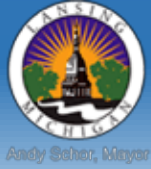


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# Real Time Plowing

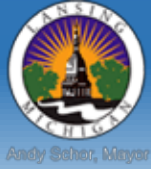
AVL and GeoEvent Server at Lansing



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# What Is GeoEvent Server?

- Consumes data streams
  - Handles many formats
- Perform analysis and transformation
  - Workflows centered around processors and filters
- Output in to ESRI ecosystem and others



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## Early Discussions

- 2018: Need was identified, started working with Verizon
  - Initial discussion between Public Service and Verizon, PS and IT
- 2019: Switch to GeoTab/Tmobile
  - Tmobile resells GeoTab
- End users unhappy with GeoTab interface
  - Found it difficult to search
  - Unintuitive



# Lansing

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Andy Sahar, Mayor

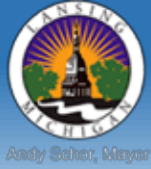
Groups filter Solid Waste X Support City\_of\_Lansing 0 Notifications Andrew.Skelton@lansingmi.gov

Vehicle, VIN, zone, route, or a Map Trips history Add zone My location Nearest

Sort by: Name Status

PS3961	Driving at 913 McKim Ave, Lansing, MI 48910, ... for 1h 7m 36s
PS8949	Driving at Route #19 for 1h 20m 55s
PS916	Driving at Route #31 for 50m 10s
PS919	Driving at Route #21 for 1h 20m 53s
PS917	Stopped at Route #13 for 53d 20h 39m 49s
PS933	Stopped at Route #13 for 14d 21h 31m 23s
PS3968	Stopped at Route #13 for 12d 16h 29m 40s
PS941	Stopped at Route #13 for 11d 23h 18m 23s
PS906	Stopped at Route #13 for 5d 16h 17m 24s
PS8947	Stopped at Route #13 for 4d 21h 27m 50s
AS6081 HRCS	Stopped at Route #7 for 4d 21h 5m 14s
PS936	

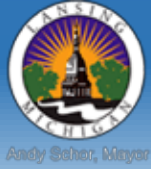
Map data ©2021 1 km Terms of Use



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## Set-Up

- Initial deployment in 10.6
  - Install was fairly straightforward
  - Config was not
- Entire environment consists of two machines:
  - One hosting GeoEvent
  - One hosting Portal/Data Store
- ESRI training
  - ArcGIS GeoEvent Workshop
- Other users across the Midwest!
  - Great knowledge base



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# Consuming AVL Data

- **GeoTab Connector**
  - Simplifies connection between GeoTab and GeoEvent
  - Handles different event record types
  - Be careful with options
- **Accuracy**
  - GeoTab seems to be reasonably accurate
  - Temporal Order issues



## geotab-in (Geotab Connector)

Name\*:

URL\*:

Polling Frequency (in seconds)\*:

Username:

Password:

Database:

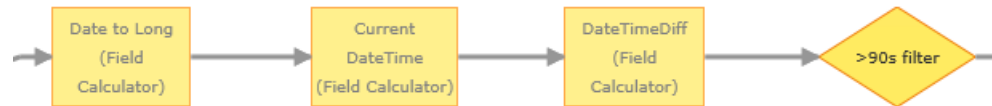
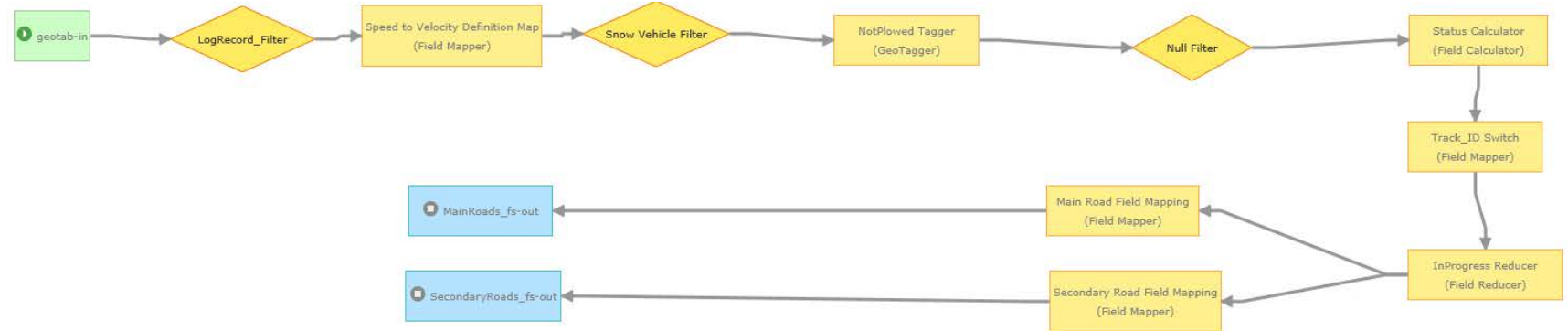
Get Log Record:  Yes  No

Get Status Data:  Yes  No

Get Fault Data:  Yes  No

Get Trip Data:  Yes  No

Get Exception Event Data:  Yes  No





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# Snowplow Map

- Fall 2019, request was made by Public Service Department
  - Wanted one public, one internal map
  - Goal of the public map was to inform, cut down on call volume
  - Internal pushback on releasing plow location to public
- Initial attempts got about 60% there...
  - Late winter 2020 began discussion with GIS Inc for help
  - By autumn 2020, official consulting agreement was signed
- Public Release Feb 2021
  - Good public reception, great feedback

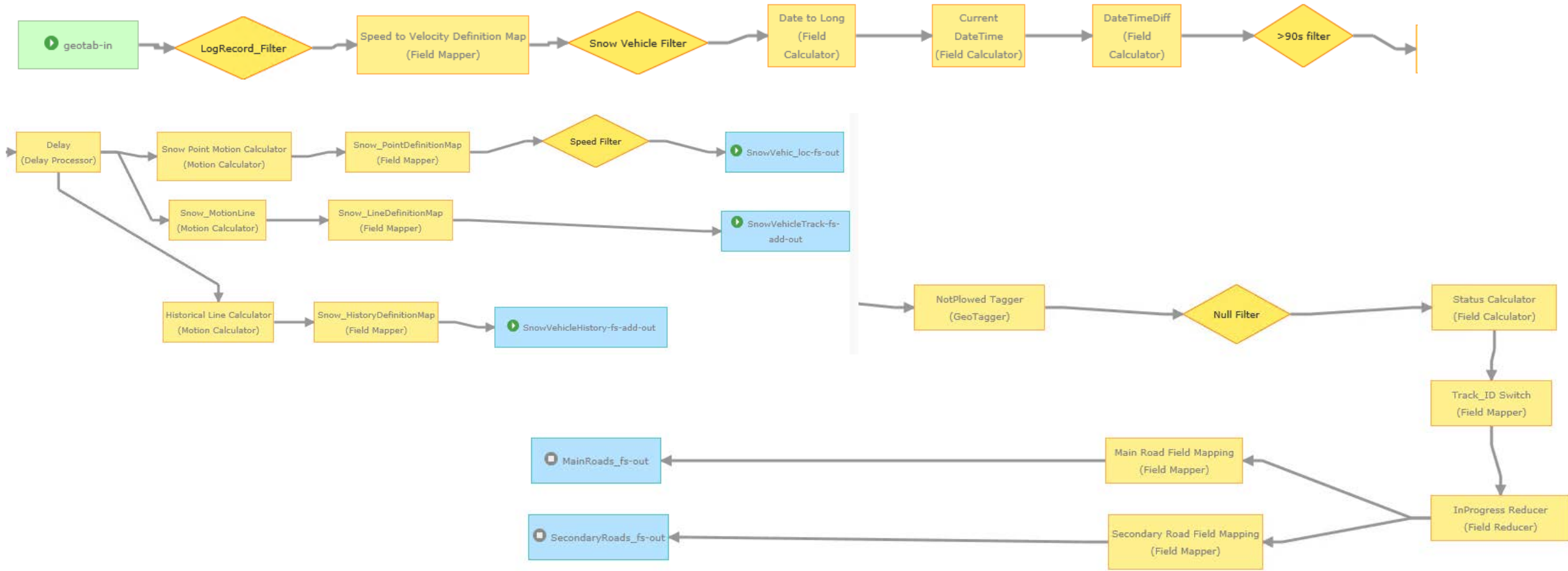


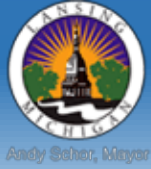


# Lansing

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Andy Scheer, Mayor

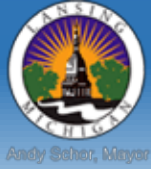




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# Future Applications

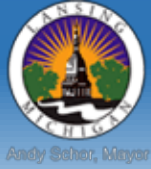
- Solid Waste and Recycling
  - Ability to bring in Cityworks trash/recycling work orders
  - Help plan response to missed carts/emergency pickups
- Route Planning
  - Determine current plow and trash pickup routes
  - Tweak with efficiency in mind
- Cityworks Integration
- Beyond AVL



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## Summary

- Steep Learning Curve
- Don't be afraid to work with others outside organization
- Training is important
- Immensely useful



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Thank you!

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