

SUMMARIES

Radosław Cellmer: **Spatial Analysis of the Effect of Noise on the Prices and Value of Residential Real Estates** • Geomatics and Environmental Engineering 2011, Vol. 5, No. 4

This paper presents the methodology and the results of spatial analyses investigating the impact of noise on the prices of residential real estate with the involvement of GIS tools. The impact of noise on real estate prices in the analyzed area was evaluated by analyses of variance and regression. A map indicating the strength of noise effects was generated with the use of the Geographically Weighted Regression (GWR) technique. Kriging and cokriging interpolation was used to generate a map of housing price distribution where noise intensity was input as an additional variable.

Keywords: real estate valuation, noise, spatial analysis, geostatistics

Ryszard Hycner, Jan Ruchel: **Free Software Applied in Surveying Computations** • Geomatics and Environmental Engineering 2011, Vol. 5, No. 4

This paper is of review kind. On the basis of internet sources, accessibility and possibilities of software to surveying computations with special attention to free software. It has also been presented analysis of possibility of such software, especially from the point of view accessible functions, useful for surveyor's environment.

Application of analysed programmes depends on size and specialty of surveying enterprise. It is also essential a region where surveying enterprise is located. Yet, the most important factor influencing on universality of programme is its price.

Non commercial programmes almost don't exist and these which are on the market have limited possibilities. Usually they are single product, being often results of students diploma projects. Usually they are not entirely free of charge, since they force using the other, commercial payable software or hardware of a definite firm. One can generally say, that there is lack of significant non commercial programme, serving for surveying computations in Poland, belonging to free and open software.

Thus, one can assume, that good, friendly in use and possible versatile but comprises fundamental range of surveying computation programme, would win many users.

Keywords: surveying computations, adjustment of surveying networks, computer programmes, licences for software, free software

Jacek Kudrys, Robert Krzyżek: **Analysis of Coordinates Time Series Obtained Using the NAWGEO Service of the ASG-EUPOS System** • Geomatics and Environmental Engineering 2011, Vol. 5, No. 4

The NAWGEO service of the ASG-EUPOS system is practically the most often used by geodesists. The accuracies of determining coordinates using the NAWGEO service as declared on ASG-EUPOS internet pages are 3 cm horizontally and 5 cm vertically. In this work, on the basis of conducted measuring tests executed in optimal conditions, the authors verify the capabilities for determining point coordinates with a given accuracy depending on the method of measurement and the type of corrections used. The presented results confirm the capability for obtaining high accuracies of determined coordinates in case of optimal measuring conditions. In the case of unfavorable measuring conditions, the achieved accuracy (repeatability) of determining coordinates is significantly worse.

Keywords: ASG-EUPOS, NAWGEO service, RTK GPS

Krzysztof Naus: **Accuracy in Fixing Ship's Positions by CCD Camera Survey of Horizontal Angles** • Geomatics and Environmental Engineering 2011, Vol. 5, No. 4

The article describes a study to assess the accuracy determining the position coordinates of the ship based on measurements horizontal angle made optical CCD (Charge Coupled Device) camera.

In the first part of paper describes the method of calculating the measurement mean errors and the field figure mean errors of position coordinates delineated from two or more horizontal angles. There have been defined three software applications assigned for preparation of navigational sea charts with accuracy areas mapped on (map distributions of accuracy).

The second part presents, in the form of maps distributions of accuracy, results of the study's Rolleiflex camera. This study was conducted in based on the theoretical measurements, carried out the geometric structure formed by the constant measurement, optical navigational marks located on the Gulf of Gdańsk.

In the final part, based on the results of research conducted discussion on evaluating the suitability of CCD cameras to determine the ship's position coordinates with the International Maritime Organization.

Keywords: coastal navigation, position accuracy, camera survey of angle

Piotr Parzych: **Modelling of Urban Estates' Values • Geomatics and Environmental Engineering 2011, Vol. 5, No. 4**

The urban estates are particular components of ground property. The urban estates are characterized by the ground components of great complication. Urbanized estates may be of following type: urban grounds, commercial premises, office buildings, welfare buildings, industrial buildings, warehouse buildings and small buildings of some type.

Transactions including urban estates are not very common at the real estates' market. However, if a transaction takes place, all components of the estate have an influence on the transaction price. The application of such transaction prices for the valuation of similar estates is very complicated, for estates' components structure is highly differentiated and it is not possible to establish estates' representative reference unit.

The algorithm enabling the sold industrial estates unit elements' and transaction prices comparative analysis with elements of valued urban estates will be presented in this paper. This algorithm is based on statistical modelling. Its result is the urban estates' market value estimation.

Keywords: urban estates, real estates' valuation, statistical methods

Dorota Przewoźnik: **Fulfilment of the Recovery and Recycling Obligations by Entrepreneurs in Podkarpackie Province • Geomatics and Environmental Engineering 2011, Vol. 5, No. 4**

The article presents binding legal regulations governing entrepreneurs' obligations as regards recovery and recycling of packaging and post-use waste. It shows fee rates, recovery and recycling levels for packaging in the years 2007–2009. It gives examples of calculating the product fee that according to the Act must be paid by entrepreneurs for 2007, 2008 and 2009. The author of the article elaborates on regulations that must be complied with by the entrepreneurs who pack products and place them on the market. Furthermore, the article shows how the obligations imposed by the Act on obligations of the entrepreneurs as regards management of certain waste and on product fee are met in Podkarpackie Province.

Keywords: product fee, recovery and recycling of packaging and post-use waste, packaging, recovery organisations

Jan Ruchel, Tomasz Adamczyk: **Application MS Access for Surveying Computations • Geomatics and Environmental Engineering 2011, Vol. 5, No. 4**

The paper presents a method of building a complementary computer application for the Surveying Database program, capable of executing various surveying computations. The application uses for the

computations data stored in the Database, especially the points' coordinates. The computations can be also executed for any coordinates entered manually into proper forms of the application.

The method presented application the database management system of MS Access, which allows to fulfill individual needs in computations, control and display of the results. The coordinates gained in the computations can be automatically added to the Database resources.

Keywords: surveying computations, Visual Basic for Applications, MS Access, computer applications