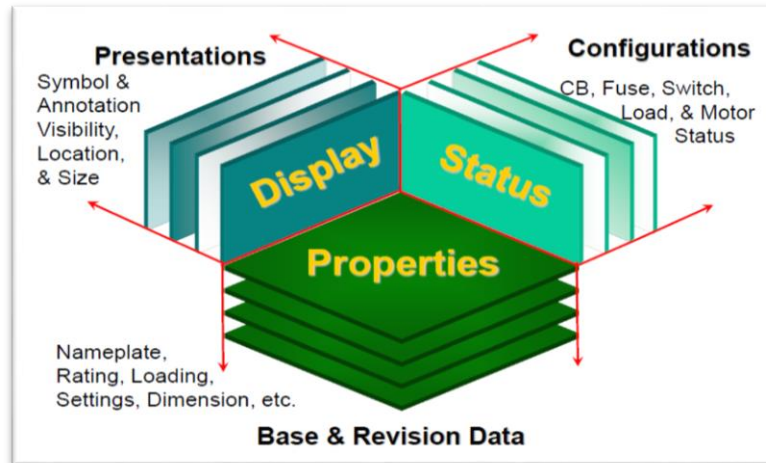## 3D Database

Theoretical concepts

ETAP relies on a three-dimensional database concept to implement all Presentations, Configurations and Base/Revision Data. The use of this multi-dimensional database concept allows you to independently select a particular Presentation, Configuration and Revision Data within the same project database.

These selections can be used in conjunction with multiple loading categories and multiple study cases to quickly and efficiently perform system design and analysis. This will avoid inadvertent data discrepancies created when multiple copies of a single project file are used to maintain a record of various system changes.
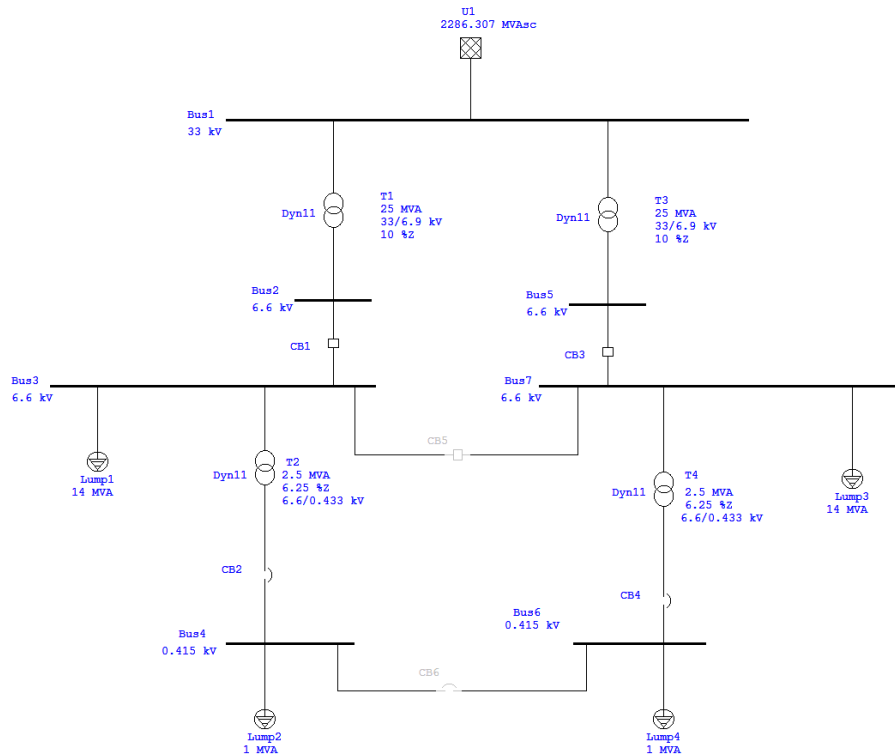
3D Database

Purpose and Description

This section is to explain functionalities of 3D database in ETAP which includes Configuration, Presentation and Base & Data Revision.
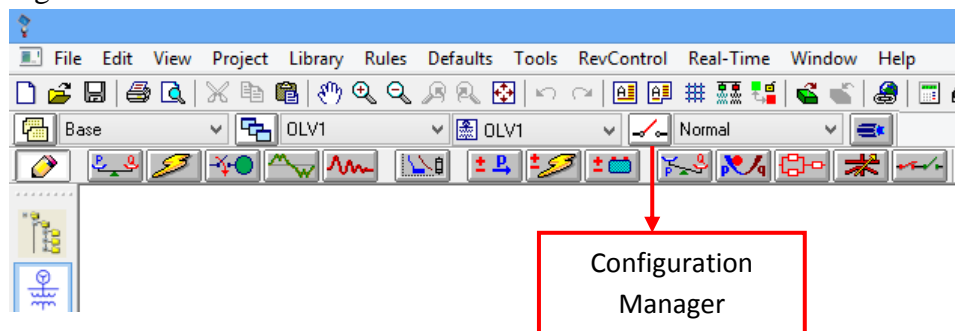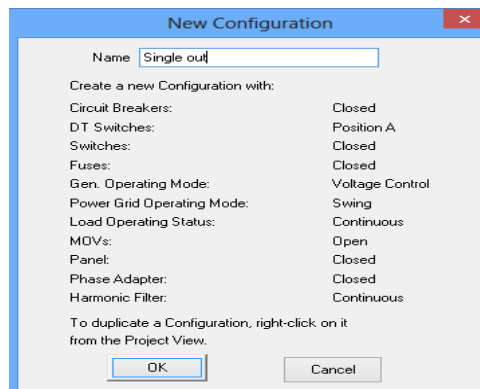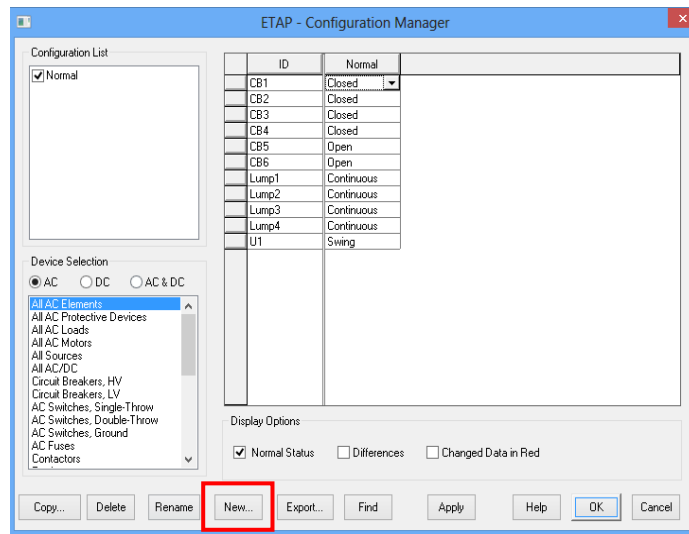
Creating Configurations

Procedure

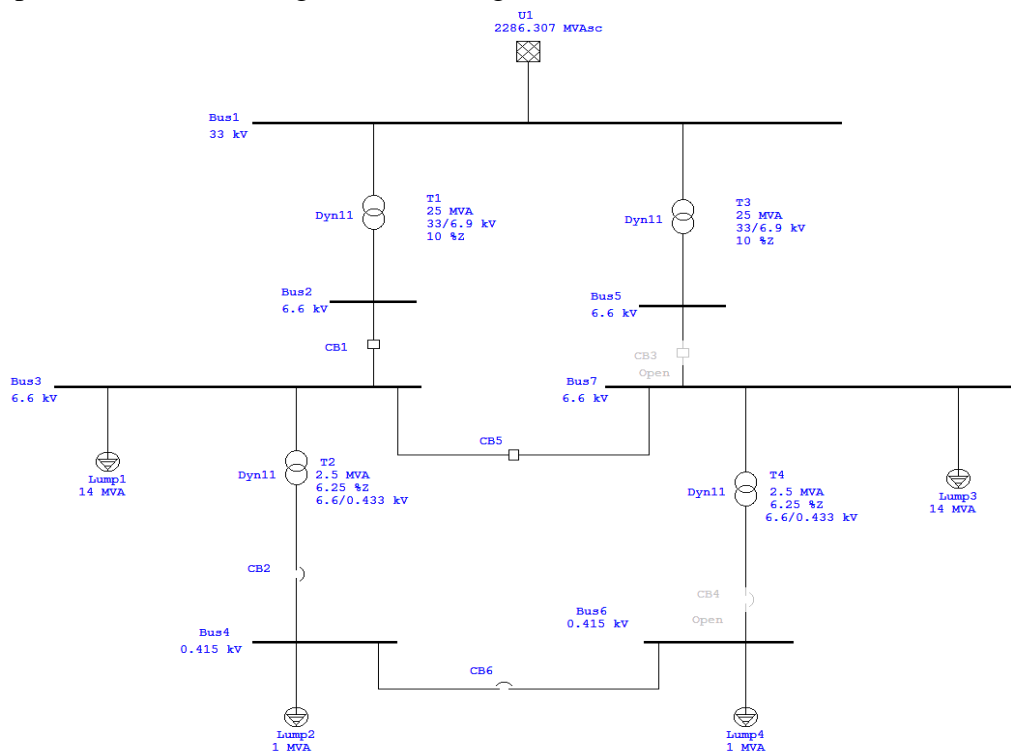1. Open LF-Example OTI file shown below.

2. Go to Configuration Manager, Click on New to create a new configuration and name it as Single out.
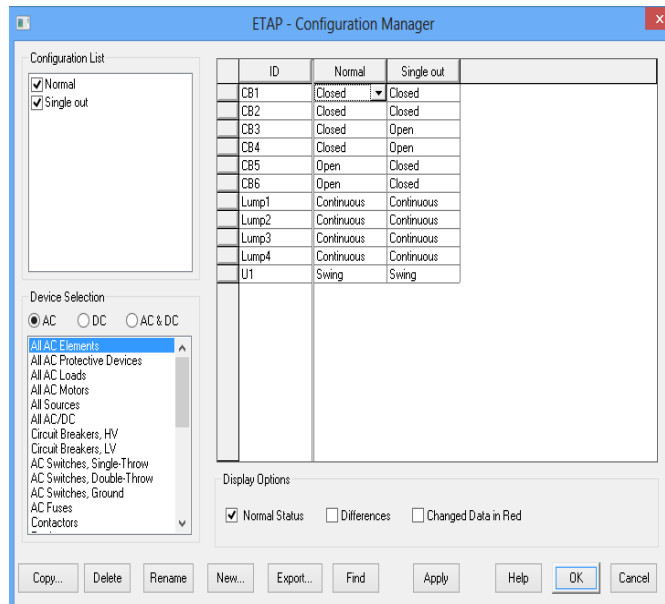
3D Database

3. Click on Configuration Status drop down button, select Single out configuration and proceed to make changes in the configuration as shown below.

3D Database

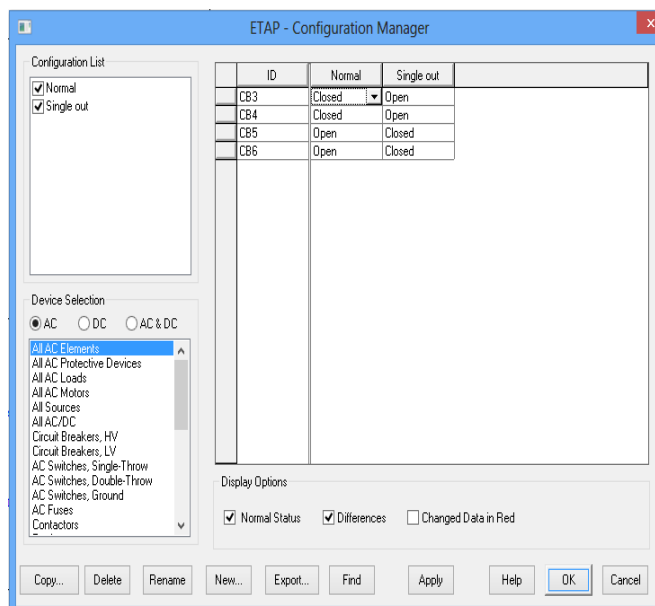4. Go to configuration manager, check for the device status as shown below.

ID	Normal	Single out
CB1	Closed	Closed
CB2	Closed	Closed
CB3	Closed	Open
CB4	Closed	Open
CB5	Open	Closed
CB6	Open	Closed
Lump1	Continuous	Continuous
Lump2	Continuous	Continuous
Lump3	Continuous	Continuous
Lump4	Continuous	Continuous
U1	Swing	Swing

5. Check Differences in Display Options to note the differences in the configurations as shown below.

ID	Normal	Single out
CB3	Closed	Open
CB4	Closed	Open
CB5	Open	Closed
CB6	Open	Closed

3D Database

Creating Presentation
Procedure

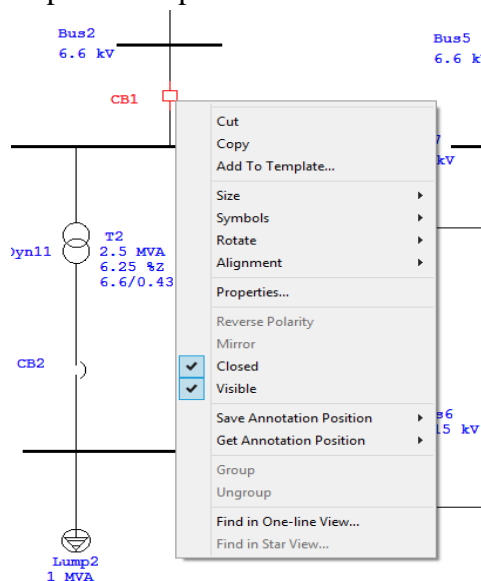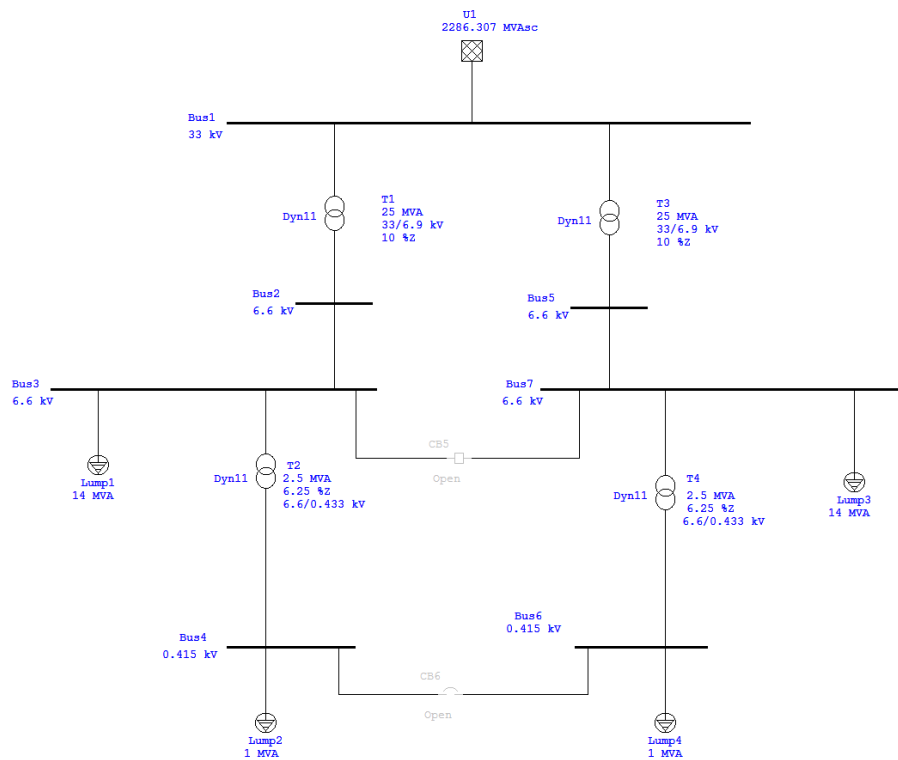1. Click on New Presentation to create OLV2 as shown below.
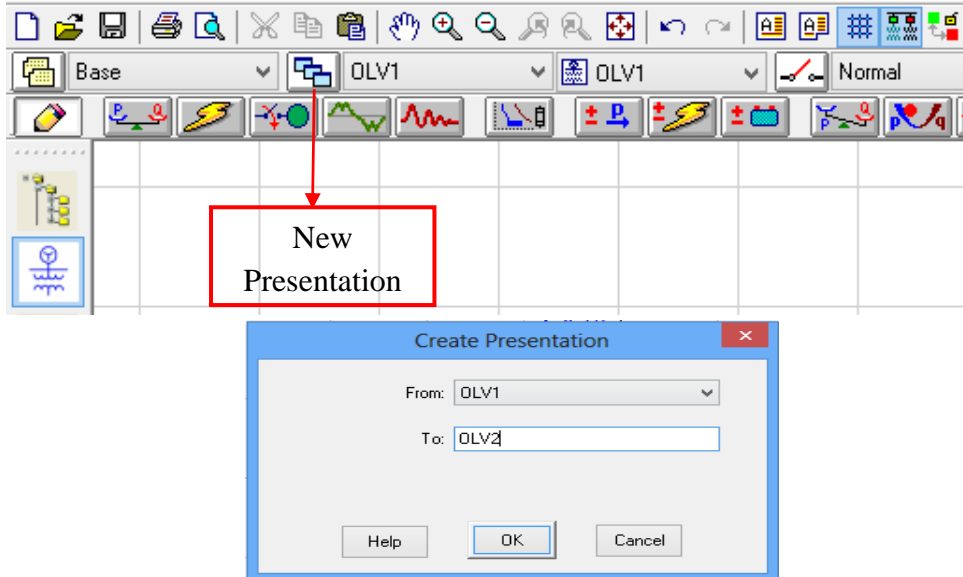
2. To hide CB1, right click on it & uncheck visible option as shown below. Similarly hide all circuit breakers except bus couplers.
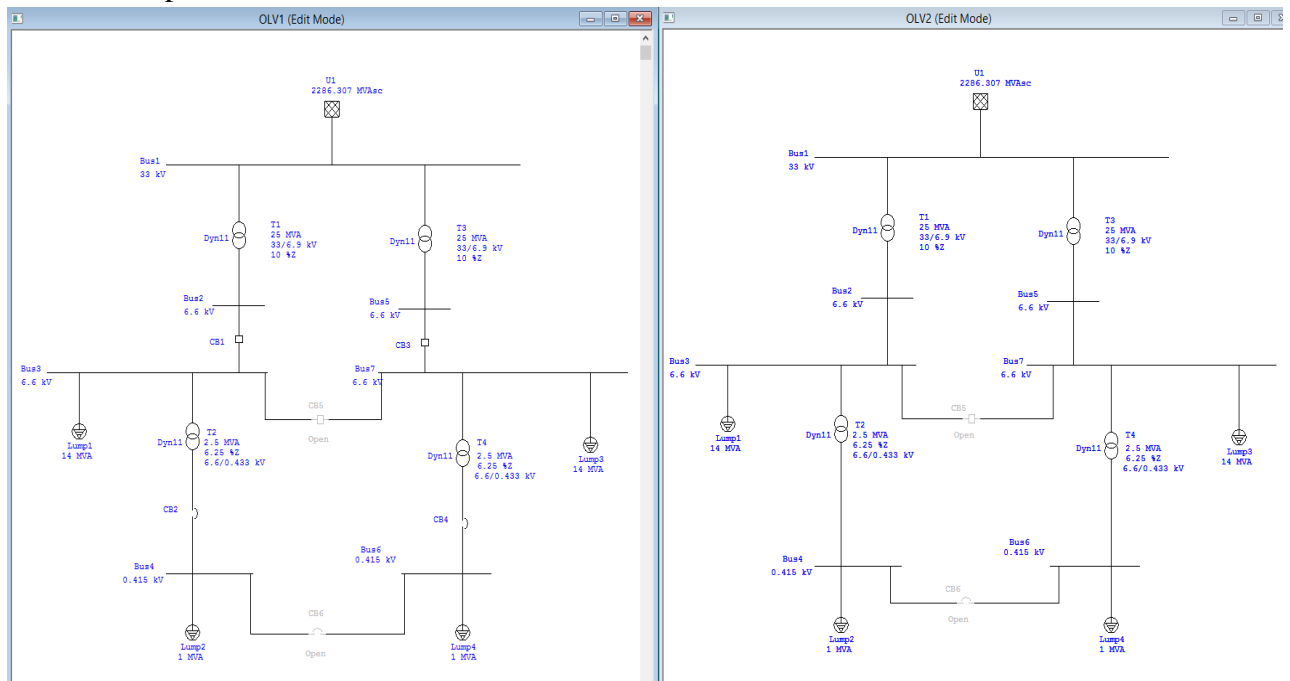
3D Database
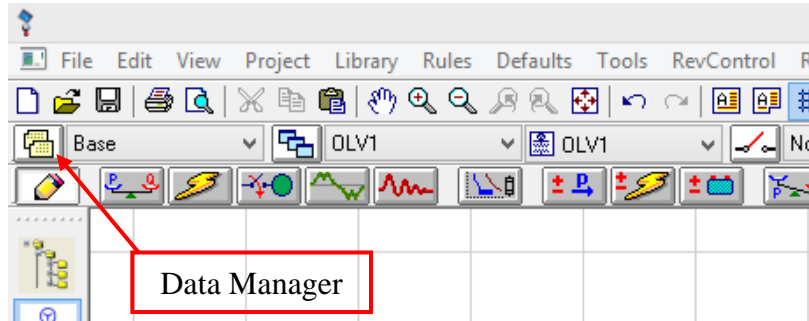

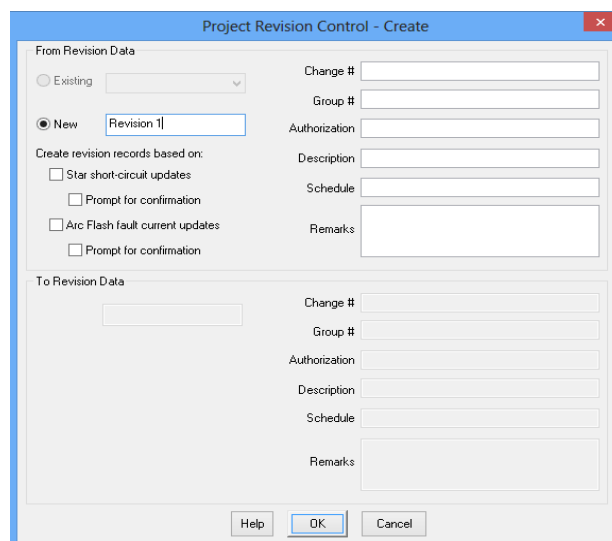3. Compare both the OLV1 & OLV2 as shown below.
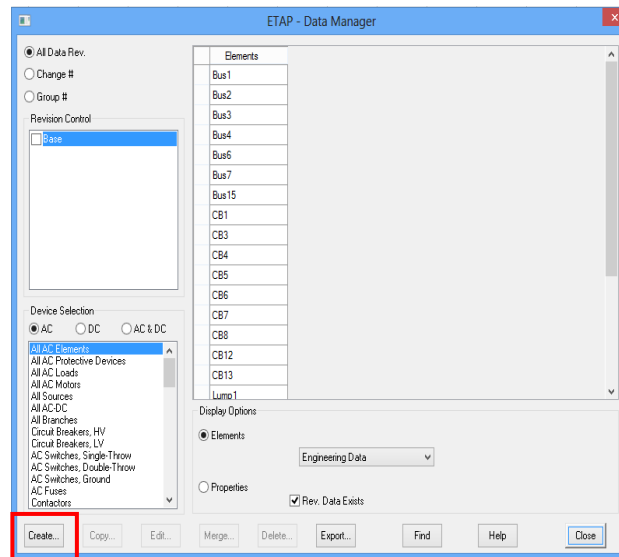
3D Database

Revision data
Procedure

1. Click on Data Manager to create new revision.
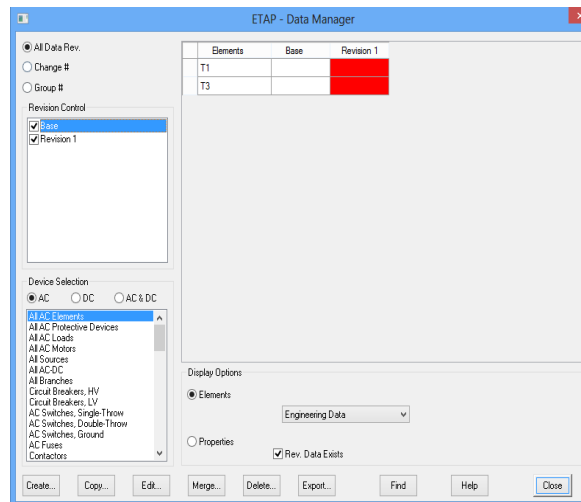

Data Manager

2. Click on Create and name new revision as Revision 1.

3. Select Revision1, change %Z of transformer T1 & T3 to 12% in the OLV.
4. Go to Base revision, click on Data Manager to compare Base and Revision1.
5. Click on Properties in the Display options to view the changed data.

3D Database

6. Create new revision as Revision 2.
7. Select Revision2, change %Z of transformer T2 & T3 to 8%.
8. Go to Base revision, click on Data Manager to compare Base and Revisions.
9. Click on Properties in the Display options to view the changed data as shown below.
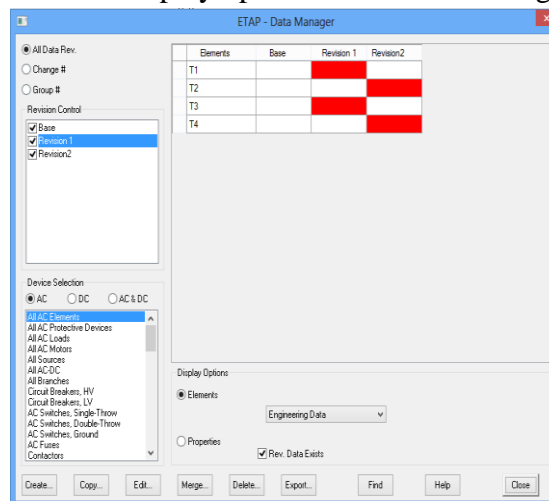
10. Click on Merge button & merge Revision 1 inside Revision 2. Check the results of merge operation as shown below.