Data Interoperability Advanced

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Topics
Ask Us About Anything

ArcGIS Pro 2.0

Web Connections

FME Hub

Custom Formats

Custom Transformers

Python

Multiprocessing

Working with ArcGIS Enterprise and Online

ArcGIS

python™

FME HUB

ArcGIS Enterprise

Lets Start With ArcGIS Pro 2.0
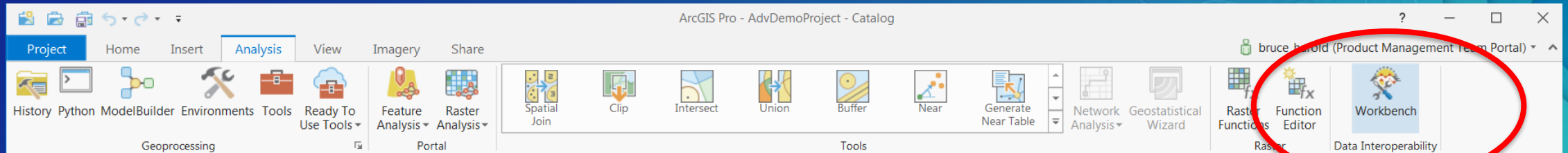
Data Interoperability

- FME 2017.0.1.1 Engine
  - Use FME 2017 Workspaces
  - Parameter Editor
  - Web Connector Transformers
  - Saved Web Connections
  - FME Hub Access

- Open and Edit 10.x ETL Tools
  - Like Modelbuilder, save as Pro tool only

- Python Compatibility
  - Pro Conda Environment Enabled Workspaces
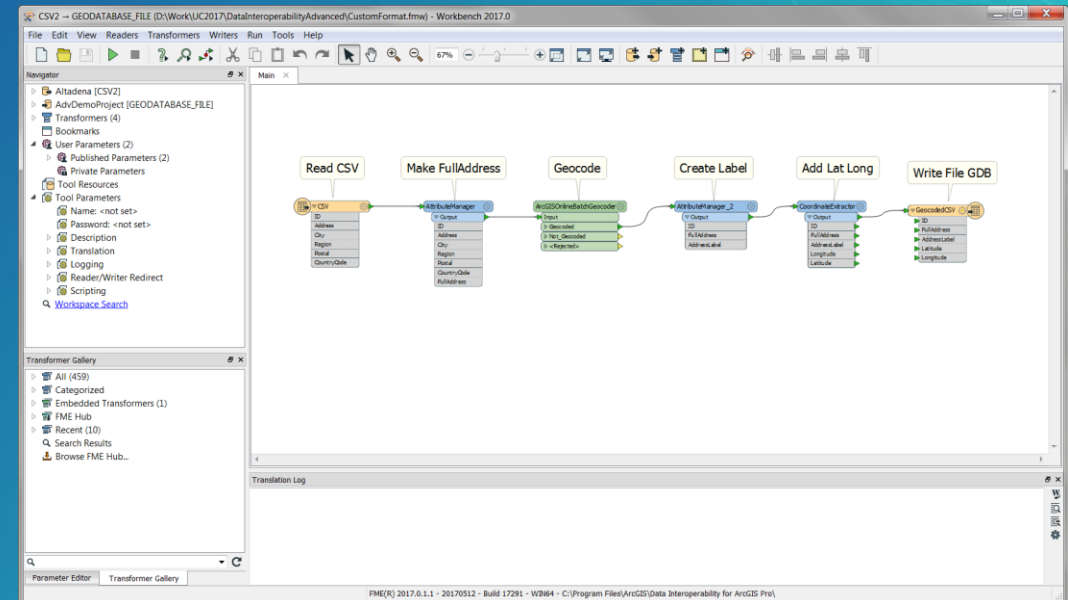 - Just This Workspace or Any Workspace
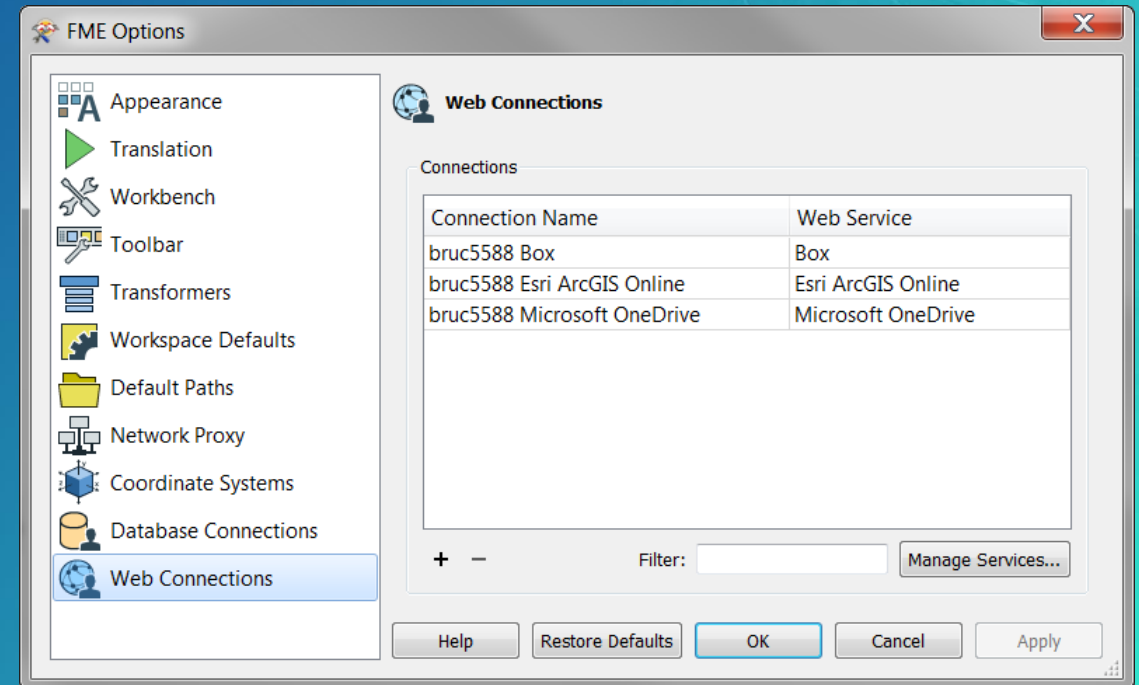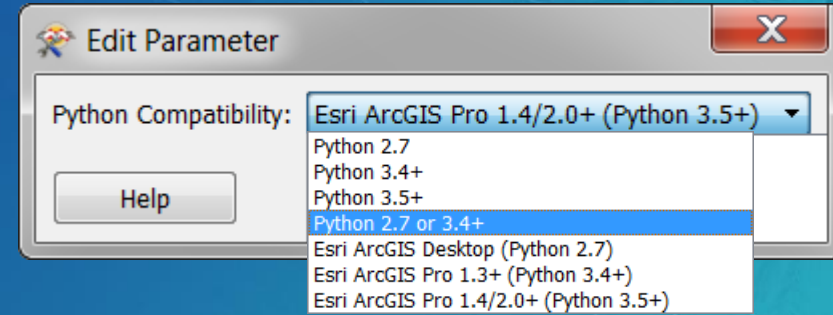
# Analysis Workspaces
Data Interoperability

- **Launch From Ribbon**

- **Prototype Workflows**
  - Author
  - Open
  - Drag In Data or FMW
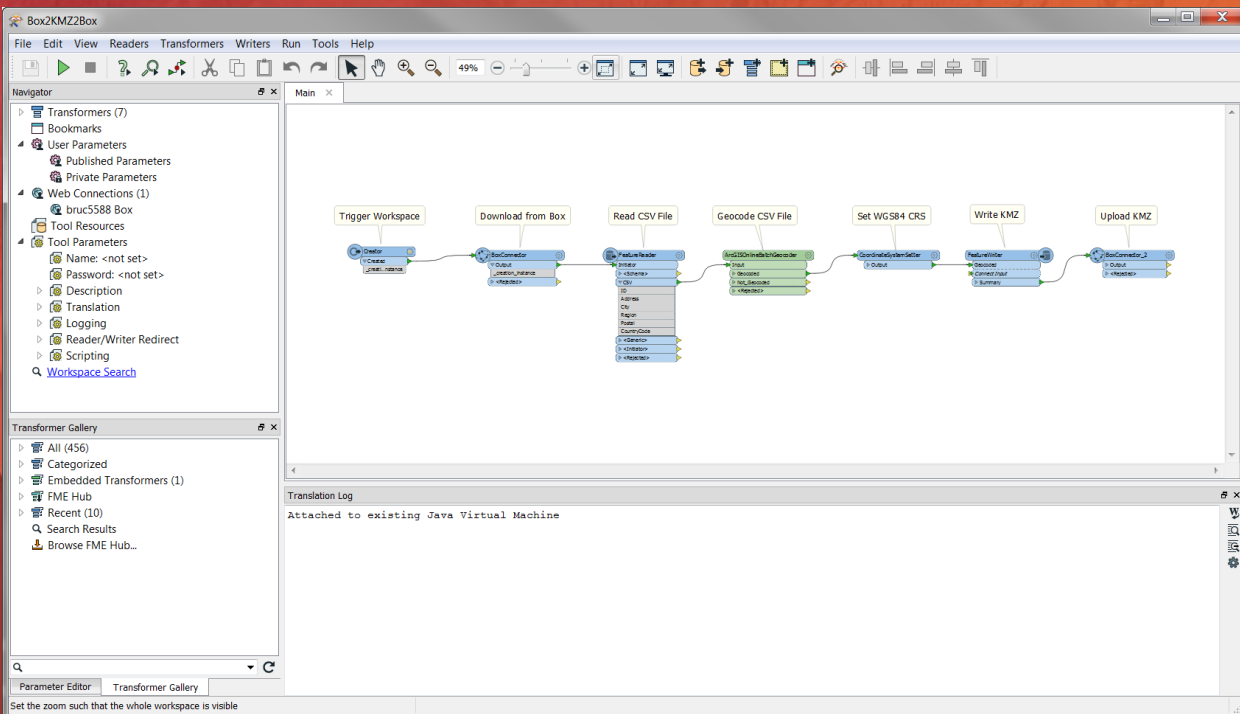 - Save As
  - Export As

- **Send To Email**

What's a Web Connection?
Data Interoperability

- Templates Preregistered
- Create/Authenticate Your Own
  - OAuth2
  - Token
  - HTTP
- Create From Template
- Import From File or Hub
- Saved To Cryptographic Keystore
  - May Be Shared Location
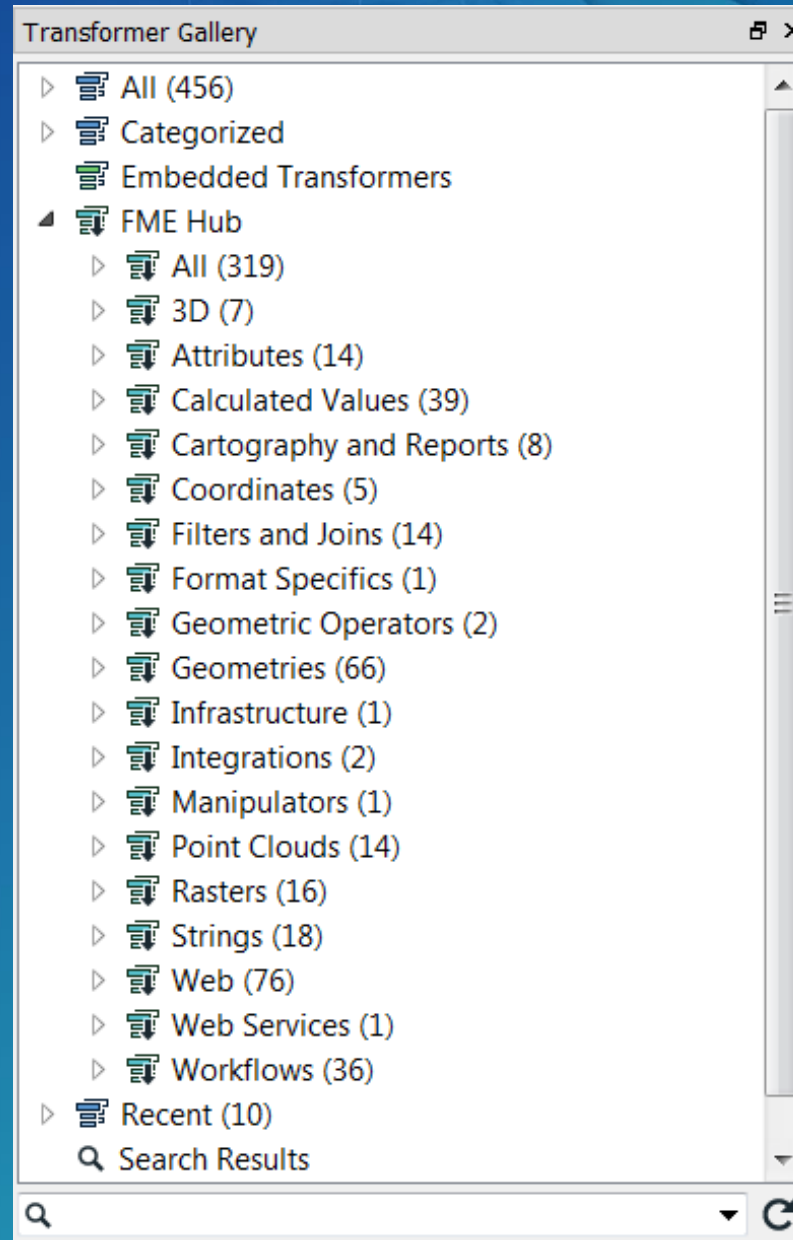 - Public Visibility Option
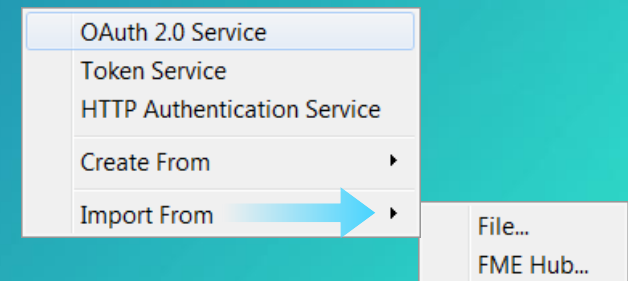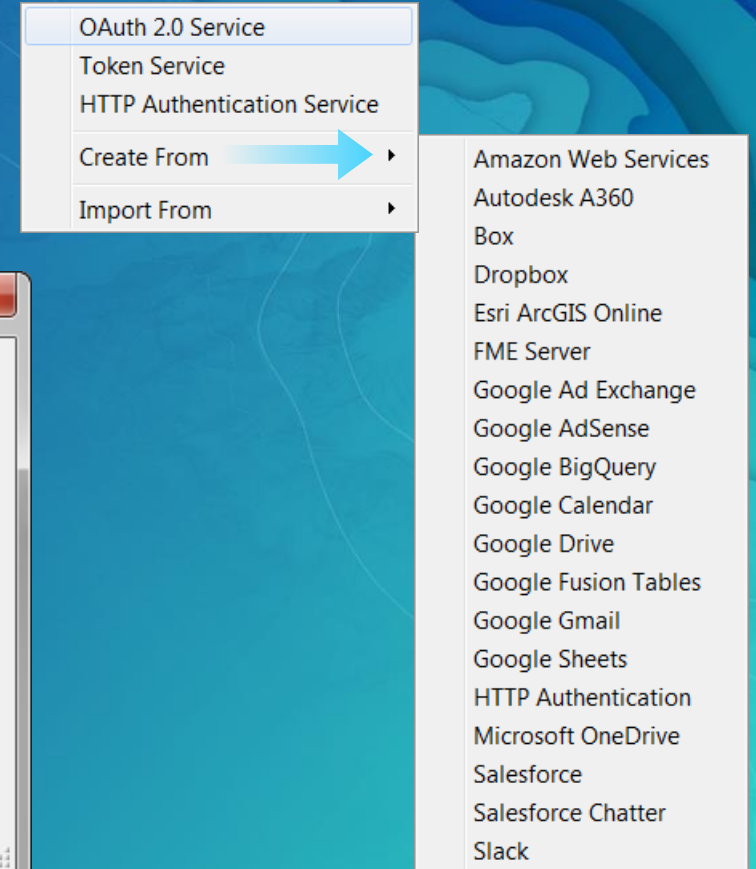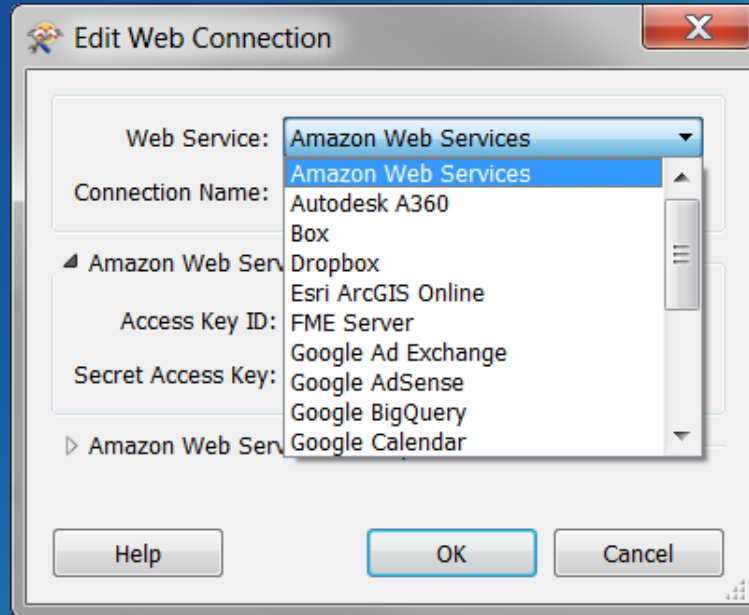
Demo: Web Connections

Web as Filesystem

What's FME Hub?
Data Interoperability

- Community Platform
  - Transformers (in Gallery)
  - Formats
  - Templates
  - Web Connections
- Browse
  - https://hub.safe.com
- Related: Sharing
  - Email workspace
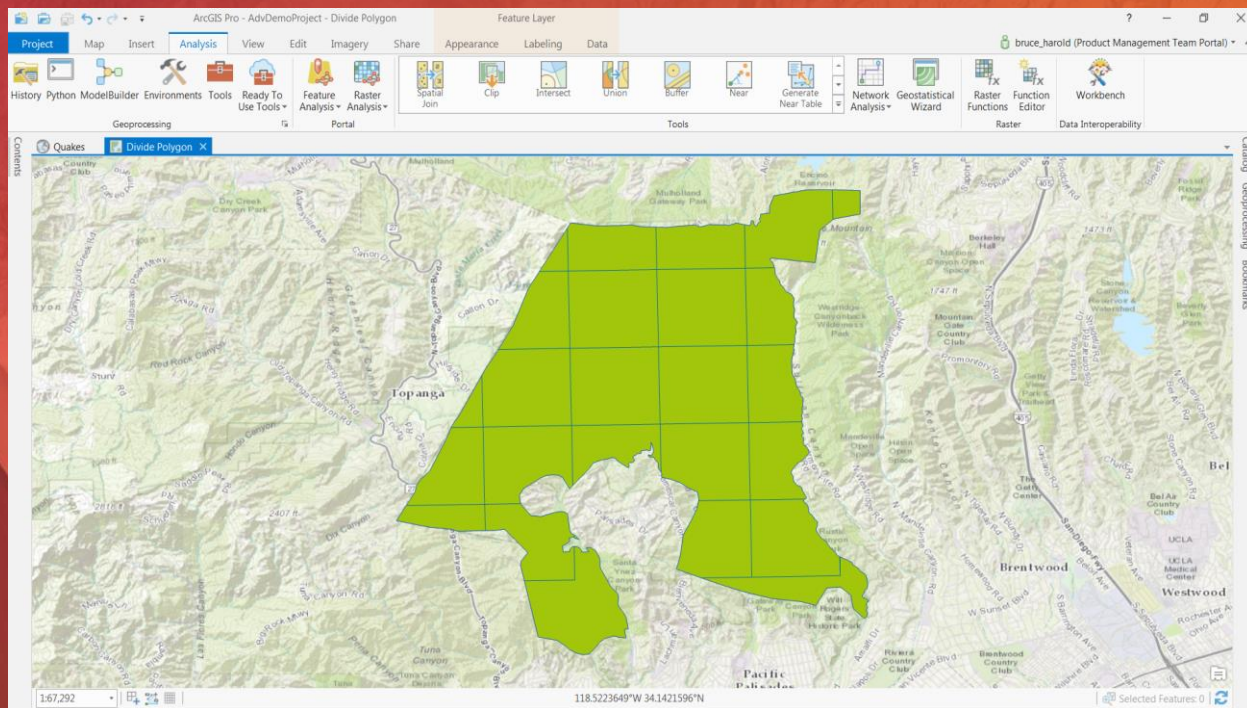
Demo: FME Hub

Polygon Division

Custom Formats

Built from an existing format

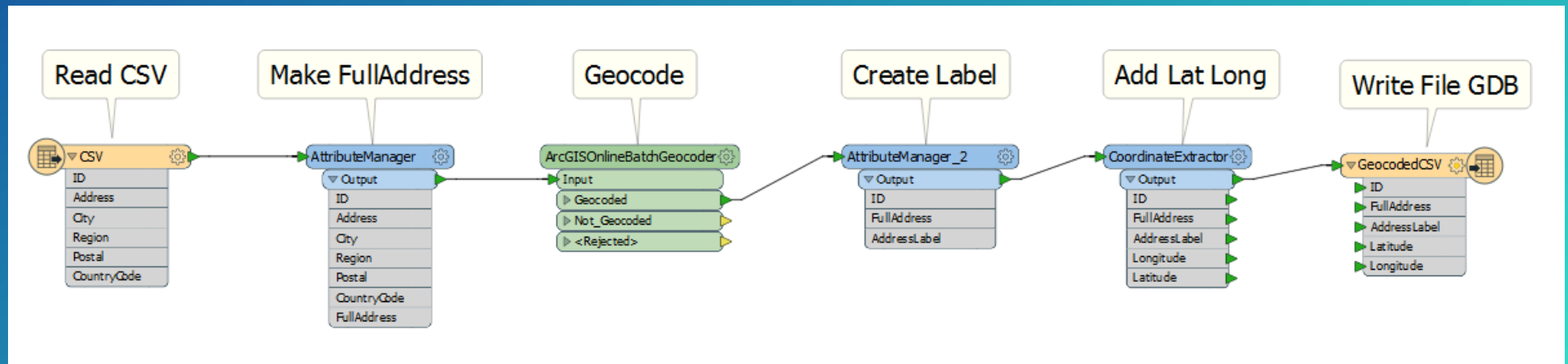Add your desired transformations

Write to your desired schema

Export as Custom Format

   Opens Workbench, writes a FDS file → GEOCODEDCSV.fds
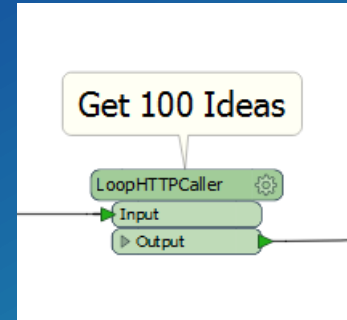
Share, Install

Custom Transformers

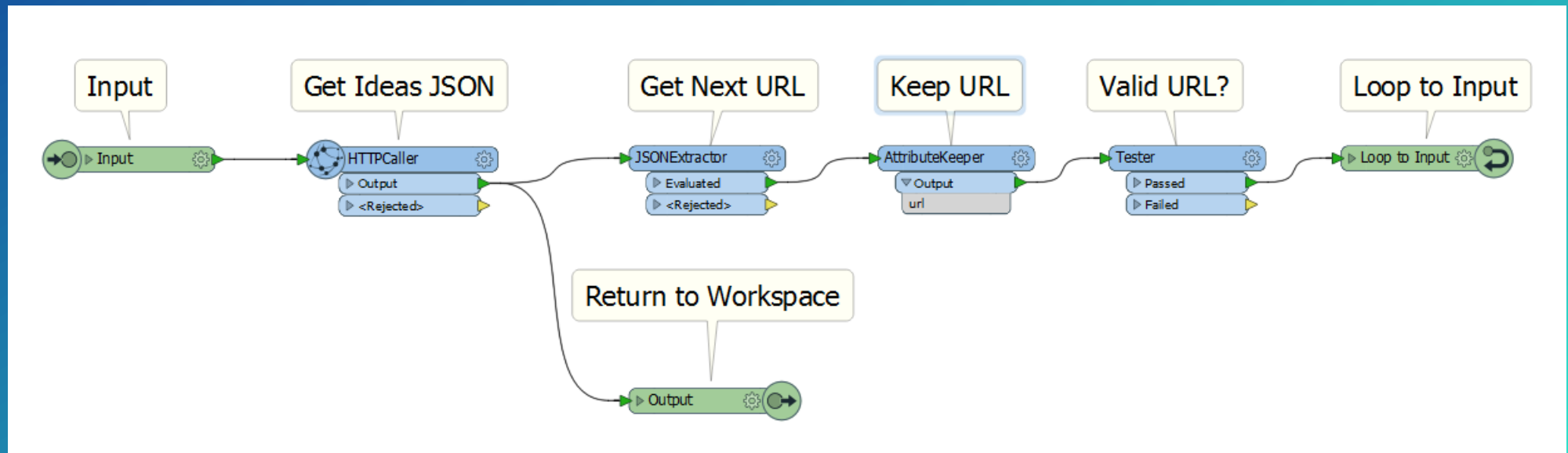Assemble transformers into logical unit

Declutters the workspace
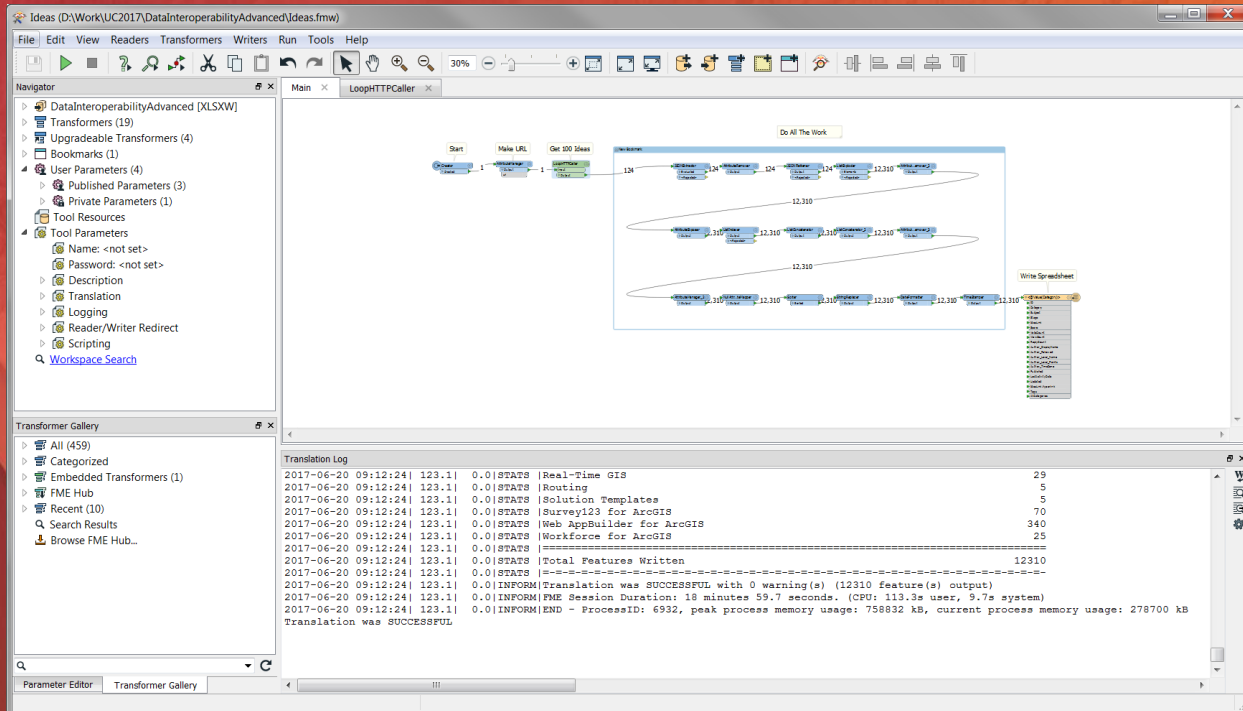
Looping mechanism

Like grouping in ArcGIS Modelbuilder

HTTP Pagination Example

Demo: Custom Formats & Transformers

Geocoded CSV
HTTP Pagination

Python
Parameters available as a dictionary

In-App Script Editor

Startup Scripts
> Run first

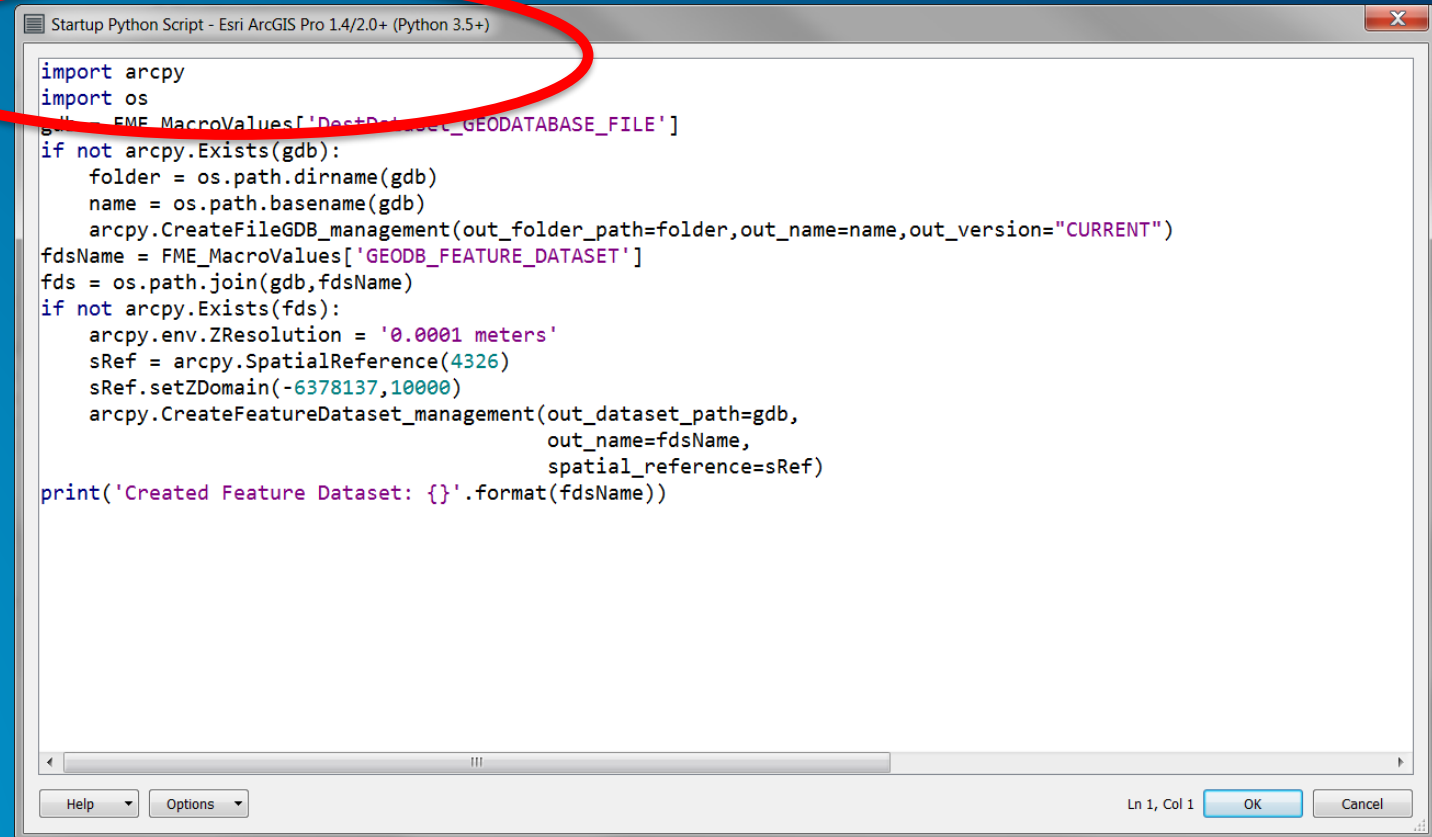Scripted Parameters
> Runtime logic

PythonCreator
> Make features

PythonCaller
> Operate on features

Shutdown Scripts
> Run last

Startup Python Script - Esri ArcGIS Pro 1.4/2.0+ (Python 3.5+)

```python
import arcpy
import os
gdb = FME_MacroValues['DestDataset_GEODATABASE_FILE']
if not arcpy.Exists(gdb):
    folder = os.path.dirname(gdb)
    name = os.path.basename(gdb)
    arcpy.CreateFileGDB_management(out_folder_path=folder,out_name=name,out_version="CURRENT")
fdsName = FME_MacroValues['GEODB_FEATURE_DATASET']
fds = os.path.join(gdb,fdsName)
if not arcpy.Exists(fds):
    arcpy.env.ZResolution = '0.0001 meters'
    sRef = arcpy.SpatialReference(4326)
    sRef.setZDomain(-6378137,10000)
    arcpy.CreateFeatureDataset_management(out_dataset_path=gdb,
                                          out_name=fdsName,
                                          spatial_reference=sRef)

print('Created Feature Dataset: {}'.format(fdsName))
```

Help   Options   Ln 1, Col 1   OK   Cancel
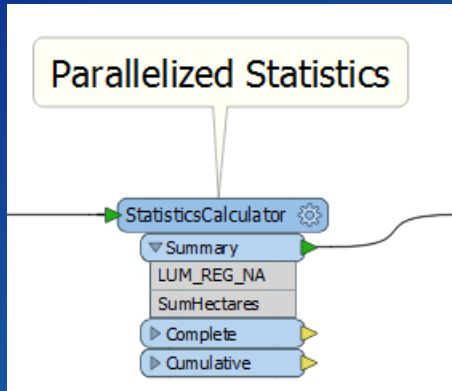
Demo: Python

Startup Script Using ArcPy
PythonCaller Feature Creation

Multiprocessing

Group By Attribute

WorkspaceRunner
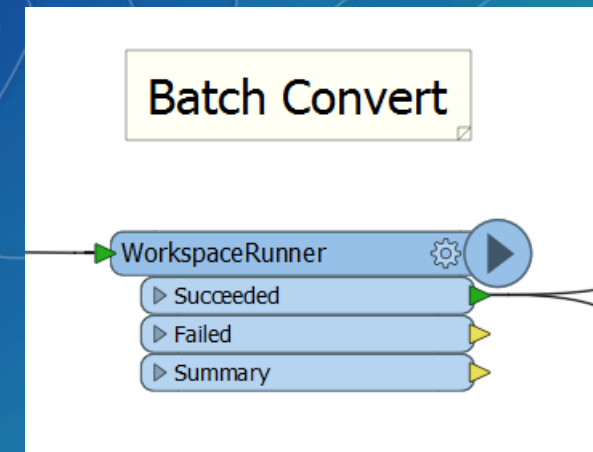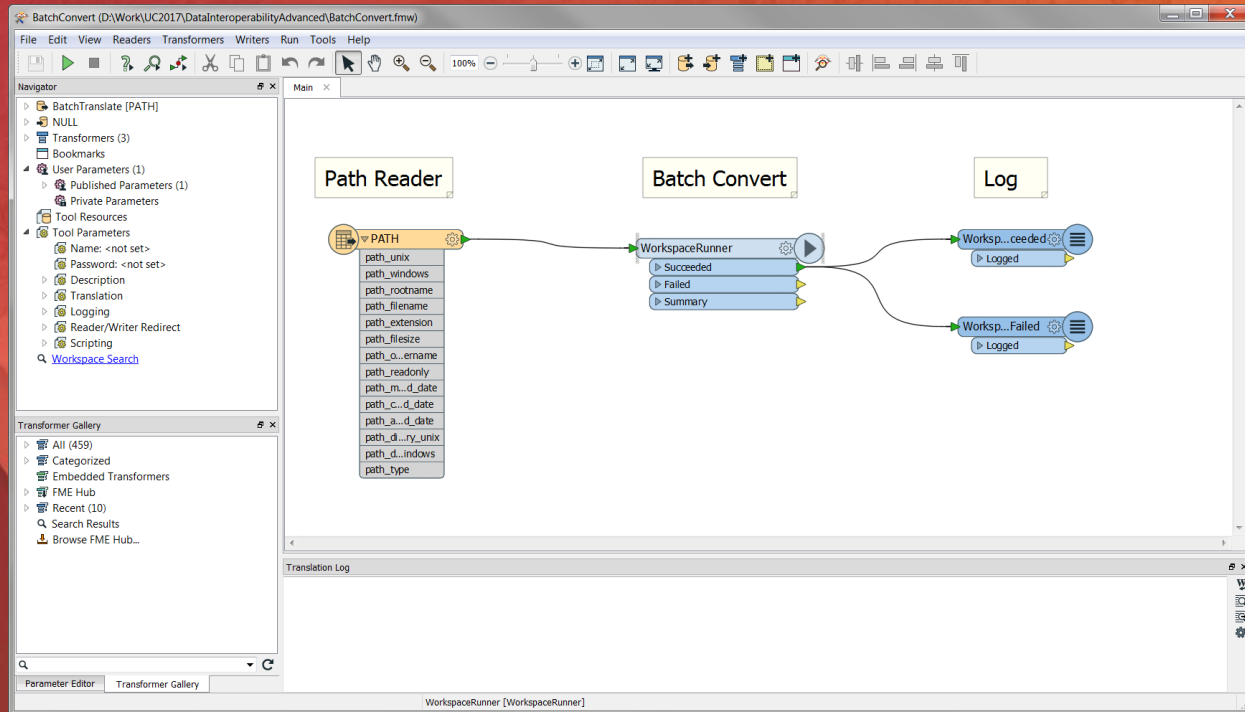
Demo:
Multiprocessing

Parallelized Statistics
Batch Conversion

Working With Portals
ArcGIS Online and ArcGIS Enterprise

- Background Map

- Feature Services
  - Existing
  - New
  - Add, Delete, Update
  - Truncate

- Images
  - HTTPCaller
  - ImageFetcher

FME Options

Background Map

Background Map
Default Paths
Database Connections
Web Connections

Background Map

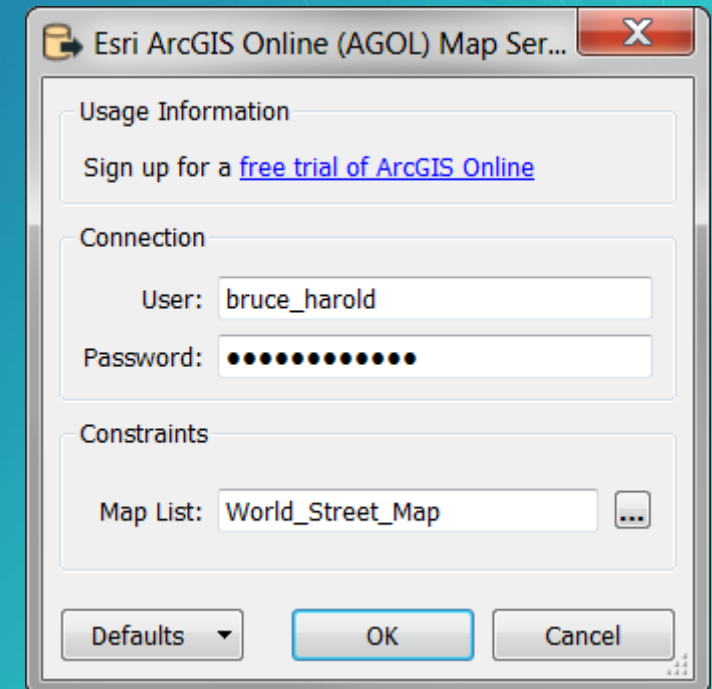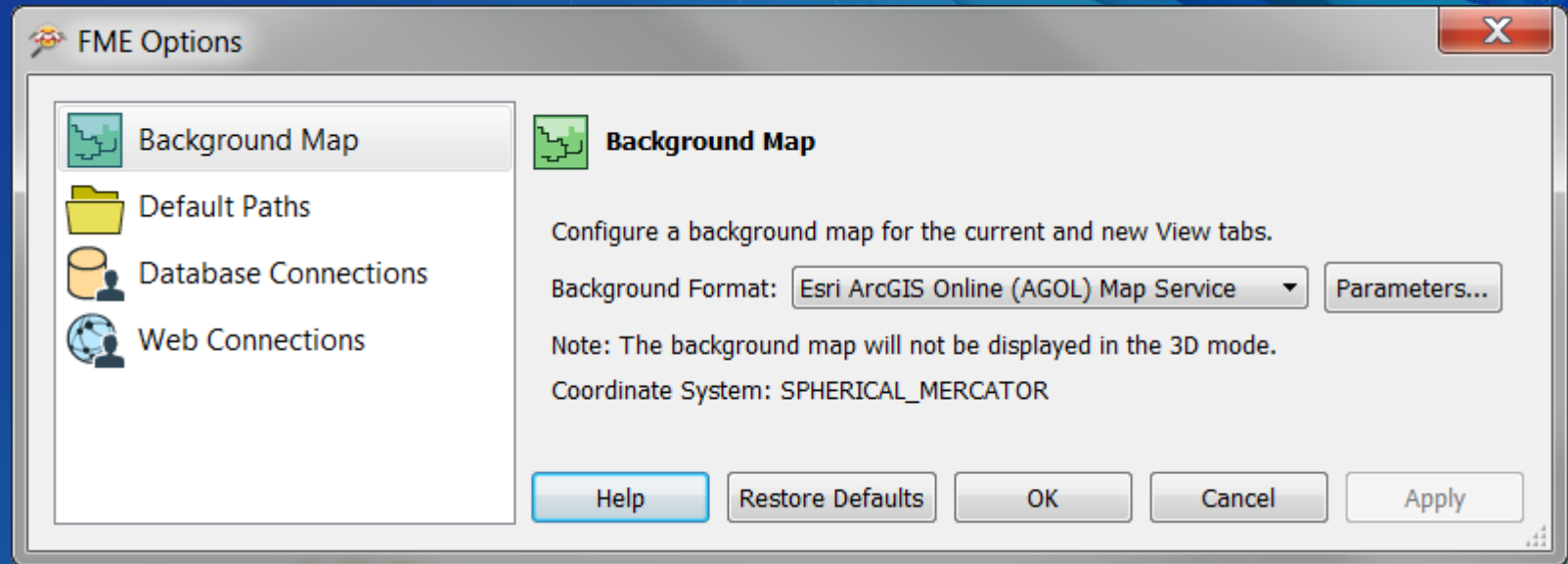Configure a background map for the current and new View tabs.

Background Format: Esri ArcGIS Online (AGOL) Map Service   Parameters...

Note: The background map will not be displayed in the 3D mode.

Coordinate System: SPHERICAL_MERCATOR

Help   Restore Defaults   OK   Cancel   Apply

Esri ArcGIS Online (AGOL) Map Ser...

Usage Information

Sign up for a free trial of ArcGIS Online

Connection

User: bruce_harold

Password: ●●●●●●●●●●●●

Constraints

Map List: World_Street_Map   ...

Defaults ▼   OK   Cancel

Demo: Portals

Make a Map Chip

Question Time

- Bruce Harold bharold@esri.com
- Dale Lutz https://www.safe.com/live-chat/

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