

IAF SYMPOSIUM ON INTEGRATED APPLICATIONS (B5)
Tools and Technology in Support of Integrated Applications (1)

Author: Dr. Sevda R. Ibrahimova
National Aviation Academy - Azerbaijan, Azerbaijan, s_ibrahimova@yahoo.com

CREATION INTEGRATE AND DIGITAL PROCESSING SYSTEM FOR INTELLEAGENT CONTROL
OF AZERSPACE SATELLITE INFORMATION

Abstract

Azerbaijan possesses satellites such as AzerSpace and AzerSky and has access to various satellite systems, i.e. the volume of data arriving from satellites is increasing immeasurably. The key to the effective use of these satellite data is an infrastructure for storing, searching and providing them on the basis of their structured descriptions - metadata. The metadata catalog allows users to search for satellite data, display search results on the map, to analyze images for previewing. During the search it is possible to specify in the metadata the necessary set of satellites and sensors, as well as to set temporal and spatial characteristics of images. Modern aerospace information management systems are based on the construction of satellite systems with spatial and temporal characteristics. For this purpose, data models based on the construction of dynamic human-machine interfaces are developed and a software infrastructure based on the management of distributed systems is created to organize and analyze the results of information processing from aerospace systems, which can be integrated into various systems on different parameters. Analysis of satellite data increases the efficiency of its transfer to the knowledge base. Data from various satellite systems are currently used in Azerbaijan. Therefore, the growing demand for satellite data can be satisfied only through the use of automated processing systems. The increase in the volume of analyzed satellite data necessitates the use of multithreaded processing systems based on computing clusters. Multidimensional information is processed in various applications of satellite data, such as study of natural resources, operational assessment of natural processes. The metadata for the Azerbaijani segment should be close to the international level in this area and meet the interests of organizations that are users of geospatial data.