

Data Import & Export

SuperMap Software Co., Ltd.



SuperMap

TO BE THE GLOBAL LEADING GIS

Course Overview

- 1 GIS Data sources
- 2 Import Data of Other Formats
- 3 Export SuperMap Data to Other Formats

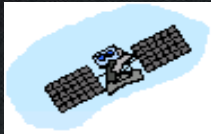
The **acquisition of GIS data** is a primary task for the construction of a GIS system, and it's also one of the issues with most cost of human and financial resources.

Data is the Lifeblood of GIS

GIS Data Sources



Map data (e.g. paper map and electronic map)



Remote sensing image data



Field surveying data (e.g. GPS data)

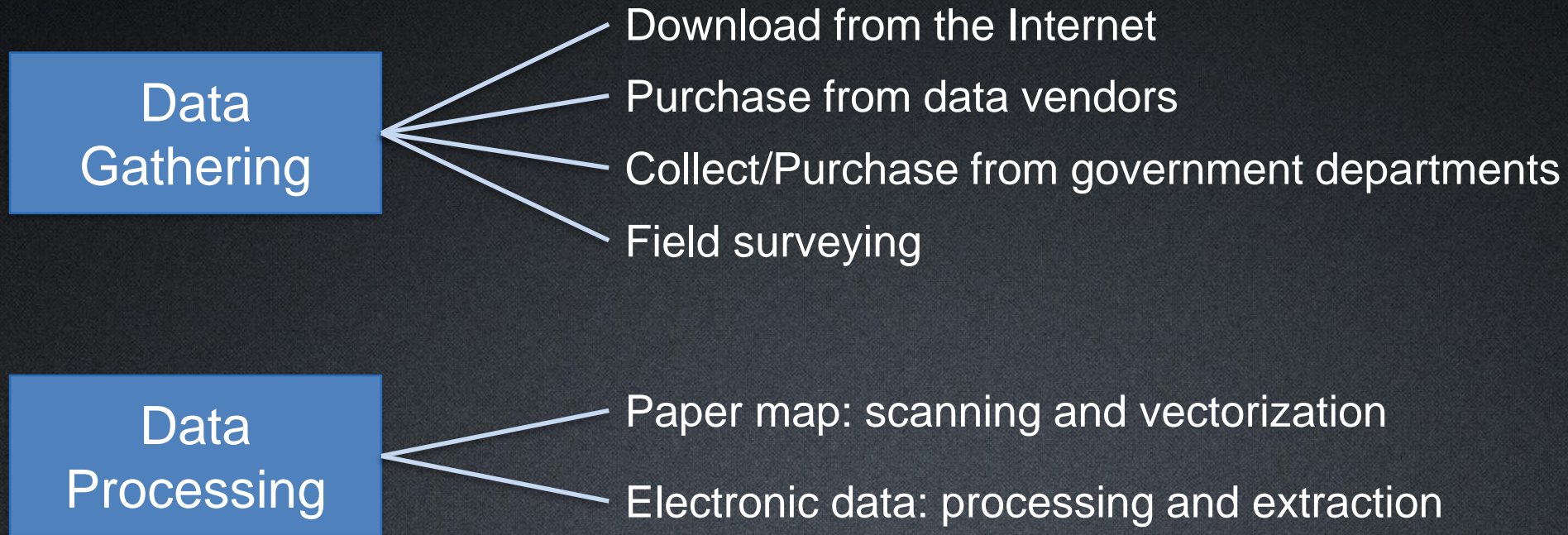


Digital data (e.g. the data from statistical yearbook)



Text reports

GIS Data Sources



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Data formats

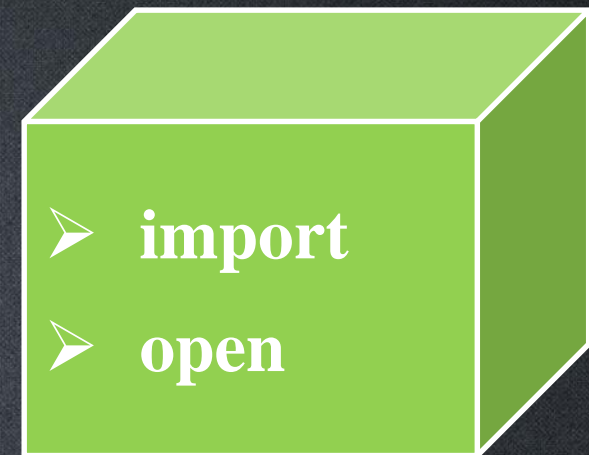
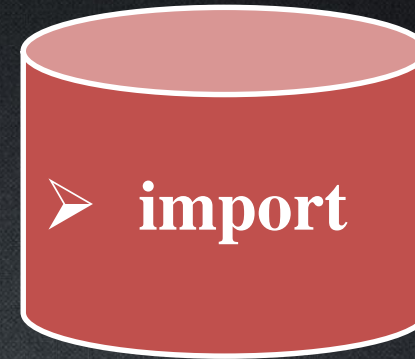
Vector data

- CAD General Format (*.dxf/*.dwg)
- GIS General Format (*.mif/*.shp/...)
- Tabular data (*.csv)
-

Raster data

- General Image Format (*.bmp/*.jpg/*.tiff/...)
- Compression Format (*.sit)
-

Integration Approach



Exercise:

- Import IMAGE.jpg
- Data location:
 - Data\05-jpg\IMAGE.jpg

Supported Formats

All Files (*.dxf;*.dwg;*.grd;*.txt;*.dem;*.asc;*.shp;*.tab;*.mif;*.kml;*.kmz;*.wat;*.wal;*.wap;*.wan;*.csv;*.bmp;*.jpg;*.
AutoCAD(*.dxf;*.dwg;*.dgn)
ArcGIS(*.grd;*.txt;*.dem;*.asc;*.shp;*.E00;*.dbf;*.mdb)
MapInfo(*.tab;*.mif;*.wor)
Google KML(*.kml;*.kmz)
MapGIS(*.wat;*.wal;*.wap;*.wan)
Microsoft(*.csv;*.xlsx)
Image Bitmap File(*.bmp;*.jpg;*.jpeg;*.png;*.gif;*.img;*.sit;*.tif;*.tiff;*.sid;*.ecw;*.jp2;*.jpk)
Raster File(*.raw;*.b;*.bin;*.bil;*.bsq;*.dem;*.bip;*.vrt)
3D Model File(*.osgb;*.osg;*.s3m;*.s3mb;*.s3mbz文件;*.3ds;*.x;*.dxf;*.obj;*.ifc;*.fbx;*.dae;*.stl;*.off;*.sgm;*.skp)
LIDAR File(*.txt)
TIN(*.tinz;*.sct)
Vector File(*.vct;*.json;*.gpx;*.osm)
GRIB2 File(*.grib2)
Geo3DML(*.xml)
Oblique Photograph(*.scp)

Vector Data Import—CAD Format

- Pay attention to the **Type** parameter

The screenshot shows the 'Import Data' dialog box in SuperMap software. The 'Import DWG File' section is active, and the 'Type' dropdown menu is set to 'CAD', which is highlighted with a red box. The 'Source File' field contains 'lightingPlotPlan.dwg' and the 'Result Dataset' is 'lightingPlotPlan'. The 'Conversion Parameters' section includes options for 'Unite Layers', 'Import Symbol Block', 'Import Extended Field', 'Set Scale', 'Import Invisible Layers', 'Import Block Attribute', 'Import Extension Records', 'Keep Object Height', 'Keep Parametric Object', and 'Keep LWP Line Width'. The 'Source File Info' section shows the 'Source Folder' as 'C:\Users\Jessica\Desktop\实习数据生产数据\cad\lighting'.

| Source File | Type | Status |
|----------------------|--------------|----------|
| lightingPlotPlan.dwg | AutoCAD D... | Uncon... |

Exercise:

- Import LightingPlan.dwg as CAD dataset
- Import LightingPlan.dwg as simple datasets
- Data location:
 - Data\01-CAD\LightingPlan.dwg

Vector Data Import—CAD Format

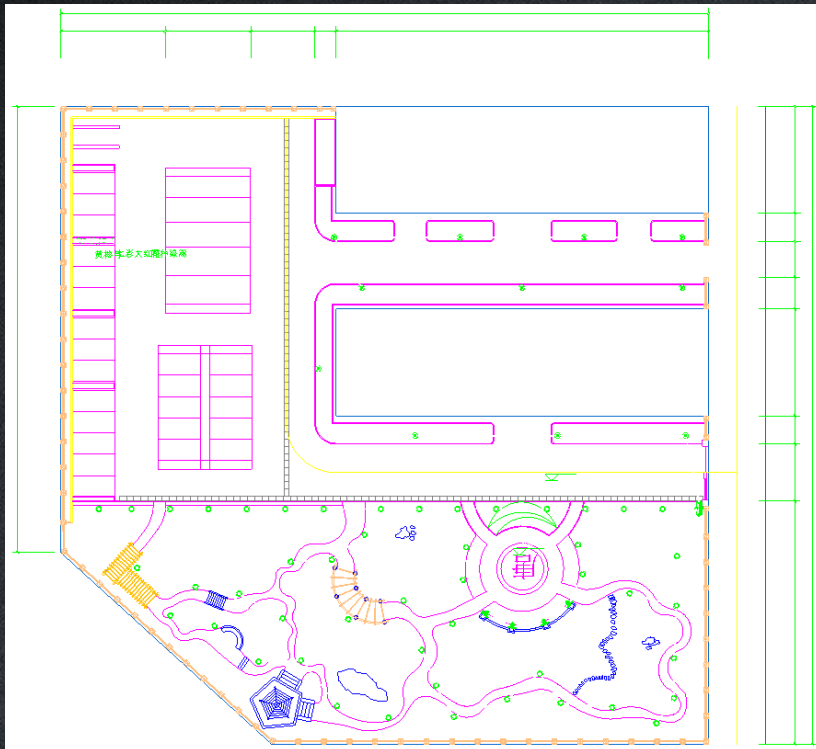
- Comparison of import results

| Import Type | Result | Original CAD Style | Spatial Analysis |
|----------------|---|--------------------|------------------|
| CAD Dataset | Point, Line, Region, and Text are stored together | Imported | Not Supported |
| Simple Dataset | Point, Line, Region, and Text are stored separately | Not Imported | Supported |

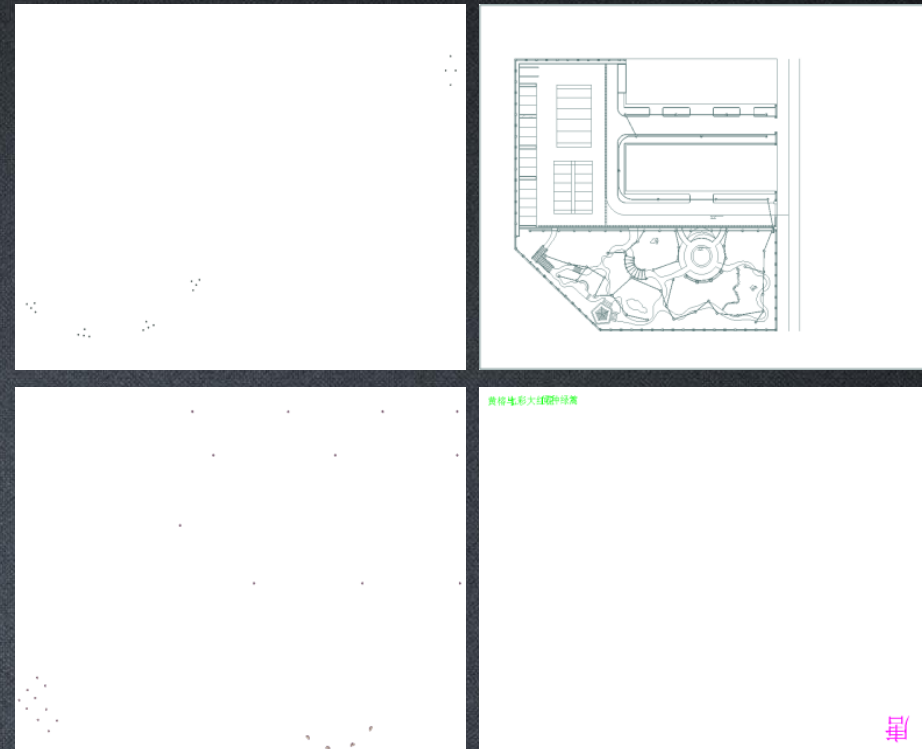
Vector Data Import—CAD Format

- Comparison of import results

CAD Dataset

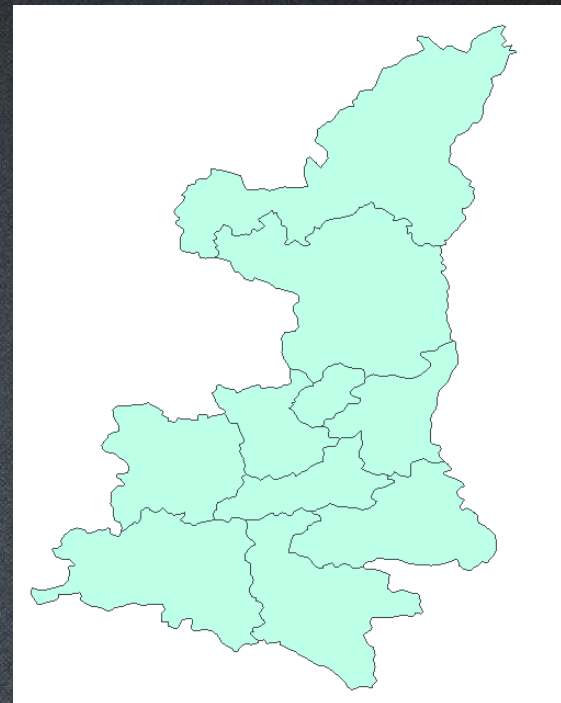
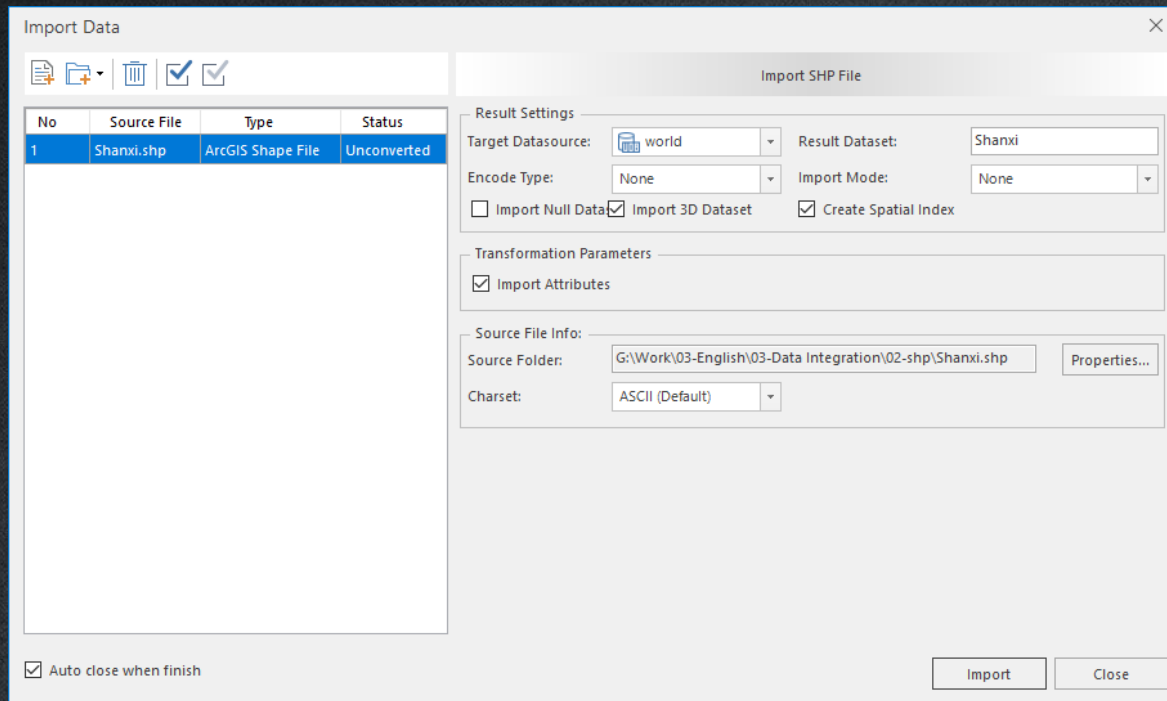


Simple Dataset



Vector Data Import—GIS Format

- MapInfo format (*.mif;*.tab;*.wor)
- ArcGIS format (*.shp;*.grd;*.txt;*.e00)
- MapGIS format (*.wat;*.wal;*.wap;*.wan)
- ...

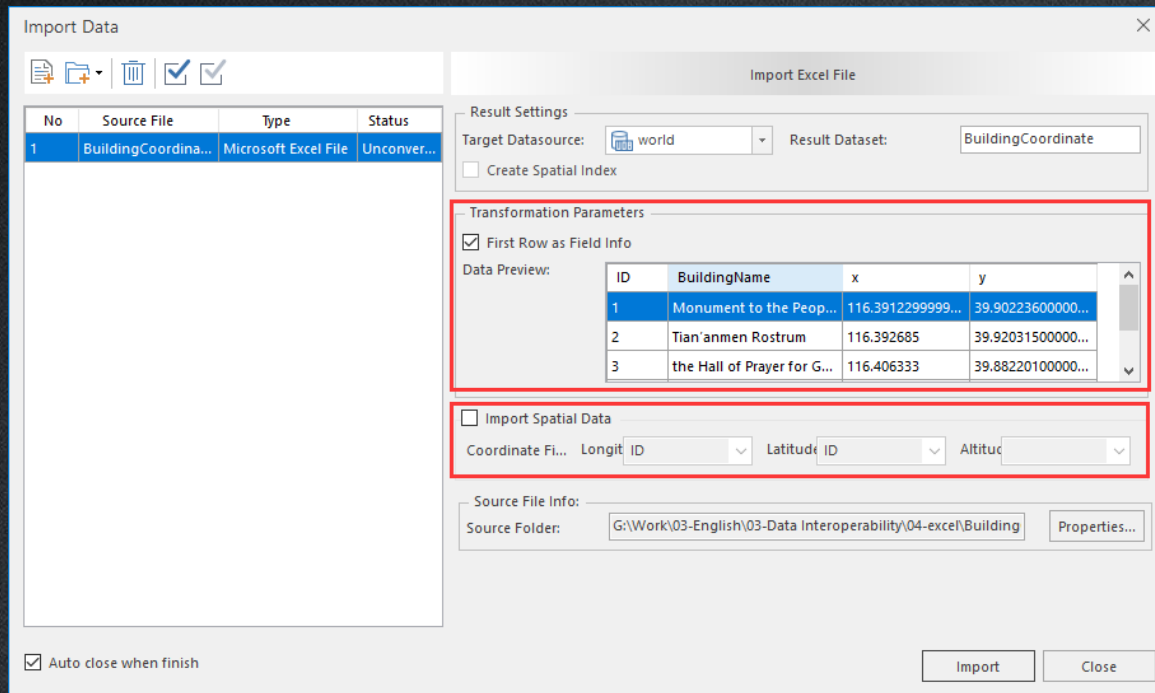


Exercise:

- Import Shaanxi.shp into the target datasource
- Data location:
 - Data\02-shp\Shaanxi.shp

Vector Data Import—Attribute Table

- Attribute Files (*.csv;*.xlsx)
- Functions of Attribute Files
 - Convert it into point dataset
 - Associate it with other spatial dataset



Attention:

- ✓ First Row as Field info
- ✓ Import Spatial Data

Exercise:

- Import BuildingCoordinate.xlsx file as well as its spatial data
- Import BuildingCode.xlsx and append its building code into the former dataset
- Data location:
 - Data\03-excel\BuildingCoordinate.xlsx
 - Data\03-excel\BuildingCode.xlsx

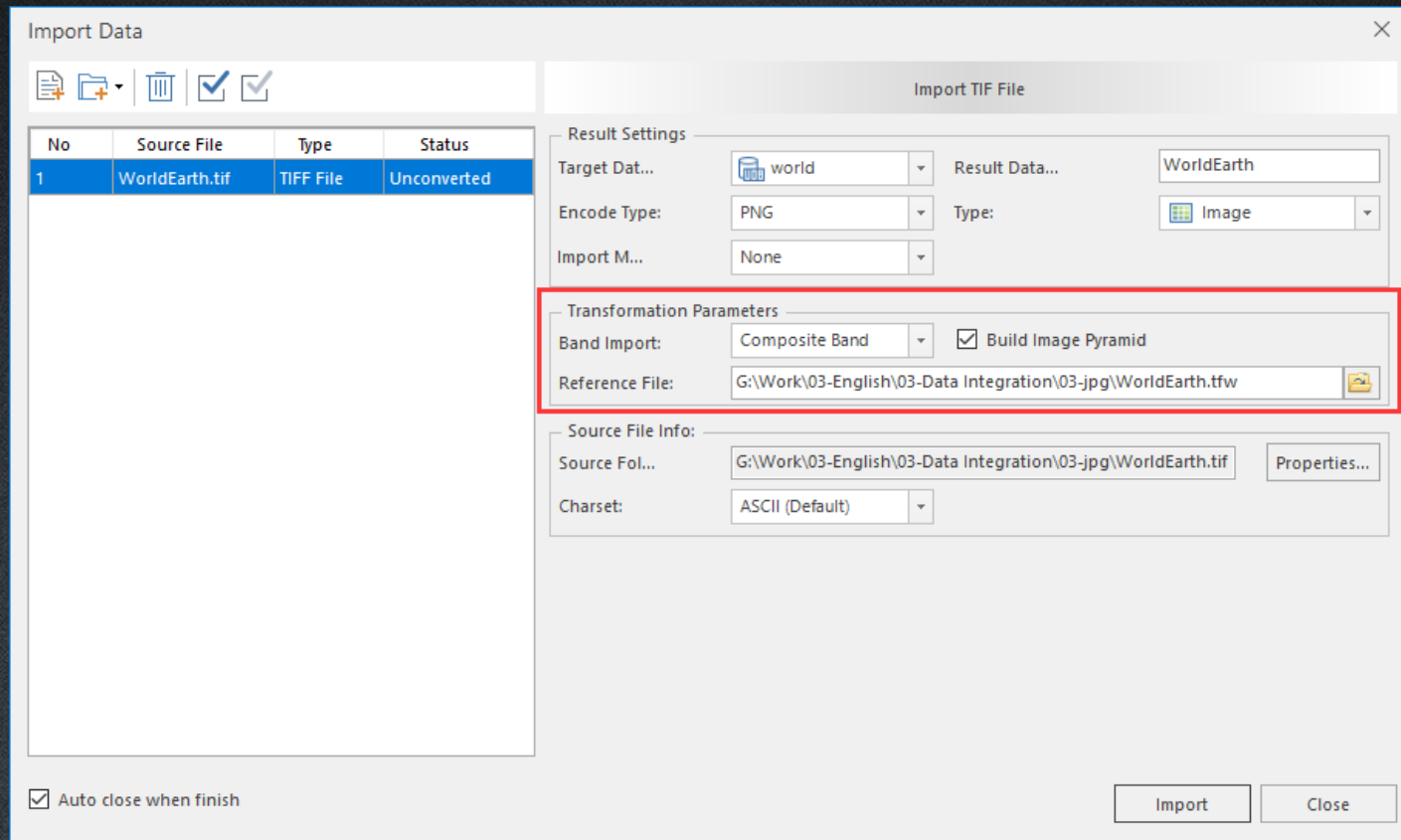
The screenshot shows the 'Dataset Append Column' dialog box in a GIS application. The 'Target Data' section is configured with 'world' as the Datasource, 'BuildingCoordinat' as the Dataset, and 'BuildingName' as the Join Field. The 'Source Data' section is configured with 'world' as the Datasource, 'BuildingCode_She' as the Dataset, and 'BuildingName' as the Join Field. The 'Append Field' table lists the fields to be appended:

| | Source Field | New Field | Field Type |
|-------------------------------------|--------------|--------------|------------|
| <input type="checkbox"/> | SmUserID | SmUserID | Int |
| <input type="checkbox"/> | ID | ID | Text |
| <input type="checkbox"/> | BuildingName | BuildingName | Text |
| <input checked="" type="checkbox"/> | BuildingCode | BuildingCode | Text |

Below the dialog box, a map displays several building locations with their IDs: 31522, 31535, 54696, 56299, 54680, 31518, 31517, and 31521.

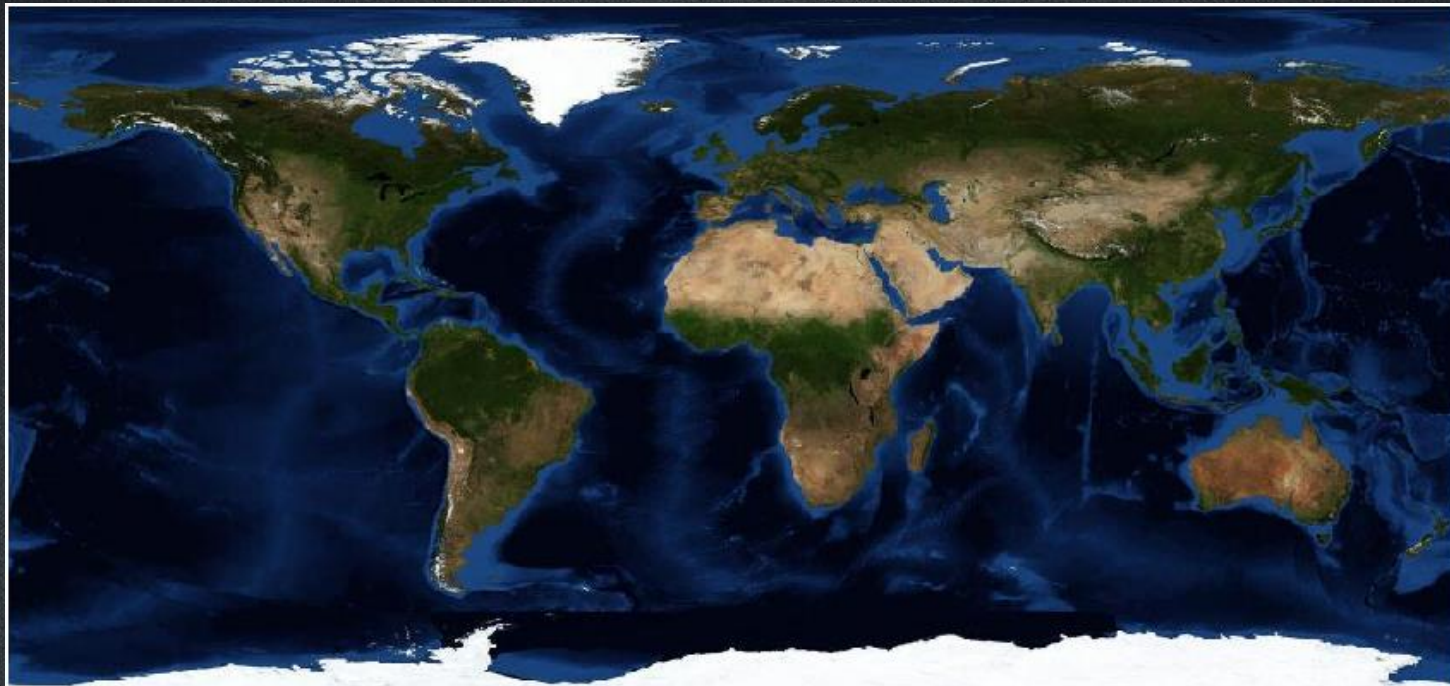
Raster Data Import

- General image files (*.bmp;*.jpg;*.png;*.tiff;etc.)
- Compression image files (*.sit)



Exercise:

- Import WorldEarth.tif into the target datasource
- Data location:
 - Data\04-tif\WorldEarth.tif



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Exercise:

- Export a vector dataset into .shp format file
- Export a raster dataset into .sit format file
- ...

Thank You!

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The SuperMap logo features the brand name in a white, italicized serif font. A thin white arc curves over the top of the letters 'M' and 'a'. A small white dot is positioned above the letter 'p'.

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