



Structure Identification

USER'S GUIDE

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I. Introduction

This plugin allows to find the structure type (H or I, U shapes) by measuring a particular distance between 2 faces. It uses external txt tables to identify the structures.

II. Installation

Unzip the package that contains the fpp file and the txt tables.

Copy the .fpp file into the App folder of Scene / Scene LT (5.3 and above).
Then, open Faro Scene and go into tools – Apps, and install the fpp package.

III. Using the plugin

General :



The plugin is represented by a white icon « SI »

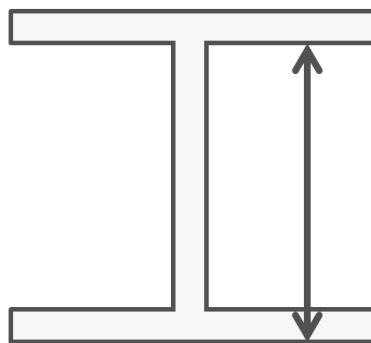
First of all, when the plugin is started, you'll be asked to choose the unit (meters or feet).
Indeed, the internal unit in Scene is always the meter, even if feet are set in the options table.

Once the unit is set, it will be used for this plugin during the whole work session. To change it, you'll have to close / open Scene, or to deactivate / reactivate the plugin.

Workflow:

The plugin works for flanged beams or channels. It will not work for angle irons.

It will look for a particular distance in a table. This distance is unique for a family of beams :



The distance used is = total height h – flange thickness t_f

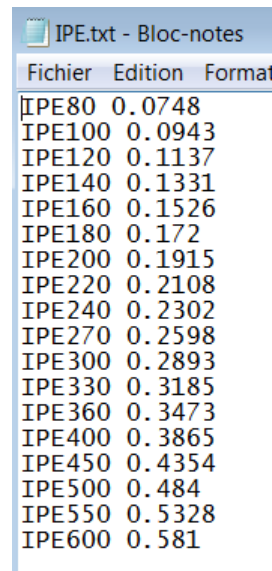
Before using the plugin, you have to create a txt file that contains all the distances for a shape. We already provide some metric tables with the following families : HEA&HEB, IPE, UPE (European norms).

The tables are easy to build. Give the shape name, let a space, and then give the distance between the 2 faces, as it is represented on the previous picture. Please build it in an ascending way (first line : smallest value, last line : highest value).

Metric tables : please use the meters in the tables

Imperial units : please use the inches in the tables (**not the feet**)

Example of a table :

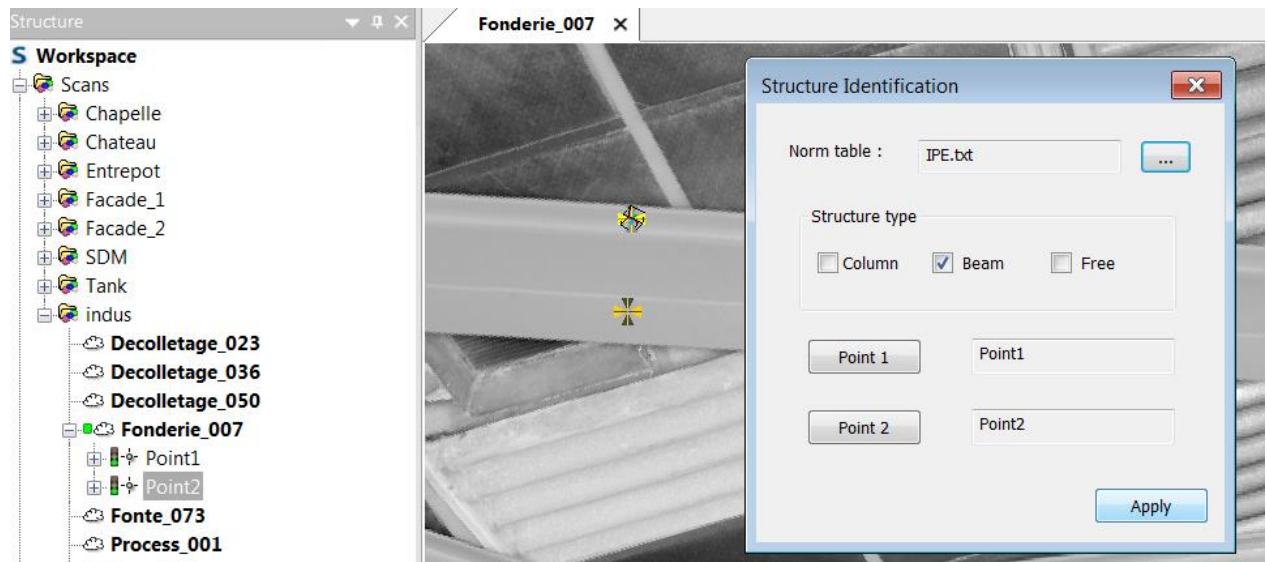


IPE.txt - Bloc-notes		
Fichier	Edition	Format
IPE80	0.0748	
IPE100	0.0943	
IPE120	0.1137	
IPE140	0.1331	
IPE160	0.1526	
IPE180	0.172	
IPE200	0.1915	
IPE220	0.2108	
IPE240	0.2302	
IPE270	0.2598	
IPE300	0.2893	
IPE330	0.3185	
IPE360	0.3473	
IPE400	0.3865	
IPE450	0.4354	
IPE500	0.484	
IPE550	0.5328	
IPE600	0.581	

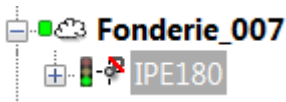
To use the plugin, create 2 points on the beam faces (one on the lower face, and one on the lower side of the upper face, as represented on the previous page), then choose the norm table and the type of structure : column, beam, or free (tilted).

As the plugin compares the distance between the points and the values in the table, try to be quite accurate when placing the points, especially on tilted beams.

It will use the horizontal distance between the points for the columns, the vertical distance for the horizontal beams, and the total distance for the tilted beams.



After applying the plugin, one of the points will be renamed with the shape type :



Tip for the tables : please try to build one table for each shape family. Otherwise you may have very small differences between 2 families that are in the same table and get wrong results.

Important :

This plugin isn't an automatic shape detection function. You should have an idea of the shape family to get good results.

IV. Known issues

Don't store the .txt tables in a subfolder that has a very long path. The plugin might not be able to find them.

e-mail : support@liber-d.fr