

Preview mode. Refresh to see the latest changes.



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Categories



Geodatabase Behavior: Updating a File Geodatabase



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Updated 11 months ago

FME Version

FME 2022.0

Files



UpdatingAFileGeodatabase.zip

100 KB · [Download](#)



UpdatingAFileGeodatabase_2022.zip

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UpdatingAFileGeodatabase.zip

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Introduction

A common scenario that one may encounter when working with a geodatabase is to receive a set of data that contains changes to the features and attributes of feature classes in an existing geodatabase. The following example will show how to use geodatabase functionality in order to update existing geodatabase features with an edited Mapinfo TAB dataset.

Requirements

The Esri Geodatabase (File Geodb) reader/writer used in the following example requires that a licensed version of ArcGIS be available to the user. For more information on required ArcGIS license levels, please see [Comparison of Esri-Based Readers and Writers in FME](#).

Video

Source Data

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DowntownParks						
	OBJECTID	parkid	refparkid	parkname	neighborhoodname	visitorcount
1	1	21	10	Andy Livingsto...	Downtown	12786
2	2	22	30	Sun Yat-Sen Ga...	Downtown	11410
3	3	32	19	Art Phillips Park	Downtown	9008
4	4	33	-9999	Cathedral Square	Downtown	8231
5	5	34	31	Victory Square	Downtown	8769
6	6	35	28	CRAB Park at P...	Downtown	19472
7	7	36	32	Wendy Poole P...	Downtown	10250
8	8	37	26	Pioneer Place (...)	Downtown	9463
9	9	56	14	Coopers' Park	Downtown	15493
10	10	57	23	Helmcken Park	Downtown	14253
11	11	58	29	Roundhouse Tu...	Downtown	12566
12	12	59	16	David Lam Park	Downtown	11660
13	13	60	25	May & Lorne Br...	Downtown	10834

Step-by-step Instructions

1. Read Source Data

Open FME Workbench and start a blank workspace. Add an Esri Geodatabase (File Geoddb) reader to the canvas and browse to the GeodatabaseUpdates_Source.gdb dataset, then click OK to add the reader. Since there is only one feature type (feature class) in this dataset, it will automatically be

selected.

Add Reader

Reader

Format: Esri Geodatabase (File Geoddb)

Dataset: \\Data\\GeodatabaseUpdates_Source.gdb

Parameters... Coord. System: Read from source

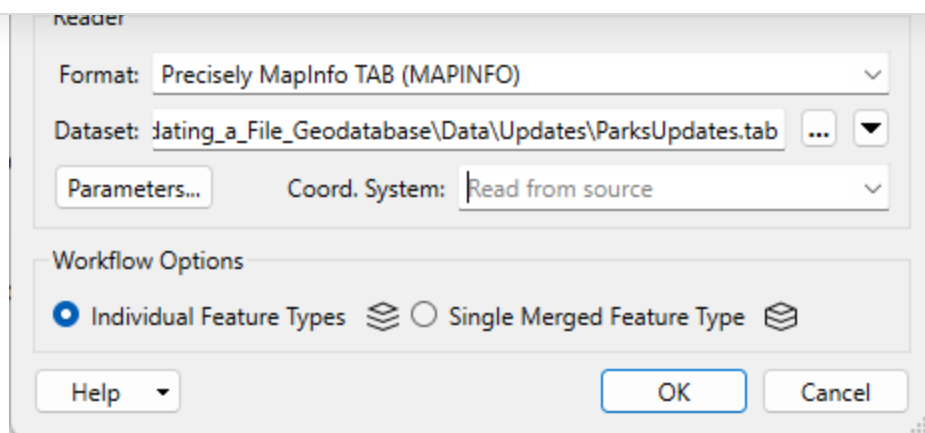
Workflow Options

☒ Individual Feature Types ☐ Single Merged Feature Type

Help OK Cancel

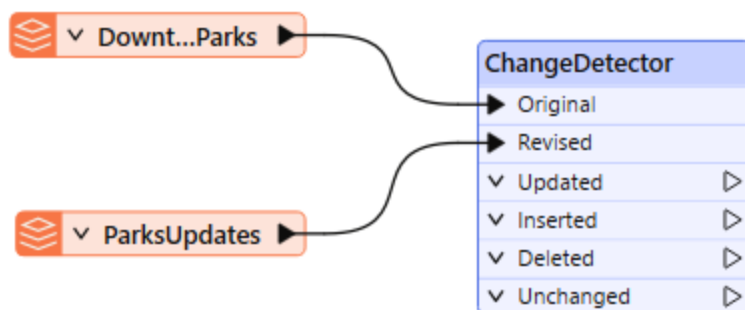
Updates to be applied to this dataset will be read from our ParkUpdates.tab Mapinfo TAB file. Add a MapInfo TAB (MITAB) reader to the canvas and browse to the ParksUpdates.tab dataset. Click OK to add the reader.

Preview mode. Refresh to see the latest changes.



2. Perform Change Detection

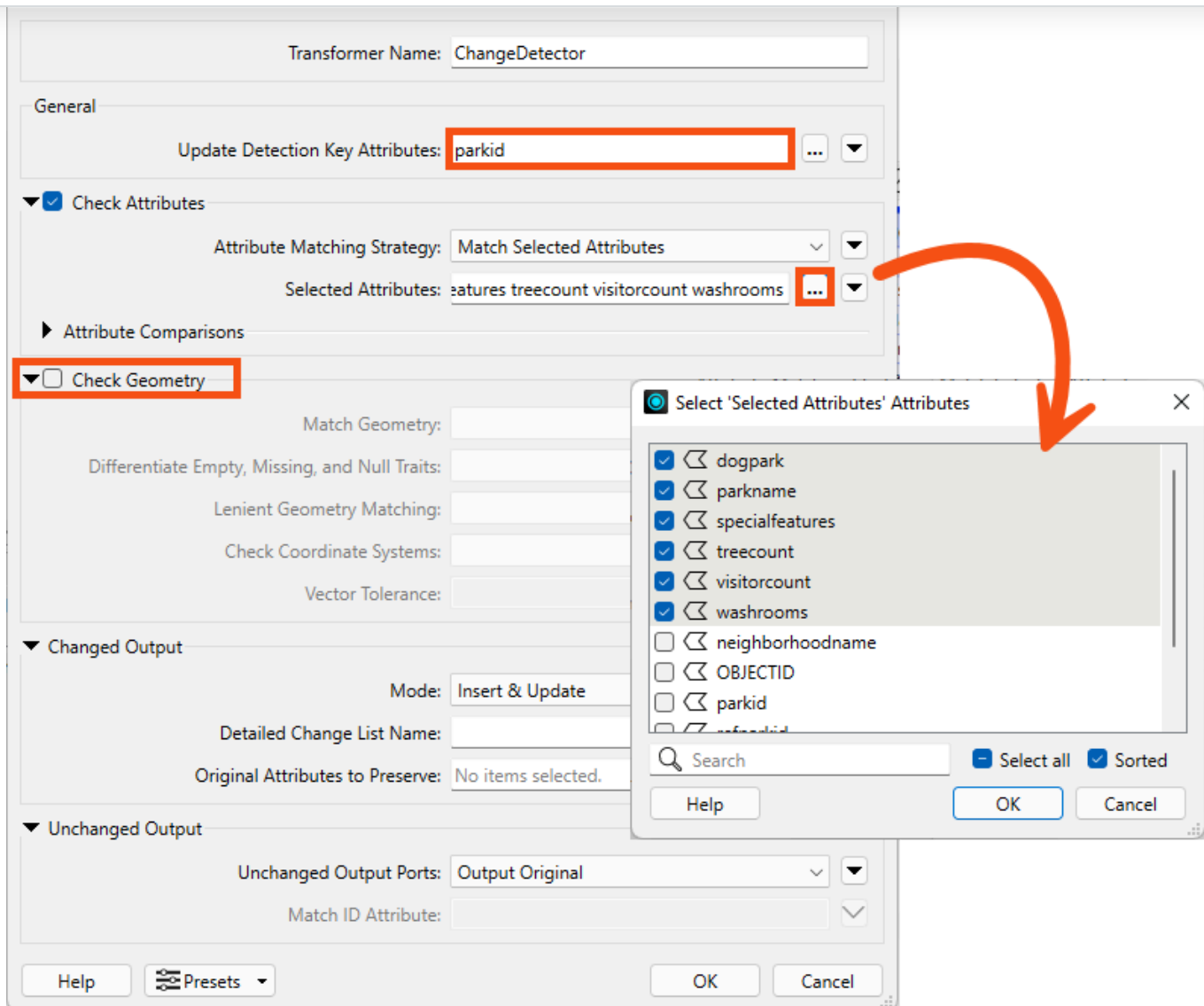
Seeing as we have two datasets read in, our original data and our updated data, we can perform change detection to see what has changed between the two datasets. Add a ChangeDetector to the canvas. Connect the original DowntownParks reader feature type to the Original input port on the ChangeDetector, and then connect the ParksUpdates to the Revised input port.



In the ChangeDetector parameters, set the Update Detection Key to parkid, this will ensure each feature that is similar is only compared with itself. Next, click on the ellipsis next Select Attributes and select the following:

- dogpark
- parkname
- specialfeatures
- treecount
- visitorcount
- washrooms

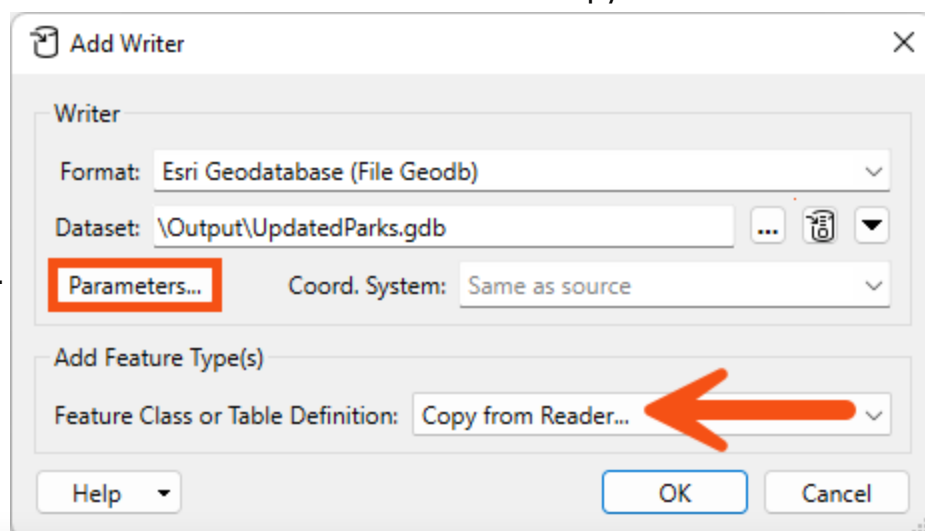
Preview mode. Refresh to see the latest changes.



4. Update Original Feature Class

Add an Esri Geodatabase (File Geodb) writer to the workspace, browse to a location to save the dataset. Set the Feature Class or Table Definition to Copy from Reader and then open the

Parameters.



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Overwrite Existing Geodatabase and for Template File Geodatabase select GeodatabaseUpdates_Source.gdb. When using a Geodatabase as a template, both the schema and data that are currently within the Geodatabase will be copied. Now this will overwrite the existing Geodatabase if it exists, however, this does not overwrite the template. Click OK twice to add the writer. Note: The Template and the Output Geodatabase should be two different files.

Esri Geodatabase (File Geodb) Parameters

Database Connection

File Geodatabase: \\Output\\UpdatedParks.gdb

☒ Overwrite Existing Geodatabase

Template File Geodatabase: \\Data\\GeodatabaseUpdates_Source.gdb

☐ Import XML Workspace Document

Transaction Type: Transactions

Feature Dataset Handling: Write Feature Dataset

Geometry Settings

Simplify Geometry: No

Contains Z Values: Auto Detect

Case Conversion

Feature Type Names: None

Attribute Names: None

Advanced

Geodatabase Version: Current

Default Z Value: 0

Transaction Number: 0

Features Per Transaction: 1000

Ignore Failed Features: No

Max number of features to ignore: -1

Dump Failed Features to File: No

Failed Feature Dump filename:

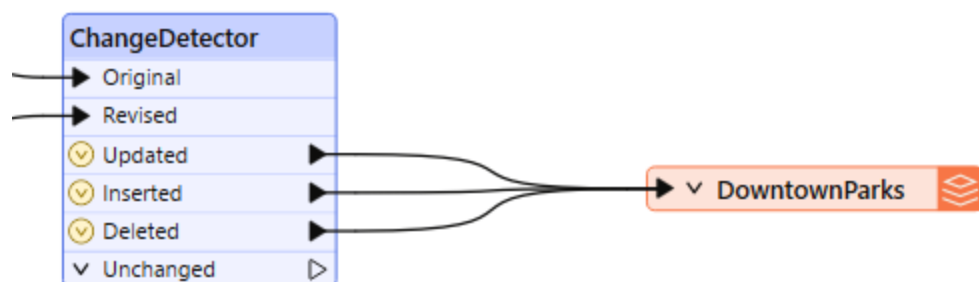
Annotation Units: Unknown Units

Help Presets OK Cancel

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reader feature type and apply it to our writer Feature type that we are going to write to.

Once the writer has been added to the canvas, connect the Updated, Inserted, and Deleted Output ports from the ChangeDetector to the DowntownParks writer feature type.



Now, there is one more step before we can write out the changed data: we need to modify the writer feature type parameters to update the geodatabase. Open the writer feature type parameters, change the Feature Operation to `fme_db_operatio`, then change the Update Spatial Columns to No. Next click on the ellipsis next to Match Columns and select `parkid`, then click OK.

Preview mode. Refresh to see the latest changes.

Parameters User Attributes Format Attributes

General

Feature Class or Table Name: DowntownParks

Writer: UpdatedParks [GEODATABASE_FILE]

Geometry: geodb_polygon

☐ Dynamic Schema Definition

Table

General

Feature Operation: fme_db_operation

Table Handling: Use Existing

Update Spatial Column(s): No

Row Selection

☒ Match Columns: parkid

☐ WHERE Clause:

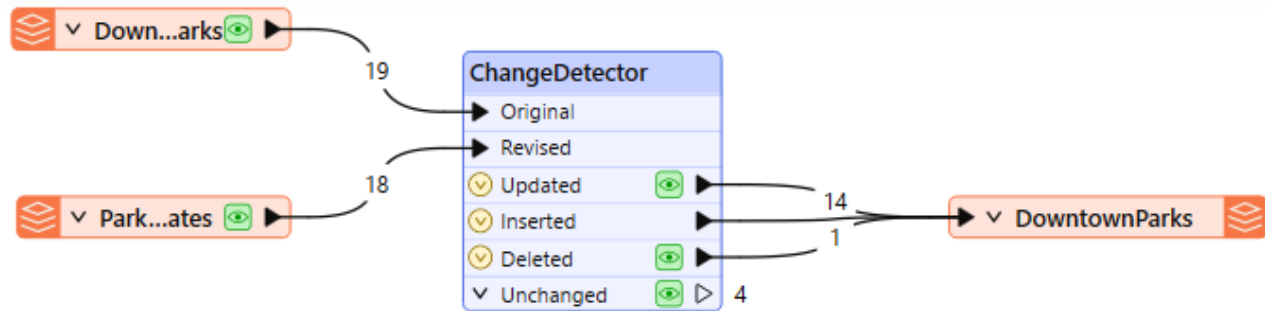
Table Creation

Help Apply to... OK Cancel

5. Save and Run the Workspace

Now, save the workspace and then run it. View your output in FME Visual Preview or in Esri ArcCatalog to confirm that the changes have been applied.

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Visual Preview X Translation Log

Table

DowntownParks

	OBJECTID	parkid	neighborhoodname	parkname	visitorcount
1	1	21	Downtown	Andy Livingsto...	1
2	2	22	Downtown	Sun Yat-Sen Ga...	1
3	3	32	Downtown	Art Phillips Park	1
4	5	34	Downtown	Victory Square	1
5	6	35	Downtown	CRAB Park at P...	2
6	7	36	Downtown	Wendy Poole P...	1
7	8	37	Downtown	Pioneer Place (...)	1
8	9	56	Downtown	Coopers' Park	1
9	10	57	Downtown	Helmcken Park	1
10	11	58	Downtown	Roundhouse Tu...	1
11	12	59	Downtown	David Lam Park	1
12	13	60	Downtown	May & Lorne Br...	1
13	14	75	Downtown	Devonian Harb...	1
14	15	76	Downtown	Marina Square	1

Columns...

Graphics

2D 3D Slideshow Orbit Select Pan Zoom In Zoom Out Zoom Selected Zoom Extents

Update Dataset

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