

TUTORIAL 6

OBJ GEOMETRY IMPORT

In this tutorial, you will become familiar with the process of importing an OBJ geometry file to reconstruct and generate a 3D model in **ShapeMetriX's ModelEditor** tool.

The ModelEditor is a convenient tool for:

- Generating 3D models from existing *.e57 laser scanner or *.obj datasets.
- Converting models from previous ShapeMetriX versions in the *.jm3 file format to the new ShapeMetriX v5.0 compatible *.jm3x file format.
- Editing existing 3D models by trimming and confining it to the area of interest.

TOPICS COVERED IN THIS TUTORIAL

- OBJ Geometry Import
- 3D Model Reconstruction and Saving

FINISHED PRODUCT

The finished product of this tutorial can be found in the downloaded **Tutorial 6 – Model Files > Finished Product** folder.

1.0 IMPORTING OBJ GEOMETRY

If you have not already done so, run the ShapeMetriX (SMX) program by double-clicking the  **ShapeMetriX** icon on the desktop or in your installation folder, or by selecting **Programs > ShapeMetriX** in the Windows Start menu.

When the program starts:

1. Select  **ModelEditor** to run the ModelEditor tool.

Whenever the ModelEditor tool runs, a default blank work page opens as shown in the image below.

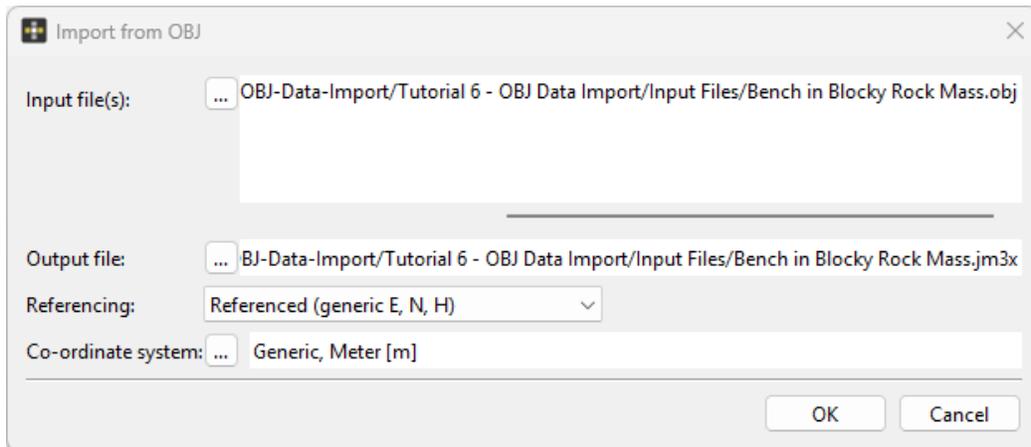


Blank ModelEditor work page

ShapeMetriX comes with several example images and files installed with the program. This tutorial will use an example Bench Slope geometry in a Blocky Rock Mass to demonstrate the OBJ geometry import feature. The example *Bench in Blocky Rock Mass.obj* file and the required images to generate the texture can be accessed through downloaded **Tutorial 6 – Model Files > Input Files** folder.

To import the OBJ geometry:

1. Select **File > Import 3D Model > Import from OBJ**
2. The **Import from OBJ** dialog will open automatically. Select the *Bench in Blocky Rock Mass.obj* from the downloaded tutorial folder.
3. Choose the directory on your computer to save the output 3D model (*.jm3x) file.
4. Set **Referencing = Referenced (generic E, N, H)**
5. Set **Coordinate system = Generic, Meter [m]**



Import from OBJ dialog

6. Click **OK**.

2.0 3D MODEL GENERATION

The progress bar will display the status of the 3D model generation. The 3D model will be automatically generated using the OBJ geometry input, and the texture will be projected onto 3D model if associated images are present in the input file directory.



Note:

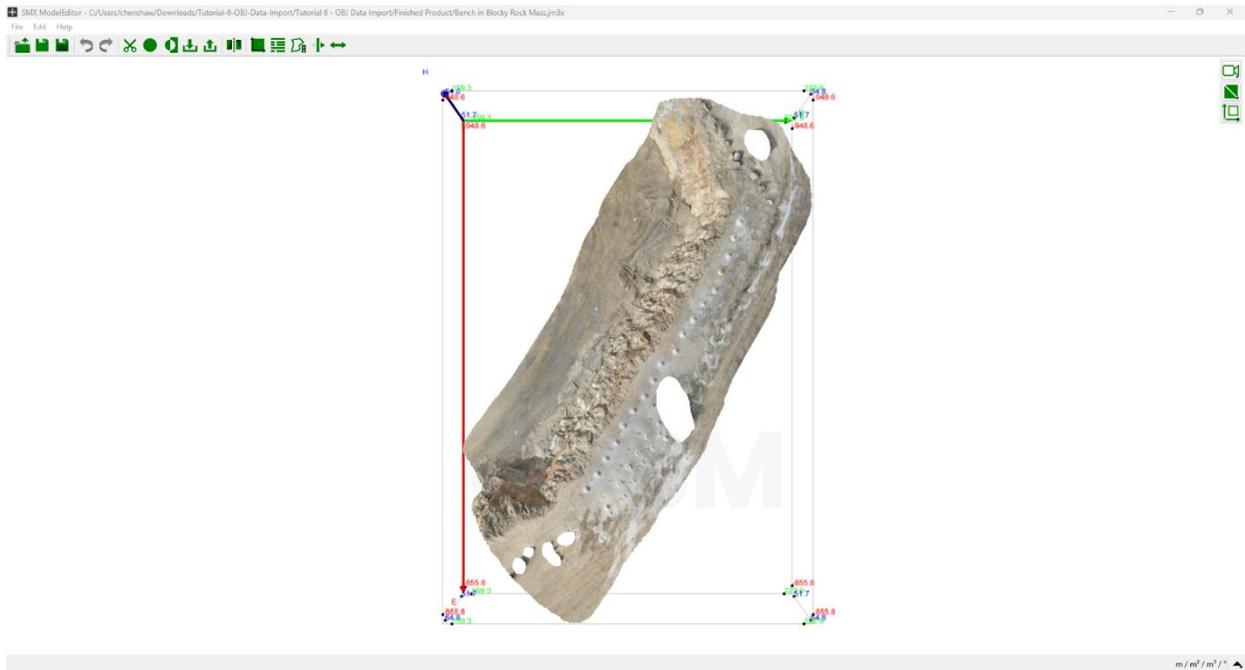
If there are no images present in the input file directory, the 3D model will be generated without texture.

3.0 3D MODEL OUTPUT

Once the 3D Model Generation process is completed, a 3D model with texture is generated and a 3D model output file (*.jm3x) is automatically saved. The resulting 3D model is displayed in the 3D viewer.

1. Inspect the generated 3D model in **3D Model Viewer**.

2. Click **Close** to leave **ModelEditor**.



Generated 3D model in 3D Model Viewer

This concludes the tutorial for the OBJ Geometry Import.