

## Datasheet of the IKTA3/010 project

### I. Examination of high resolution image processing and GIS service system

Project start: October 1, 2000, duration: 17 months.

Amount of support: KHUF 23 400, total project cost: KHUF 46 800.

Project leader: **Csornai Gábor**

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Project URL: <>

### II. Consortium members (number of members = 1, the first member is the project co-ordinator)

no	name	support	total cost
1.	Institute of Geodesy, Cartography and Remote Sensing, Remote Sensing Centre	KHUF 23 400	KHUF 46 800

### III. Public presentations

Presentation #1 (28-január-2001): HTML (8 KB)

The presentations are accessible through a special webpage summarizing the project presentations.

### IV. Goals of the project

The main objective is to develop efficient preprocessing and temporal-spectral data integration methods for high resolution digital image data (aerial photos and high resolution multispectral satellite images). The result of the integration methods is a new data system, which has better technical features, than the original image components. - Remote sensing imagery suitable for the identification of landscape objects can be obtained in different types and quality levels in terms of satellite platforms, sensor types and image qualities. The satellite data used in the KEPI-2000 project are: aerial photographs with high geometric, cartographic accuracy (< 1 m) obtained from the "Aerial Photographic Survey of Hungary 2000" project, high resolution multispectral and panchromatic satellite data (Landsat 5 TM, Landsat 7 ETM+, IRS-1C/1D LISS-III. and PAN) and super resolution (4m and 1m) multispectral and panchromatic satellite data (IKONOS). - The main objective of the project, the fusion and contents integration of remote sensing images obtained from different data sources with different parameters, is actually very important task and requires innovative R+D activities in several fields. In addition to achieve better geometric accuracy in rectifying large number and more increasingly available satellite images, the planned method enables to enhance the spatially accurate but spectrally restricted aerial photographs with the rich spectral and temporal attributes of the satellite images. The utilisation of the generated new database enables a more efficient identification of land surface objects at the level of agricultural fields or within the parcels (0,01-0,001 ha), that is specific for crop development in terms of spectral and temporal resolutions. The utilization of the resulted new data system is very complex (crop growth monitoring, mapping of land use and natural vegetation, disaster prevention, etc.). - In the frame of the R&D project (August, 2000 - December, 2001) the main tasks were the selection and processing of remote sensing (and cartographic) data systems for two representative sample sites (one on flat, one on hilly area), the effective preprocessing of image data (aerial photographs, satellite data) having different spatial, spectral and temporal resolution, the examination and application of the data fusion and integration methods and the evaluation of achieved results in terms of potential application fields. The project ends in December, 2001 when the technical documentation will be prepared containing the system and results of the implemented methodological surveys.

The abstract of the project – PDF (12 KB) – is available via the webpage summarizing the basic project data.

**V. Project results** (in case of finished projects)

The project is not finished.

**VI. Data on consortium members** (number of members = 1)

1. *Institute of Geodesy, Cartography and Remote Sensing, Remote Sensing Centre* (co-ordinator)

URL: <>

Support for the co-ordinator: KHUF 23 400, and its total cost: KHUF 46 800.

Contract number: OMFB-02306/2000.

Team leader: **Csornai Gábor**

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