SuperMapXML Resolving

After installing SuperMap iDesktop, there is a SuperMap.xml in the installing directory Bin. This file loads some parameters in aspects of system, layer, logs, affairs and so on. You can modify these parameters when you use Supermap iDesktop.

The following parameters are provided:

1. Display Effects
2. Performance Optimization
3. Printing
4. Cache
5. Engine
6. Logs
7. External File
8. Other

Display Effects

1 Display Effects

1.1 Optimize the font display effect

<IsSupportClearType/></IsSupportClearType> is used to control whether to open the parameters supported by ClearType. It can be used to optimize the screen display effect, making the font smoother. There are two types of this parameter:

1. true means to open the ClearType support.
2. false means not to. This is the default.

Note:

Because the component version uses the Microsoft YaHei Font, and it has different sizes in SFC, UGC, ESRI and WORD. SuperMap Objects .NET 6R(2012) Service Pack 3 optimizes the display effect. This effect is valid when the <IsSupportClearType> is set to true. Compared to SuperMap Objects .NET 6R(2012) Service Pack 2, the font with same size will be larger in the new version.
1.2 Map Display and Resolution

The following three parameters will implement the settings of map display and resolution.

- `<CustomDPIEnable>` controls whether to open the custom DPI, namely, the following DPI parameters is effective or not: true means to open, and false means not. The default value is true.

- `<CustomDPIX>` Custom DPI value in the horizontal direction. The default value is 96.

- `<CustomDPIY>` Custom DPI value in the vertical direction. The default value is 96.

  CustomDPIX and CustomDPIY should be used together. This parameter is the result that original CustomMapRatioX and CustomMapRatioY parameters changed. If users want to get the default map display and resolution before changed through CustomDPIX and CustomDPIY, them can set these two parameters as 76.2.

1.3 Optimizing the Scene Display

The following parameters optimize the display effect of scene through full screen antialiasing.

- `<IsSceneAntialias>` controls whether to open the full screen antialiasing function. There are two types: true means to open; false means to not.
Enable the full screen antialiasing will optimize the fine and smoothness of the scene.

Enable the full screen antialiasing will use more resources, please set according to the hardware configuration and SceneAntialiasValue property.

● <SceneAntialiasValue/></SceneAntialiasValue> sets the full screen antialiasing coefficient. This parameter is integer, and the range is from 0 to 16. The default is 2. The full screen antialiasing coefficient represent the strength of the antialiasing processing, the higher the value the more smooth the scene, it will use more system resources at the same time. please set according to the hardware configuration.

1.4 Map symbol drawing

<SymbolDrawWithLineBrushColor/></SymbolDrawWithLineBrushColor>This parameter influences the drawing of marker symbol in a map. If the region strokes of a marker symbol do not have fixed frame color and fill color, and SymbolDrawWithLineBrushColor is true, when drawing the region strokes of a marker symbol in a map, linecolor and fillforecolor of GeoStyle will be used to draw the frame and fill; if SymbolDrawWithLineBrushColor is false, the linecolor of the GeoStyle of the current marker object will be used to draw the stroke frame and fill.

1.5 Custom displaying engine

The following two are associated with custom displaying engine:

● <CustomGraphicsEnable/></CustomGraphicsEnable> sets whether to use the custom display engine type. There are two types: true means to use and false means not to use the custom engine type, namely, the contents are invalid specified by the GraphicsType paramter.

● <GraphicsType></GraphicsType> sets the display engine. There are two types: 1 represents the display engine of Windows ; and 9 represents the memory display engine of cross-platform.
1.6 Display optimization with high precision

<IsHighPrecisionMode> </IsHighPrecisionMode> whether to open the high precision display mode. There are two types: true means to open; false means not.

High precision display mode makes the coordinates more accurate. When overlapping the raster and vector layers, the same features may have slight deviation in these two layers. If you open this function, you can eliminate the deviation, which makes the coordinates more accurate.

As shown below, it doesn’t open the high precision mode. After the raster data are vectorized, we can overlap the the created region data and original raster data. In theory, these two should be completely overlapped. But if you zoom in, you can see there are some regions that do not match completely. If you open this function, these situations can be avoided, which increases the accuracy greatly.
1.7 Whether to enhance the image sharpness

<IsImageClearer></IsImageClearer> Whether to enhance the image sharpness. If this option is set to true, it will influence the display range of the image. There are two types: true means to open the function, but the display mode will be smaller; false means to close, and the display range will be larger.

Performance Optimization

2 Performance Optimization

2.1 Related settings of parallel computing

<OMPNumThreads></OMPNumThreads> Set enable how many threads to parallel computing. This parameter is integer.

2.2 Text rendering performance

<FreeTypeLibPoolSize></FreeTypeLibPoolSize> Set use how many instances of FreeType to process the text rendering.

2.3 Related Settings for memory mode of spatial analysis

<AnalystMemorySize></AnalystMemorySize> Set the analysis mode, and this parameter is integer. It supports -1 and 0. 0 means to use the traditional mode to analyze and -1 means to use memory mode to analyze.

Print and Layout Settings

3.1 Optimize map output

<IsMapInflated></IsMapInflated> determines whether the map is inflated in order to avoid the possibilities of the abnormal displaying of label thematic map and so on. True means it is used. False means it is not. The default value is true.

3.2 Grid print settings

<RasterPrint_BlockSize></RasterPrint_BlockSize> sets the block size of grid printing. This parameter is integer, and the unit is MB.

3.3 Printing page Settings

<LayoutOverlap></LayoutOverlap> sets the size of overlap region of two pages when page break printing. This parameter is numeric. Unit is millimeter.
Cache

Default directory to store cache files

\texttt{<CacheFileLocation>}</CacheFileLocation> specifies the position to store the cache files.

Example: Set the default directory to store cache files as D: \cache.

\texttt{<CacheFileLocation>D: \cache</CacheFileLocation>}

If users do not specify this value, it is the system temp directory. For Windows, it is “system disk: \Documents and Settings\current username\Local Settings\Temp”. It is “\tmp” when the system is no Windows 

Engine

5.1 SQL Server engine

The parameter of \texttt{<SqlServerMultiThread>}</SqlServerMultiThread> for multithread environment. If SDX object is used in the thread, the parameter has to be true.

5.2 PostgreSQL engine

The configuration parameters of the \texttt{<PGSQLConnPoolSize>}</PGSQLConnPoolSize> engine in multithread environment, 0 means do not use connection pooling. If SDX object is used in the thread, it is recommended to set this parameter as a value larger than 1, and match with the connection value. Note that if this is a static parameter, you need to restart the application to enable the change.

Logs

6 Logs

\texttt{<LogSetting type=“object”>}</LogSetting> The parameters between these labels provides complete the parameters of log settings, which users can customize the logs.

6.1 Crash log

When the application is crashed, the daily logs can not record the related information. So, you should open the crash logs to record the information. The following two are used to set the crash logs:

\texttt{<DumpEnabled>}</DumpEnabled> Set whether to open the crash log. There are two types: true means to open; false means not.
● <DumpPath>./Dumps</DumpPath>Set the output path of crash log. This is a relative path, namely, the path relative to SuperMap.xml.

6.2 Open/Close the log

<LogEnabled/> determines whether to enable the log function automatically. There are two situations: True means the function is on when running the software. False means the function is started manually. The default is true.

6.3 Logs settings

6.3.1 Storage directory of logs

<LogFileLocation>./log</LogFileLocation> is the path of the cache file. If it is empty, the path is Installation directory Bin. The path can be modified. I.E. set the path as “D:\Log”.

6.3.2 Storage type of logs

<StorageType/> determines the storage type of the log file. Text means the file is stored as Text type. XML means the file is stored as XML type. Memory means to store the info in memory. The default value is Text.

<LogPhysicalSave/> determines whether the file is stored referring to the value of StorageType. True means it is, i.e. if StorageType = Text, then the file is saved as Text file; if the value is false, the log file is stored in memory whatever the value of StorageType is.

6.3.3 Logs stored in different files

When there is the following situations, log file need to stored in different files.

1. <LogTimeInterval/> determines the time interval to store the log file. There are five types: None, Hour, Day, Week, Month. None means using one file to store. Hour means creating a new file to store every hour. Day means creating a new file to store every day. Week means creating a new file to store every week. Month means creating a new file to store every month. The default value is Day.
2. When the size of log file is larger than \(<\text{MaxFileSize}>\)/<\text{MaxFileSize}>, it will stored in different files:

\(<\text{MaxFileSize}> \langle/\text{MaxFileSize}>\) determines the size of the log file. If the size of the log file is greater then MaxFileSize. The log file will be handled according to the value of ExceedSizeMode. The type of MaxFileSize is long, the unit is bit. If the value is -1, the size of the file is unlimited.

If the size of the log file is greater than MaxFileSize, system will processes the log files according to \(<\text{ExceedSizeMode}>\)/<\text{ExceedSizeMode}>. There are three types:

- **Rolling** represents the rollback processing.
- **ReOpen** means to open the file again. That is, clear the current file and reopen to write;
- **NewFile** means to new a file to record. The new file is the original file name + #1, #2, #3 and so on.

### 6.3.4 File name rules of logs

\(<\text{LogFilePrefix}>\) UGC/LogFilePrefix> is the prefix of the log files. The suffix is ".log". The prefix can be modified, but chars below can not be included.

| questionmark | ? | quotation mark | " | slash | / |
| backslash | \ | less-than sign | < | greater-than sign | > |
| asterisk | * | vertical line | | colon | : |

In addition, the logs will not only output to a file. Users can create a new file to save the log information according to the time rules.

\(<\text{LogTimeInterval}>\)/<\text{LogTimeInterval}> determines the time interval to store the log file. There are five types: None, Hour, Day, Week, Month. None means using one file to store. Hour means creating a new file to store every hour. Day means creating a new file to store every day. Week means creating a new file to store every week. Month means creating a new file to store every month. The default value is Day.

So the name of log file also contains the contents that are related to time interval of log file storage, as shown below:

First, judge the value of LogTimeInterval:

LogTimeInterval = None

The name of the log file is "Prefix_PID.log" when MaxFileSize is set and ExceedSizeMode = NewFile. If the size of the log file is more...
then MaxFileSize the files are named as "Prefix_PID#1.log", "Prefix_PID#2.log", "Prefix_PID#3.log" and so on. I.E. UGC_2212#2.log means that the prefix is UGC, the PID is 2212, #2 means the size of the file is more then the MaxFileSize.

LogTimeInterval = Week, Day, Hour

The log file name is: “Prefix_PID_Date.log”. When the time interval is larger than LogTimeInterval, the log file name is “Prefix_PID_Date_1.log”, “Prefix_PID_Date_2.log”, “Prefix_PID_Date_3.log” and so on. If you set the value of MaxFileSize, and the ExceedSizeMode = NewFile, and the log file size is larger than MaxFileSize, the #1, #2, #3 will be added to the file name. For example, UGC_2212_2007121914_1#3.log means the prefix is UGC. The new log file is 14 pm, December, 19, 2007, the current PID is 2212. _1 is the label that the new file is larger than the time interval, and the #3 is the label that the size of new file is larger than MaxFileSize.

Note:

date means the hour. That is year,month, date and hour.

PID is an indicator of the process. It can be viewed in the windows task manager.

If the type of the log file is xml, then .log is changed to .xml.

The parameters can be changed if needed. It will be available after restarting the computer.

6.3.5 Logs ouput settings

<IsAppend>true</IsAppend> determines whether the log info is added to the existing log file. True means the log info is added, false means the log file is replaced. The default value is false.

Processing mode of repeated logs

<IsFilter>true</IsFilter> determines whether the same logs are filtered. There are two types: True means it is filtered. False means it is not. The default value is false. When processing 1000 same process and each process outputs a "successful", if the value is true, only one "successful" is outputted. If not, 1000 "successful" will be outputted.

Output log

<LogFormat></LogFormat> defines how the log file records. It is not recommended to modify the content of LogFormat. It had better be modified when needed. I.E. if the error level is not necessary in the log file. "%Level" could be deleted."quot; Also, the separator can be added. "\n" is used to represent enter and "\t" represent tab character.

For example:

<LogFormat>%DATETIME| %TIMESPAN| %RESID| %THREADID| %LEVEL| %MSG| %CODEFILE(%CODELINE)</LogFormat>
<\DateTimeFormat> defines the data and time format of the log file. Year, month, date use %Y, %m, %d. Hour, minute, second use %H, %M and %S. The default format is Year-Month-Day Hour:minute:second. The format can be modified if needed.

For example:

<\DateTimeFormat>%Y-%m-%d %H:%M:%S</DateTimeFormat>

Log output level

LogLevelerror</LogLevel> defines the constant of the level of the error logs. Debug is the level for the programmer and includes all the info. Error is the level for the users. The default value is error.

Log save frequency

<LogCountToDisk></LogCountToDisk> determines the count of the records when writing to the disk.

<LogCountInMemory></LogCountInMemory> determines how many records are stored in the memory to write to the log file.

External File
7 External File

<resource type="external">resource.xml</resource>

<PrjConfig type="external">PrjConfig.xml</PrjConfig>

<PrjCode type="external">CodeTransition.xml</PrjCode>

<EPSFont type="external">EPSFont.xml</EPSFont>

<GraphicsMemFonts type="external">GraphicsMemFonts.xml</GraphicsMemFonts>

resource.xml, PrjConfig.xml, EPSFont.xml, CodeTransition.xml are external files. resource.xml stores the string resources of UGC, PrjConfig.xml is the projection configuration file of UGC, EPSFont.xml stores the correspondence between the name of the fonts of EPS and the name of the fonts of the UGC. CodeTransition.xml is the reference table for searching the index of SuperMap projection and EPSG projection. The four files are system files and it is highly recommended that they should not be changed.

Other

8 Other

8.1 Progress bar switch

>ShowProgress</ShowProgress> is used to control whether to display the progress bar. There are two types:

1. true means to display all progress bar. This is the default value.

2. false means not to display the progress bar.

8.2 Related path settings

- <WorldFilePath>C:/Windows/Fonts/</WorldFilePath> font path used by memory display engine.

- <FontsPath>C:/Windows/Fonts/</FontsPath> font path used by memory display engine.

- <SystemPath>/Resource</SystemPath> System resources path

- <WebCacheFilePath>/Cache/WebCache/</WebCacheFilePath> Set the tile files storage path when opening the network map.

8.3 Number limit of Object editing

<MaxEditGeometrySize></MaxEditGeometrySize> Set the maximum number when editing object one time. This parameter is numeric.
8.4 Settings about processing time

<OvertimeDownload></OvertimeDownload> Set the maximum time of loading tile when opening the network map. If the time of loading a tile is larger than this value, it will abandon the loading of the tile. This parameter is numeric. Unit is seconds.

<OvertimeRefresh></OvertimeRefresh> The response time interval when performing the map browse, edit operations, the default is 1000 ms.

8.5 Reading mode of coordinate data

By default, the read mode of BoundingBox and TopLeftCorner in WMTS is (longitude, latitude). But some service providers provides the coordinates in the format of (latitude, longitude). For this case, please modify contents of SuperMap.xml. Generally, for this case, the local vector data can not be overlapped with the WMTS data.

<IsTopLeftCornerExchange> </IsTopLeftCornerExchange> Set the label reading mode of BoundingBox in WMTS service. There are two types: true means the reading mode is (latitude, longitude); false means the reading mode is (longitude, latitude).

<IsBoundsCornerExchange> </IsBoundsCornerExchange> Set the label reading mode of BoundingBox in WMTS service. There are two types: true means the reading mode is (latitude, longitude); false means the reading mode is (latitude, longitude).

8.6 Image block size and management mode settings

<ImgBlockCacheSize> </ImgBlockCacheSize> Set the number of image blocks in the memory. Default is 256; Each byte can be calculated according to the block size and pixel format.

<ChangeCache_ByDelete> </ChangeCache_ByDelete> Set the managements of image blocks. There are two types: true means when the number reaches ImgBlockCacheSize, release cached blocks, and recache the blocks; otherwise, false. When the number reaches ImgBlockCacheSize, reuse the free blocks. When there are no blocks, the cache is failed.