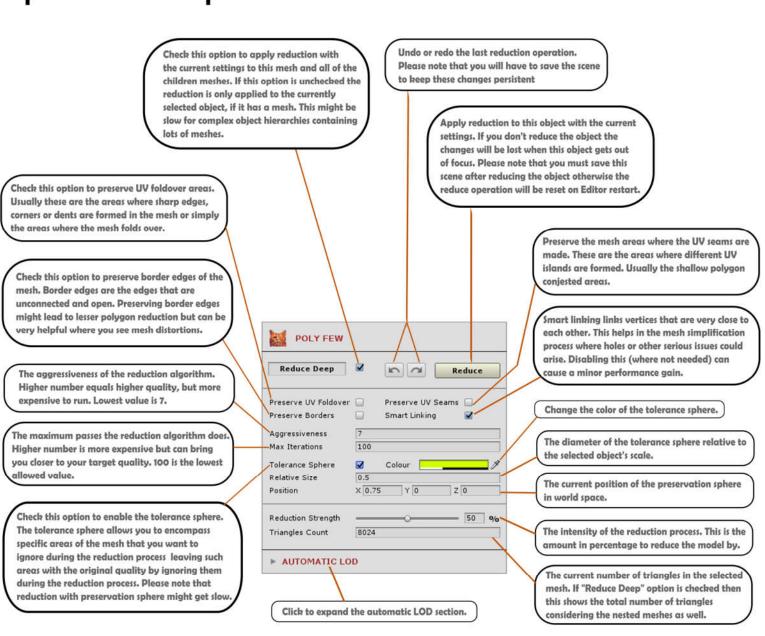This document describes the setup procedure, usage and various options of this tool.This document is not intended to describe the purpose of this tool. Please read the description on the asset store to understand what this tool does.

Installation procedure:

» Download and import the package from the asset store. Make sure you import everything in the package.

» Make sure you don't delete or modify anything that is newly imported and related to the package.

» Click on any game object. You will see the PolyFew inspector in the bottom of the components hierarchy.

Options Description:

Check this option to apply reduction with the current settings to this mesh and all of the children meshes. If this option is unchecked the reduction is only applied to the currently selected object, if it has a mesh. This might be slow for complex object hierarchies containing lots of meshes.

Undo or redo the last reduction operation. Please note that you will have to save the scene to keep these changes persistent

Apply reduction to this object with the current settings. If you don't reduce the object the changes will be lost when this object gets out of focus. Please note that you must save this scene after reducing the object otherwise the reduce operation will be reset on Editor restart.

Check this option to preserve UV foldover areas. Usually these are the areas where sharp edges, corners or dents are formed in the mesh or simply the areas where the mesh folds over.

Check this option to preserve border edges of the mesh. Border edges are the edges that are unconnected and open. Preserving border edges might lead to lesser polygon reduction but can be very helpful where you see mesh distortions.

Preserve the mesh areas where the UV seams are made. These are the areas where different UV islands are formed. Usually the shallow polygon conjested areas.

Smart linking links vertices that are very close to each other. This helps in the mesh simplification process where holes or other serious issues could arise. Disabling this (where not needed) can cause a minor performance gain.

The aggressiveness of the reduction algorithm. Higher number equals higher quality, but more expensive to run. Lowest value is 7.

The maximum passes the reduction algorithm does. Higher number is more expensive but can bring you closer to your target quality. 100 is the lowest allowed value.

Check this option to enable the tolerance sphere. The tolerance sphere allows you to encompass specific areas of the mesh that you want to ignore during the reduction process leaving such areas with the original quality by ignoring them during the reduction process. Please note that reduction with preservation sphere might get slow.

POLY FEW

Reduce Deep	☑ ↩ ↪	Reduce
Preserve UV Foldover ☐	Preserve UV Seams ☐	
Preserve Borders ☐	Smart Linking ☑	
Aggressiveness	7	
Max Iterations	100	
Tolerance Sphere ☑	Colour	
Relative Size	0.5	
Position	X 0.75 Y 0 Z 0	
Reduction Strength	——————●——— 50 %	
Triangles Count	8024	

▶ AUTOMATIC LOD

Change the color of the tolerance sphere.

The diameter of the tolerance sphere relative to the selected object's scale.

The current position of the preservation sphere in world space.

The intensity of the reduction process. This is the amount in percentage to reduce the model by.

The current number of triangles in the selected mesh. If "Reduce Deep" option is checked then this shows the total number of triangles considering the nested meshes as well.

Click to expand the automatic LOD section.

Change the path where the generated LODs mesh assets will be saved. If you don't select a path the default path will be used.

Add an LOD level.

Generate LODs for this mesh with the settings specified. Please note that you must save the scene after successfull generation of LODs.

The intensity of the reduction process. This is the amount in percentage to reduce the model by in this LOD level. The lower this value the higher will be the quality of this LOD level. For the base level or level 1 you should keep this to 0.

Destroy the generated LODs for this mesh. This will also delete the mesh files that were created for this object during the LOD generation process. Please note that you will have to delete the empty folders manually.

The screen relative height controls how far the viewing camera must be from the object before a transition to the next LOD level is made.

Expand this section to see further options for simplifying the meshes in this LOD level.

Check this option if you want this LOD level to regard the tolerance sphere and retain the original quality of the mesh area enclosed within the tolerance sphere. Please note that the LOD generation for an LOD level with "Regard Tolerance" checked can get slower.

Deletes this LOD level.

The individual LOD levels. Each LOD level has a variety of settings that can be changed for the simplification of meshes in that level. The settings are exclusive to an LOD level and don't effect other levels.

▼ AUTOMATIC LOD

Change Save Path   Add   Generate LODS
                             Destroy LODs

Level 1 (Base)   X
  Reduction Strength ○————————   0   %
  Transition Height   —————————○——   0.6
  ▶ Reduction Options
  Regard Tolerance   ☐

Level 2   X
  Reduction Strength ———○————————   30   %
  Transition Height   ———————○—————   0.4
  ▶ Reduction Options
  Regard Tolerance   ☐

Level 3   X
  Reduction Strength ——————○————   60   %
  Transition Height   ——○————————   0.15
  ▶ Reduction Options
  Regard Tolerance   ☐

NOTES

► To ensure proper functionality of this tool please don't modify the package contents in any way.

► If you are want to change the default behaviour of automatic popping of PolyFew's UI in the inspector for every selected GameObject. You can modify these settings from the menus toolbar by going to
Window > Brainfail Producs > PolyFew > Disable Auto UI Attaching

► As stated in the tool requirements on the asset store, this asset requires unity version 2017 and above. Otherwise the tool won't work as expected.

► PolyFew requires that the gizmos from the scene view are enabled, and have the Transform gizmos checked.

► There are various operations that will prompt you to save the scene after completion. If the scene is not saved in such cases before exiting the Unity Editor the changes might get lost.

► If you don't see the PolyFew panel in the inspector after selecting a GameObject then verify the following for the selected GameObject:

* It is active and if it is parented to any GameObject then the parent should also be active.
* It has a Mesh Renderer component attached.* It has a Mesh Filter attached.
* You have enabled Gizmos in the scene view, particularly the Transform gizmo.

THIRD PARTY CREDITS:

❋ Special thanks to Mattias Edlund for his work on Unity Mesh Simplifier project. Poly few would not have been possible without his existing work.

https://github.com/Whinarn/UnityMeshSimplifier

❋ Thanks to gpvigano and all other people involved in the development of for Asynchronous Importer and run-time Loader for Unity. The runtime API for importing wavefront OBJ files is based on top of this project.

https://github.com/gpvigano/AsImpL

❋ Thanks to Dummiesman for Scene OBJ Exporter for Unity.
The runtime API for exporting wavefront OBJ files is based on top of his work.

https://assetstore.unity.com/packages/tools/utilities/scene-obj-exporter-22250

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https://assetstore.unity.com/packages/3d/characters/creatures/creature-cave-troll-115707

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https://assetstore.unity.com/packages/3d/characters/humanoids/barbarian-warrior-75519

❋ Thanks to Unity Technologies Japan for sharing their skills in the form of a cute looking anime girl,the Unity Chan Model is used in the asset's demonstration video.

https://assetstore.unity.com/packages/3d/characters/unity-chan-model-18705

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