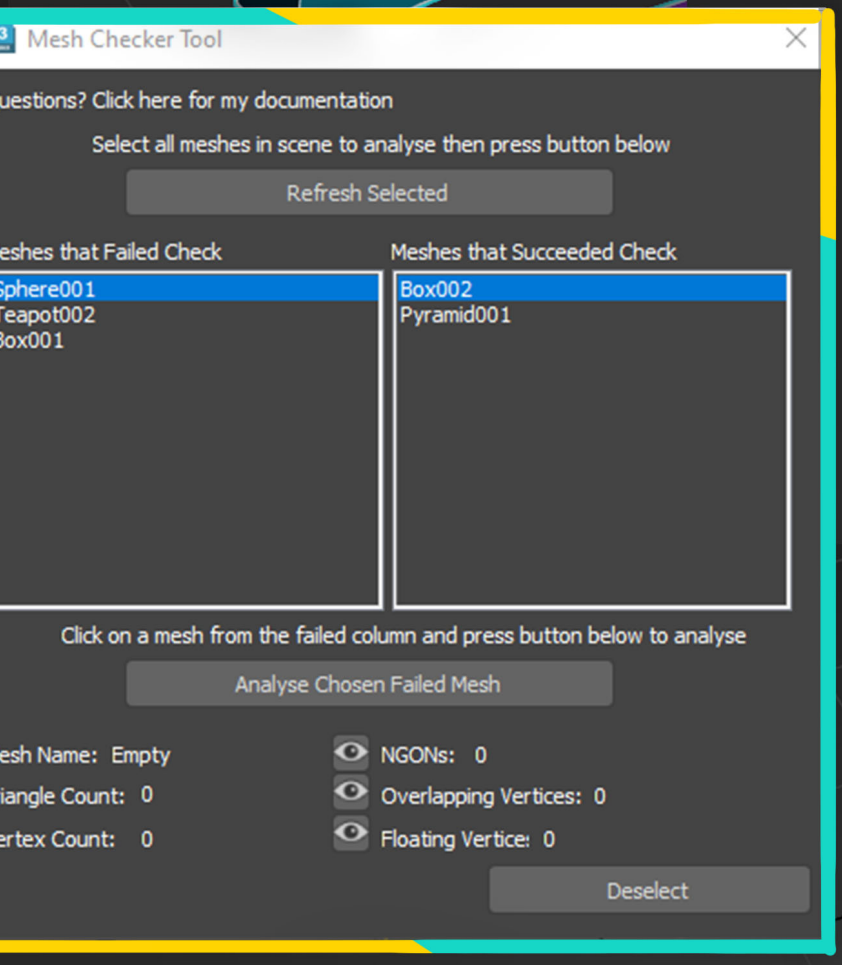
Multi Mesh Selection

Overlapping Vertices



NGONS and More!

Mesh Checker Tool

By Jesse Olchawa

Contents

How to Setup

1.0 Running the script

Download the .MS (Maxscript) file to a easy to access location e.g. Desktop. To run the script there are two main ways:

- The first being a simple drag and drop into the centre of 3DSMax.
- The second is on the very right side of the screen, select **Utilities** > **Maxscript > Run Script.** You can now **select the .ms file and run it.**

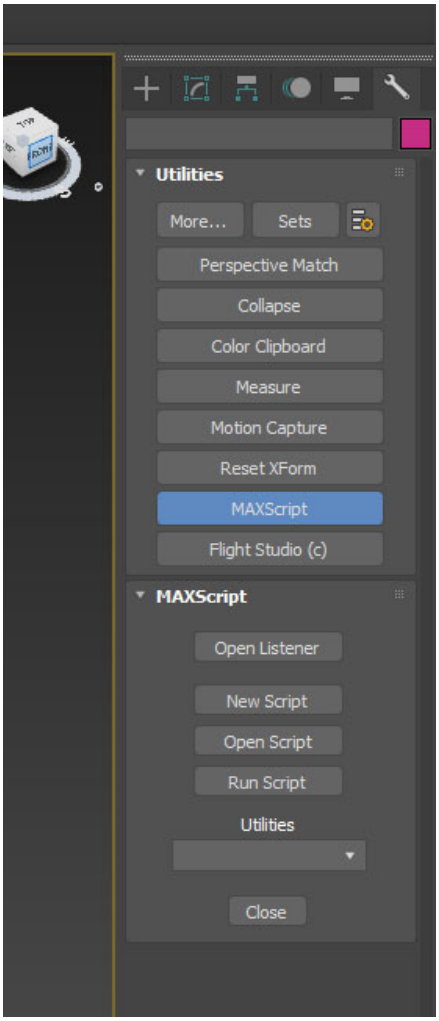


Figure 1.01 Screenshot of the Utilities Tab in 3DSMax

Disclaimer: this script **will remove** modifiers to analyse meshes and overall convert to Editable Poly.

You will be asked if needing to do so, however keep this in mind for models such as rigged characters (**Skin Modifier**).

You should now see a window that looks like this below

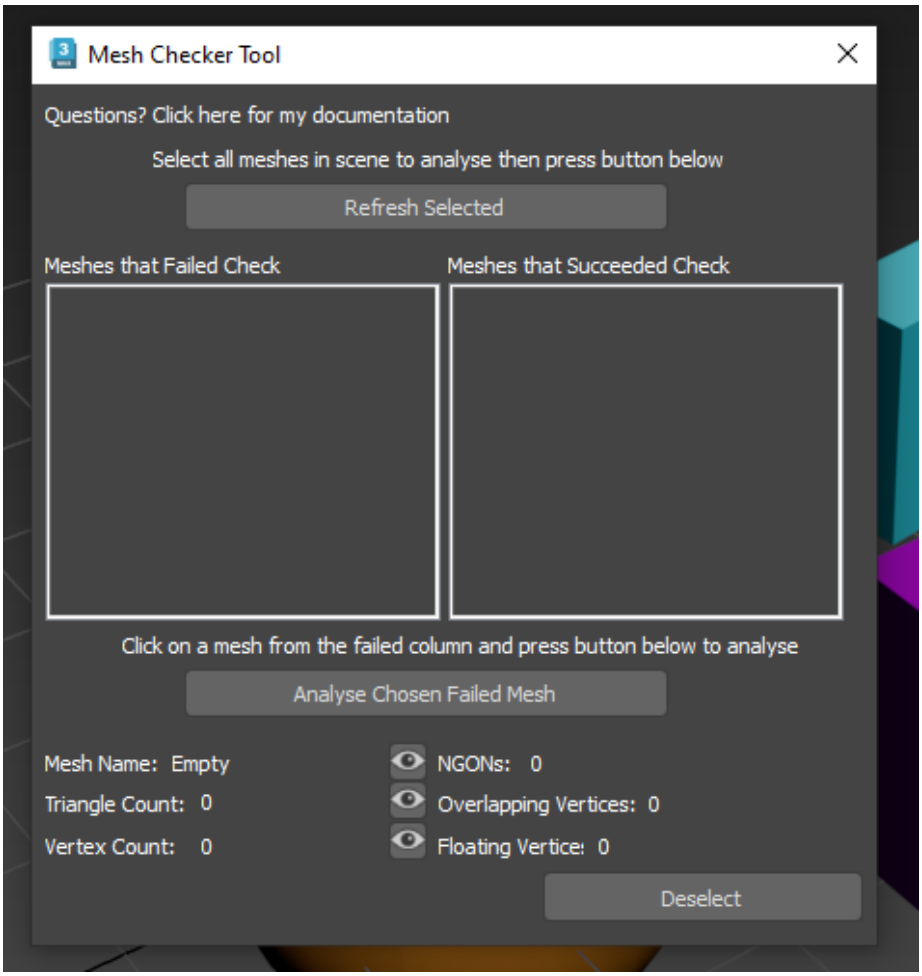


Figure 1.02 Screenshot of the mesh checker script

How to Select Meshes to Check

2.0 Selecting Meshes

CAUTION: Ensure your meshes have names you can recognise!

First, select all meshes you want to check in the **Viewport**. A shortcut to select **all visible meshes is Ctrl+A.** Afterwards, on the tool click the top button "**Refresh Selected".**

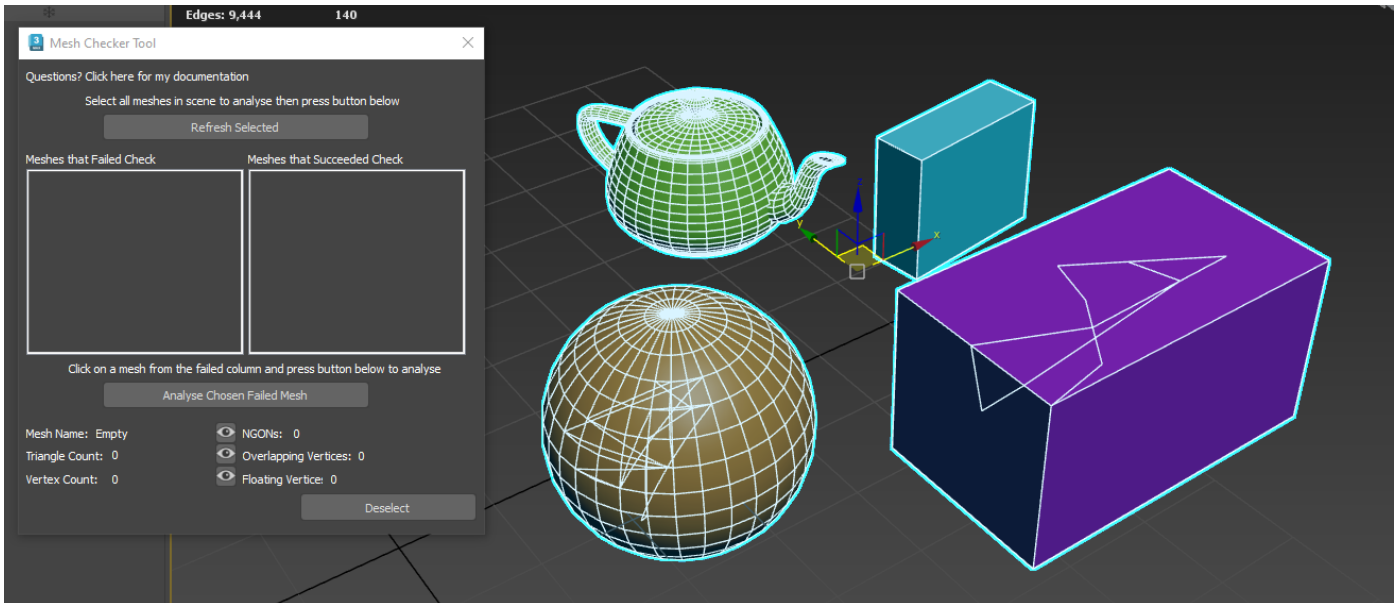


Figure 2.01 Selecting meshes in viewport

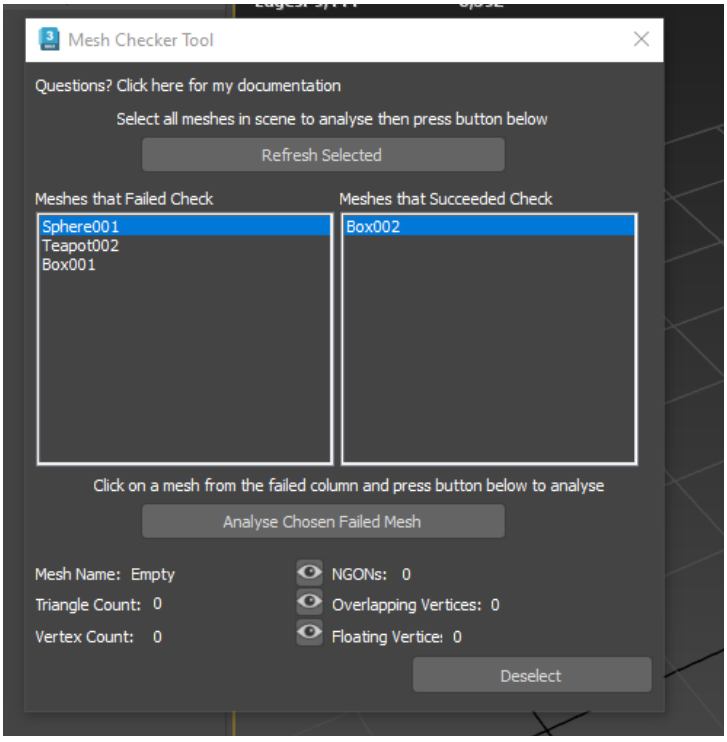


Figure 2.02 After pressing refresh selected button

2.1 Failing or Succeeded Check Lists

If a mesh contains one or more of the following issues, it will fail the check:

- **NGONS** — faces with more than 4 sides, commonly caused by cut tool.
- **Overlapping Vertices** — vertices that are on top of each other, commonly caused by the Symmetry modifier.
- **Floating Vertices —** vertices that are not connected to anything else, commonly caused by accident during Retopology.

After failing or succeeding it will then be added to the appropriate column

How to Analyse Failed Meshes

3.0 Analysing failed meshes

WARNING: If you have renamed, deleted or modify mesh topology (detach/weld) since pressing the **"Refresh Selected"** button you need to press it **AGAIN** to **recheck**.

Select a mesh from the failed column and ensure it is selected in blue

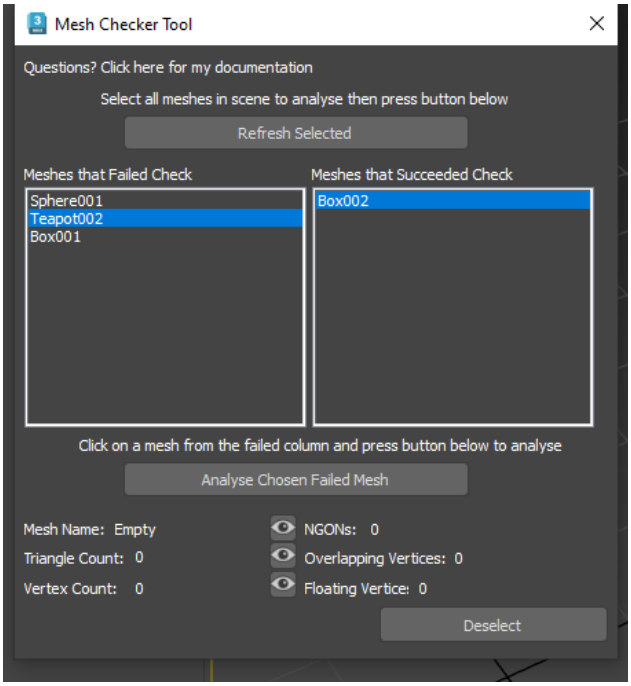


Figure 3.01 Selecting mesh to analyse

Now you can press the **"Analyse Chosen Failed Mesh" button** to fill out the statistics below.

Keep a eye on the mesh name section, this shows what mesh all the data belongs to.

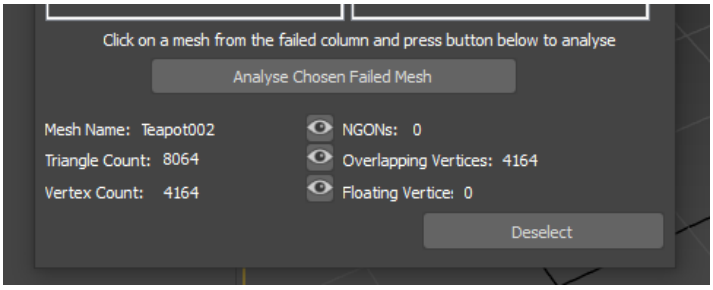


Figure 3.02 After pressing Analyse mesh button

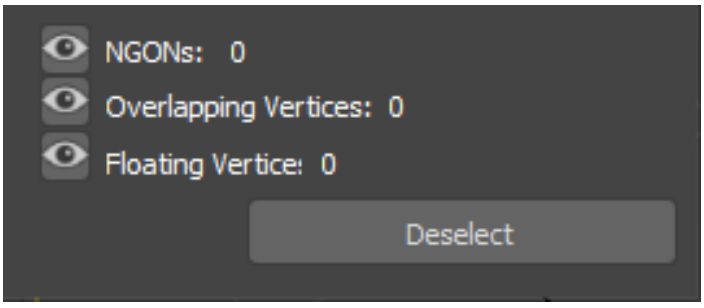


Figure 3.03 The 3 select "Eye" buttons

3.1 Previewing Problem Areas

Press the **eye icon** to select affected areas on the mesh. Press the **Deselect button** to exit

In this example the Teapot is highlighted fully as it contains a copy of itself.

This could occur when attaching meshes.

After fixing the mesh press the **Refresh Selected** button again to recheck the mesh.

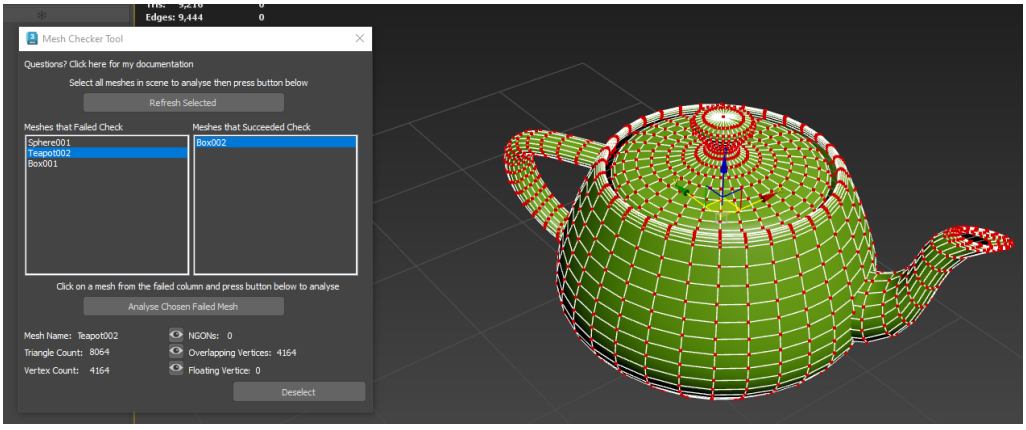


Figure 3.04 After pressing select overlapping vertices button

Problems

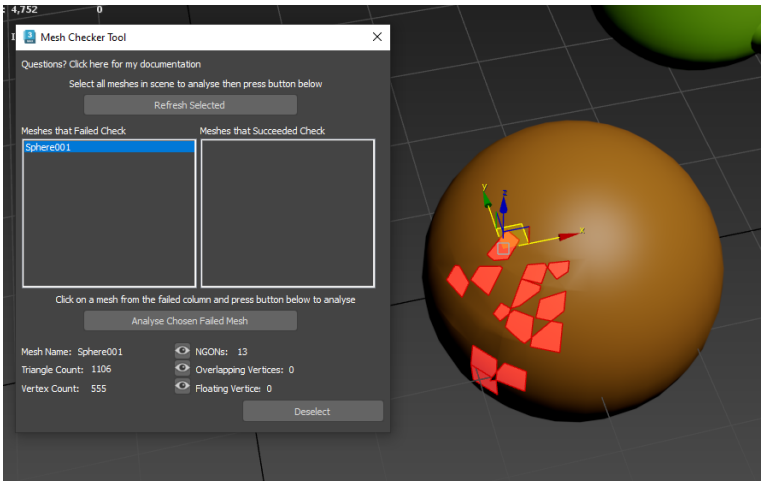
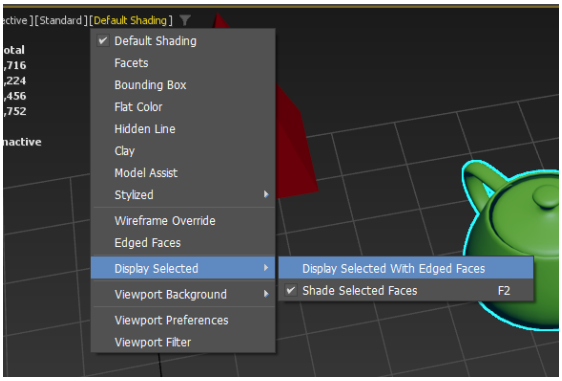


Figure 4.01 Missing wireframe in viewport

4.0 Unable to View Wireframe

To see the wireframe, enable **"Display Selected with Edges Faces"** in Viewport



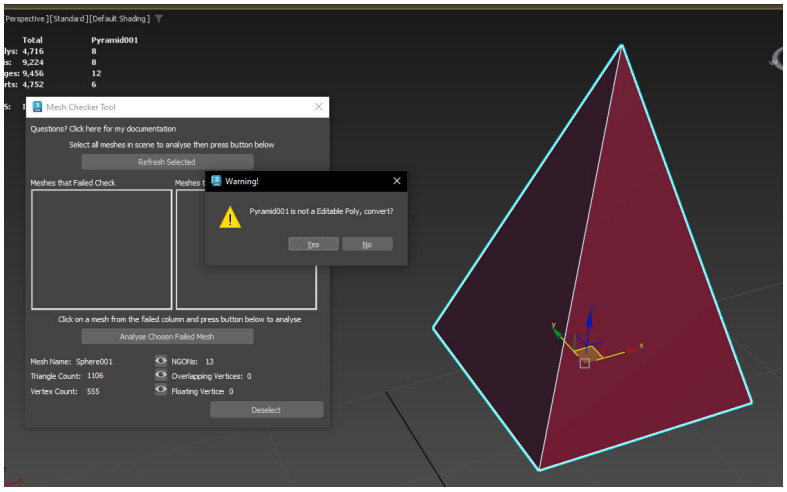


Figure 4.02 Non-Editable Poly Mesh

4.1 Mesh has Modifiers/is not a Editable Poly

Upon pressing "Refresh Selection" you will be prompted to convert these meshes. If declined the mesh will be left out of the check.

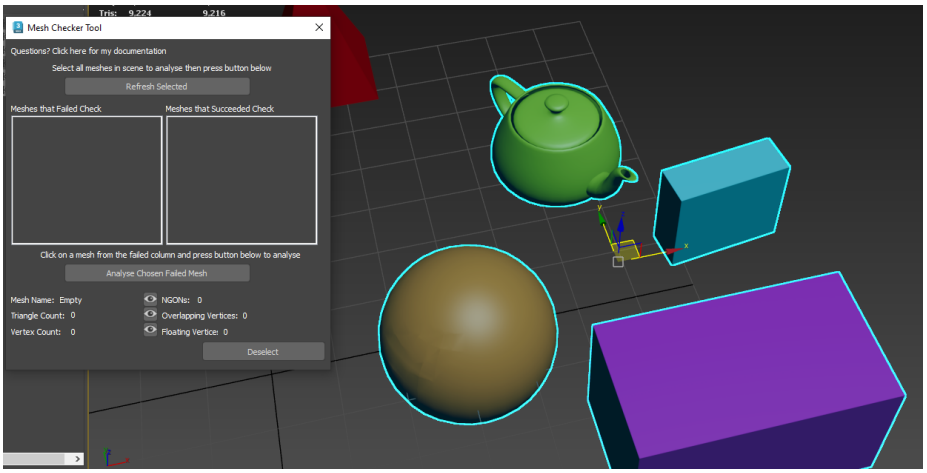
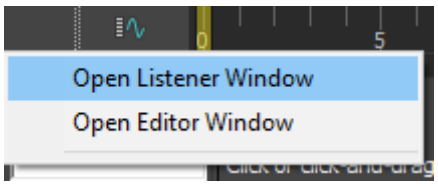


Figure 4.03 Missing items from list

4.2 Mesh statistics not appearing

Any changes to the mesh name or number of vertices/faces will require a "Refresh Selection" followed by a reanalysis to work.



Any further issues open the bottom left pink box with a right click to view the **Listener Window**.

Error messages are printed out here.