.

Keywords: theodolites, stability of visual axis

Tadeusz Zbigniew Dworak, Beata Hejmanowska, Krystian Pyka: **A bibliography of papers on the subject remote sensing methods for the environmental control published by the authors during the years 1977–2005** • Geodezja • Tom 11 • Zeszyt 1/1• 2005

The article contains the list of 93 papers published by us in the years 1977–2005. The aim of this bibliography is to present whole our knowledge within remote sensing methods for the investigation and control of the environment – natural and anthropogenic.

Keywords: air pollution, monitoring, remote sensing, GIS

Rafał Gawałkiewicz: **Definition of the precision characteristics of selected laser instruments** • Geodezja • Tom 11 • Zeszyt 1/1• 2005

For several years the market of surveying equipment has been dominated by reflectorless laser instruments – telemeters built into tachometers and scanners. They make the instrumental base for many important producers of surveying equipment in the world. In this article, the results of the tests on selected instruments i.e. laser tachometer TCR 303 – Leica and first in Po-

land panoramic scanner Callidus – German firm Callidus Precision Systems GmbH, Halle are presented. Given in the article results of the carried out experiments allow more detail characteristic of the precision of tested instruments in terms of the accuracy in the measurement of the distance up to 32 m. They also give the answer, regarding the orientation of Callidus scanner in the relation to the selected reference prisms, which has a significant influence on the accuracy of the combination of individual scanning images into one image. The accurate analysis confirms the possibility of applying parameters in orientation (lengths and directions for a bigger number of prisms) obtained in the scanning of reflectors, which in practice, allows the definition of the situation of a scanner in space, with a great precision and without the use of angle-measuring auxiliary instruments in the process of the reference of scanning observations referring to the points of the measuring base.

Keywords: laser scanning

Mariusz Frukacz: **The influence of the method of determination of a calibrating correction of measured high difference** • Geodezja • Tom 11 • Zeszyt 1/1• 2004

In this paper, the author presents the methdos of determination of a calibrating correction of the precise leveling results. The purpose of the statistical experiment which was carried out, was to generate randomly the results of levelling as well as determine the calibrating corrections in four ways. It was observed that different ways of calculating this correction may cause the occurrence of systematical errors. The values of other corrections, for example correction for refraction, in this experiment was calculated for comparison.

Keywords: calibration, levelling rods, laser interferometry, calibrating correction, precise levelling

Jan Gmyrek: **Network influence on setting out accuracy by free station method** • Geodezja • Tom 11 • Zeszyt 1/1• 2005

The paper presents analysis of network influence on accuracy of setting out by a free station method. As accuracy parameters of setting out the mean errors of side lengths and directions, the mean errors of angles and the mean errors of positioning points were assumed. On the basis of analysis one can say that network accuracy does not influence on the accuracy of setting out of side lengths and angles. Network accuracy influences on the accuracy of setting out of directions. The influence is equal with the mean error of connecting direction. The network also influences on the mean errors of positioning points. In examine cases the influence is two times greater then the errors of setting out.

Keywords: free station

Józef Jachimski, Sławomir Mikrut, Michał Majewski: **The structure of the data base for Multilingual, Interdisciplinary Dictionary and Glossary of Terms for Geoinformatics of the Polish Academy of Science and Arts** • Geodezja • Tom 11 • Zeszyt 1/1• 2005

Commission for Geoinformatics of the Polish Academy of Science and Arts (KG PAU) in Krakow, has been formed in 1998. That commission gathers scientists of many disciplines, such as geology, geophysics, environmental engineering and protection, mining, surveying and geodesy, geography, cartography, GIS, and, of course, photogrammetry and remote sensing and computer sciences (informatics). All that specialists, devoting their special interest to geoinformatics, found out, just at the very beginning of their cooperation, that they do not speak the same technical and scientific language concerning geoinformatics. Finally that was decided to work out a dictionary, which could help people of geoinformatics from various disciplines to use the identical vocabulary.

The work is split to thematic teams, which, working independently, but in a contact with each other, build a final product: The Multilingual, Interdisciplinary Terminological Dictionary for Geoinformatics, a very important project of the KG PAU. The Dictionary will be build up in the open formulae, using internet. All the work stages will be public, available on the www pages. To the editorial process will be admitted also volunteers, who, under care and in cooperation with the responsible editors will help to build the dictionary data base. The internet program for editing the Dictionary, in an experimental version, is available for use. We hope to have our dictionary data base soon filled with new entries, definitions, and longer descriptions of many terms used in geoinformatics.

Keywords: terminology, geoinformatics, photogrammetry, remote sensing, internet, Polish Academy of Sciences and Arts

Anita Kwartnik: **Documentation of delimitation of a real estate property connected with legal regulations of the ground** • Geodezja • Tom 11 • Zeszyt 1/1• 2004

The paper presents an analysis of geodetic-legal regulations connected with the delimitation of a real estate, in the light of documentation arising in this process. This documentation is included in the national geodetic and cartographical resources, which are the basics of title boundary reestablishment. The paper deals with present legal bases, since 1946, of the proceedings of ground real estate delimitation, composition of documentation, arising from this process, and changes with the administration responsible for this delimitation.

Keywords: delimitation, title boundary reestablishment

Małgorzata Renigier, Ryszard Źróbek: **Model of the residual and innovations on property market** • Geodezja • Tom 11 • Zeszyt 1/1• 2005

Wide by comprehended computerization and continually growing value of information in aspiration for creating modern "informative economy" as well as the advanced computer techniques enable larger systematizing and unifications of economic and social processes, often presented in the form of the advanced the statistical and mathematical models. Recognizing of the economical and mathematical modeling as advanced tool supporting the creating and verification of analyzed processes, in present study was introduced the use of the residual from the value analysis models in spatial conception. Was presented also the example of the geostatistical, non-linear model and linear built for olsztyńskiego land property market from 1997 to 2003.

Keywords: residual from the geostatistical model, spatial innovation, non-linear model, linear model

Jan Ruchel: **Taxation of market value of real estate limited rights** • Geodezja • Tom 11 • Zeszyt 1/1• 2005

In the paper, formulas and numerical examples of real estate market value, for which legal limitations are assigned, have been shown.

Investigations have been done for perpetual use, and therefore periods of 45 and 99 years of laying down perpetual use have been considered. Then, observing of real estate market value of limited rights has been examined. Formulas for taxations of real estate market value has been shown, as an object of perpetual use or lease or tenancy.

Keywords: taxation, market value, limited rights

Barbara Ruchlewicz: **Analysis of legal acts concerning proceedings of restitution of expropriated property** • Geodezja • Tom 11 • Zeszyt 1/1• 2005

The purpose of this article is to analyze administrative proceedings in the cases of restitution of expropriated property in view of the current interpretation of several legal acts. The rapid increase in the number of cases concerning the restitution of expropriated property is related to the Poland's forthcoming entrance in the structures of the European Union. It is connected with the Polish society's increasing awareness of the value of property. The article does not only review the currently binding regulations of the Property Management Act and the Administrative Procedure Code, but also the abrogated regulations which where the legal basis for the expropriation or seizure of property and which now give a subject the right to claim its restitution. During administrative proceedings both geodetic and legal problems arise, the solving of which is essential for the effectiveness of administrative proceedings. The article is a detailed study of the subsequent stages that may be distinguished in the proceedings of the restitution of expropriated property. In particular, it is mainly concerned with the determination of the subject entitled to claim the restitution, the determination of the object of proceedings and the determination of the premises qualifying the property as inessential for the purpose specified in the decision of expropriation. Theses presented in the article are supported with various judicial decisions of the Supreme Court and Supreme Administrative Court.

Keywords: expropriation, restitution of property, purpose of expropriation, inessentiality of property

Marian Sołtys: **Determination of depth of underground structures with the radar method** • Geodezja • Tom 11 • Zeszyt 1/1• 2005

The paper discusses essential factors influencing the range of depth determination with GPR, including instrument features and chosen parameters of penetrated medium. Interrelations between instrument factors and measurement parameters pertained to: antenna frequency, size and depth of the object to be located, sampling frequency, time window selection and velocity of electromagnetic waves in the penetrated ground. Geometric principles of depth determination are presented and accuracy of processed radargrams is assessed.

Keywords: Ground Penetrating Radar, depth, radargram