

UC



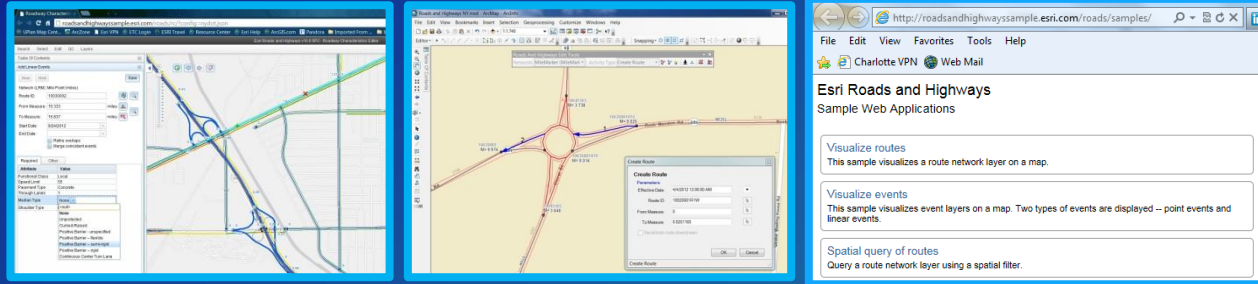
Esri Roads and Highways: An Introduction to Roadway Reporter (Demo Theater)

Tom Brenneman

Agenda

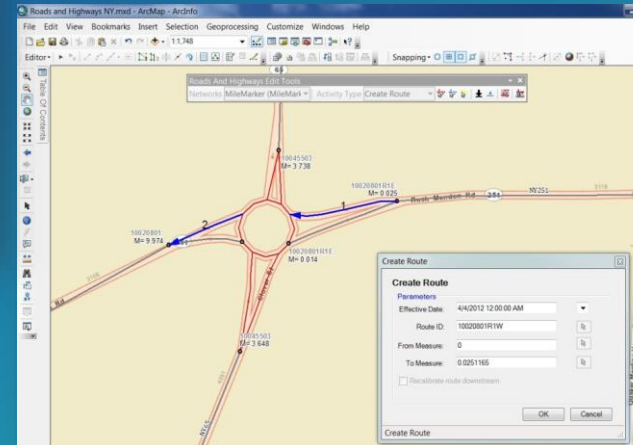
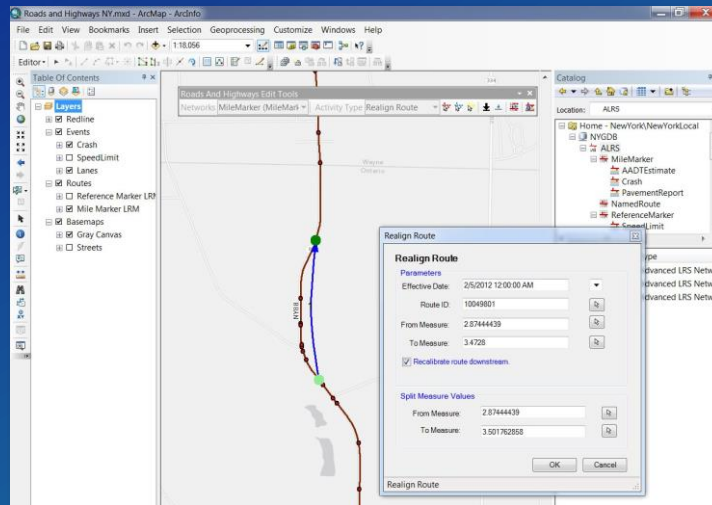
- **Roads and Highways introduction**
- **Roadway reporter overview**
- **Roadway reporter demonstration**

What is Esri Roads and Highways?

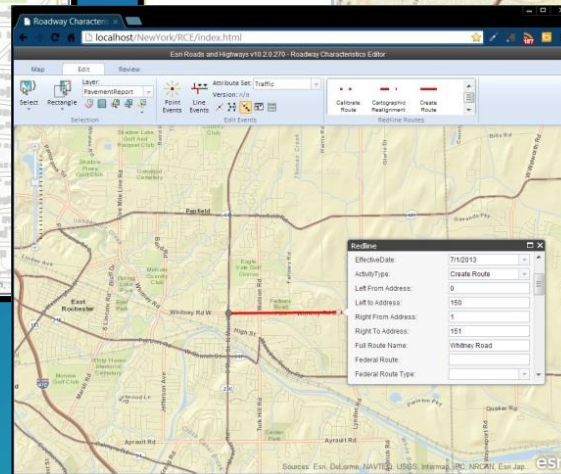
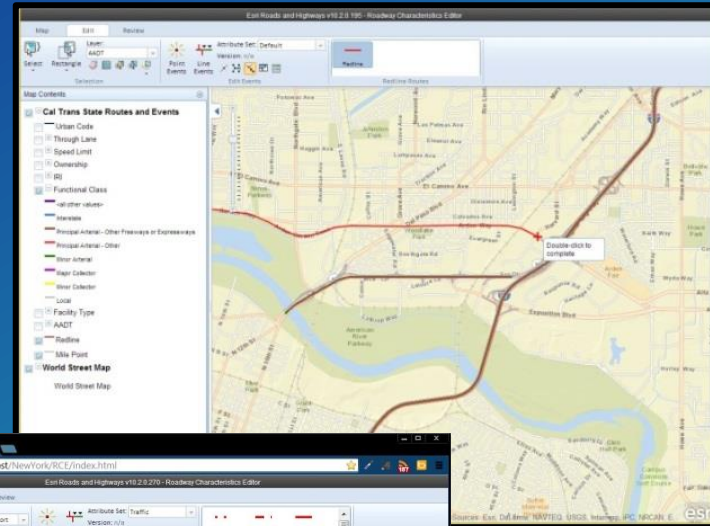
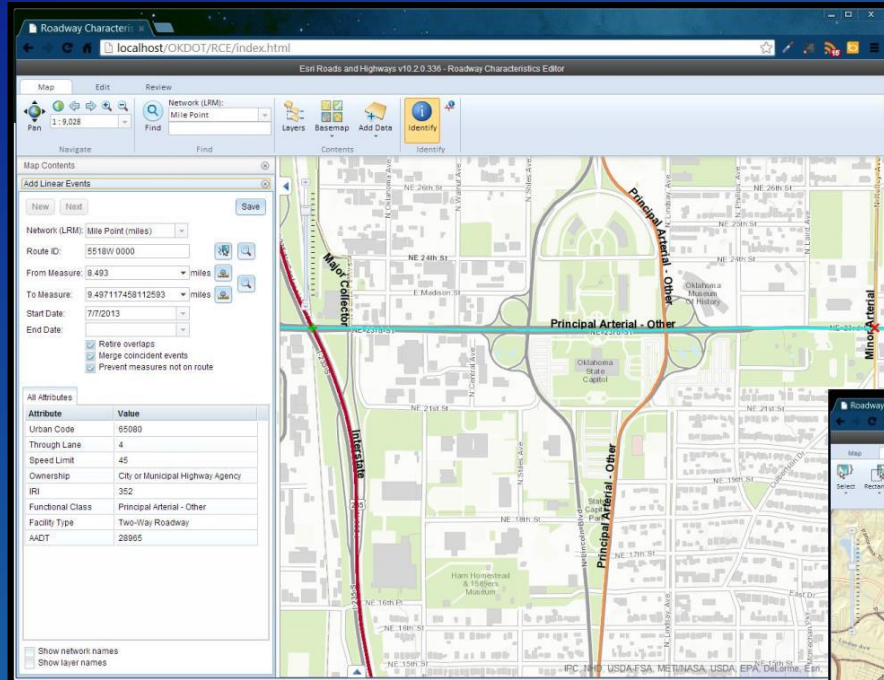


- **Maintenance**
 - Focused route editing tools
 - Web-based Roadway Characteristics Editing solution
 - Address maintenance tools (10.3.1)
- **System Integration**
 - Dynamic integration of enterprise business systems
 - Automated synchronization of business systems with LRS
- **Application framework**
 - LRS web services functionality for collaboration & data quality

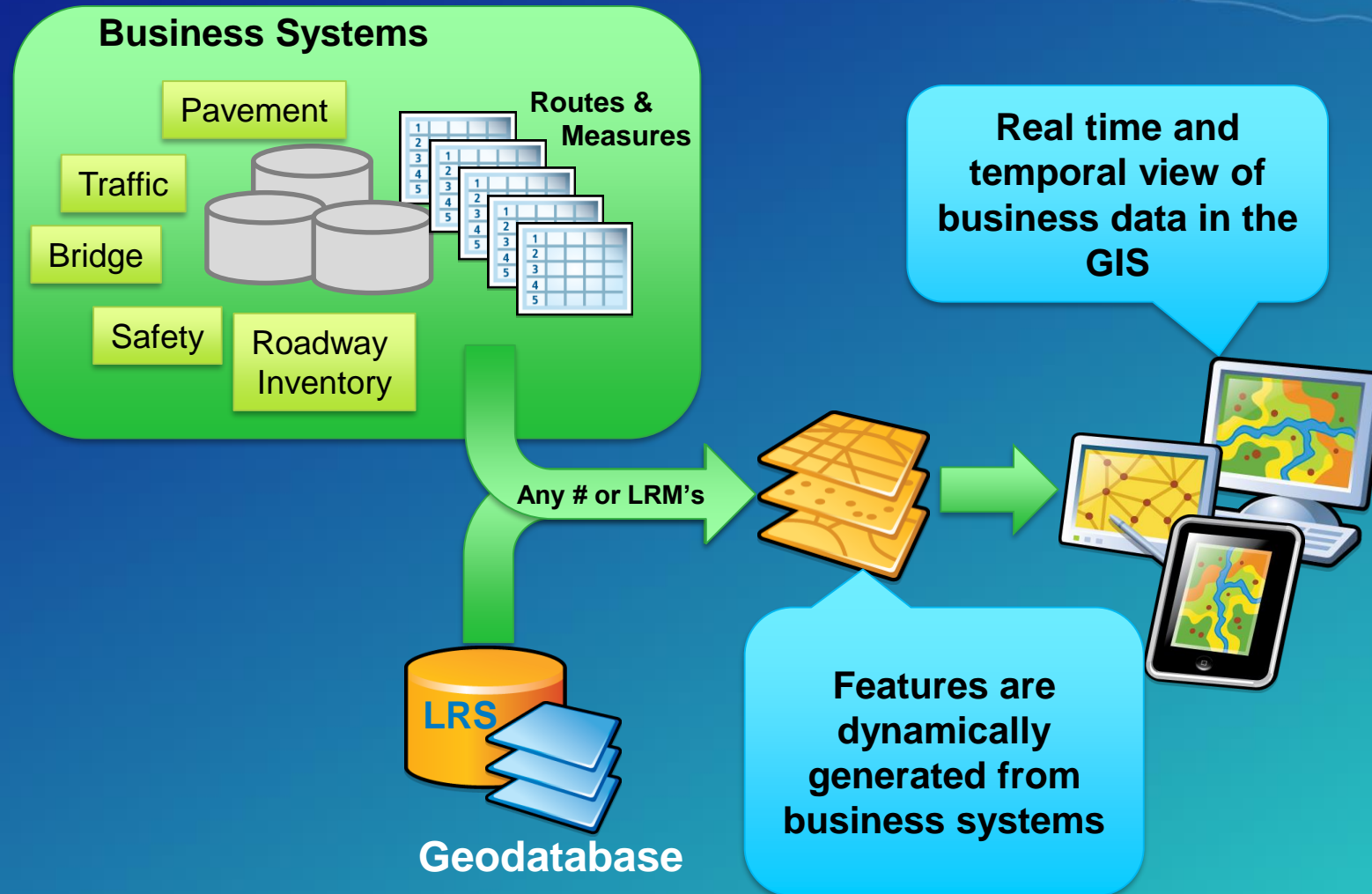
Focused LRS editing tools



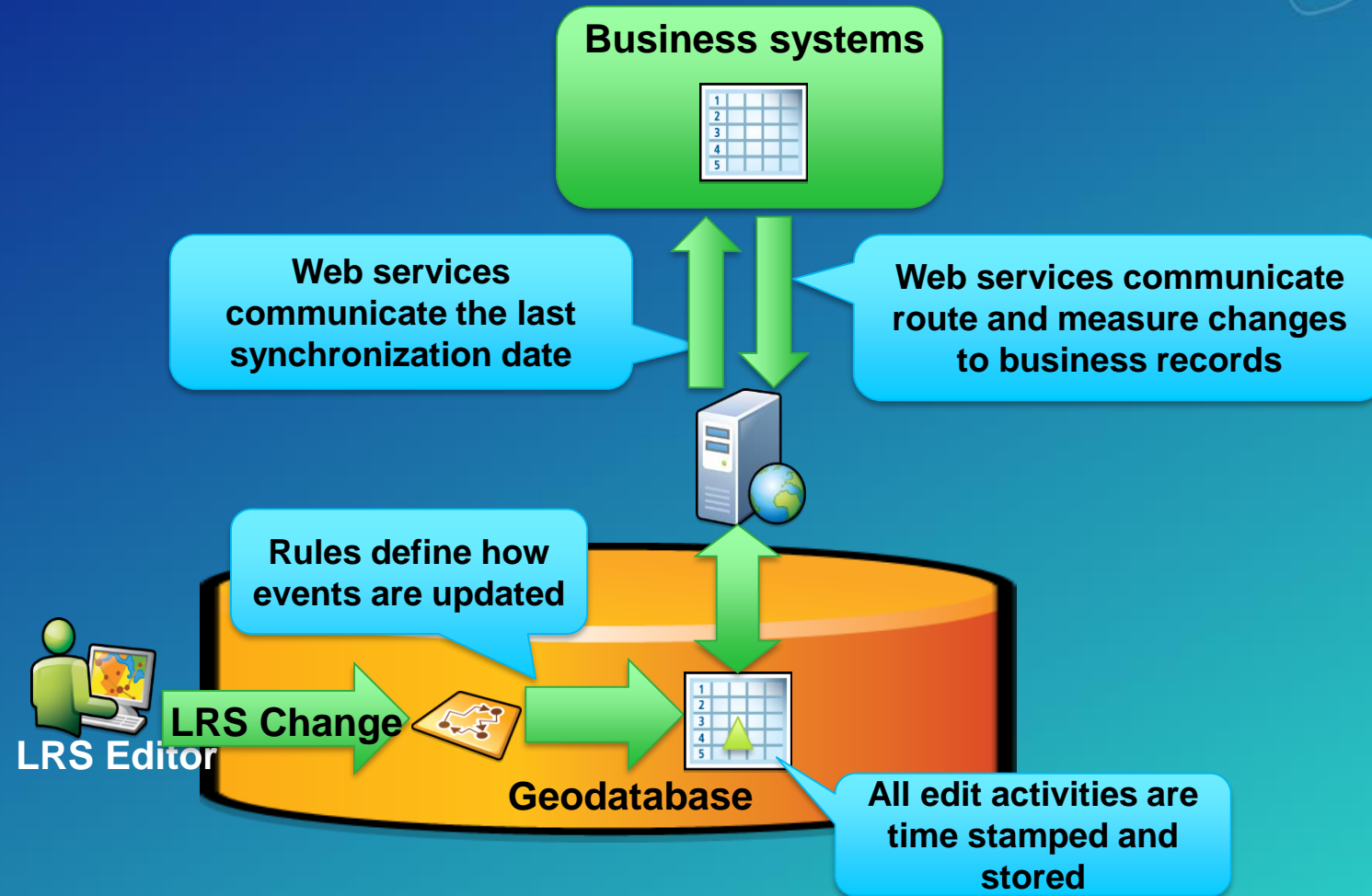
Event Editor



Dynamic integration of enterprise business systems



Automated sync of business systems with LRS



Robust set of web services for a variety of LRS functions

Improve data integrity & usability

The screenshot displays the Esri Roads and Highways web application. The main map shows a network of roads in a city. A data table on the left lists route measures with columns for RouteID, Measure, and Notes. A 'Translate Measures' tool is open, showing a map of a specific route and a table of route measures.

RouteID	Measure	Notes
122100	0.1165	Sing needs replacing
499450	0.2798	Graffiti
6400	34.3806	Damaged sign
6600	0.6223	Light needs replacing
122900	0.5993	Damaged sign
4000	29.97326	Sing needs replacing
58500	1.376644	Light needs replacing
75500	0.609677	Graffiti
24600	4.186686	Damaged guard rail
1400	21.8769	Damaged guard rail
500	6.706772	Graffiti
17400	0.414715	Light needs replacing

Translate Measures

From Network: Named Route
To Network: Mile Marker
Route ID: IN278
Measure: 30
[Translate]

Result

MeasureToGeometry Status: OK
Geometry: ("x": -8226543.328858199, "y": 4984549.129375781)
GeometryToMeasure Status: OK
Route ID: 10023605

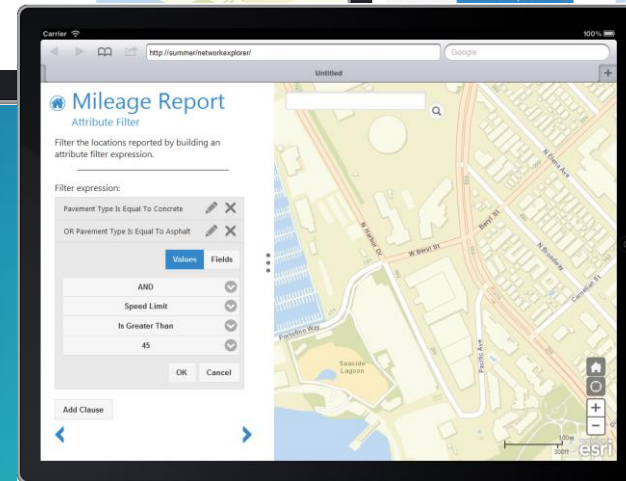
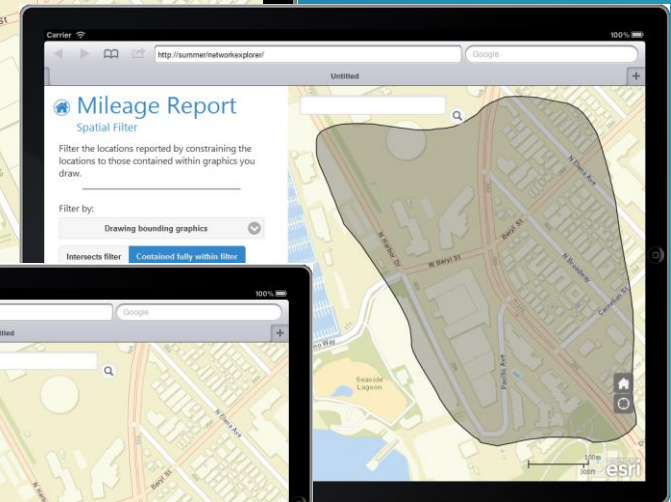
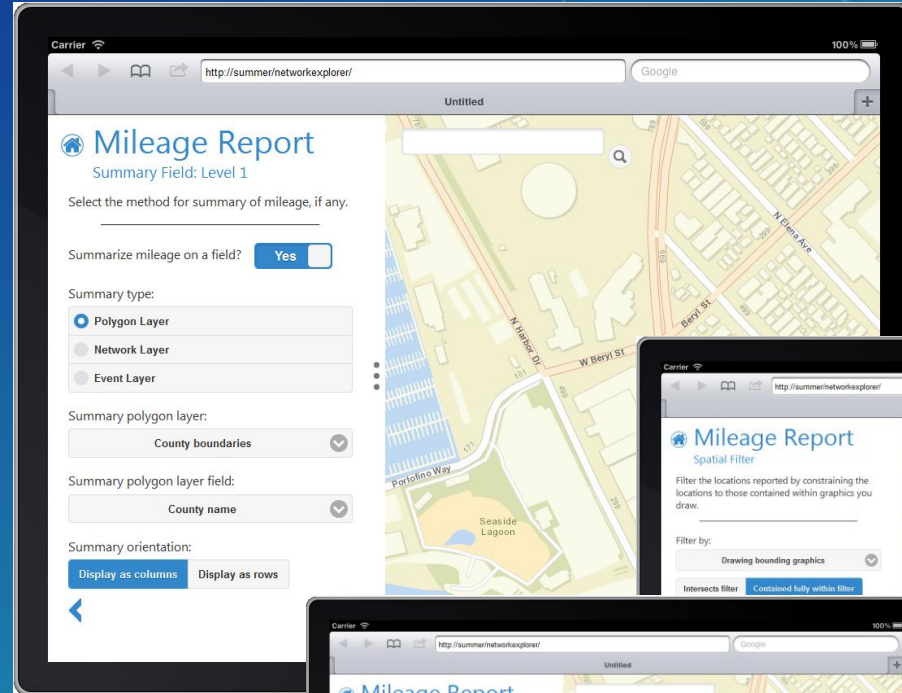
The screenshot displays the Esri Roads and Highways web application. The main content area lists various sample web applications and their functions.

Esri Roads and Highways Sample Web Applications

- Visualize routes**
This sample visualizes a route network layer on a map.
- Visualize events**
This sample visualizes event layers on a map. Two types of events are displayed -- point events and linear events.
- Spatial query of routes**
Query a route network layer using a spatial filter.
- Spatial query of events**
Query an event layer using a spatial filter.
- Attribute query of routes**
Query a route network layer using an attribute filter (where clause).
- Attribute query of events**
Query an event layer using an attribute filter (where clause).
- Convert geometry to measure**
Convert a geographic location into a route measure value.
- Convert measure to geometry**
Convert route measure values into geographic points and lines.
- Translate network measures**
Translate measure values between two networks with different units of measure.
- Drag-drop a CSV file of geographic locations**
Drag-and-drop a CSV file to convert geographic locations into route measures.
- Drag-drop a CSV file of route measures**
Drag-and-drop a CSV file to convert route measures into geographic locations.
- Event editing**
Add new event records to an event layer.

Roadway Reporter Reporting

- Report types
 - Mileage summary reports
 - Road locations & segments
 - Mile log
- Filter and combine event layers
 - Web based for PC or tablet
 - Opens data to decision makers
 - Produces
 - Tabular reports, maps, data products
 - PDF, CSV



Roadway Reporter Reporting

- Leverages Web Services
 - Road and Highways for Server required
- Integrated with ArcGIS for Organizations and ArcGIS Portal
 - Provides user and sharing model
 - Per user licensing
 - Stores report configurations
- Uses Overlay Route Events
 - New tool for Roads and Highways

The image displays two overlapping screenshots of the Roadway Reporter software interface. The background screenshot shows the 'Add Field' dialog box, and the foreground screenshot shows the 'Attribute Filter' dialog box.

Mileage Report - Add Field

Select the layer you would like to report count on.

Mileage layer: Through Lane

Column header: Lane Miles

Use a formula? ☒ Yes

Fields: Length, From Measure, To Measure, Event ID, Through Lane

Functions: Abs(), Atn(), Cos(), Exp(), Fix()

Formula: [Through_Lane] * {Mileage}

Mileage Report - Attribute Filter

Mileage Fields - Attribute Filter

Filter the locations reported by building an attribute filter expression.

Filter expression:

- AND Through Lane is greater than
- AND Through Lane is less than 5

Values Fields

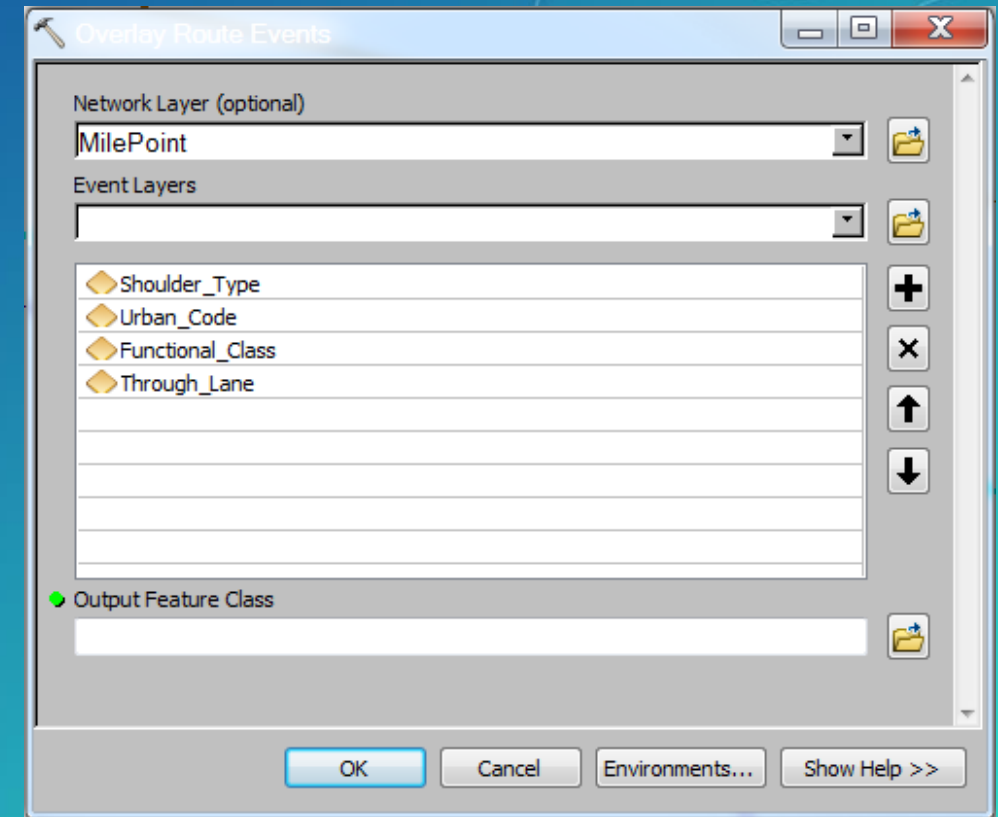
- OR
- Through Lane
- is equal to
- 7

OK Cancel

Add Clause Show SQL

Overlay Route Events

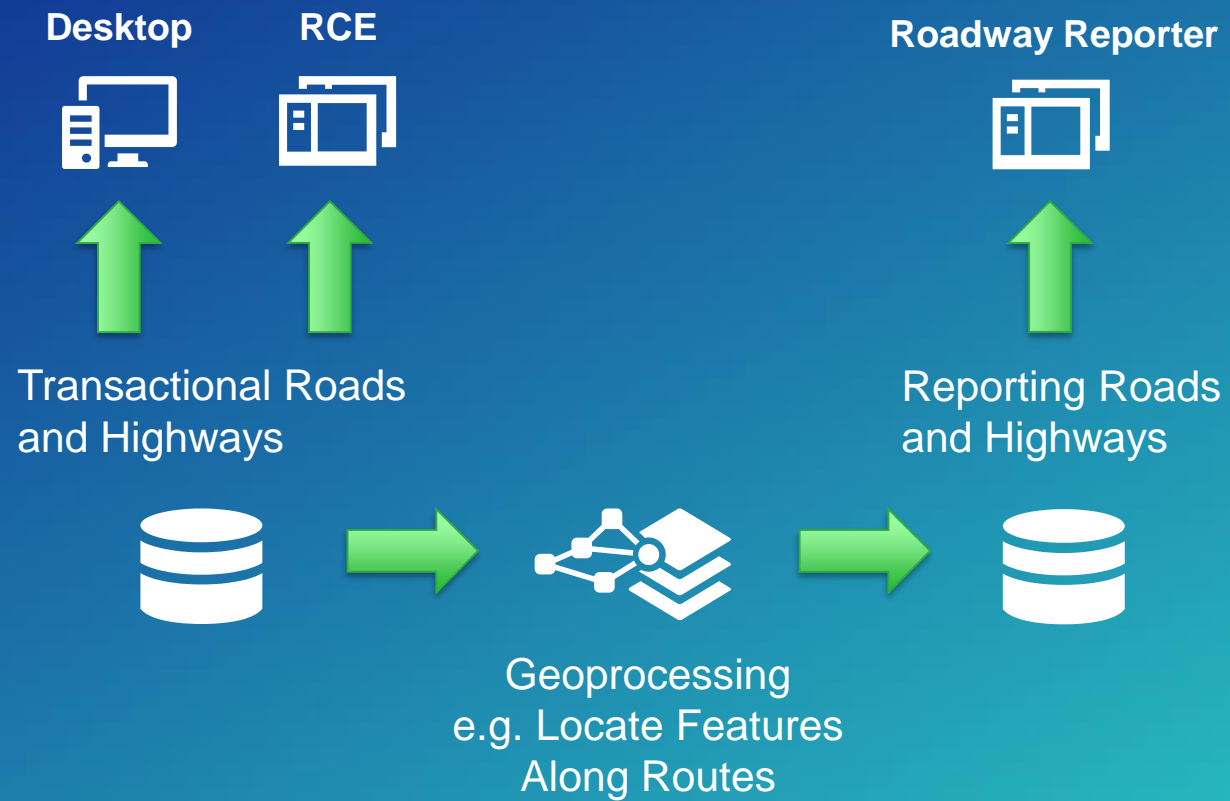
- Supports ...
 - Event feature classes
 - Dynamically segmenting multiple event layers
 - Event LRM measure translation
- Can produce publication dataset for Roadway Reporter
 - Faster reporting
 - Optional, not required
- Can produce dataset for other reporting tools



Sharing reports

- Share report configurations through ArcGIS Online groups
- Modify shared reports and share with others
- Report outputs
 - Share as files
 - Use CSVs in Esri Maps for office

Creating a publication data model from reporting



Demo

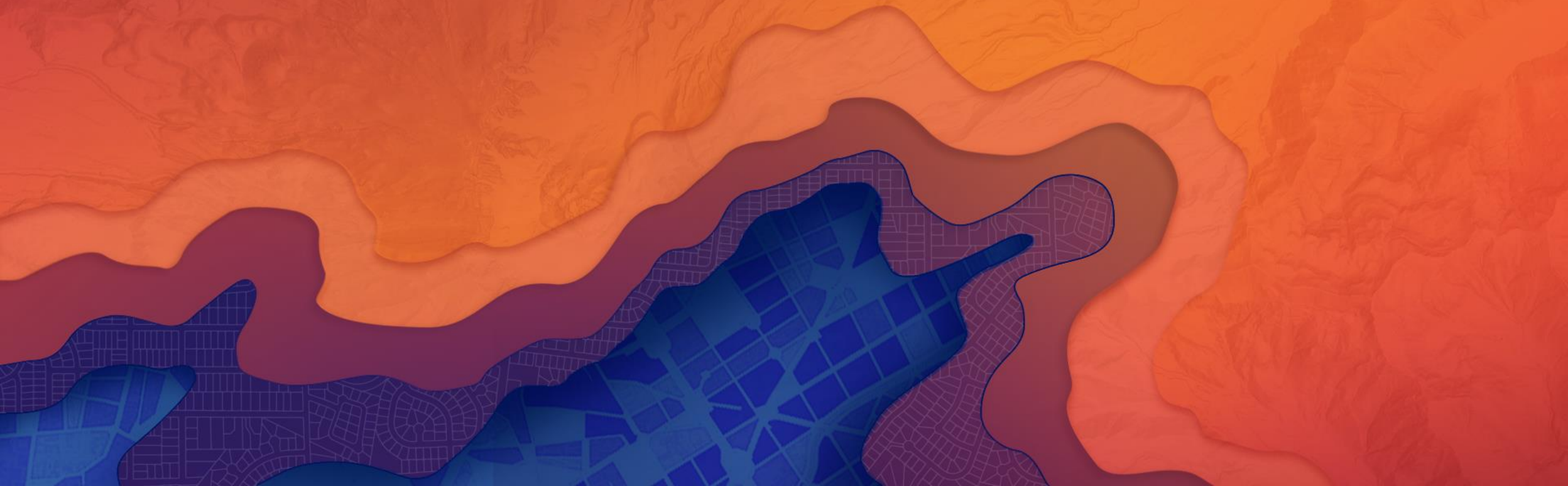
Probably the best demo you have ever seen. You will tell your friends about this demo. You may cry during this demo!

Resources

- <https://geonet.esri.com/groups/departments-of-transportation/projects/esri-roads-and-highways-extension>
- Tom Brenneman – tbrenneman@esri.com
- Search “Roads and Highways” in the agenda

Questions

About anything....

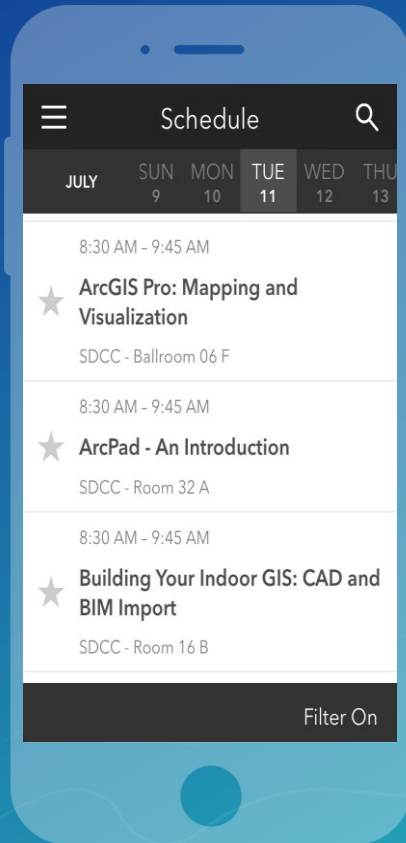


Please Take Our Survey on the Esri Events App!

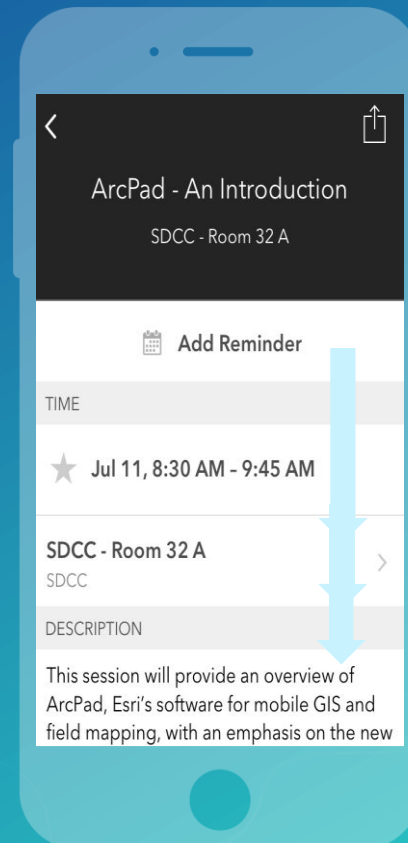
Download the Esri Events app and find your event



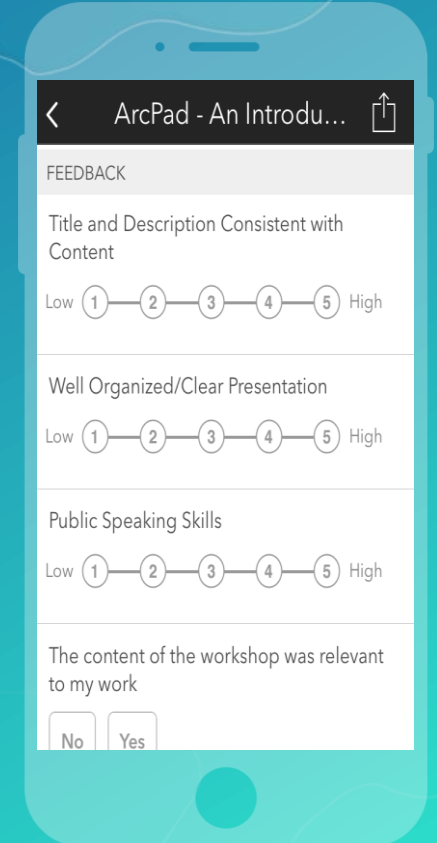
Select the session you attended



Scroll down to find the survey



Complete Answers and Select "Submit"



Thank You

“The mountains are calling and I must go.” — John Muir