

SuperMap iObjects .NET Spatial Data Management (2)

SuperMap Software Co., Ltd.



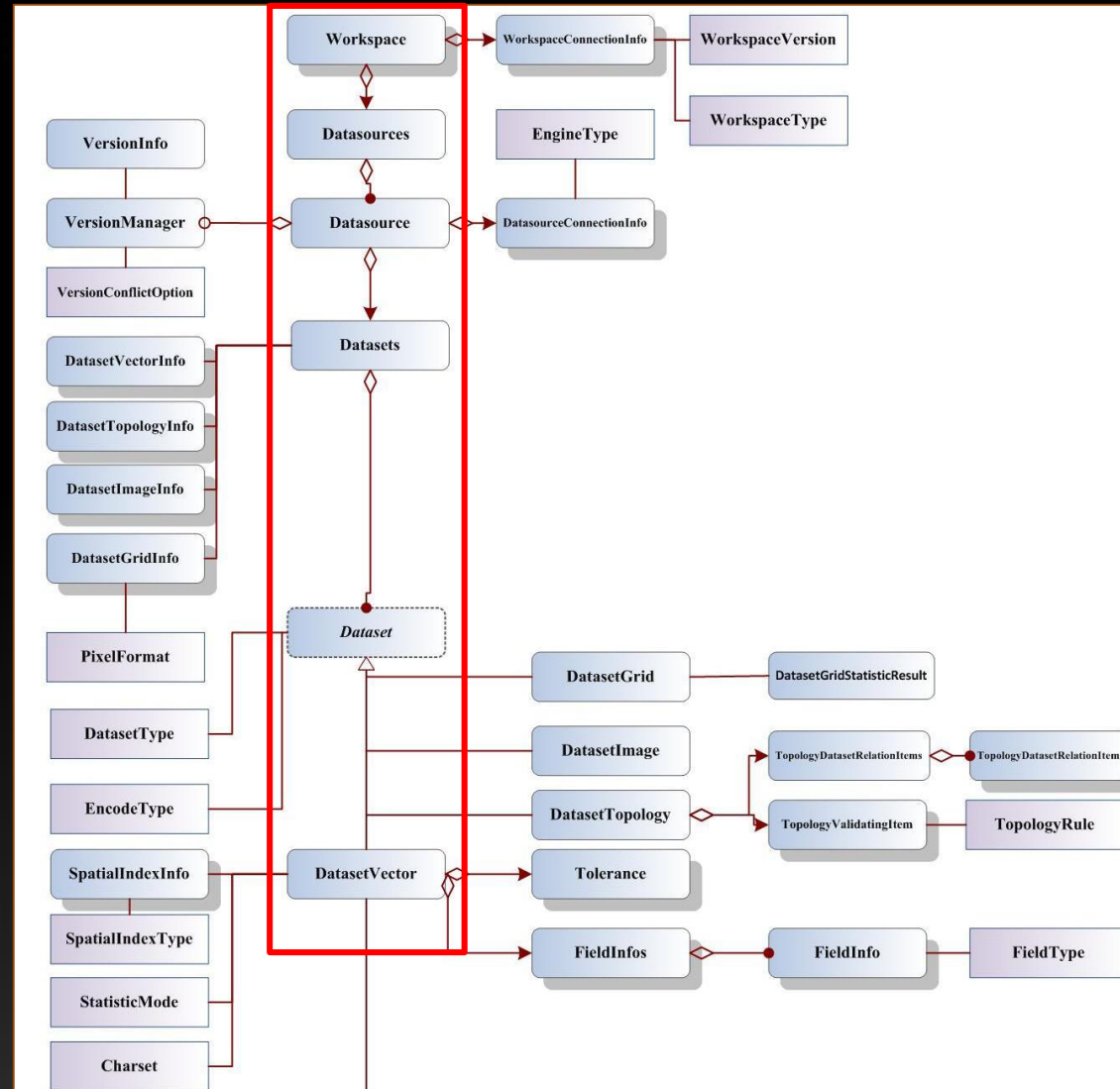
Course Objectives

- Understand the main purposes of the workspace, datasource, dataset objects, and relationships of them in the Data module
- Master the creation, opening methods of the datasource
- Sample Data: SuperMap iObjects .NET 9D Installation
Directory\SampleData\World\World.smwu, World.udb,udd

Main Contents

- Structure Diagram of Main Objects
- Application of Datasource

Object Structure Diagram of Data Module



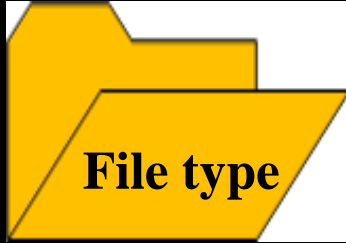
Application of Datasource

- Review of the Concept of Datasource
- Main Objects of Datasource
- Use of Datasource
- Code Samples

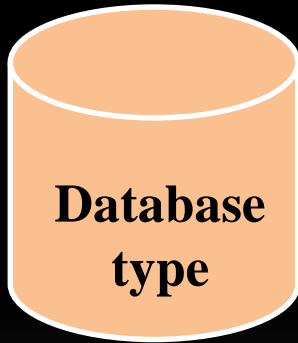
Review of the Concept of Datasource

- A datasource consists of various types of datasets and is the physical storage of spatial data (sets).
- A datasource can have one or more types of datasets, including vector datasets and raster datasets.

Datasource Types



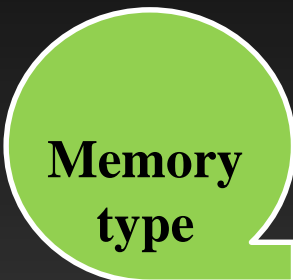
UDB, UDD, imagery file



SQL Server, Oracle, Oracle Spatial, etc.



OGC , GoogleMaps, SuperMapCloud, MapWorld,
BaiduMaps, etc.



Memory

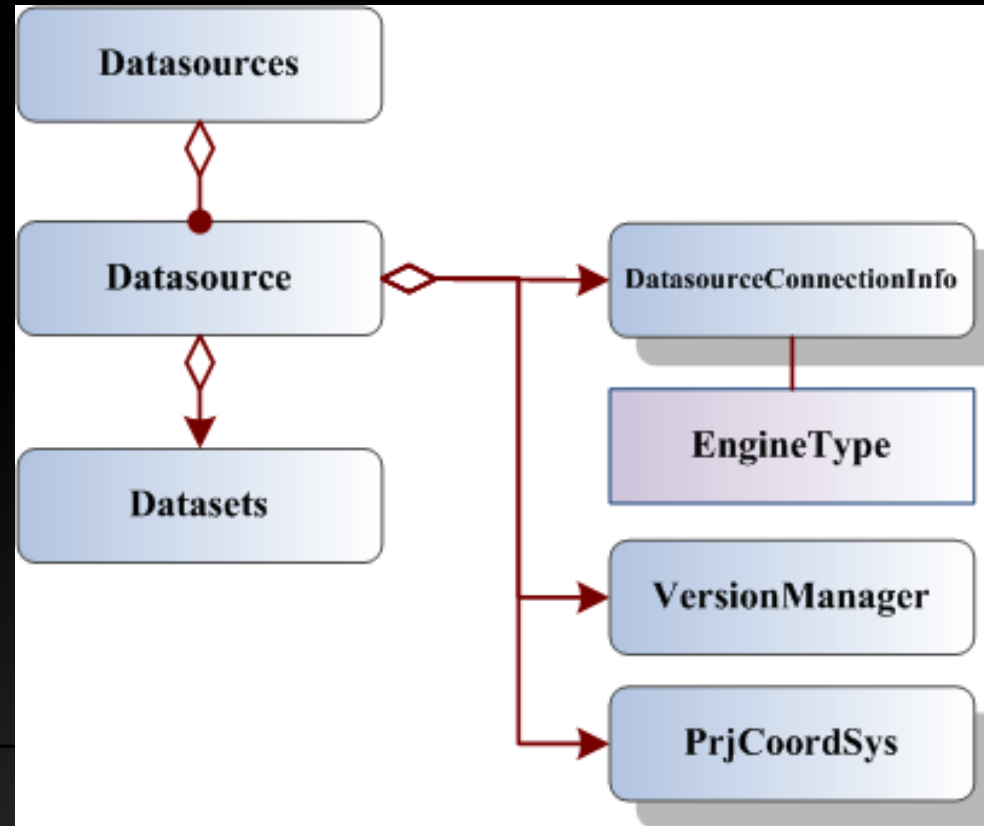
Datasource Types

The image displays four screenshots from a GIS software interface, each illustrating a different type of data source:

- File type:** A screenshot of the "Open Datasource" dialog box. The "Look in:" field is set to "World". A table lists files, with "World.udb" selected. An orange box labeled "File type" is overlaid on the table. Below the table, the "Files of type:" dropdown is open, showing options like "All Files (*.*)", "Universal DataBase Engine (*.udb)", and "Excel File (*.xlsx)".
- Web type:** A screenshot of the "Open Web Datasource" dialog box. The "Database" list on the left includes "OGC", "iServerREST", "SuperMapCloud", "GoogleMaps", "MapWorld", "OpenStreetMap", and "ChinaRS". The "OGC" option is selected. An orange box labeled "Web type" is overlaid on the right side of the dialog.
- Database type:** A screenshot of the "Open Database Datasource" dialog box. The "Database" list on the left includes "SQLPlus", "OraclePlus", "OracleSpatial", "MySQL", "PostgreSQL", "DB2", "HighGoDB", "SinoDB", "MongoDB", "KingBase", "ArcSDE", and "BeyonDB". The "SQLPlus" option is selected. An orange box labeled "Database type" is overlaid on the right side of the dialog.
- Memory type:** A screenshot of the "Workspace Manager" dialog box. The "Databases" tree view shows "MemoryDatasource" selected. An orange box labeled "Memory type" is overlaid on the right side of the dialog.









Main Objects of Datasource

Structure Diagram of Main Objects of Datasource



Use of Datasource

- Basic datasource operations, including creating, opening, closing datasources, and modifying datasource aliases, etc.
 - Datasources

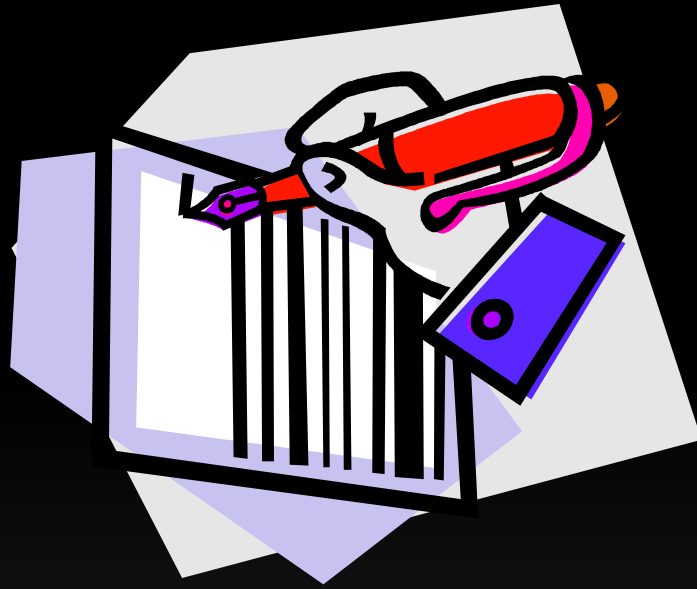
	Name	Description
	Close	Overloaded.
	CloseAll	Closes all the datasources.
	Contains	Determines whether the datasource of the specified alias is contained in this Datasources.
	Create	Creates the datasource according to the specified connection information of the datasource. Returns null if the datasource to be created has already existed.
	GetEnumerator	Gets the enumerator of the Datasources.
	IndexOf	Gets the index number of the datasource of the specified alias in this Datasources.
	ModifyAlias	This method is used to modify the alias of the datasource.
	Open	Opens the existing datasource according to the specified connection information. Returns null if the datasource does not exist.

Use of Datasource

- Get the basic information of the datasource, including projection information, opening mode, engine type, and so on.
 - Datasource

	Name	Description
	Alias	Returns the alias of the datasource.
	ConnectCheckInterval	Return or set the time interval of checking connecting database, the unit is millisecond. It is valid to the DatasourceDisconnectedEventArgs event.
	ConnectionInfo	Returns the connected information of the Datasource.
	CoordUnit	Gets or sets the unit of coordinates of datasource.
	Datasets	Returns an object of the Datasets that is contained in the Datasource.
	DateLastUpdated	Gets the last updating time of the datasource.
	Description	Returns or sets the description of the Datasource.
	DistanceUnit	Gets or sets the distance unit of datasource.
	DomainManager	Get the domain management object.
	EngineType	Returns the engine type of the datasource.
	IsAutoConnect	Gets or sets a boolean value indicates whether the datasource connects the database automatically.
	IsConnected	Determines whether the datasource has been connected with the database. This property is invalid for non-dataset datasources.
	IsModified	Returns whether the datasource has been modified. True means that it has been modified and false means that it has not been modified.
	IsOpened	Gets whether the datasource is opened. If the datasource is opened, the value got will be true. If the datasource is closed, the value got will be false.
	IsReadOnly	Returns a value that indicates that whether the datasource is opened in read-only mode.
	IsUnicodeSupported	Gets whether the current datasource supports Unicode data store. SuperMap Objects .NET 6R(2012) SP2 is non-Unicode application, the property value is false.
	PrjCoordSys	Returns or sets the projection information of the Datasource.
	RootGroup	Get the RootGroup of the DatasetGroup.
	VersionManager	Gets the VersionManager object of the datasource.
	Workspace	Gets the workspace object contained the current datasource.

Code Samples for Datasource













Create New Datasource

Open Datasource

Create New Datasource

- Main interfaces
 - Datasources.Create (DataSourceConnectionInfo)
 - DataSourceConnectionInfo

DataSourceConnectionInfo class members

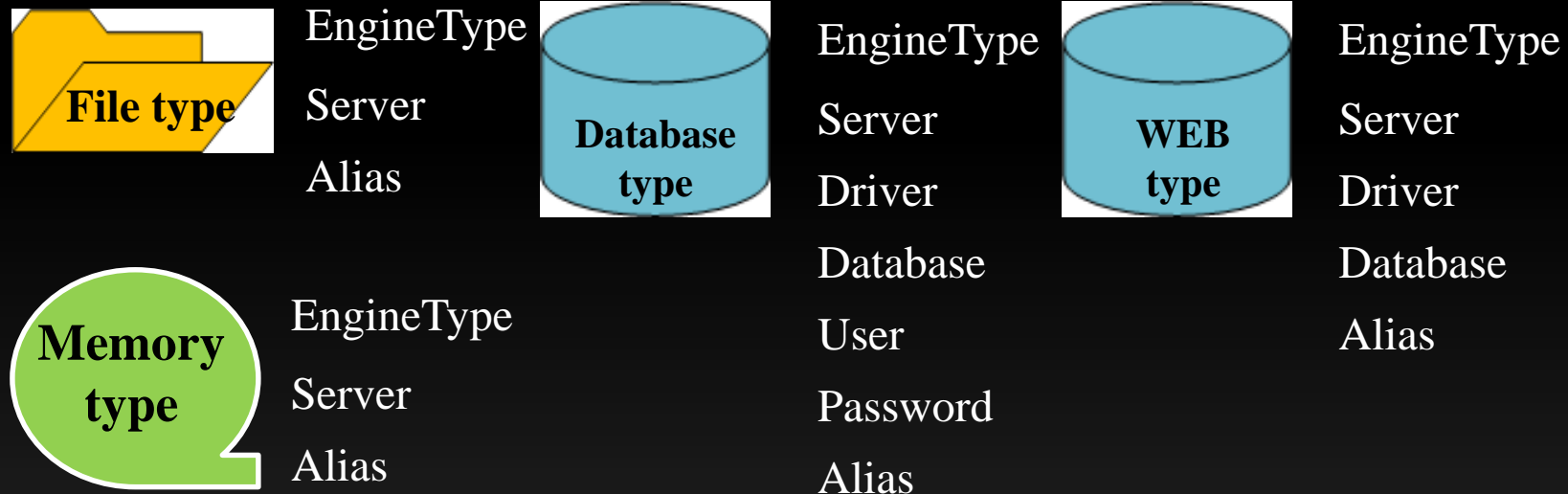
	Name	Description
	Alias	Gets or sets the alias of the datasource. The alias is the unique identifier of a datasource and the identifier is not case sensitive.
	Database	Gets or sets the database name connected to the datasource.
	Driver	Gets or sets the driver name needed for the datasource connection. For SQL Server database, which uses the ODBC connect, the driver name is SQL Server or SQL Native Client. For the WMTS service published by iServer, the driver name is WMTS. It is a required property.
	EngineType	Gets or sets the datasource connection engine type. So far, the following engines are supported; they are UDB engine, OraclePlus engine, SQLPlus engine, PostgreSQL engine and DB2 engine. For more information about the engines that supported, please refer to the EngineType class.
	IsAutoConnect	Gets or sets whether the datasource connects to the data automatically. If it is set to true, the datasource will connect to the data automatically when opening the workspace.
	IsOpenLinkTable	Gets or sets a boolean value indicates whether open the non-SuperMap datasheet as the LinkTable. False indicates not to open the non-SuperMap datasheet as the LinkTable.
	IsReadOnly	Gets or sets whether to open the datasource in readonly manner. If the database is opened in readonly manner, the related information about the datasource together with the data of the datasource can not be modified.
	Password	Gets or sets the password when logging on the database or connecting to the file.
	Server	Gets or sets the database server name, file name or service address.
	User	Gets or sets the user name when logging on the database. Only applies to the database datasource.

Create New Datasource

- Implementation ideas and steps

Step1: Construct DatasourceConnectionInfo class

Step2: Set properties of the DatasourceConnectionInfo class













Step3: Call Datasources.Create (DatasourceConnectionInfo)

Open Datasource

- Main interfaces
 - Datasources. Open (DataSourceConnectionInfo)
 - DataSourceConnectionInfo

DataSourceConnectionInfo class members

	Name	Description
	Alias	Gets or sets the alias of the datasource. The alias is the unique identifier of a datasource and the identifier is not case sensitive.
	Database	Gets or sets the database name connected to the datasource.
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Open Datasource

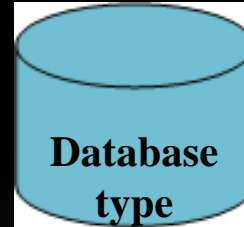
- Implementation ideas and steps

Step1: Construct DatasourceConnectionInfo class

Step2: Set properties of the DatasourceConnectionInfo class



EngineType
Server
Alias



EngineType
Server
Driver
Database
User
Password
Alias

Step3: Call Datasources.Open(DatasourceConnectionInfo)

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Thanks!

