Installation

-Drag and drop the **Ultimate Trim UV.mzp** file over your 3ds Max window.
-An installer window will pop up.
-Choose install. (If you need to, you can also uninstall using this same method).
-The installer will tell you how to create a button for the tool, but that is also detailed below.

Create a button:
-Press the "Customize" drop-down menu at the top of 3ds max.
-Choose "customize user interface".
-Open the "Toolbars" tab.
-Choose the dropdown menu beside "Category".
-Select "Scumbrella Scripts".
-Inside the "Action" box, you should see "Ultimate Trim UV".
-Drag this "Ultimate Trim UV" text to a toolbar and a button will be created that looks like this:

-Press that button to launch the user interface for the tool.
-You will want to use this user interface together with the "UV Editor" of 3ds max.
-The UV Editor can be accessed from the settings of an "Unwrap UVW" modifier.

Requirements:
-The tool will only work when you have **one** object selected that has **one *Unwrap_UVW*** modifier applied to it. Otherwise, the buttons will give you an error message.

Overview

-This script was written to speed up the process of UV mapping with the *ultimate trim* technique that was developed at Insomniac games, but could be useful for any trim sheet based UV mapping approach.

More info on the ultimate trim technique available here:
https://www.gdcvault.com/play/1022323/The-Ultimate-Trim-Texturing-Techniques

-This script will resize your rectangular UV islands to match the scale of a chosen trim index and align the island to the left, right, or center of a square texture file. *Future versions may allow for non-square texture files.*

-You can configure custom trim sheet sizes with 2 to 12 trim strips by choosing how many strips you need and inputting the vertical pixel height of each strip. Once configured you can save presets for these settings.

-This script adjusts UV islands based on their bounding box, so you will need to be working with square or rectangular UV islands to get the intended results.

-Your UV selections will need to be made with *polygon* selection enabled, the tool will not work with *vertex* selections, or *edge* selections. Enabling *select by element* will make it easier to select whole UV islands with a single click.

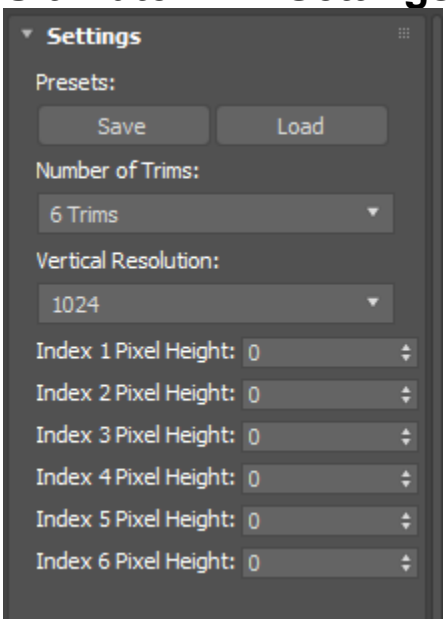
-These square/rectangular UV islands will need to be perfectly horizontal to get the best results. The *align to edge* button under the *Quick Transform* menu of the UV editor should be able to help you with this.

-At this time, the script does **not** help with making your UV islands rectangular, but I plan on adding such a feature in a future version. Depending on the type of UV island that you are working with, the *reshape elements* tools inside the UV editor may be able to help with this.

Instructions

-This script has been broken apart into two panels, one for the settings, and one for the buttons. Since a trim sheet with several trim elements requires a lot of buttons, being able to collapse the settings panel with a “set it and forget it” approach helps reduce UI clutter.

Ultimate Trim Settings Panel



-You can choose a preset file if one already exists, by browsing your computer for a .txt file that has been saved from this tool, or create a new trim setup as follows.

-The **Number of Trims** drop-down, lets you choose how many trim divisions you have created in your trim sheet.

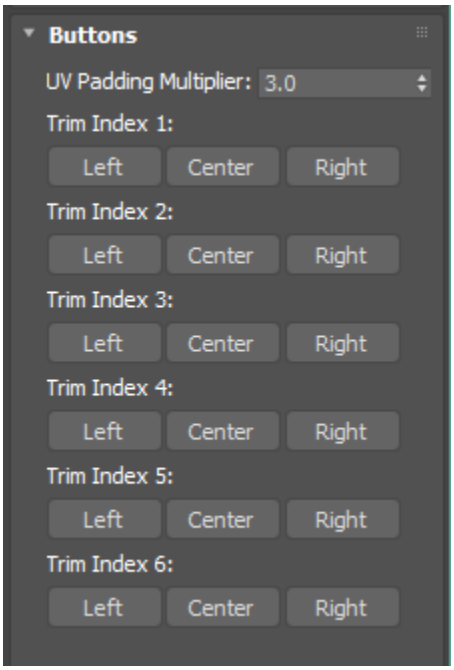
-The **Vertical Resolution** drop-down, is for choosing the total amount of vertical pixel resolution that your index settings should add up to. (How tall your textures sheet is in pixels).

-**Index Pixel Height:** These are inputs for setting the vertical pixel height of your trim elements. Index 1 will always start at the top of 0-1 UV space. The top of index 2 will start at the bottom of index 1, and all subsequent indexes will start at the bottom of the previous strip.

-**Saving a preset:** Once you have configured the above settings to your liking, you can press the **Save** button. This will bring up a window allowing you to save a .txt file, containing your current settings, anywhere you would like to on your computer.

-**Removing a preset:** Since these are just stored as .txt files in windows, you can delete them manually in your file browser if you need to.

Buttons Panel



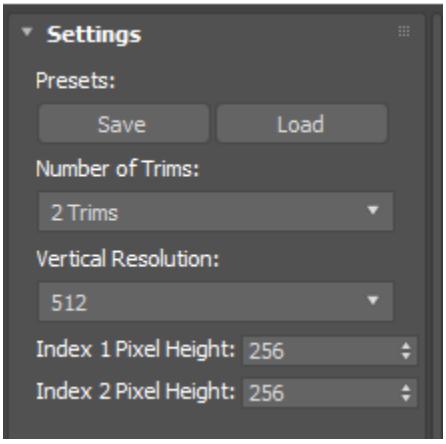
-UV Padding Multiplier: This setting is specifically to help with creating UVs that will work well with mipmapping for game engine style graphics. This setting slightly shrinks the UV islands to avoid touching the trim edges. This prevents the UVs from bleeding into other trims when using lower resolution textures (mipmapping). If you won't be mipmapping, then this setting can be set to 0 and your trim islands will snap to the precise dimensions of the trim sheet you've configured. (This setting will also be stored in any preset files that you create).

-Here the default UV Padding setting of 3.0 slightly pulls in the UV island from the exact trim border.

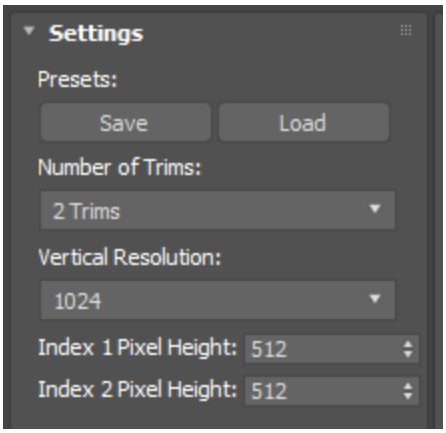
Special note on settings

-The **Resolution** setting is just for computing percentages of UV space and doesn't need to match the actual resolution of your texture file. It does need to correspond with the values you input into the trim pixel heights though.

Example: A setup with **two trims** and **512** resolution that has **index settings** of **256** and **256**

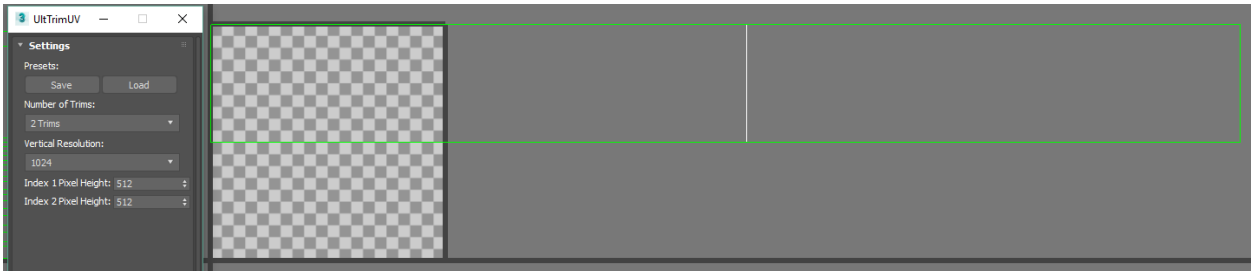


Will give you the *exact same results* as a setup with **two trims** and **1024** resolution that has index settings of **512** and **512,** regardless of what your actual texture file size is.



Both of the above examples will divide your texture space into two strips, and give you 50% of UV space on top and 50% of UV space on the bottom.

-Trim index 1 - left



-Trim index 2 – left