Driver:

Select load case Select component

Select T-pin component

Set thresholds for: Green, BU/FRP, Absolute Error, % Error

Set location of spreadsheets to be read

Read Excel File:

Joint coordinates on either side of joint

Orientation (Horizontal, vertical)

Output components: Local U1/U2/U3 on either side, JS/JW/PFO

Direction vectors: e1, e3

Read T-Pin Excel File:

Joint coordinates at T-Pin

Output components: Length, SRSS(U), U1/U2/U3

Direction vectors: e1, e2

Read BU/FRP Excel File:

Output components:

Top/Left: Absolute error, % error, BU contribution. Bottom/Right: Absolute error, % error, BU contribution.

Given:

Joint coordinates
Component magnitude

Joint orientation

Generate:

Transformation matrix for bubble Transformation matrix for label Given:

Joint coordinates Component name Component magnitude

Joint orientation

Joint Onematio

Plot:

Place bubble into correct layer Place text at offset location with correct orientation

Input:

Excel File

Plotting parameters

Output: Rhino file