

Electronic Earth as Methodology and Technology of Our Time

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ABSTRACT

Today, at the boundary of millennia, the Electronic Earth appears as the prior direction of scientific and technical progress. Its goal is the cartographic representation of the real world and creation of the global computer model of the Earth, comprised of millions of space images and electronic maps of various subjects and scales, themes and also reference information. This fundamental problem can be solved by cartographers from different countries, who should meet the 21 century as partners, possessing new ideas, courage and intellectual technologies for creating and application of maps.

In order to implement the main statements the Electronic Earth we solve the following methodological and technological tasks:

- Investigation and generalization of the international experience in Earth mapping and application of geospatial data;
- Development of cartographic thinking, revelation and exploration of objective regularities and features of Earth mapping, formulation of principles of the Electronic Earth on this base;
- Investigation and elaboration of the concepts, intellectual methods and technologies of acquisition, integration, analysis, processing, modeling, displaying of electronic maps, 3D images (3D cadastres), dynamic cartographic models;
- Development of basic categories and notions, international and national standards in the area of the Electronic Earth;
- Creation of the International Earth Knowledge Management System, Global Base of Metadata and Banks of Geospatial Data, telecommunication networks;
- Development and implementation of high-skilled expert cartographic systems and GIS of various intent;
- Increasing professional skill level of the personnel in the area of GIS and intellectual technologies at all educational levels;
- Revelation of contradictions in the area of the Electronic Earth, determination of directions of its evolution, elaboration of the criteria and methods for evaluation of the effectiveness of the new technologies;
- Development and implementation of the international cooperation programs in the area of the Electronic Earth including participation of governmental and private cartographic enterprises of different countries.

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