

PREPROCESSING OF SATELLITE TRAJECTORY MEASUREMENTS

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The program for preparing initial measuring data to be processed by the dynamic method of satellite geodesy is described.

Key words: trajectory observation data processing, format transformation.

ESTIMATION OF THE ISOCHRONOUS DERIVATIVE MATRIX RELATIVE ERROR

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Various methods of calculation of a matrix private derivatives are considered and the estimation of their relative mistakes for several kinds of orbits of space satellite is executed.

Key words: dynamic system, measuring problem, space satellite, private derivatives.

TWO THEOREMS OF THE RELATIONSHIP BETWEEN THE ADJUSTED MEASUREMENTS DISPERSIONS, THOSE OF THE LEAST-SQUARES CORRECTIONS AND OF THE INITIAL MEASUREMENTS

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Two theorems are being proved: one of the relationship between the optimized (adjusted) measurements values dispersions and those of measured values, the other deals with the relationship

between the dispersions of the least- squares corrections to measurements and those of the same measurements.

Key words: optimized (adjusted) measurements values, the least- squares corrections to measurements.

EVALUATION OF REFRACTIVE INDEX PRECISION DETERMINATION FOR RANGE-FINDER (ED)MEASUREMENTS THROUGH DISPERSION METHOD

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In connection with change of formulas for correct definition of an indicator of refraction of light in troposphere in the given work more rigid requirements to accuracy of measurement of a difference of a course of optical beams of various lengths of waves of light in a dispersive method of definition of average value of refraction of atmosphere are formulated.

Keywords: dispersing atmosphere, a difference of a course of beams, group speed.

«GEOMETRICAL» AND «GEOPHYSICAL» IN GEODESY

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The article is devoted to the problem of content and correlation of geometrical and geophysical knowledge, its subject and object components and the role of such knowledge in the formation of its modern objectives.

Key words: geodesy, orientation, space geometry, geophysical principles.

GIS DATAWARE MONITORING OF RURAL LAND FOR AGRICULTURAL USE

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Different ways of improving GIS dataware for agricultural lands monitoring are described.

Key words: land monitoring, agricultural land, gis software.

REALIZATION OF «COMMON WINDOW» PRINCIPLE IN THE SYSTEM OF STATE CADASTRE REGISTRATION AND STATE REGISTRATION ON REAL ESTATE RIGHTS (THE EXAMPLE – NOVOSIBIRSK REGION)

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The article is dedicated to the analyze of practical experience in organization of cooperation between cadastral and land register authorities in Novosibirsk region on the principle of “One Window”.

Key words: cadastre, registration, «common window»

METHODOLOGICAL BASIS FOR FORMALIZATION OF THEMATIC MAP-MAKING PROCESSES FOR INFORMATION-AND-REFERENCE ANALYTICAL GIS IMPLEMENTATION

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Methodological basis for formalization of thematic map-making processes in GIS-environment, involving precise step-by-step description of the processes is considered. The principles of thematic map-making processes formalization are offered. The flowchart, including a number of steps to be sequentially implemented, permits solving routine problems of information-and-reference analytical (IRA) GIS. In accordance with the offered list of formalized routine problems classification of the thematic maps made for IRA GIS is presented. The user actions in solving both administrative-and-managerial and scientific-and-reference problems by means of IRA GIS are also determined.

Key words: thematic maps, formalization, representation methods, GIS.

**SYSTEM MAPPING OF NOVOSIBIRSK ECOLOGICAL SITUATION:
EXPERIENCE AND RESULTS**

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The problem of making ecological maps series of Novosibirsk territory is considered. The prospects for future practical use of the work results are shown.

Key words: environment, ecological map.

INTERACTIVE MAP PRINCIPLES DESCRIPTION

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In article provides conception of interactive map. Also there are main terms, connected with interactive map and description of structure and development instruments.

Key words: interactive, map, structure, development tools.

MODELING IN APPLIED GEOINFORMATICS

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Applied geoinformatics is concerned with the investigation of different processes on the Earth. Its methods are used for predicting and assessing risks of these processes effects, as well as the development of efficient methods for their control, with mathematical simulation being the basic tool for it. Typical examples of simulation in geoinformatics are many of the models in astronomy (Solar System models), geophysics (internal structure of the Earth), geodesy (Earth figure models), applied geodesy (time-space condition of natural and artificial systems), cartography (map as a model of the Earth surface) and others.

Key words: geoinformatics, geoinformation field, mathematical model.

POSSIBILITIES OF INFORMATION-ANALYTICAL GIS FOR NON-PROFESSIONAL USERS TO WORK WITH GEOSPATIAL INFORMATION

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One of the characteristics of modern technological progress is constantly increasing complexity of technical devices and software. On the one hand it gives us a large number of tools for solving many problems, on the other - we see the unavailability of new technology for most users, who can not use them because of their complexity. This contradiction is not spared, and the scope of geo-graphic information systems.

Key words: geoinformational systems, information-analytical GIS, spatial information, non-professional users, classification.

MOBILE GIS IN OIL-GAS FIELD

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The article describes the possibilities of mobile GISs, conformably to oil-gas complex units reveals the concept, being the basis of such systems and their application.

Key words: GIS, oil-gas complex, information systems, mobile GIS, mobile device, operational system, tablet computer, data transmission, mobile platform, GPS, monitoring

CALORIMETRIC DEVICE STANDARD FOR HEAT FLUX SENSORS CALIBRATION

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The teplometrical measuring installation allowing to investigate radiatsionno-convective method is developed. Results of checking of the new high-temperature heat flux sensors are resulted.

Key words: specific heat flow, verification, heat flux sensors, radiatsionno-convective method.

SNIIM – SSGA – IN THE INTERNATIONAL PROJECT EOPCPPP (EARTH ORINTATION PARAMETERS COMBINATION OF PREDICTION PILOT PROJECT)

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Article is devoted to the problems of predicting Earth rotation parameters and the results obtained for the 9-month period, the participation of the Siberian Institute of meth-meteorology (SNIIM) and the Siberian State Academy of Geodesy (SSGA) in an experimental international pilot project EOPCPPP.

Key words: Earth rotation, polar motion, forecasting, trend changes, the harmonic model, autoregression, estimation UPC, the international project comparison.

METHODOLOGICAL BASIC OF SOCIAL SIGNIFICANCE OF OIL EXTRACTION FIELD EVALUATION

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The level of the social weight of oil-extracting branch is defined by means of differential of participation. The level of the social weight influences quality and a standard of living of the population of territory which are defined as social effect. Definition of social effect assumes the account of direct and indirect receipts of the population. Direct receipts it is incomes of the population received from the economic operator (wages and dividends). Indirect receipts it is the goods received by the population from the state bodies.

Key words: the social weight, oil-extracting branch, the goods, the social responsibility, standard of living, quality of a life.

THE PROBLEM GOST R ISO 14000 CERTIFICATES ACCEPTANCE ABROAD: CAUSES AND SOLUTIONS

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The problem of GOST R ISO 14000 certificates acceptance abroad, its causes and ways of solving.

Key words: environmental management system (EMS), certification of environmental management systems, GOST R ISO 14000, ISO 14000.

30-TH ANNIVERSARY OF THE RUSSIAN LANGUAGE DEPARTMENT AS A CENTRE FOR TRAINING FOREIGN STUDENTS AND POST-GRADUATES

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Article reflects the main stages of formation and development of the department in the field of Russian language taught as a foreign language during the years of its existence.

Key words: department, russian as a foreign language, students, communication, culture, traditions.

SIBERIAN HIGHER SCHOOL OF GEODESY UNDER THE CONDITIONS OF SCIENTIFIC-AND-TECHNICAL REVOLUTION (1965–1985)

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The objectives and the results of training specialists in geodesy for the development of the country's east regions are considered. Most of the manpower requirements have been met by Novosibirsk institute of engineers of geodesy, aerial photographic surveying and cartography (now Siberian State Academy of Geodesy).

Key words: Higher school of geodesy, Novosibirsk institute of engineers of geodesy, aerial photographic surveying and cartography, research-and-teachers staff, space technologies, scientific-and-technical revolution, computerization, optical instruments and systems.

METHODOLOGY OF GIVING LECTURES USING MULTIMEDIA PROJECTOR AND «DIALOGUE» BOARD

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Some peculiarities and advantages of applying multimedia presentations in educational process are analysed. It is proved, that new tools of conducting classes enable a lecturer to use much more teaching materials during the academic hour and pay attention to some specific parts of the lecture in detail. The combination of multimedia lectures with the lectures outlines given to the students beforehand (on the eve) enable the lecturer to involve students more actively into discussion of some complicated parts of the material under consideration and if it's necessary to revise some of the previous subjects at the expense of the released time.

Key words: multimedia, multimedia presentation, multimedia projector, multimedia teaching technology, multimedia methods of education.