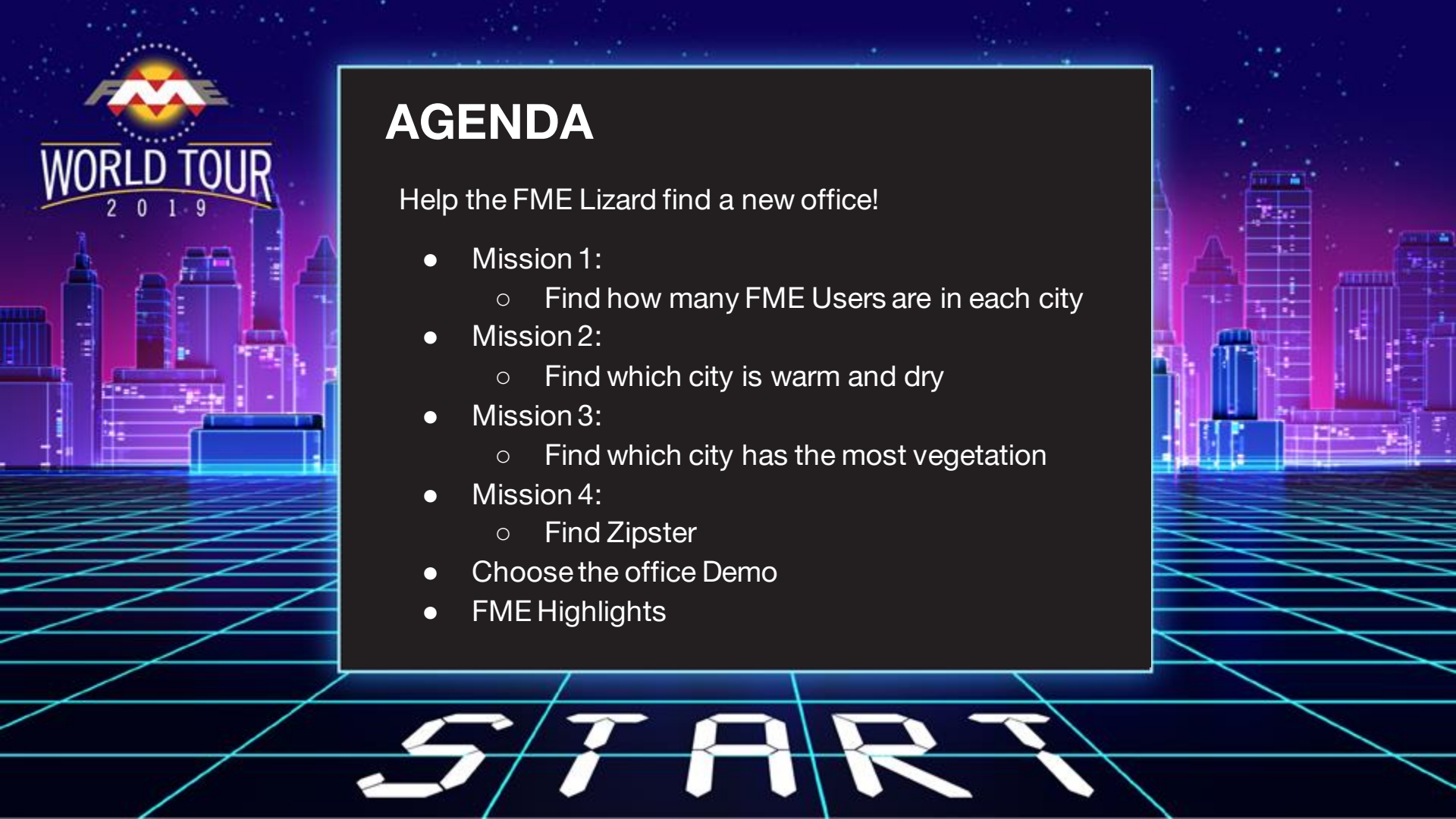
SAFE SOFTWARE

Level 2: FME 2019 Scenarios

FME Desktop


WORLD TOUR
2019
AGENDA
Help the FME Lizard find a new office!
Mission 1:
Find how many FME Users are in each city
Mission 2:
Find which city is warm and dry
Mission 3:
Find which city has the most vegetation
Mission 4:
Find Zipster
Choose the office Demo
FME Highlights
START

The FME Lizard is on the Move!

But where should its next office be?

FME to the Rescue!

Let’s build a workspace to help the FME Lizard find a new office.
(Caveat: the FME Lizard is picky and has very specific needs.)

The FME Lizard is on the Move!

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Let’s build a workspace to help the FME Lizard find a new office. (Caveat: the FME Lizard is picky and has very specific needs.)

FME Lizard's New Office: Location Selection Criteria

1. FME Lizard likes FME users and wants them nearby.
2. Warm and dry.
3. Fresh supply of vegetation.
4. FME Zipster sightings.

May the best city win

- Generate index ranking all FME World Tour cities.
- You can game the system by assigning a weight to the indexes.
- Vote at fme.ly/wtvote now!

Index 0-1 for each World Tour city

Weight each index 0-100%, must add up to 100%

You vote on these! Try to improve your city's ranking by increasing the weight for criteria that fit your city.

FME users * Weight = Weighted

\+

Warm and dry * Weight = Weighted

\+

Vegetation * Weight = Weighted

\+

Zipster sightings * Weight = Weighted

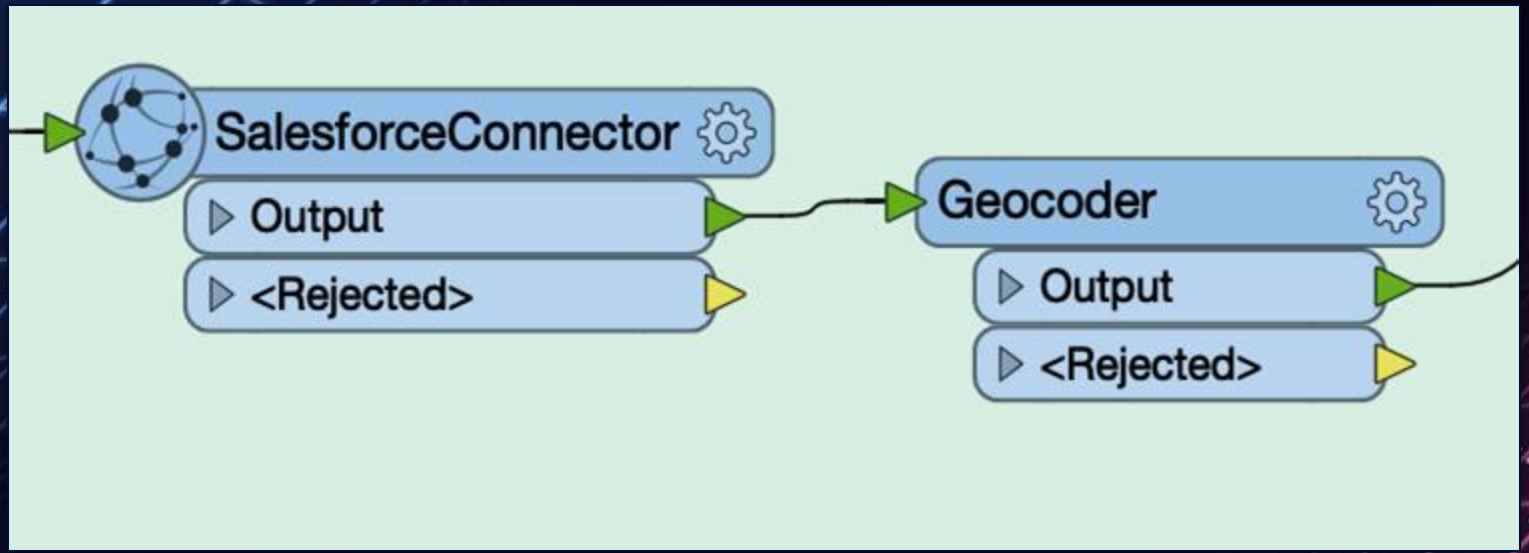
= Final index

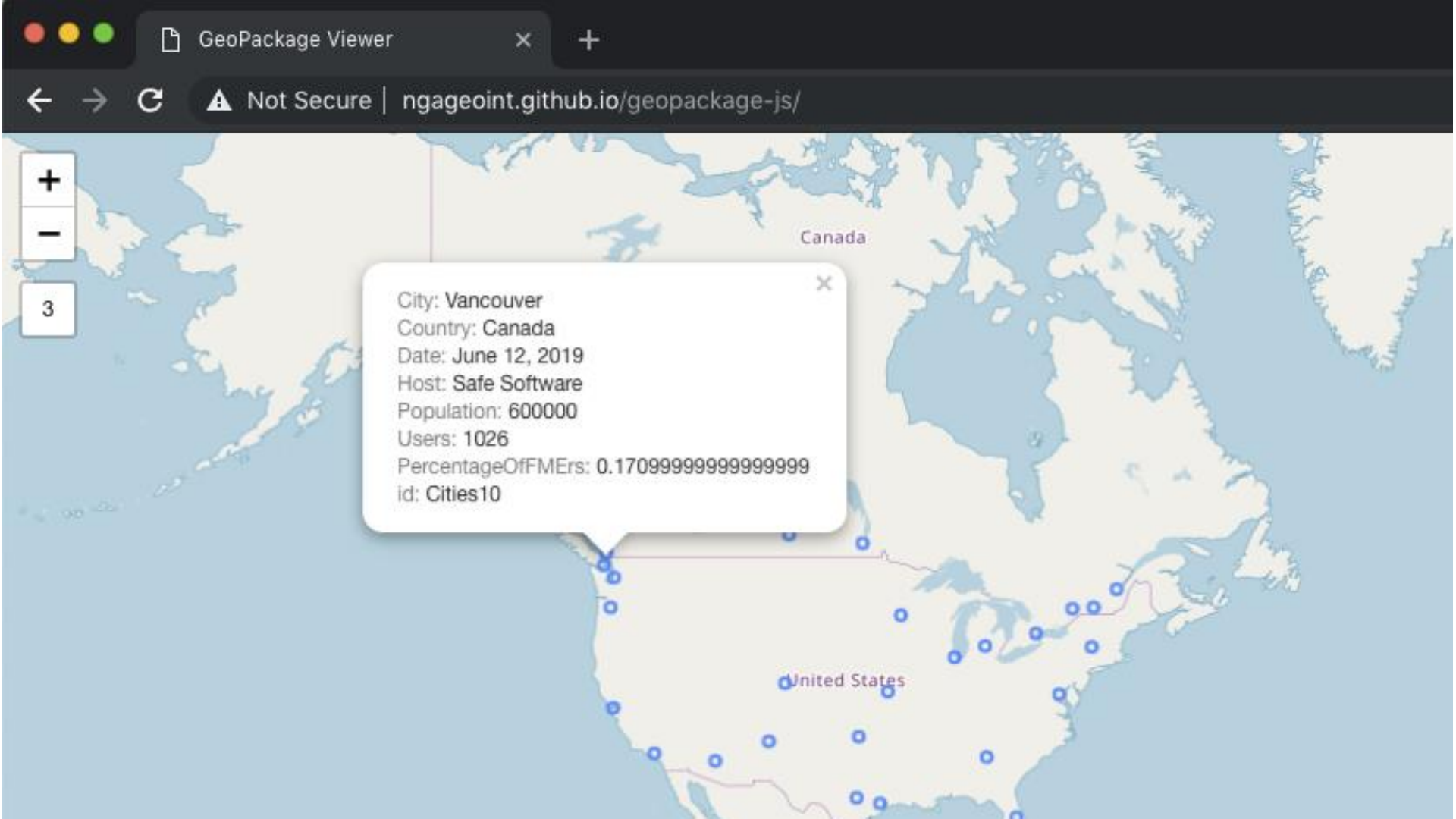
fme.ly/wtvote

WT City	Ranking	Change
Vancouver	1	+3
Bonn	2	+1
...	...	...

Mission 1

How many FME Users are in each city?

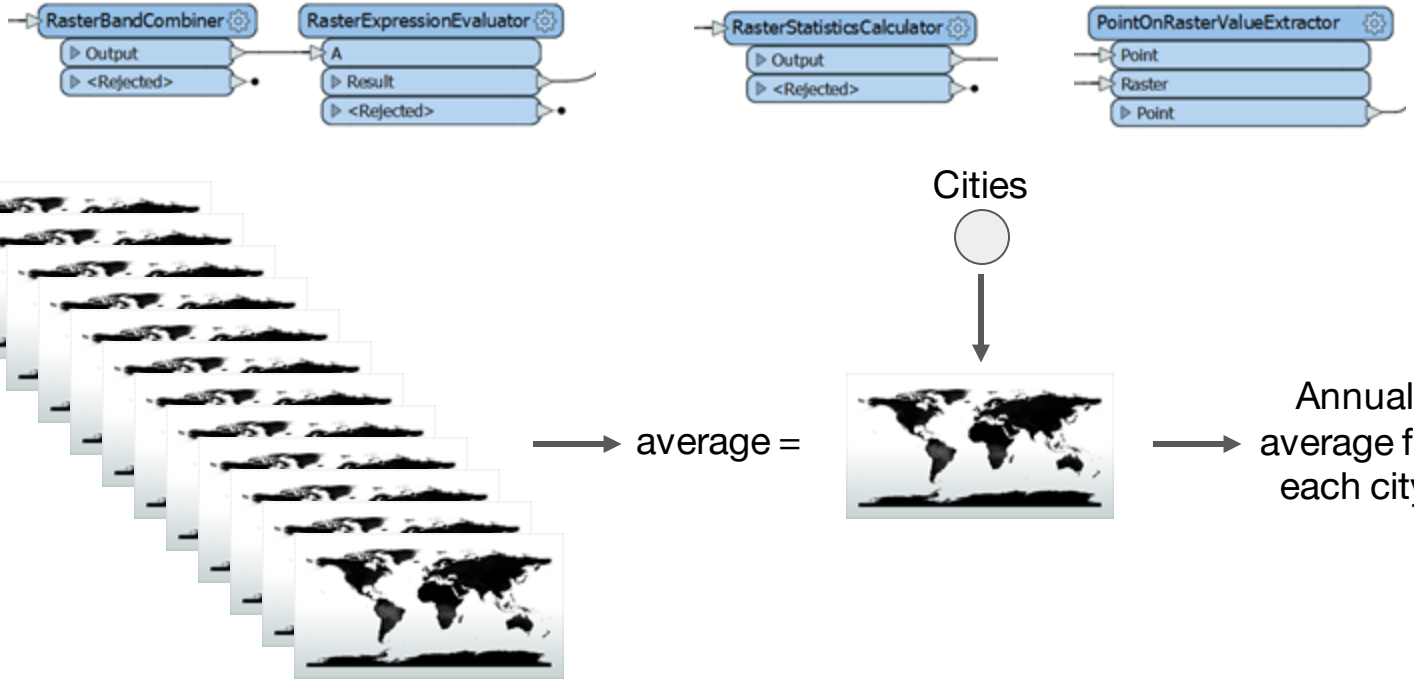

SalesforceConnector
Output
<Rejected>
Geocoder
Output
<Rejected>


GeoPackage Viewer
Not Secure | ngageoint.github.io/geopackage-js/
+
−
3
Canada
City: Vancouver
Country: Canada
Date: June 12, 2019
Host: Safe Software
Population: 600000
Users: 1026
PercentageOfFMErs: 0.17099999999999999
id: Cities10
United States

Mission 2

Which city is warm and dry?

Fick, S. E., & Hijmans, R. J. (2017). WorldClim 2: new 1-km spatial resolution climate surfaces for global land areas. *International Journal of Climatology, 37*(12), 4302-4315.


RasterBandCombiner
Output
<Rejected>
RasterExpressionEvaluator
A
Result
<Rejected>
RasterStatisticsCalculator
Output
<Rejected>
PointOnRasterValueExtractor
Point
Raster
Point
Cities
average =
Annual average for each city

Precipitation raster

Temperature raster

Warm and dry index

Lizard_Habitat [CSV2] - CSV

Columns...

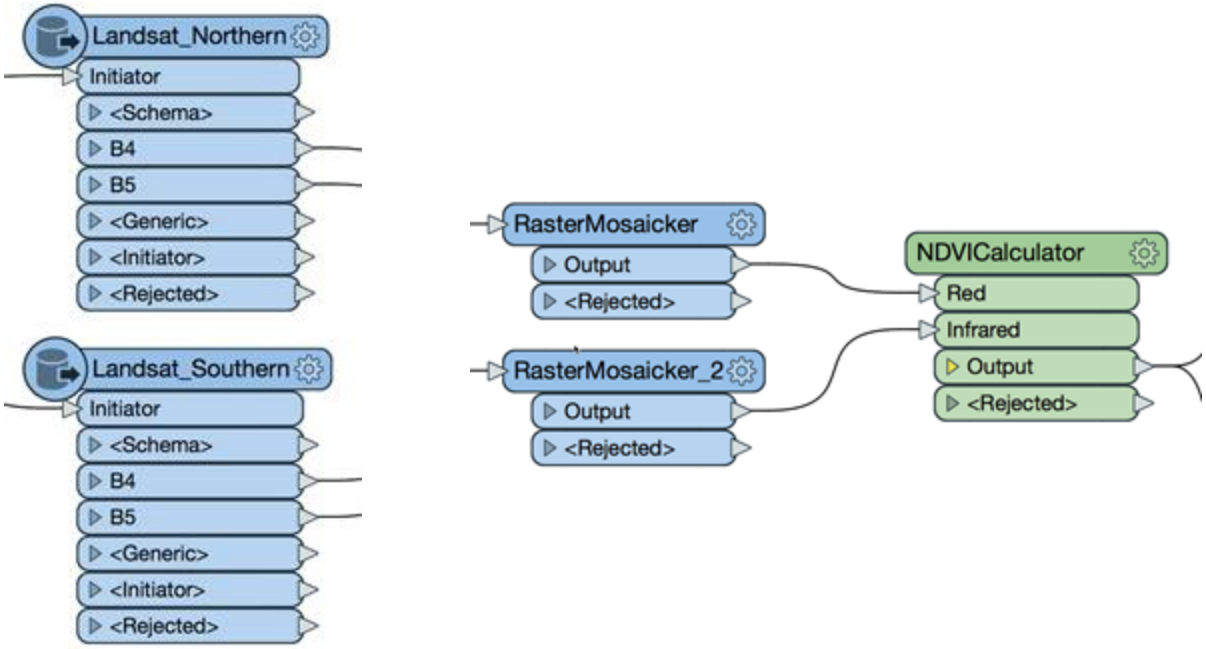
	City	Country	Date	Host	Population	precip_norm	temp_norm	Habitat Index
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

in any column

75 row(s)

Mission 3

What city has lots of vegetation?


Landsat_Northern
Initiator
<Schema>
B4
B5
<Generic>
<Initiator>
<Rejected>
Landsat_Southern
Initiator
<Schema>
B4
B5
<Generic>
<Initiator>
<Rejected>
RasterMosaicker
Output
<Rejected>
RasterMosaicker_2
Output
<Rejected>
NDVICalculator
Red
Infrared
Output
<Rejected>

Mission 4

Where is Zipster?

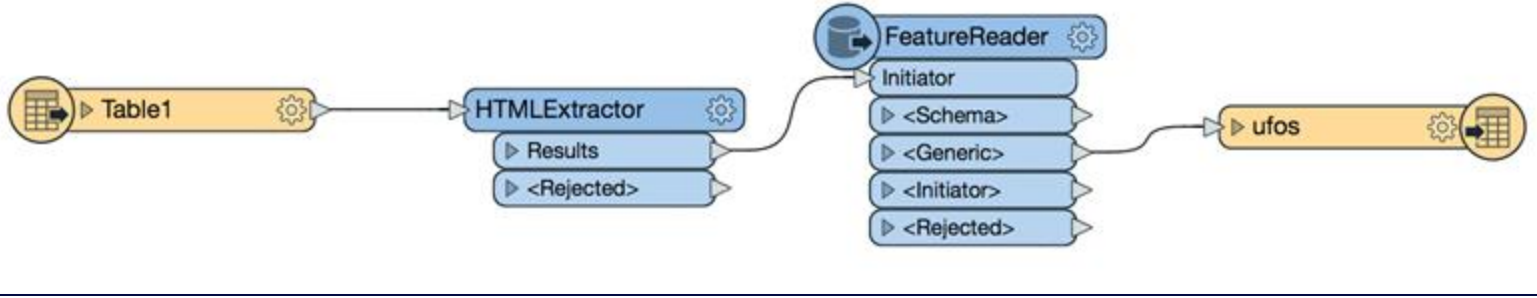
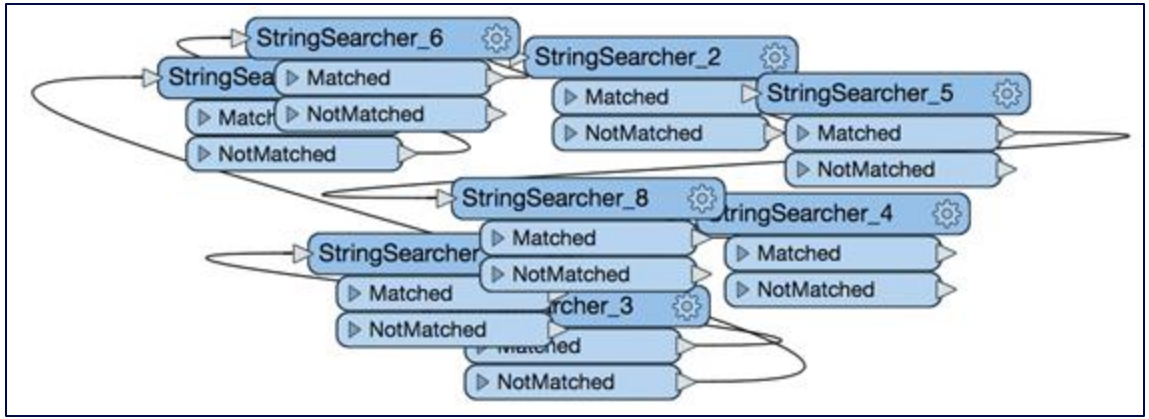


Table1
HTMLExtractor
Results
<Rejected>
FeatureReader
Initiator
<Schema>
<Generic>
<Initiator>
<Rejected>
ufos


StringSearcher_6
StringSea
Matched
Matc
NotMatched
NotMatched
StringSearcher_2
Matched
NotMatched
StringSearcher_5
Matched
NotMatched
StringSearcher_8
Matched
NotMatched
StringSearcher
Matched
NotMatched
tringSearcher_4
Matched
NotMatched
rcher_3
NotMatched

DESKTOP 2019
DESKTOP 2019
FASTER-EASIER-DARKER
Checkpoint
Over to
Workbench

Demo Recap

- Integrated multiple sources
- Transformation tips and tricks:
  - Feature Caching and Partial Runs
  - Visual Preview
  - Bookmarks and Annotations
  - Database and Web Connections
  - FeatureReader and FeatureWriter
- Displayed data in a friendly way

FME 2019
Highlights

Performance

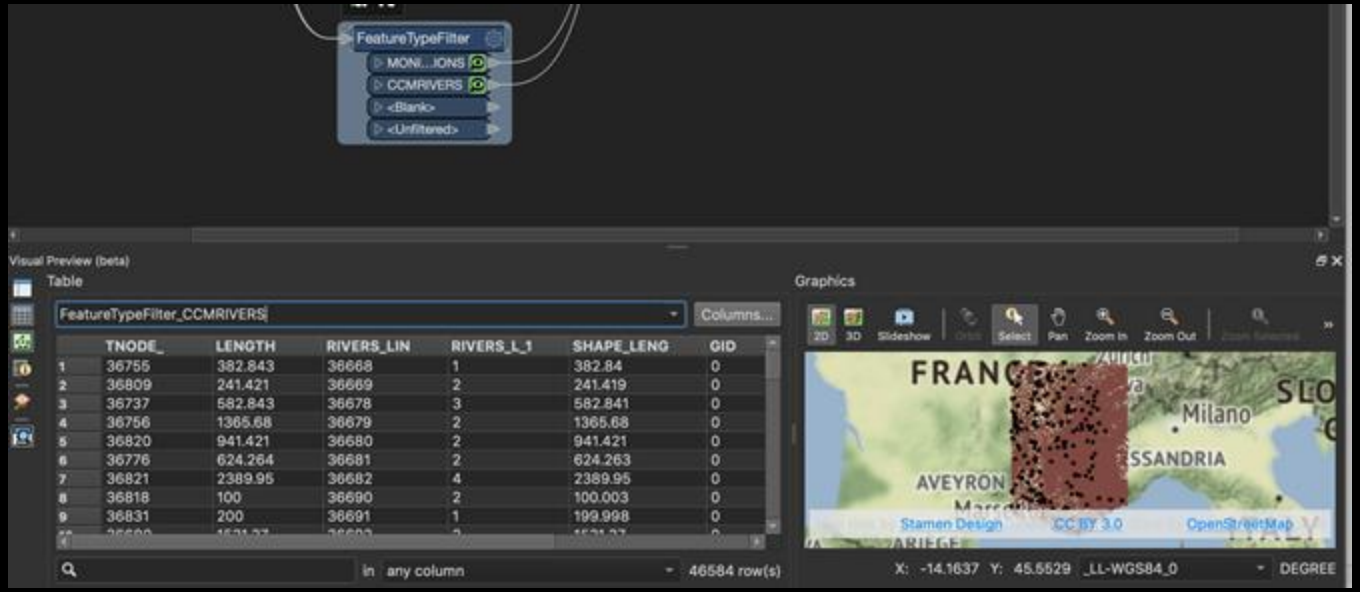
"EVERY FME RELEASE WILL BE **FASTER THAN THE PREVIOUS** OR WE WON'T SHIP IT!"

Dale Lutz / Don Murray

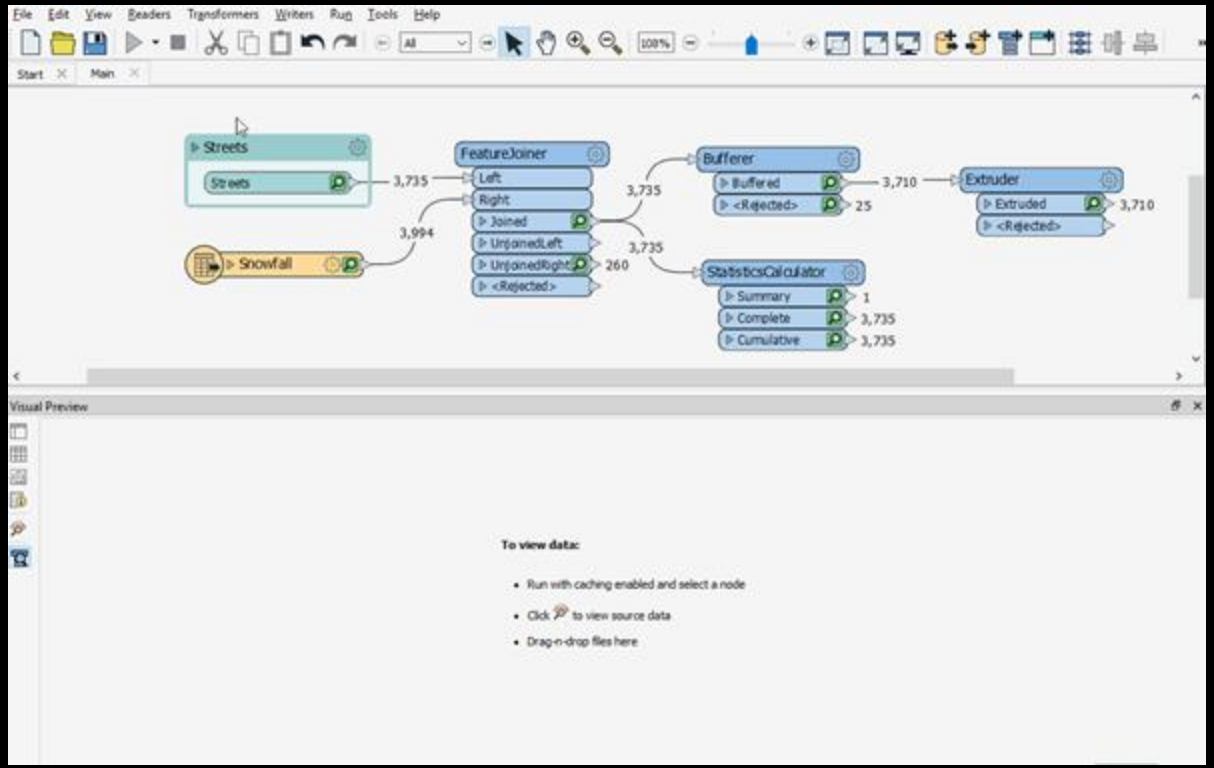
2018+

FME 2019: The Interface

Dark Mode

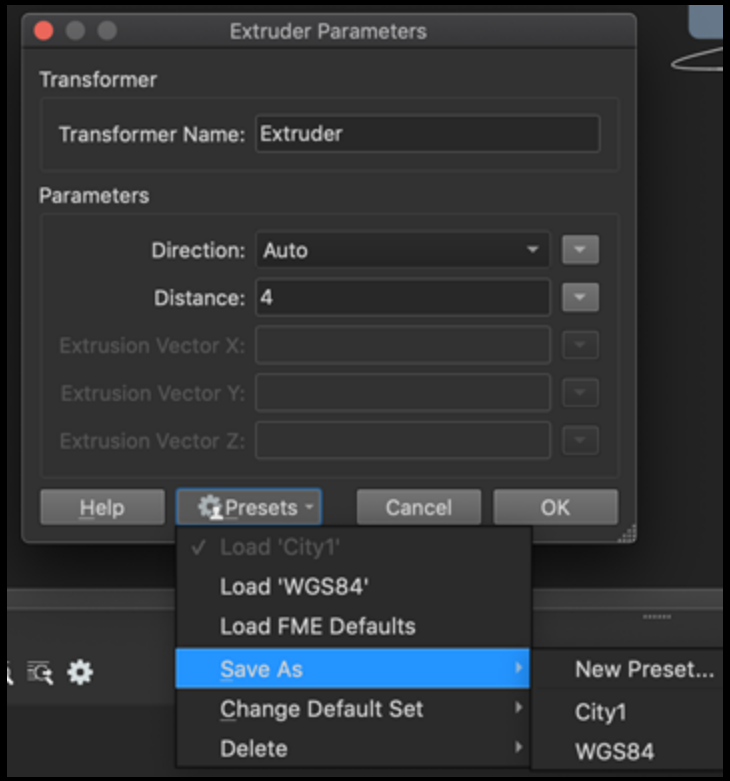

FeatureTypeFilter
MONI...IONS
CCMRIVERS
<Blank>
<Unfiltered>
Visual Preview (beta)
Table
FeatureTypeFilter_CCMRIVERS
Columns...
TNODE_ LENGTH RIVERS_LIN RIVERS_L_1 SHAPE_LENG GID
1 36755 382.843 36668 1 382.84 0
2 36809 241.421 36669 2 241.419 0
3 36737 582.843 36678 3 582.841 0
4 36756 1365.68 36679 2 1365.68 0
5 36820 941.421 36680 2 941.421 0
6 36776 624.264 36681 2 624.263 0
7 36821 2389.95 36682 4 2389.95 0
8 36818 100 36690 2 100.003 0
9 36831 200 36691 1 199.998 0
in any column
46584 row(s)
Graphics
2D 3D Slideshow Select Pan Zoom In Zoom Out
FRANCE
Milano
AVEYRON
Stamen Design CC BY 3.0 OpenStreetMap
X: -14.1637 Y: 45.5529 _LL-WGS84_0
DEGREE

Visual Preview

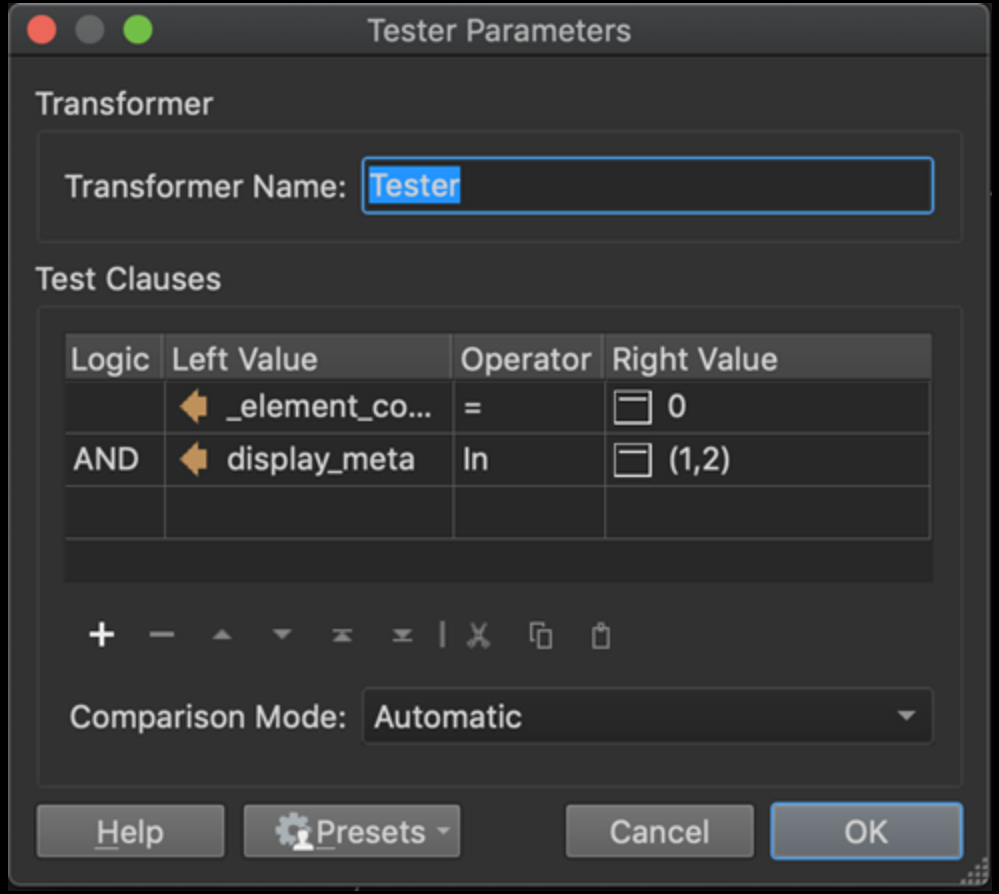


Animate Mode

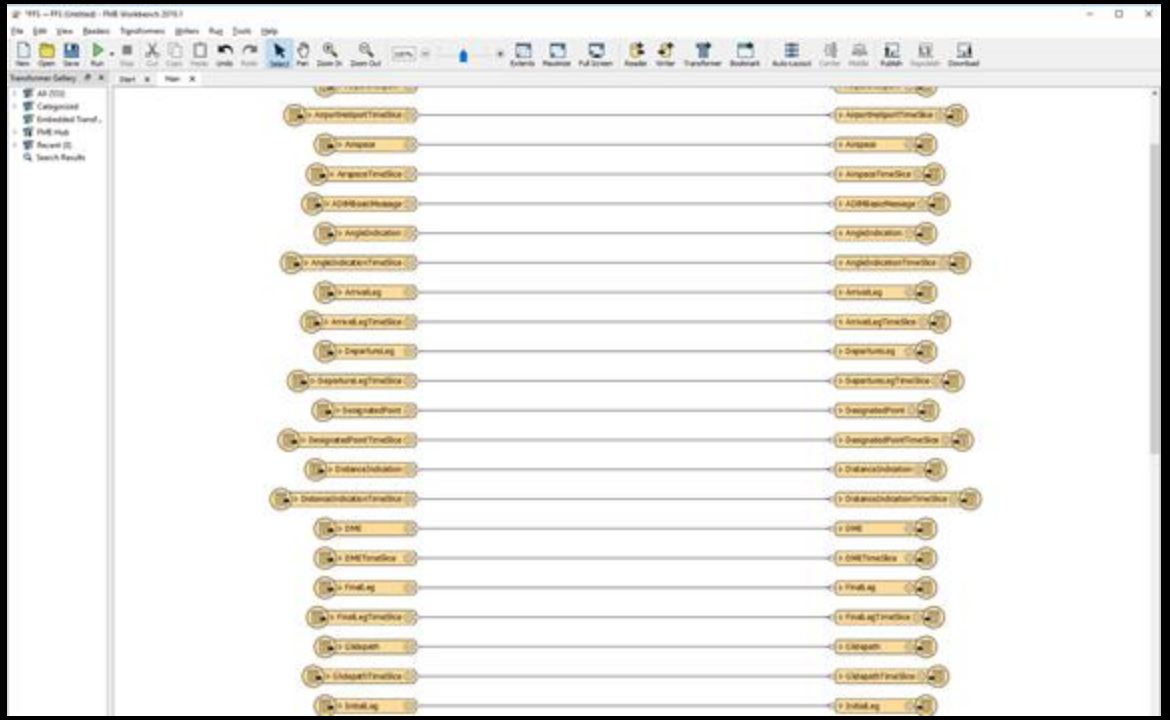
Save
Parameter
Presets



Tester
transformer



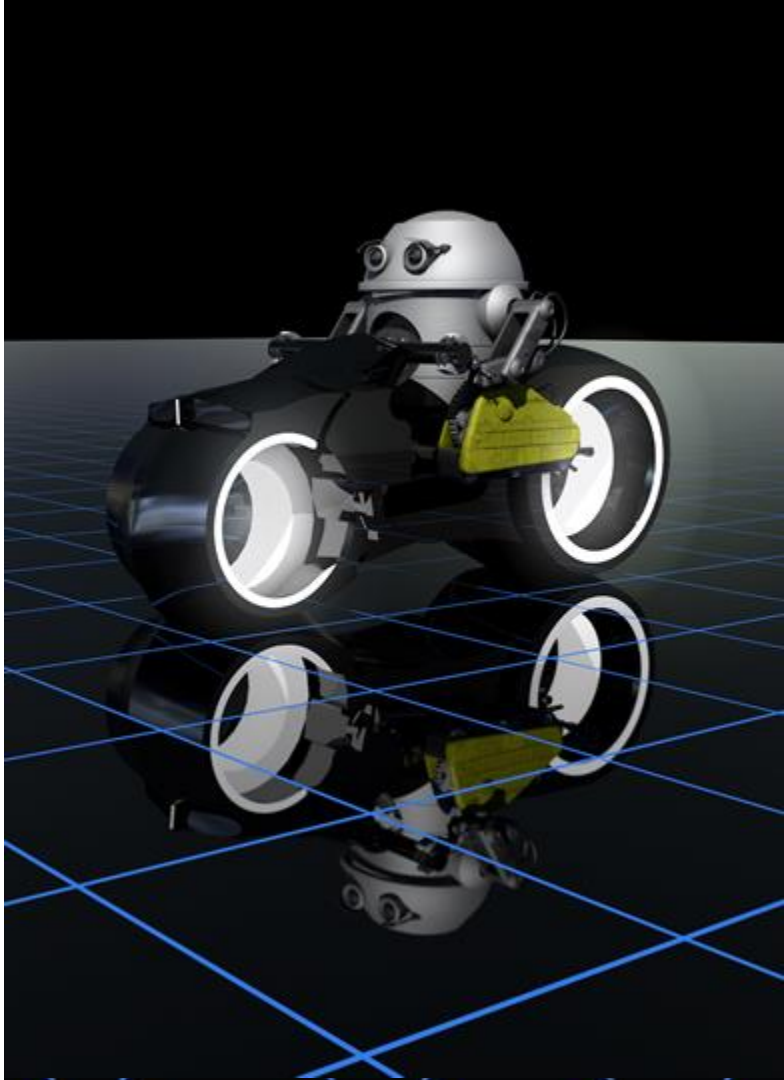
Auto-sized Transformers & Feature Types



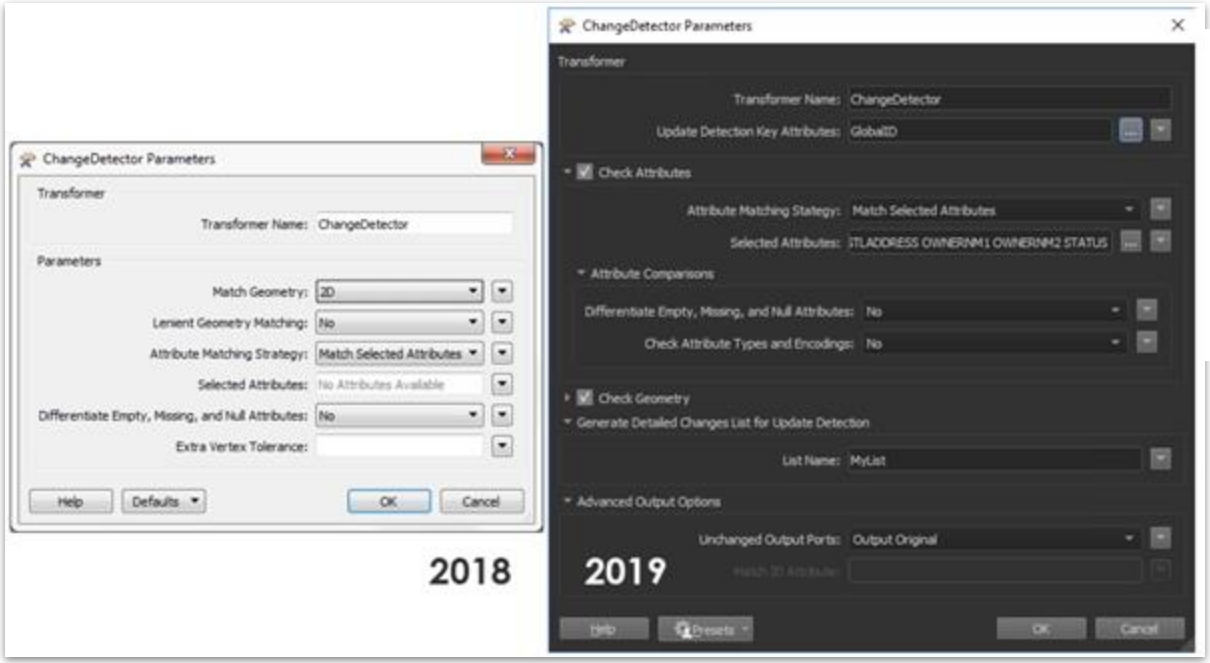
New in 2019

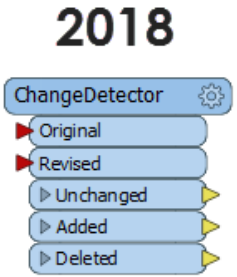
More New Format Support

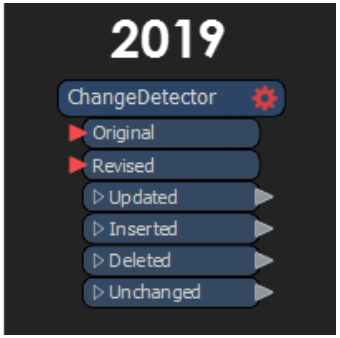
- Azure Storage Connectors
- Cesium Ion Connector
- Cityworks Connector
- Compressed File Reading (.rar/.gz/.tgz/.zipx)
- DGN Meshes
- Digital Weather Markup Language (DWML) Reader
- FME Augmented Reality (AR) Reader
- Garmin POI Reader/Writer
- Google Storage Connectors
- OGC Web Coverage Service (WCS) Reader
- TopoJSON Writer

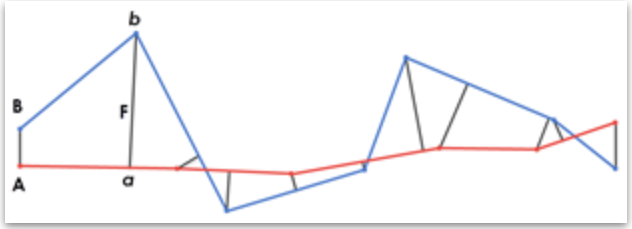


ChangeDetector



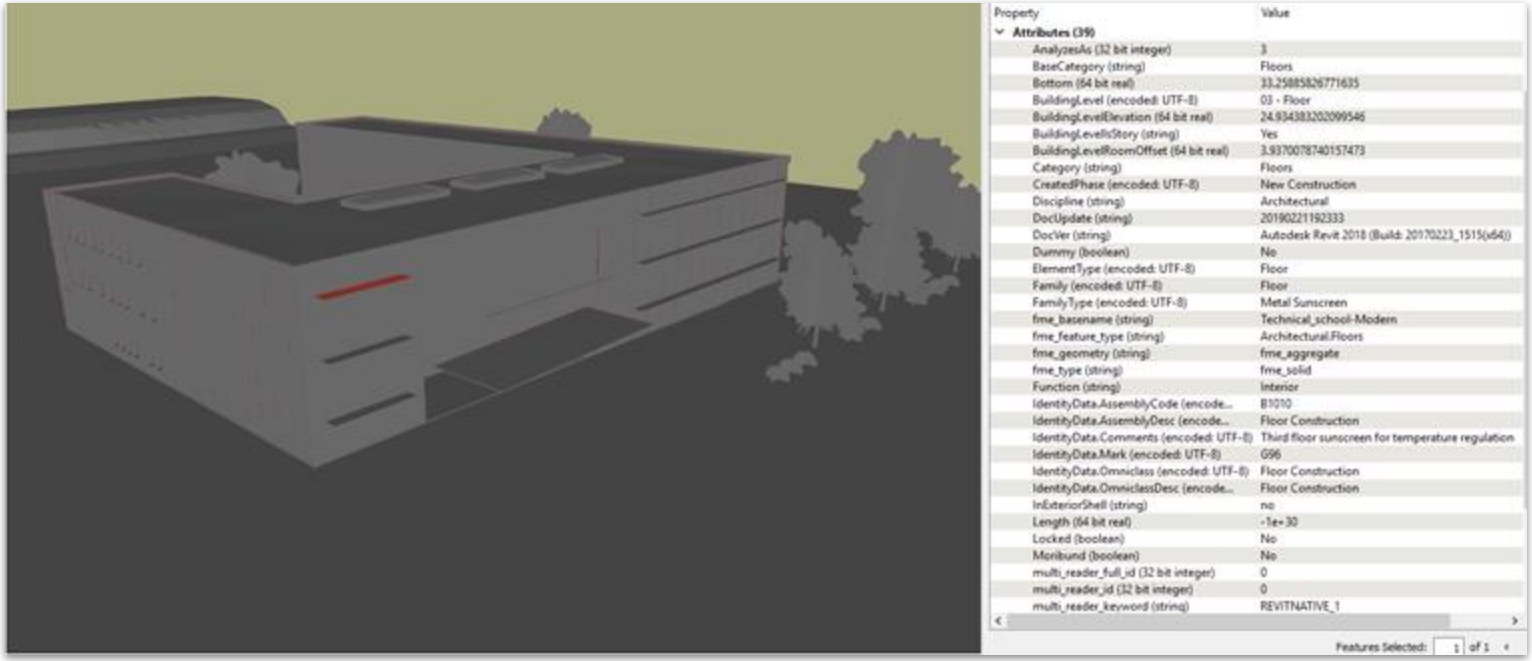






Decompression

Native Revit Reading

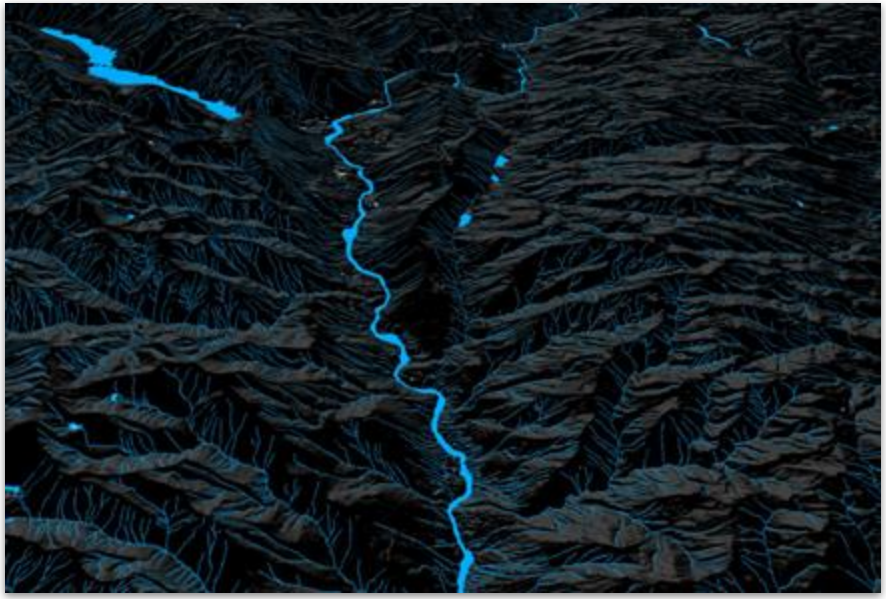


Property	Value
Attributes (39)	
AnalyzesAs (32 bit integer)	3
BaseCategory (string)	Floors
Bottom (64 bit real)	33.25885826771635
BuildingLevel (encoded: UTF-8)	03 - Floor
BuildingLevelElevation (64 bit real)	24.934383202099546
BuildingLevelIsStory (string)	Yes
BuildingLevelRoomOffset (64 bit real)	3.9370078740157473
Category (string)	Floors
CreatedPhase (encoded: UTF-8)	New Construction
Discipline (string)	Architectural
DocUpdate (string)	20190221192333
DocVer (string)	Autodesk Revit 2018 (Build: 20170223_1515(x64))
Dummy (boolean)	No
ElementType (encoded: UTF-8)	Floor
Family (encoded: UTF-8)	Floor
FamilyType (encoded: UTF-8)	Metal Sunscreen
fme_basename (string)	Technical_school-Modern
fme_feature_type (string)	Architectural.Floors
fme_geometry (string)	fme_aggregate
fme_type (string)	fme_solid
Function (string)	Interior
IdentityData.AssemblyCode (encode...	B1010
IdentityData.AssemblyDesc (encode...	Floor Construction
IdentityData.Comments (encoded: UTF-8)	Third floor sunscreen for temperature regulation
IdentityData.Mark (encoded: UTF-8)	G96
IdentityData.Omniclass (encoded: UTF-8)	Floor Construction
IdentityData.OmniclassDesc (encode...	Floor Construction
InExteriorShell (string)	no
Length (64 bit real)	-1e+30
Locked (boolean)	No
Moribund (boolean)	No
multi_reader_full_id (32 bit integer)	0
multi_reader_id (32 bit integer)	0
multi_reader_keyword (string)	REVITNATIVE_1

Features Selected: 1 of 1

DGN Mesh Reading

Esri i3s



TopoJSON

DWML(R)

Socrata
(New API)

OGC WCS(R)

Garmin POI
Binary(R)

FME AR(R)

New Connectors

- AzureBlobStorageConnector
- AzureFileStorageConnector
- CesiumIonConnector
- CityworksConnector
- GoogleCloudStorageConnector
- S3Connector
- AzureQueueStorageConnector *(coming soon)*
- KafkaConnector *(coming soon)*
- TrelloConnector *(coming soon)*

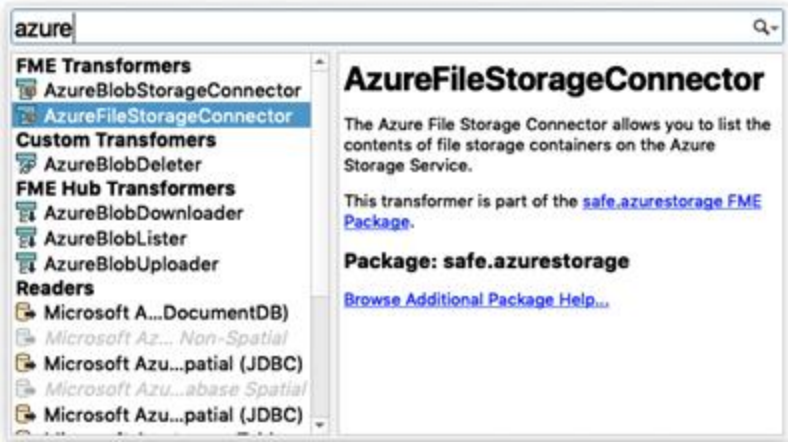
Cityworks
Empowering GIS

CESIUMJS

FME Packages

Delivering transformers, reader/writers, and connections to you ***faster***.

- Zipped *.fpkg* files available via FME Hub.
- Get fixes and new features into your hands within hours, not months.
- Developers can contribute their own content to FME.
- Currently released as FME Packages:
  - S3Connector
  - CesiumIonConnector
  - RasterObjectDetector series
  - NLP series



New Machine Learning Transformers

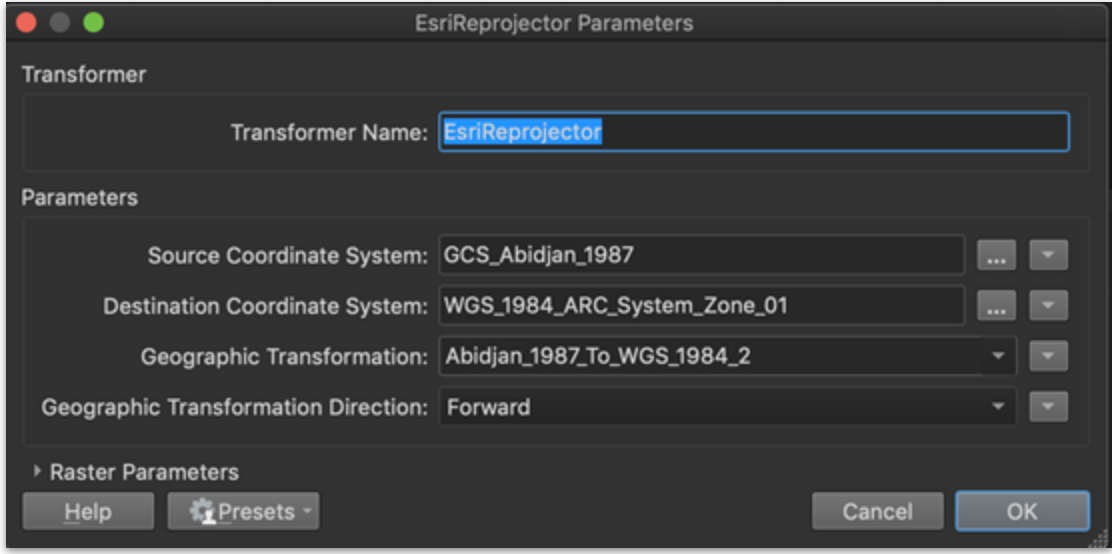
- RasterObjectDetector
- RasterObjectDetectorTrainer
- NaturalLanguageProcessor

inspector [FFS] - NLPClassifier_LabelledText

	Text	_nlp_label
1	The Lawlors finally got some satisfaction...	English
2	CARTO is a cloud-based location intellig...	English
3	Nous avons visité l'Abbaye en novembre...	French
4	Vous êtes au volant d'une voiture et vou...	French

EsriReprojector

- Not new, but rewritten to not use ArcObjects
- Bundled on all platforms
- Does not need ArcGIS installed



THE END

Questions?

Now let’s take a look at FME Server…