



# IMAGE MEDIA CENTER

## functional features:

1. Open, visualize, modify, save raster data, which supports geospatial information.
2. Image with different data types, such as 8-bit, 16-bit, 32-bit, floating point, and complex.
3. Various color spaces (RGB, CMYK, Lab, HLS, HSB).
4. Work with geographic information:
  - a. Georeferencing based on the reference points using various transformation algorithms (polynomial, rubber-sheeting, etc.).
  - b. Changing vector and raster data map projection.
  - c. Performing measurements of ground objects in geographic units.
5. Optical data processing and analysis:
  - a. Processing of the whole image or selected fragment.
  - b. Visual characteristics improvement, color and hue correction, noise elimination, resolution improvement.
  - c. Work and visualize multispectral and hyperspectral data.
  - d. Atmospheric correction for minimizing the effect of atmosphere on the brightness values of land surface objects.
  - e. Calculation and analysis of well-known (such as NDVI, NBR, NDWI, etc.) and custom indices.
  - f. Clustering, unsupervised k-means classification.
  - g. Supervised classification, creation of sets of references.
  - h. Spectral analysis.
  - i. Texture analysis for objects detection on panchromatic images.
  - j. Detection of land surface objects based on their geometrical features (structure analysis).
  - k. Pin-point editing.
6. Save the results in popular raster file formats.
7. Open, visualize, modify, save vector data, which supports geospatial information.
8. Creation and editing of simple and complex vector objects.

9. Creation, filling, editing of attribute data tables and databases.
10. Database inquiries (SQL), search for vector objects by the specific parameters.
11. Vector objects display styles adjustment: common style for all vector objects of the layer, or for individual vector objects based on their attributive information.
12. Vector objects classifier which allows to create, store, and apply styles to vector objects based on their attributive information and map scale factor.
13. Geospatial analysis of vector objects, generalization, topology check to detect geometrical errors.
14. Vector layer georeferencing.
15. Save the results in popular vector file formats.
16. WMS, WFS data visualization within workspace.
17. Layers visualization depending on a scale factor for optimization of visualization and processing.
18. Tools for layers comparison which allow to set transparency to required areas.
19. Map design elements (compass, coordinate grid, scale, etc.), legend, graphs, diagrams.
20. Actions history, possibility to undo or redo an action.
21. Detailed view window, convenient window management.
22. Possibility to store the whole project in a single workspace.
23. Intuitively understandable, customizable and convenient user interface.
24. Creation of macros (recorded image processing actions sequence).
25. Background data processing mode.
26. Integration with external databases (texture, spectrograms, etc.).
27. Development of external application modules.

