



SuperMap Software Co., Ltd.

# SuperMap iObjects .NET Development Basics

SuperMap Software Co., Ltd.

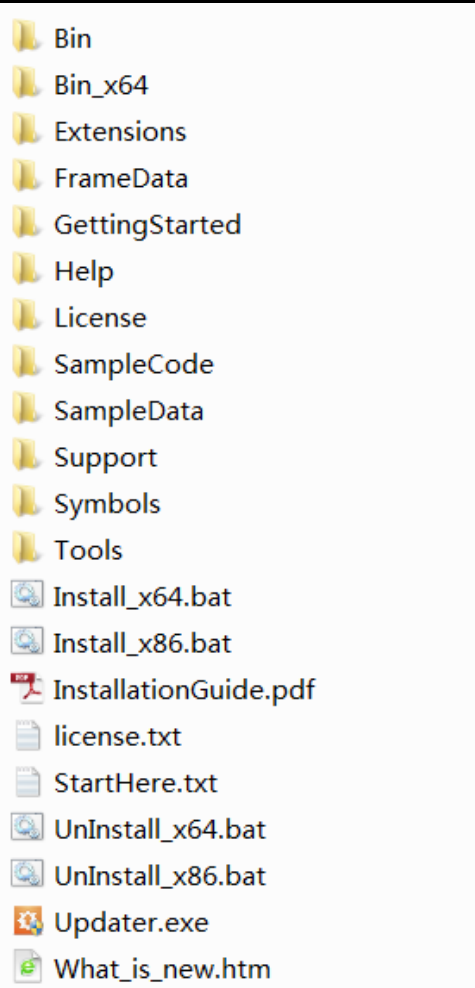
# Main Contents

- Use of Help Resources
- Review of Concepts of SuperMap GIS
- Object Structure Overview

# Use of Help Resources

- Installation Directory
- Help Document
- Sample Code

# Installation Directory



- Bin/Bin\_x64: SuperMap iObjects .NET system, various dynamic libraries and language packs.
- FrameData : 3D framework data offered by the product.
- GettingStarted: Code for the Getting Started program.
- Help: Online help, and documents of Hxs and other formats.
- License: License declaration files for dependent third party libraries.
- SampleCode: Sample code programs.
- SampleData: Sample data served as the operation data for sample programs and the Getting Started program.
- Support: Visual C++ 2008 redistributable package, .NET Framework 4.0.
- Tools: Auxiliary tools, such as DEPENDS.EXE used to view dependencies between dynamic link libraries, the integration tools for development environments, the registration tool for the help document, and so on.

# Help Document

SuperMap iObjects .NET Online Help

Hide Locate Back Forward Stop Refresh Home Print Options

Contents Index Search Favorites

- Welcome to SuperMap iObjects .Net
- Reading Guide
- Legal Statement
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- Technical Support
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- Control Introduction
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- FAQ
- SuperMap iObjects .NET Programming Reference

## SuperMap iObjects .NET 9D

**Ordinary Rendering**

**Hill Shadow**

### New Hill shadow function

Make ordinary rendering more stereoscopic and terrain features more forward.

[New Features](#)

### Getting Started

You can quickly master the basic principle of developing based on SuperMap iObjects .NET components, and use the SuperMap iObjects .NET components to develop applications.

[Details](#)

### Developer Guide

The developer guide includes information on the developing environment, integration of product and Visual Studio of SuperMap iObject .NET, and the object model diagrams. Some distribution and deployment for the developing is also provided.

[Details](#)

### Quick Links

- [Introduction](#)
- [Sample Code](#)
- [FAQ](#)
- [Download Center](#)

# Guide of Help Document

The screenshot shows a web browser window titled "SuperMap iObjects .NET Online Help". The browser's address bar is empty, and the navigation toolbar includes buttons for Hide, Locate, Back, Forward, Stop, Refresh, Home, Print, and Options. Below the toolbar, there are tabs for Contents, Index, Search, and Favorites. The left sidebar contains a tree view of the help document's structure, with "SuperMap iObjects .NET Programming Reference" selected. The main content area displays the "Help guide" page, which provides an overview of the help document and a step-by-step guide for users.

**Help guide**

## Help Guide Guide you to read the document efficiently

SuperMap iObjects Java/.NET is a GIS development platform for developers to implement GIS applications. It has powerful data management, edit, display, and analysis functions. A rich set of easy-to-use resources are provided to help users develop GIS applications quickly.

This pages demonstrates how to efficiently use the SuperMap iObjects Java/.NET Help document when you are developing GIS applications.

**Step 1: Introduction**

Use the [Product Introduction](#) page to get a quick idea of the product, its architecture, targeted users, etc. Then learn how to install and deploy the product before developing.

**Step 2: Install and Deploy**

Check [IDE Setting](#) for the prerequisites on running the software., and install it by following the instructions in Install Guide. Auto-checking tools have been provided to help users with this process.

**Step 3: Start Using iObjects**

Get started to use iObjects and develop your own GIS applications by going through [Getting Started](#) where a rich set of sample code is provided. However, this is not enough yet. You can go on to the next step to get a all-side understanding of SuperMap.

**Step 4: Understand SuperMap Data**

Fundamental Concepts enables you to quickly get an idea of SuperMap data organizations and models. From Data Models, you can see all the data models supported by SuperMap. To transform data between SuperMap data formats and those from other parties, you can refer to the Data Transformation topic.

SuperMap SDX+ is a data engine that enables you to store your spatial data in multiple databases. To know to how install and configure your databases, please refer to SDX+ for Oracle, SDX+ for PostgreSQL and SDX+ for DB2.

**Step 5: Basic GIS Application -- Map Creation**

By mapping your data, you can get an intuitive and efficient understanding of the data. Please refer to [Fundamental Concepts](#) to know the key concept used through the manual.

Map Projections explains how to project data from a 3D globe to a 2D map, and how SuperMap handles projections.

Certain data imported does not have spatial reference, e.g. scanned maps. You can refer to Data Registration to learn how to register such kind of data.

Thematic maps are used to highlight one or more themes from the data. Check Thematic Mapping to learn the variety of thematic mapping features of SuperMap iObjects Java/.NET 8C.

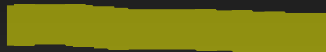
Check Layout and Print to learn how to layout your map with elements including title, north arrow, scales, etc and output the map.

**Step 6: In-Depth Learning -- Spatial Analysis**









In addition to visualize geographical data, the core of GIS is to perform geospatial analysis capabilities. We can dig more information from the analysis of the data, to benefit our social life. SuperMap iObjects Java / .NET product provides a rich, powerful, professional set of spatial analysis capabilities, supporting both vector-based data analysis and raster data-based analysis, to meet the needs of individual field. Spatial analysis functions are advanced applications of GIS, and by grasping and using spatial analysis functions, you can make full GIS system for your service to provide you with a wealth of practical information.

# Replacements for Obsolete APIs

	Name	Description
☰	<a href="#">Build</a>	Builds the vector cache.
☰	<a href="#">BuildTexture</a>	<b>Obsolete.</b> Create texture image according to the index path and the hierarchy.
☰	<a href="#">BuildToFile</a>	Generates OSGB format based on point-cloud data.
☰	<a href="#">BuildWithoutConfigFile</a>	Builds vector cache for vector data. The vector cache setting file will not be built by this method.
☰	<a href="#">ComputeFileName</a>	<b>Obsolete.</b> Gets the file list specified by the Bounds, Level and OutputFolder of this instance. The filename is absolute path.
☰	<a href="#">ComputeLevel</a>	<b>Obsolete.</b> Computes the appropriate count of the cache level for the dataset.
☰	<a href="#">Dispose</a>	Releases all resources that the object occupies.
☰	<a href="#">FromConfigFile</a>	Imports the cache file and specify the properties according to the configuration file.
☰	<a href="#">GetIntensionFieldName</a>	Gets the field name to generate cache.
☰	<a href="#">SetIntensionFieldName</a>	Sets the field and field type of the point-cloud cache.
☰	<a href="#">ToConfigFile</a>	Outputs the properties of the object to the specified file. The suffix the file is .scv.



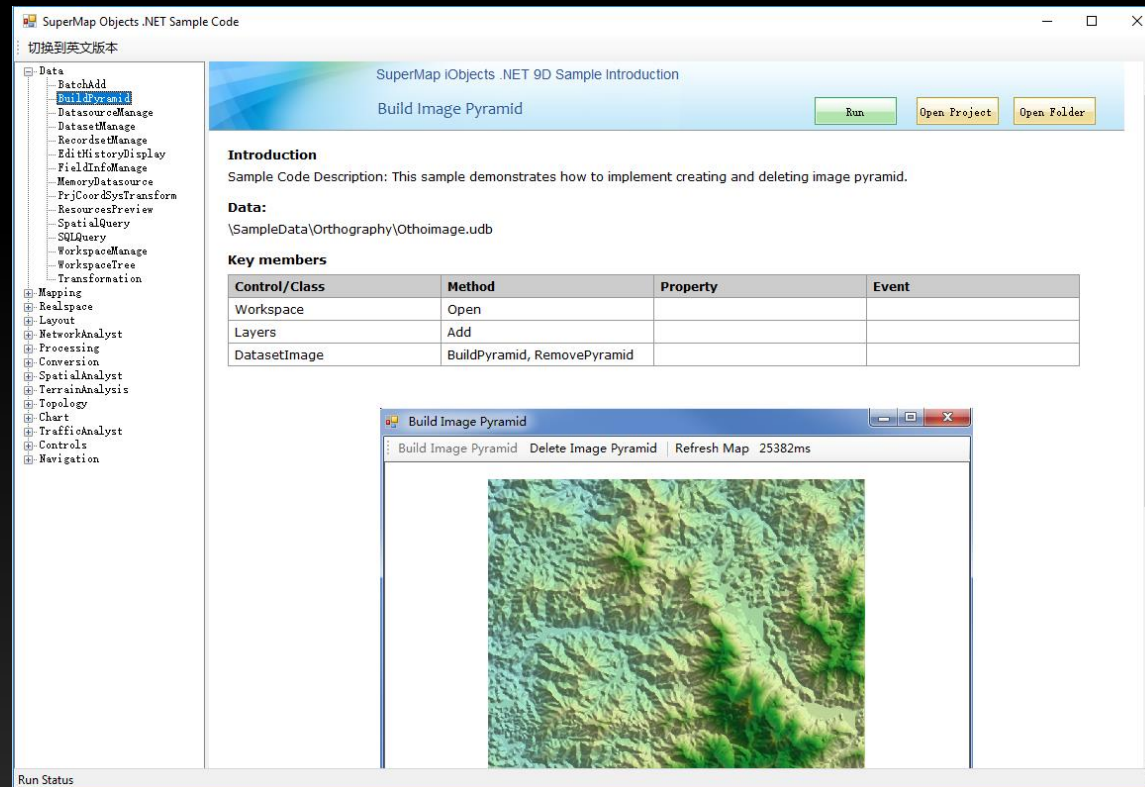
# Units for All Numeric Values

	<a href="#">FillOpaqueRate</a>	The fill opacity. The value ranges from 0 to 100, with 0 indicating fully transparent and 100 indicating fully opaque. Values less than 0 and greater than 100 will be taken as 0 and 100 respectively.
	<a href="#">FillSymbolID</a>	The ID of the fill symbol. It is used to uniquely identify the fill symbol.
	<a href="#">LineColor</a>	The color of the line symbol or marker symbol.
	<a href="#">LineSymbolID</a>	The ID of the line symbol. It is used to uniquely identify the line symbol.
	<a href="#">LineWidth</a>	Gets or sets the width of the line symbol, and the unit is millimeter and accurate to 0.1 millimeter.
	<a href="#">MarkerAngle</a>	Gets or sets the rotation angle of the marker symbol. The rotation direction is anticlockwise and the unit is degree. The rotation angle is accurate to 0.1 degrees.  This angle can be used as fill symbol rotation in common fill style.
	<a href="#">MarkerSize</a>	Gets or sets the size of the marker symbol. The unit is millimeters and the accuracy is 0.1 millimeters.
	<a href="#">MarkerSymbolID</a>	The ID of the marker symbol. It is used to uniquely identify the marker symbol.

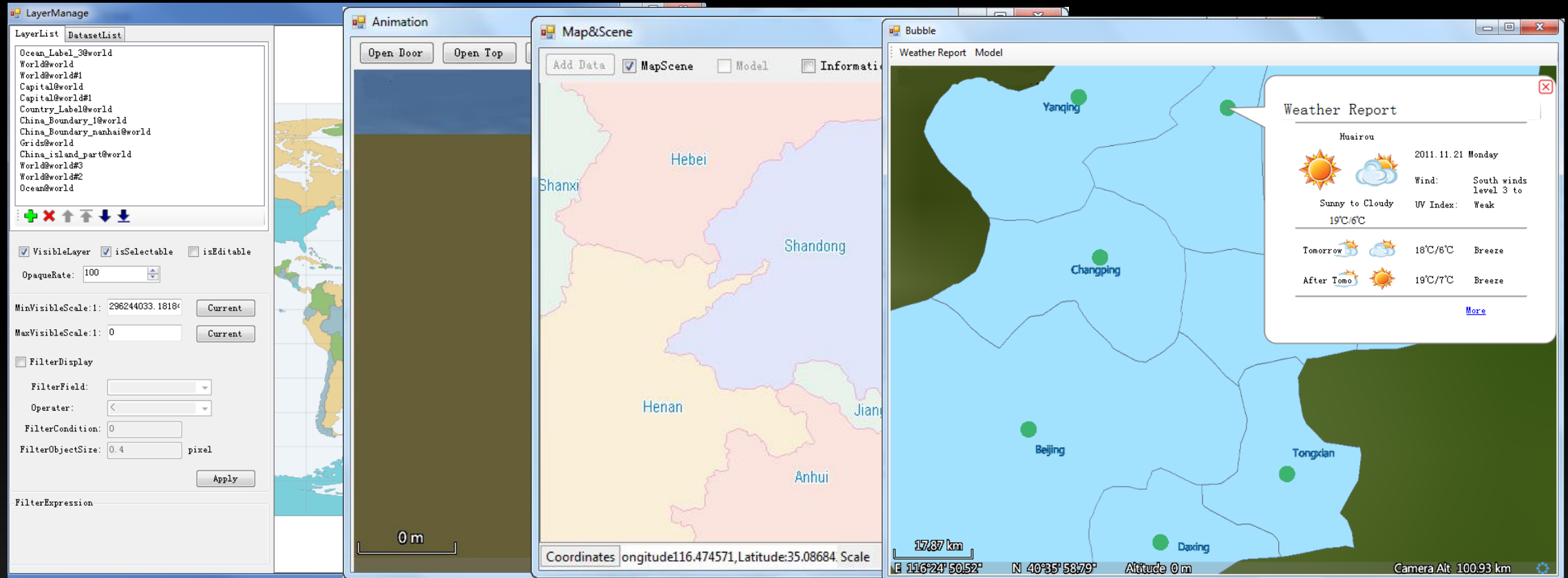


# Sample Code

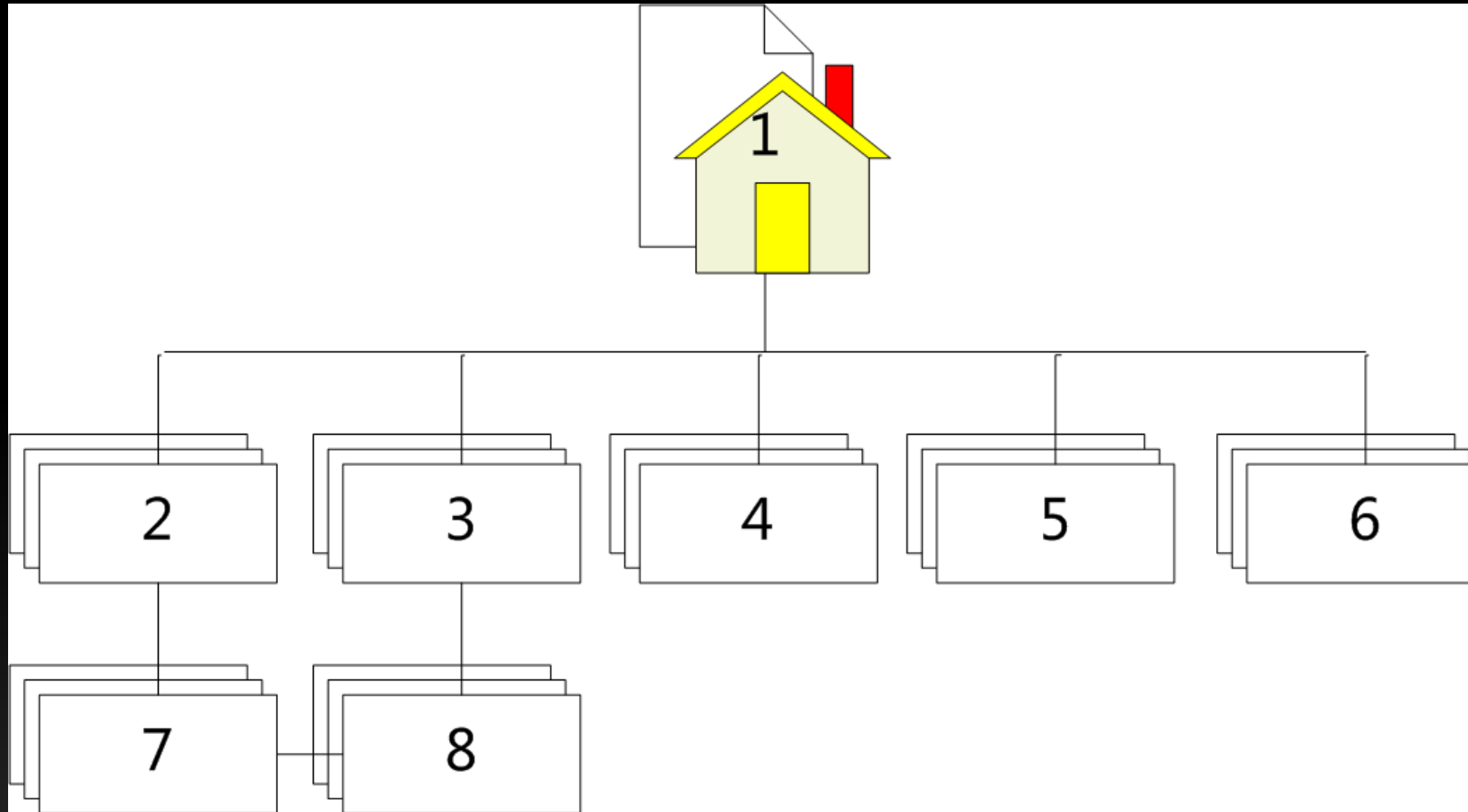
- The SampleCode folder under the product installation directory
  - SuperMap\iObjects .NET 9D\SampleCode\ Startup.exe



# Sample Code



# Review of Concepts of SuperMap GIS



Workspace

Datasource

Map

Layout

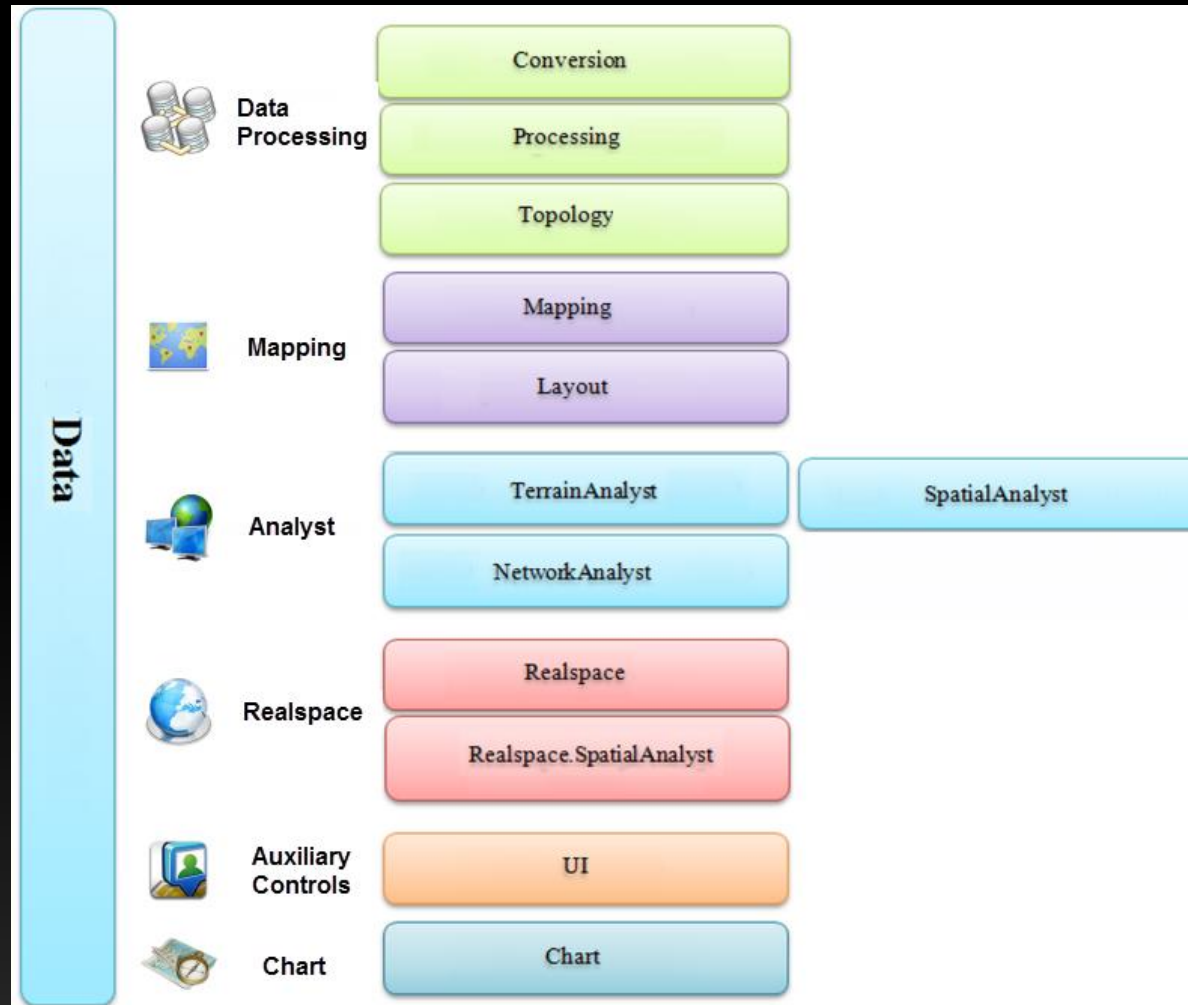
Resources

Scene

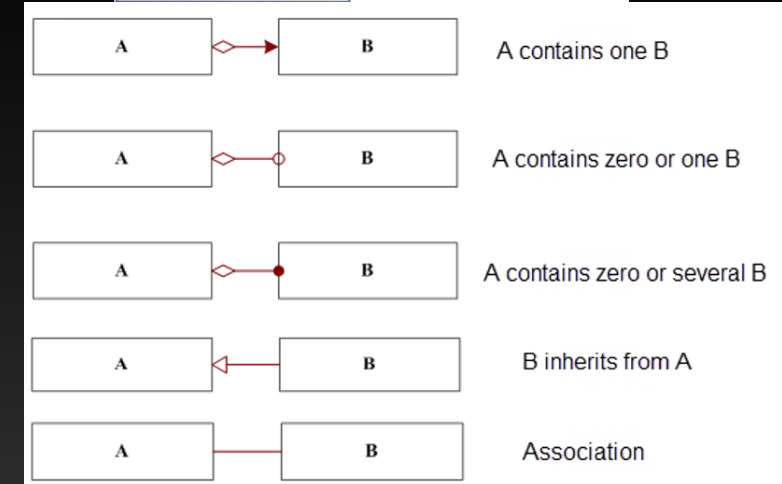
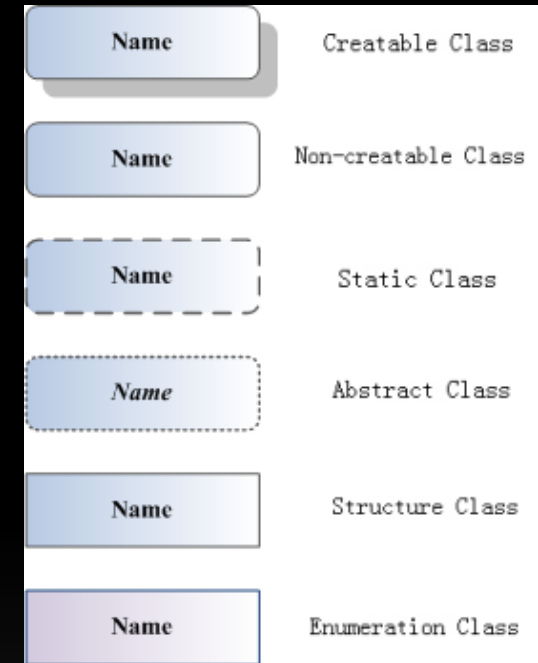
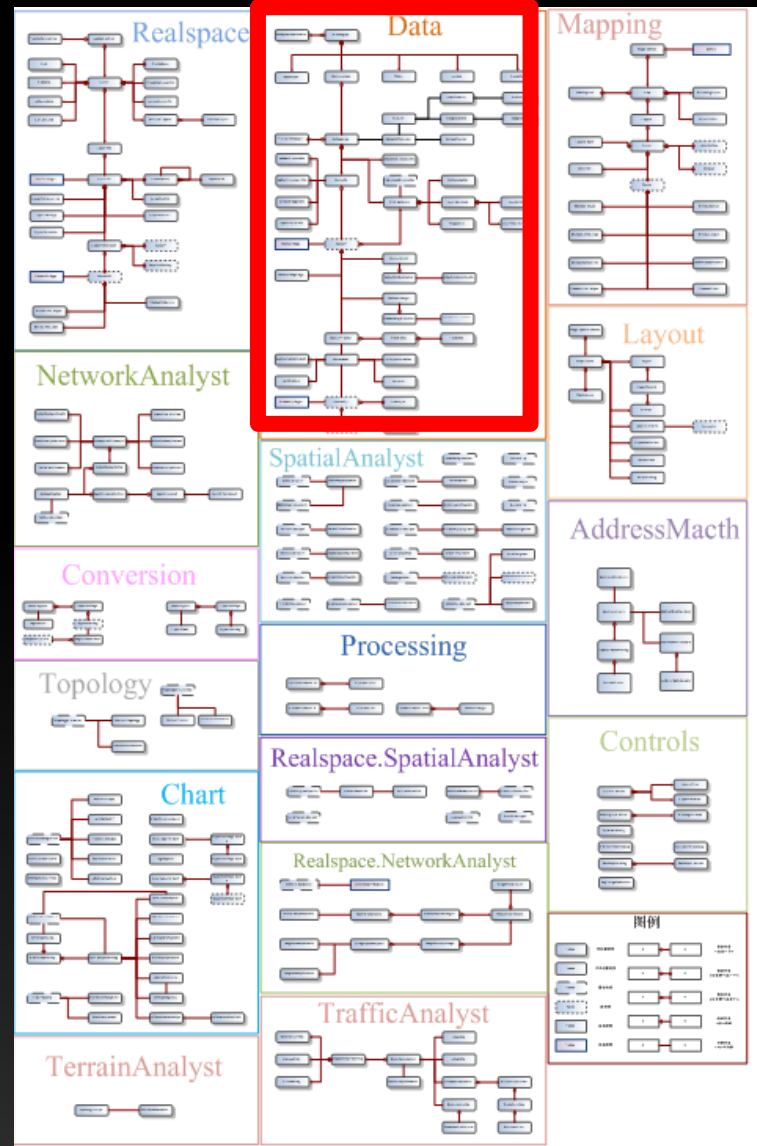
Dataset

Layer

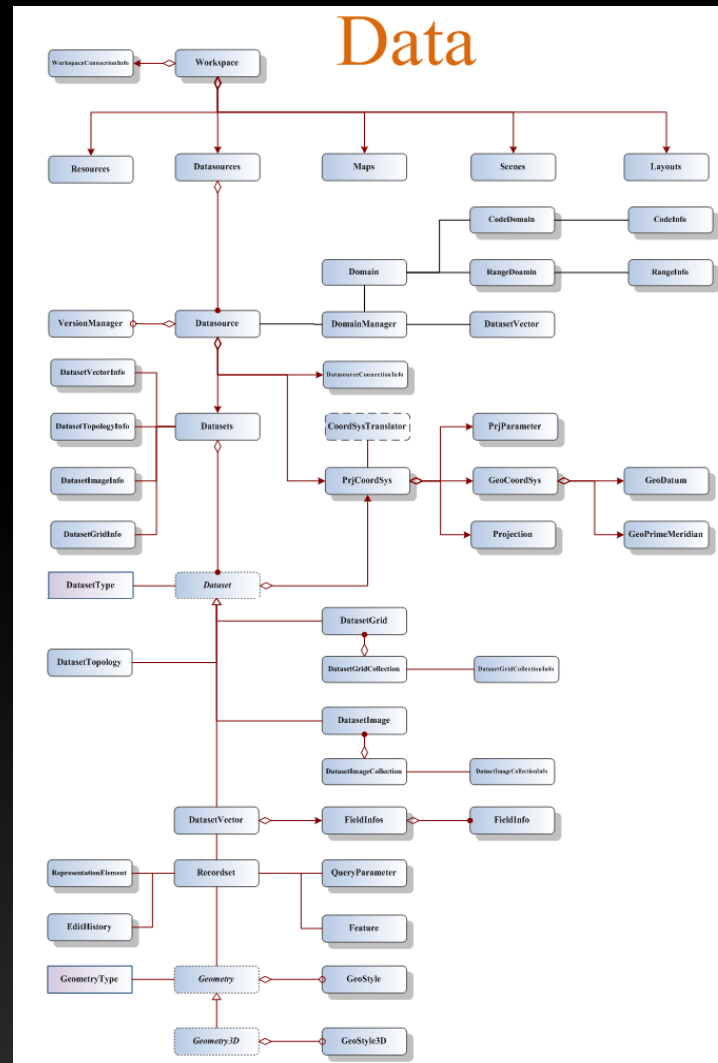
# Object Structure Overview (1)



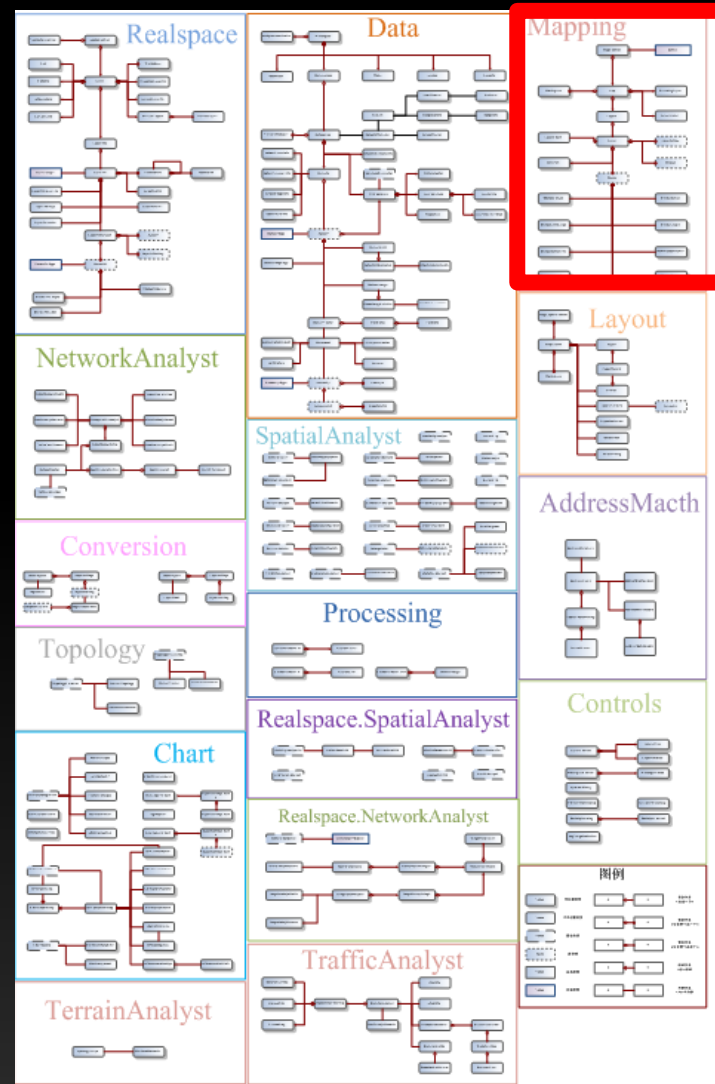
# Object Structure Overview (2): OSD



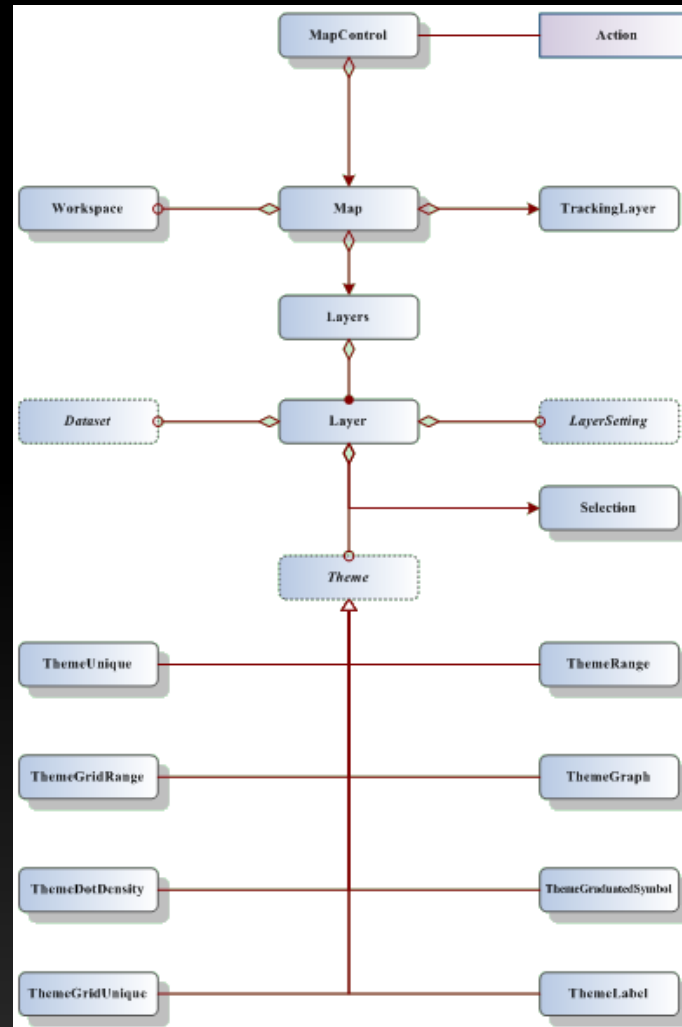
# Data Module



# Object Structure Overview (2): OSD



# Mapping Module





*SuperMap* 北京超图

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# Thanks!

