How We Automated the Spatializing of Data for a Web Map Data Portal

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Quick Bio

• BS in Geography from the University of Idaho with a Certificate in GIS
• Been in GIS field about 4 years
• If not at desk making maps, most likely up on a mountain somewhere or at a Mariners Game
Auburn, WA

- Population: ~ 80,000
- 450 Full-time Employees
- 30 Square Miles
Background

City of Auburn Strategic Initiatives: Technology- The Transparent City
Our Crimes Database

- Stored in a Proprietary Linux system
- Raw data with only addresses
- Can’t directly dump into GIS- needs to have data transformed for public/internal viewing, QA/QC, a spatial component to view on maps and applications, attributes renamed...
First Impression…

I HAVE NO IDEA WHAT I'M DOING
Our Mission

How to view all of this crime data spatially for analysis and reporting?
Our First Plan: Python Script

The Good.
• It worked. Can add new offenses, change and update as needed
• Ran in windows scheduler to automate.

The Bad.
• Long, cumbersome script.
• Needed multiple databases (.gbd → SDE) to clean and move data

The Ugly.
• Can’t easily change connection to Crimes Database, no direct connection to source (connected through ArcCatalog -then built through Model Builder- then exported out as a Python Script)
• No custom alerts or in depth logging capabilities.
• Not user friendly for non-python users.
Our Next Plan: FME!!
The FME Process

From Linux database to SDE
Easy Database Connections

Over 350 connections available in FME!
Managing Attributes

This continues on for a few more pages...
Attribute Mapper Transformer

- As an example: RKBK
  Crime Type= Felony Crimes Against Person
  Crime Name= Robbery

*double bonus: I was able to automatically import codes by a CSV file, AND...FME automatically read in all the source values for me*
Attribute Renamer

Transformer Parameters

Transformer Name: AttributeRenamer

Attributes To Rename

<table>
<thead>
<tr>
<th>Old Attribute</th>
<th>New Attribute</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>mature</td>
<td>OFFENSE</td>
<td></td>
</tr>
<tr>
<td>location</td>
<td>REPORTING_DISTRICT</td>
<td></td>
</tr>
<tr>
<td>dater</td>
<td>REPORTED</td>
<td></td>
</tr>
<tr>
<td>number</td>
<td>CASENUMBER</td>
<td></td>
</tr>
</tbody>
</table>

[Image of diagram with flows and nodes labeled]
*double bonus: Not Geocoded Values are routed to Excel spreadsheet for extra review for address.
Into GIS Environment: SDE
The Automation Process
LETS AUTOMATE!!
FME Server

Email notifications when Workbench succeed or failed
FME Server Logging (FME Jobs)
## Comparison

<table>
<thead>
<tr>
<th>Python</th>
<th>FME</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cumbersome/long script</td>
<td>• Easy to update codes and field changes</td>
</tr>
<tr>
<td>• Not very easy to customize alerts or logs</td>
<td>• Other users can easily edit-even w/minimal knowledge of FME</td>
</tr>
<tr>
<td>• Hard to edit- other users might not know the python language</td>
<td>• Share directly to FME Server for logs and alerts</td>
</tr>
<tr>
<td>• No friendly user interface</td>
<td>• Friendly user interface for FME Server and easy to set up</td>
</tr>
</tbody>
</table>
Demos

Crimes Interactive Public Map
Open Data Portal: Crimes Database
Thank You!

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