Roadsoft & GIS

Panel Discussion

Panel:

Luke Peterson – Roadsoft
Rick Sprague - Kent County Road Commission
Keith Depp - City of Rochester Hills
Erik Dziurka - Bay County Road Commission
Marcus McNamara - OHM Advisors
Topics

• GIS to Roadsoft - Adding External Layers
  - Digital orthos, Shapefiles
  - Managing external layers

• Roadsoft to GIS - Exporting Shapefiles
  - Full layer
  - Partial layer based on Selection
GIS to Roadsoft

External Layers
Adding Map Layers

Tip: If you are having trouble selecting a feature on the map, it is probably because that layer is not the ACTIVE layer.

Note: Many external layers can be re-projected (if necessary) when added to the Roadsoft map, but .ecw files MUST match the Roadsoft map projection.
Common Formats

- All Supported File Types (*.DXF;*.BT;*.BMP;*.TOC;*.RT1;*.CSV;*.DLG;*.OK)
- AutoCAD File Format (*.DXF)
- Binary Terrain Grid (*.BT)
- Bitmap (*.BMP)
- CDRG Format (*.TOC)
- Census 2000 TIGER/Line (*.RT1)
- Comma Separated Values (*.CSV)
- Digital Line Graphs (*.DLG;*.OPT)
- Digital Elevation Model (ASCII GRID or SPOT) (*.DEM)
- Digital Terrain Elevation Data (*.DT0;*.DT1;*.DT2)
- Enhanced Compressed Wavelet (*.ECW)
- ERDAS IMAGINE (*.IMG)
- ESRI ArcInfo ASCII Grid (*.GRD)
- ESRI ArcInfo Binary Grid (*.ADF)
- ESRI ArcInfo Export Format (*.E00)
- ESRI ArcView Shapefile Format (*.SHP)
- Geographic Data Files (*.GDF)
- Geographic Markup Language (*.GML;*.XML)
- Google Earth Keyhole Markup Language (*.KML;*.KMZ)
- GPS Exchange Format (*.GPX)
- Graphic Interchange Format (*.GIF)
- JPEG (*.JPG;*.JPEG)
- JPEG 2000 (*.JP2;*.J2K;*.JPF;*.JPX;*.JPC)
- Lizardtech MrSID (*.SID)
- MapInfo Interchange (*.MIF;*.MID)
- MapInfo Native Format (*.TAB)
- Microstation Native Format (*.DGN)
- PNG - Portable Network Graphic (*.PNG)
- SDTS Raster Profile and Extensions (*.DDF)
Drag and Drop
Some Imagery Sources

• Michigan Geographic Data Library: http://www.mcgi.state.mi.us/mgdl/

• National Agriculture Imagery Program (NAIP) 2009/2010 aerial imagery:
  - Contact Roadsoft
Layer Properties
Rendering, Labels, Legends

Tip: If you are having trouble selecting a feature on the map, it is probably because that layer is not the ACTIVE layer.
Layer Visibility Manager

Tip: If you are having trouble selecting a feature on the map, it is probably because that layer is not the ACTIVE layer.

Note: This can be especially useful when working with external layers that are broken down into rectangular areas of the map. It will allow you to turn them all on/off at one time.
Roadsoft to GIS

Exporting Shapefiles
Export Layer

Tip: If you are having trouble selecting a feature on the map, it is probably because that layer is not the ACTIVE layer.
Export Layer Fields

Tip: If you are having trouble selecting a feature on the map, it is probably because that layer is not the ACTIVE layer.
**Shapefile Export**

A popular geospatial vector data format for geographic information system software.

- Can export an entire layer or a selection on a layer
- Exports using Roadsoft’s Map Projection: Michigan GeoRef (in Michigan)
- Is called a shapefile, but is actually a set of at least 4 files:
  - .shp = shape format
  - .shx = shape index format
  - .dbf = attribute format
  - .prj = projection format
- Optionally: many other pieces
Creative Solutions
Exporting Shapefiles
&
Adding them as External Layers
Using Roadsoft Shapefiles as External layers in Roadsoft?
Samples
Kent County Road Commission

Rick Sprague
Street Map with Ratings
Local Road Conditions
City of Rochester Hills

Keith Depp
2015 Major Road Conditions

2015 MAJOR ROAD CONDITIONS
(PUBLIC PAVED ROADS)

1-4 (POOR)
- Asphalt: 6.14 mi > 22%
- Concrete: 2.91 mi

5-7 (FAIR)
- Asphalt: 16.21 mi > 50%
- Concrete: 4.51 mi

8-10 (GOOD)
- Asphalt: 6.09 mi > 28%
- Concrete: 5.64 mi

Note: ACT 51 mileage is 39.10 centerline miles.
Roadsoft ACT 51 mileage includes both sides of Hamlin Rd
boulevard and cross overs in total mileage.
2015 Local Road Conditions

2015 LOCAL ROAD CONDITIONS
(PUBLIC PAVED ROADS)

1-4 (POOR)
- Asphalt: 12.13 mi
- Concrete: 20.86 mi

5-7 (FAIR)
- Asphalt: 83.52 mi
- Concrete: 34.96 mi

8-10 (GOOD)
- Asphalt: 27.93 mi
- Concrete: 14.21 mi

Notes:
1) Actual travel length (214.16 miles)
2) ACT 51 certified length (196.65 miles)
3) Roadsoft length (193.61 miles)
Bay County Road Commission

Erik Dziurka
All Primary Roads
Spicer and Bay Culverts
OHM Advisors - Orchard, Hiltz & McCliment Inc.

Marcus McNamara
Open Discussion
Suggestions

• Management Tool for External layers
  ▪ Create views for other users
  ▪ Help to keep them in sync

• Links between Roadsoft & other GIS
  ▪ Is there a way to connect them for updates?