SuperMap iDesktop Introduction

SuperMap iDesktop is an enterprise desktop GIS application and development platform which can efficiently perform various GIS operations like data conversion, data processing, analyzing, 2D & 3D mapping, layout designing, map publishing, etc. Your own desktop GIS application platform can be built with SuperMap iDesktop with customization and extension development functions. SuperMap iDesktop is a plug-in GIS application built based on SuperMap iObjects. .NET, desktop core libraries and .NET Framework 4.0. There are x64 (64 bit) and x86 (32 bit) packages available for SuperMap iDesktop.

Who Needs SuperMap iDesktop?
- Personnel involved with spatial data producing and processing;
- Personnel involved with spatial data analyzing;
- Personnel involved with custom application development.

Main Functions of SuperMap iDesktop

- Multi-language
  - The storage of workspace, data and symbol uses Unicode. The same data supports multi-language and automatic display.

- Data management function
  - Provides workspace management, datasource management, dataset management;
  - Provides functions of creating, editing, managing, accessing spatial data and other attribute data.
  - Supports multiple data engines, like SQL, Oracle, Oracle Spatial, PostgreSQL, DB2, MySQL, etc. Also supports directly opening ArcSDE data; Supports directly opening Web data, like WMS, WFS, WMTS, iServer REST, SuperMapCloud, GoogleMap, Baidu Map, OpenStreetMaps, etc; Supports direct access to Shp, mif, dxf, dwg files, etc.

- Data conversion and processing function
  - Provides data conversion among SuperMap data and other GIS, CAD data formats, supporting more than 50 data formats;
  - Provides rich data processing functions, like data merging, row appending, column appending and reclassifying;
  - Provides topology functions like topology checking, network by topology, polygon by topology, line topology validating, etc.;
  - Provides function of nautical map cache creating, supporting storing into MongoDB, GeoPackage;
  - Supports creating 3D cache for nautical image, terrain, model, storing cache results into MongoDB and encrypting;

- Objects drawing and editing function
  - Provides multiple object drawing functions, including point, line, polygon, text drawing;
  - Provides multiple object editing functions like trimming, extending, breaking, moving, etc.;
  - Supports parameterized accurate drawing function;
• Spatial and attribute data query function
  ▶ Provides query functions of SQL query, spatial query, attribute query, etc.;
• Spatial analysis function
  ▶ Supports parallel computing, GPU computing, big memory mode, greatly improved
    analysis performance;
  ▶ Provides vector analysis functions like buffer analysis, overlay analysis, dynamic
    segmentation, etc.;
  ▶ Provides spatial analysis functions like kernel density analysis, thiessen polygons,
    distance measurement, etc.;
  ▶ Provides surface analysis functions like extracting Isoline/contour surface, slope and
    aspect, excavation and filling, etc.;
  ▶ Provides raster analysis functions like sun radiation analysis, DEM curvature calculation,
    interpolation, hydrological analysis, raster statistics, etc.;
  ▶ Provides traffic network analysis functions like optimal path analysis, TSP analysis,
    logistics and distribution, service area analysis, location-allocation, closest facility
    finding, key factor analyzing, etc.;
  ▶ Provides facility network analysis functions like tracking analysis, accessibility analysis,
    etc.
• Map creating function
  ▶ Provides comprehensive map display, rendering, editing and output functions;
  ▶ Provides functions like thematic mapping, including label maps, graph maps, ranges
    maps, dot density maps, etc.;
  ▶ Provides rich symbol resources and easy-to-use symbol library manager;
• 3D scenes
  ▶ Supports loading and viewing large detailed model, stretch model, large image data (10
    million level quick model building, 10 million KM² detailed model);
  ▶ Supports planar and spherical scenes;
  ▶ Supports underground scene displaying and surface excavating;
  ▶ Supports particle effect, simulating some abstract effects like frame, fog, fountain,
    explosion, firework, rain, snow in the scenes;
  ▶ Supports 3D water surface effect, providing 3D surface symbol.
• 2D & 3D integration of data, displaying, querying, analyzing
  ▶ Supports 2D and 3D integration of data, the same data can be displayed, processed or
    analyzed in 2D or 3D mode. There is no need to switch between different software;
  ▶ Supports 3D displaying for 2D data;
  ▶ Supports 3D stretch and quick model building for 2D polygons;
  ▶ Supports direct projection of 2D map into 3D scene;
  ▶ Supports making 3D unique value maps, ranges maps and label maps;
  ▶ Supports querying the location, height of arbitrary points and querying the attribute
    information of arbitrary objects.
• Real-time dynamic display of 3D analysis function
  ▶ Supports 3D analysis functions like visibility analysis, slope and aspect analysis,
    viewshed analysis, skyline analysis;
  ▶ Supports 3D network analysis functions like pipe burst analysis, key facility analysis,
single factor analysis, etc.

- Fully supports 3D oblique photography modelling data
  - Supports directly loading OSGB data by loading model data index file, with no need to convert data;
  - Supports displaying OSGB modelling data with arbitrary tile type;
  - Supports effective loading and displaying large OGSB modeling data;
  - OSGB data can be combined with vector polygon data to realize the operations of highlight of selected object, attribute query, spatial query, buffer analysis, etc.:
  - Supports flattening chosen area and excavating selected area;
  - Supports storing OSGB data into MongoDB database and encryption.

- Supports storing, displaying and publishing nautical map data
  - Supports nautical data conversion function based on latest IHO S-57 digital nautical data transmitting standard;
  - Supports importing S-57 nautical data;
  - Standard display of nautical map based on IHO S-52;
  - Supports integrated display of sea and land, displaying and publishing of real 3D nautical map;
  - Supports displaying control of object elements of nautical map; Supports attribute information editing function.

- Custom, extensible desktop
  - Supports customizing existing software interface or developing a new one;
  - SuperMap iDesktop is a plugin desktop, users can develop, customize, and extend existing plugins;
  - Provides rich templates for plugin extension development, integrating iDesktop toolbox in IDE.