Learning Video Series
Extending Map Suite

Lesson:
FDO, OGR & GDAL

Learn how to integrate a variety of data formats into Map Suite using FDO, OGR & GDAL.

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Agenda

- Answer the following questions

  - What are FDO, GDAL, and OGR?

  - Where do I find the formats they support?

  - What licenses cover them?

  - How do I access them through Map Suite?

  - What files do I need to deploy?

  - What if I need a format that is not supported?

- Review a sample project using a number of different formats

- Answer additional questions

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FDO, GDAL, and OGR High Level

- Open source libraries to support various data format

- Developed to provide a single abstract API

- We offer many native implementations of formats they support

- Native C++ libraries

- We wrap and package them for your convenience

- They ship as extensions because of their dependencies

- They require you have certain files in the System32 directory

- We support them as best we can considering they are third party libraries

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FDO

- FDO stands for "Feature Data Object"

- Developed by Autodesk

- One common interface to a number of spatial formats

- Released under the LGPL

- Homepage - http://fdo.osgeo.org/

- Providers List - http://fdo.osgeo.org/OSProviderOverviews.html

- Gateway support for OGR & GDAL

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GDAL

- GDAL stands for "Geospatial Data Abstraction Layer"

- Released by Open Source Geospatial Foundation

- One common interface to a number of raster formats

- Released under the X/MIT style license

- Homepage - http://www.gdal.org/

- Formats Supported - http://www.gdal.org/formats_list.html

- Specializing in Raster formats

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OGR

- OGR is part of the GDAL library

- One common interface to a number of vector formats

- Released under the X/MIT style license

- Homepage - http://www.gdal.org/ogr/

- Formats Supported - http://www.gdal.org/ogr/ogr_formats.html

- Specializing in Vector formats

- Many libraries not compiled by default

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How do I access them through Map Suite?

- We expose an extension assembly called FdoExtension.dll

  \Developer Reference\Spatial Extensions\Fdo Extension

- We require you move the folder below to your System32

directory

  \Developer Reference\System32\MapSuiteFdoExtensionx86

- We expose classes that target FDO at a high level

- We expose classes that target OGR & GDAL

- We expose classes that target certain formats

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What are the Important Classes?

- FdoRasterSource & FdoFeatureSource
  - Classes that all other classes inherit from

- GdalRasterLayer & GdalRasterSource
  - Targeted to GDAL formats with easy to use interface
  - Inherits from FdoRasterSource

- OgrFeatureLayer & OgrFeatureSource
  - Targeted to OGR vector formats with easy to use interface
  - Inherits from FdoVectorSource

- Targeted Classes
  - S57FeatureLayer, SdfFeatureLayer, TabFileFeatureLayer, PersonalGeoDatabaseFeatureLayer, etc…
  - We can add additional classes as customers request them.

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What if I need a format that is not supported?

- You can petition FDO, OGR or GDAL to include your format

- You can integrate your format using Map Suite

- Check out the video 'Extending Map Suite – Integrating Custom Data Formats'

- Post your questions or requirements to the discussion forums

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Sample Code Overview

- Sample showing some an OGR format

- Sample showing some GDAL formats

- Show how we create a easy to use wrapper

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Let's Look at Some Code!

You can find the code we will review in a zip file accompanying this video on ThinkGeo.com.

To compile the code it requires you have installed a full or evaluation edition of any Map Suite 3.0+ product. You will need to add the MapSuiteCore.DLL as a reference in the project.

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Thank You For Watching!

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