



10 Ways to Correct CAD

10 Ways to Correct CAD/GIS Data Mismatches

With FME's flexible data transformation capabilities, you can automatically correct mismatches between CAD representations and GIS requirements. Using FME's graphical interface, FME Workbench, you can quickly design a limitless variety of data conversion transformations that extract and transfer the precise meaning and semantics from your original CAD files. Simply choose the transformers you want - from a gallery of over 400 - and then link them together on the "canvas" to create the exact data model you need. FME eliminates the need to manually recapture semantic information in your GIS system.

Here are ten examples of how you can use transformer combinations in FME:

1. Stitch together CAD tiles into a continuous layer and connect segments of features that extend across tile boundaries
2. Convert data to a different mapping coordinate system
3. Create polygons or areas from CAD line work
4. Decipher CAD layer codes and map all CAD layers to the corresponding GIS layers
5. Move and resymbolize map features (or symbols) to give a better cartographic representation of real-world features
6. Remove slivers and close artificial gaps in map features created by incomplete linework or symbol placement
7. Split lines where the attribute(s) of the feature change
8. Capture attribute information from annotations adjacent to CAD features using proximity analysis or TAG values
9. Retrieve attributes from tables, spreadsheets, or databases and attach these to features
10. Transform feature symbology to match GIS requirements

FME also allows you to easily correct problems introduced by previous conversions between CAD and GIS systems using two powerful transformers, Curvefitter and MRFCleaner.

Curvefitter — Restore ARCS and Smooth Jagged Polygons

FME's Curvefitter transformer provides smart linear optimization technology that dramatically reduces CAD and GIS file sizes by replacing multiple line segments with arcs. Curvefitter is the only line smoothing tool available for adjacent area features:

- Restore arcs that were lost during migration from a CAD to a GIS format and replaced by stroked line segments
- Create a more realistic representation of features by replacing jagged survey lines with arcs
- Join lines and arcs to create a single feature entity (path)
- Reduce file sizes by up to 80% for efficient file processing and sharing

MRFCleaner — Correct Geometric Problems During Data Migration

FME's MRFCleaner transformer provides an efficient data cleaning solution that allows geometric problems in CAD data to be corrected during data migration. It eliminates many tedious data preparation tasks by automatically repairing geometry in the initial phase of a data conversion workflow. Multiple FME transformers and complex workflows normally required for data cleaning can be replaced by a single MRF Cleaner transformer.

The MRF Cleaner is useful for multi-layer and multi-tolerance data cleaning, and provides the following functionality:

- fuzzy tolerance
- extending lines
- weeding lines
- removing gaps
- removing danglers
- performing conflation

