

CCS323124

## Good Fabrication MEP DB Management - Inside and Out

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### Learning Objectives

- Learn how to perform QA/QC on your database
- Learn about identifying and fixing issues
- Learn about proper routine maintenance
- Learn things not to do

### Description

This class will go over a wide variety of topics regarding best practices for database management, from keeping your content functioning and facilitating major changes gracefully to correcting common problems. You'll learn several tips, techniques, and best practices to help keep your database in proper order.

### Speaker(s)

Based in Washington state, Darren Young has been a veteran Autodesk University speaker for well over a decade. His unique ability to leverage multiple everyday technologies in interesting ways to solve complicated and laborious tasks has been valued by users around the world. Down to earth and approachable, he's always willing to help his peers anytime of the year even outside of Autodesk University. Darren's background includes a wide variety of disciplines such as Construction, Engineering, Manufacturing, LEAN, Information Technology, Computer Programming, Author and Technical Editor. His lectures and labs are not just a training opportunity for others but a venue which connects him personally with users helping him learn as well.

## Fabrication MEP Best Practices

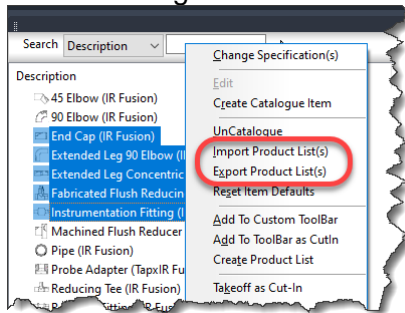
### #1: Don't Use Double Quotes (")

Double quotes are often used to represent the inch mark. However, using double quotes can create problems with data exported to CSV files as Excel can see them as Text String delimiters.

Use export scripts (<https://tinyurl.com/COD-Script-Library>) to export ITM property data into CSV files and examine in Excel for ITM's with double quotes.

- Bulk Export ITM Product Lists and use Notepad++ to search files in folders to replace double quotes (<https://notepad-plus-plus.org>).

Ctrl+Shift+Right-Click in CADmep Folders window...



- Review other database entries for double quotes. E.g. Materials, Specifications, Connectors, etc.
- Use two single quotes ( ' + ' = ' ' ) to simulate the inch mark if you prefer that look to the text.

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### #2: Don't Use Commas (,)

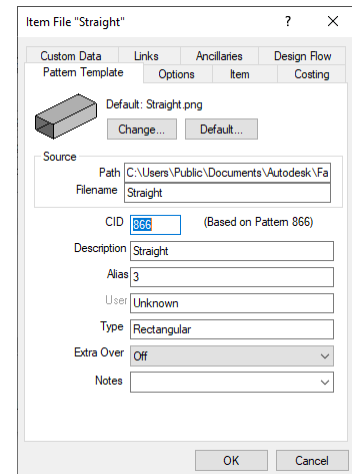
Commas are used in CSV files to delimit between data fields causing data alignment issues in data exports.

- Use export scripts (<https://tinyurl.com/COD-Script-Library>) to export ITM property data into CSV files and examine in Excel for ITM's with commas.
  - Review other database entries for comma usage. E.g. Materials, Specifications, Connectors, etc.
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## #3: Don't Use BMP Files For ITM Images

BMP images are larger and slower when changing services.

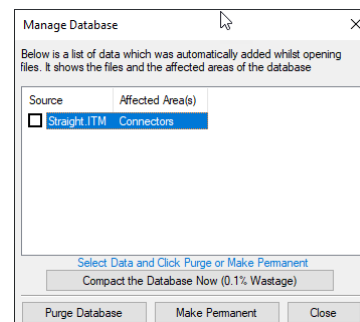
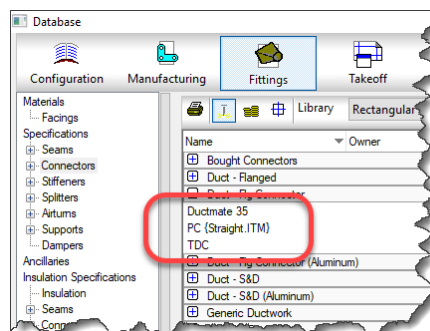
- Use export scripts (<https://tinyurl.com/COD-Script-Library>) to export the BMP properties of ITM's to a CSV file for review in Excel. ITM's use the "BMP" property name regardless of the type of image used.
- Use PNG files for ITM images.
- Use a utility like SnagIt or Paint.Net to convert existing BMP images to PNG format.



## #4: Don't Leave Proxy Entries In Your Database

BMP images are larger in file size and slower to display when changing between services.

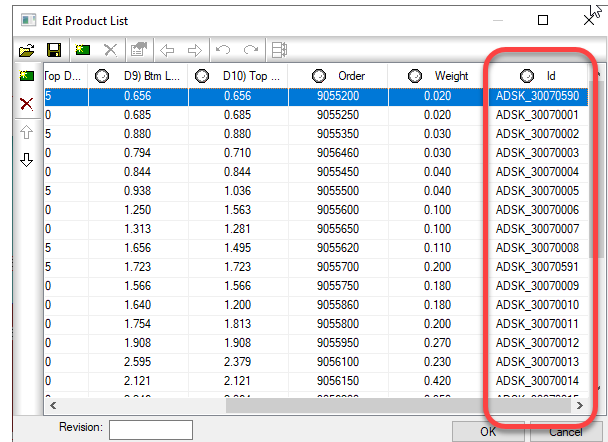
- Review Database Entries for *{proxy}* items.
- Use PRUGEDB to find and remove or make permanent any *{proxy}* items.
- Use Export scripts (<https://tinyurl.com/COD-Script-Library>) to find where problematic, reoccurring *{proxy}* items are used or are coming from.



## #5: Assign A Database ID To All ITM Content And Ancillaries

Database ID's are Fabrication's method for matching Price, Labor and Product Information to ITM content and Ancillaries. Managing ID's can be time consuming but helps ensure your database content is well managed by verifying there are not duplicate ID's or missing ID's.

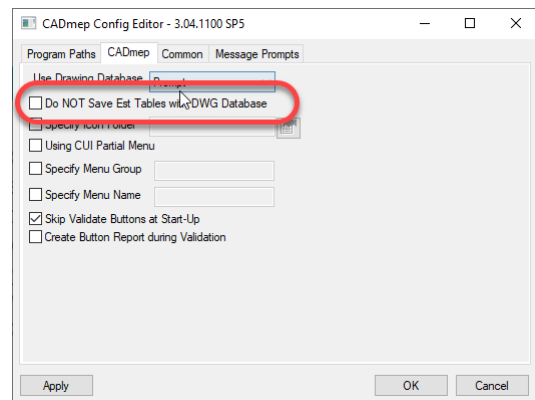
- Use Export Scripts (<https://tinyurl.com/COD-Script-Library>) to review ITM contact for database ID's
- When adding Database ID's, make sure to create entries in ProdInfo.map
- Add entries for Price/Labor tables if you're an ESTmep user
- Develop your own "ID Naming" scheme for your company and use consistently Review
- Use Excel to help manage content and Database ID's



## #6: Don't Store Estimating Tables In Your CADmep Drawing

By default, CADmep stores Estimating data (price & labor) in your DWG files. Anyone with your DWG can easily extract that data. This functionality can and should be disabled.

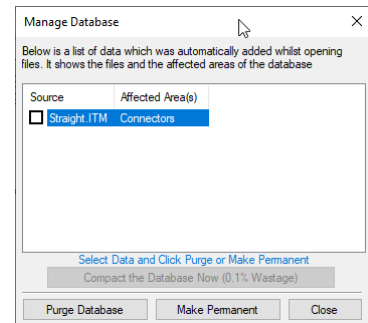
- Use the **Edit Configuration** program to disallow EST tables from saving in your DWG.
- This setting is "Windows Logon" specific. Each user of a system needs the change made.
- This setting is also "Version" specific. Each version of Fabrication needs this setting applied.
- Have IT push the change via Policy to the registry...



Key: **HKEY\_CURRENT\_USER\Software\Autodesk\Fabrication ####\CADmep**  
 Value: **StoreEstDatabase**  
 Data: **False**

## #7: Don't PURGE Or COMPACT Your Database When In Use

Purging and Compacting your database is a good thing when done properly. It can be disastrous when used improperly. When you Purge/Compact your database, database entries can have their indices changed. Any user currently working in your database already has the old index values in memory. As they work, the new values can get read and create conflicts. If you've ever had a Piping service tell you it's a Sheetmetal service, this is likely why. Purge/Compact only when nobody else is working in your database.



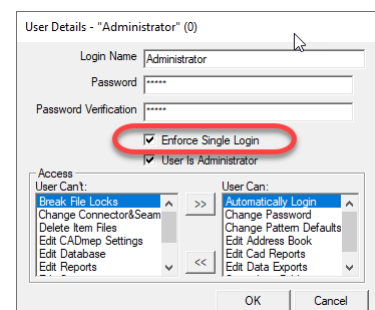
## #8: Don't Work In A Live Sync'd Database

Using sync utilities to sync your database can be risky. Especially if they sync in real time across servers or in the cloud. It can be done but it's highly advised to not try.

- Most sync utilities don't offer control of which files sync and when. Some of the MAP files are critical that they are the copied together. If one is updated without the others, anyone accessing them could have the the index values in the data tables get out of sequence. If you've ever had a "Cast Iron No Hub" service suddenly report it's "Rectangular Supply", this is likely the cause.
- If using a sync utility, try to run "on demand" in the off hours.
- If you only use Revit, this significantly reduces this risk as Revit does not read from the database on disk unless you reload (unlike CADmep, ESTmep and CAMduct)
- Utilities like RoboCopy offer very granular control of database sync'ing if needed.

## #9: Only 1 (One) Concurrent Database Administrator

- Use **Configure Users** to limit DB Admin to a single user and concurrent login.
- When multiple people Admin, "Last One In Wins" with changes.
- Use ITM and Report Editing accounts as exceptions if needed as each is a single file, not a database table.
- If you need multiple Admins, consider separate "Development" databases for each Admin who then import their work into a "Master". **RoboCopy** utility works well for this purpose.



## #10: Always Use The Same Version Of Software To Administer Your Database

From a user's perspective, your Fabrication Database is "version neutral". This does NOT apply to administering your database.

- Never use multiple different product year software versions for Administration. If you're going to use 2019 for Admin, always use 2019. If you're going to use 2020, always use 2020.
  - Tables can often get updated with new data in new versions of Fabrication. If you use an older version to later administer your database, it rewrites those tables without that data because it's not supported.
  - Users without administrative permissions in the database can use older versions for production work because they ignore that extra data and can't save back to the tables.
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## #11: Don't Use Ancillaries With Breakpoints Inside An Ancillary Kit

- When setting up ancillaries, don't use nested breakpoints.
  - Ancillary Kits with Ancillary's using breakpoints are OK.
  - Ancillary Kits with Breakpoints using non-breakpoint Ancillaries are OK.
  - Breakpointed Ancillary Kits using Breakpointed Ancillaries are **NOT OK**.
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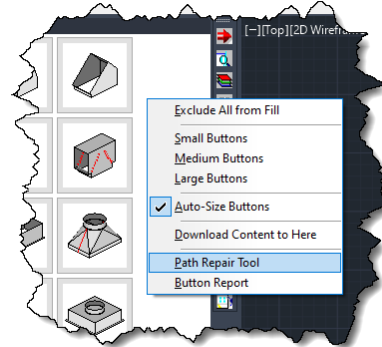
## #12: Don't Nest Ancillary Kits (Kits within Kits)

- Can cause issues with reports and reporting. Just because something is in a Kit, does not mean it will report. E.g. Adding a "Clip" to a "Kit" that's used for a "Rod" may not report the Clip.
  - Compound nesting is makes it difficult to understand your database structure.
  - This best practice can be ignored but be aware and cautious. Troubleshoot reports carefully and un-nest Kits is you experience problems.
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## #13: Eliminate All Broken Service ITM's

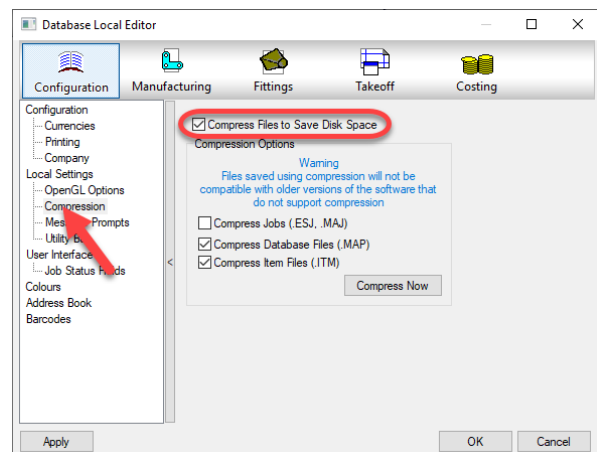
Your services should not have broken links to ITM's. Not only is it sloppy database management, it can slow performance of your database.

- Use **Path Repair Tool** find broken button links.
- Path Repair Tool can use a mapping file to fix broken ITM links.
- Path Repair Tool without a mapping file will report broken links.
- Use **SYSSCRREPORT** command in CADmep to export Service data.



## #14: Compress MAP Files

- Smaller database footprint on disk.
- Faster loading/reading of database.
- Defaults to “not compressed” with each new software version (2018 vs 2019 vs 2020, etc.).
- Defaults to “not compressed” with each different product (CADmep vs ESTmep vs CAMduct).



## #15: Use A Naming Convention For Everything In Your Database

- Keeps your database organized.
- Helps you think through future scenarios.

## #16: Use A Fresh Load Of CADmep, For Administration

- Proxy items can get “Stuck” in your database.
- Ensures no erroneous data from other drawings get added.

## #17: Disable “Save With Graphics” In CADmep Unless Needed

- Makes DWG files MUCH smaller.
- Use only for DXF/DWG exchange with others using Non-Autodesk products.
- Set in separate database copy or when others are not using the database.

