

UV & Texture Editor Manual

UV & Texture Editor

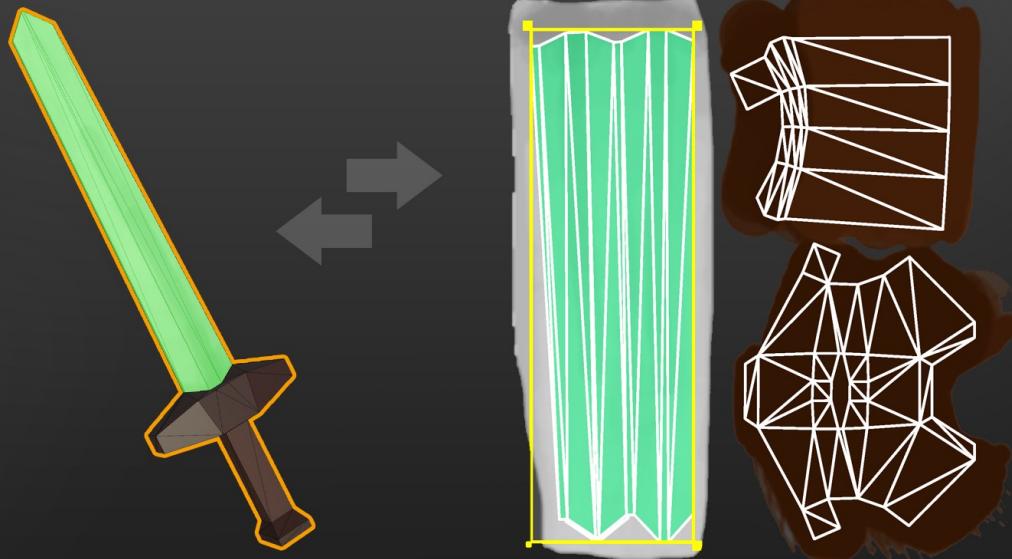


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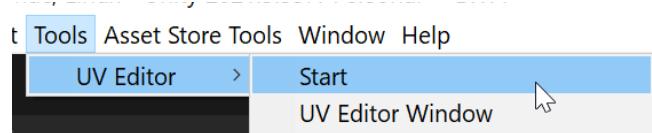
Requirements & Setup

Requirements

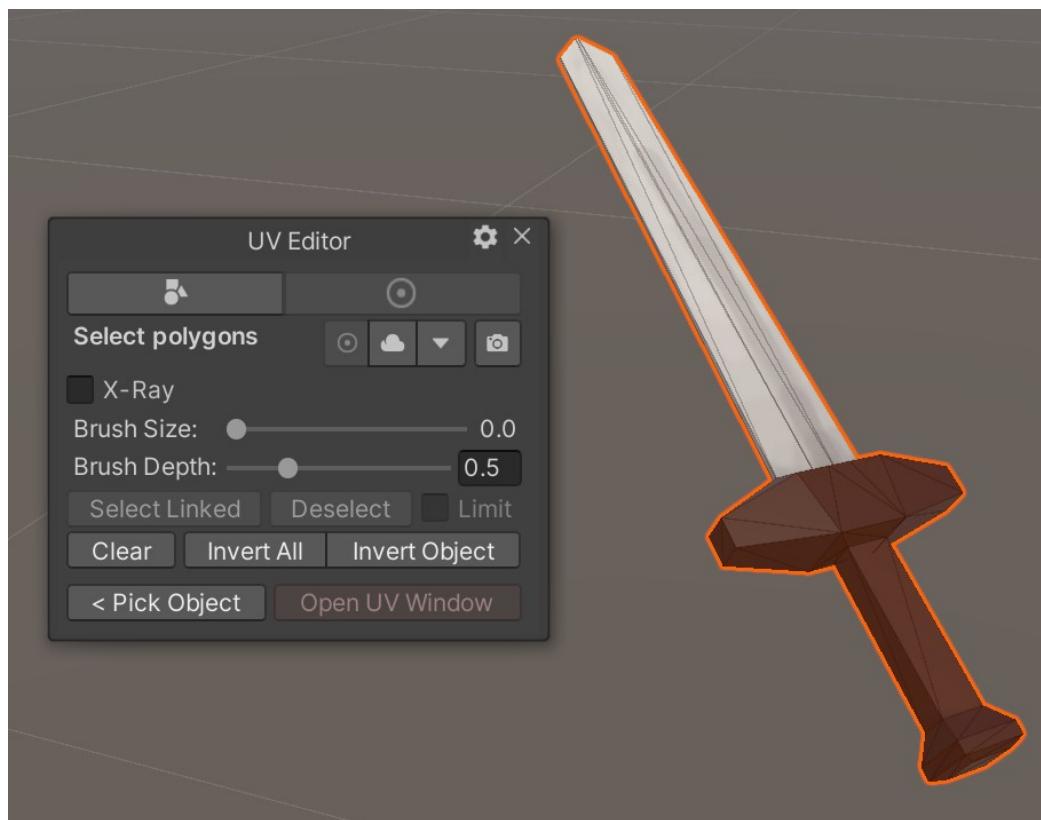
Unity 2021.3 or higher is required since that is the min version Unity allows for new assets in the store. However it may work just fine in older versions of Unity with minor changes.

Getting Started

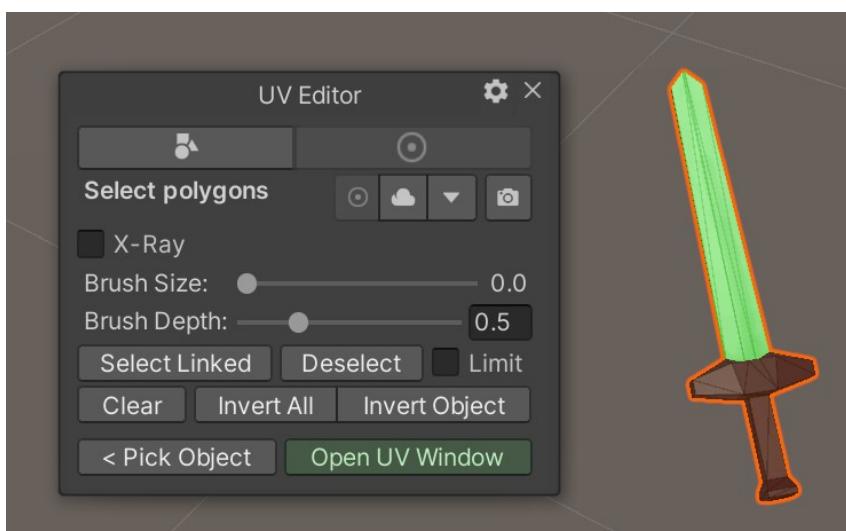
You can start the UV Editor by using **Tools → UV Editor → Start**



This will open a small window in the scene view. This is used to select the Uvs (triangles) that you want to edit (HINT: You can deselect single vertices any time in the Editor Window vertex, see „Vert.” button)

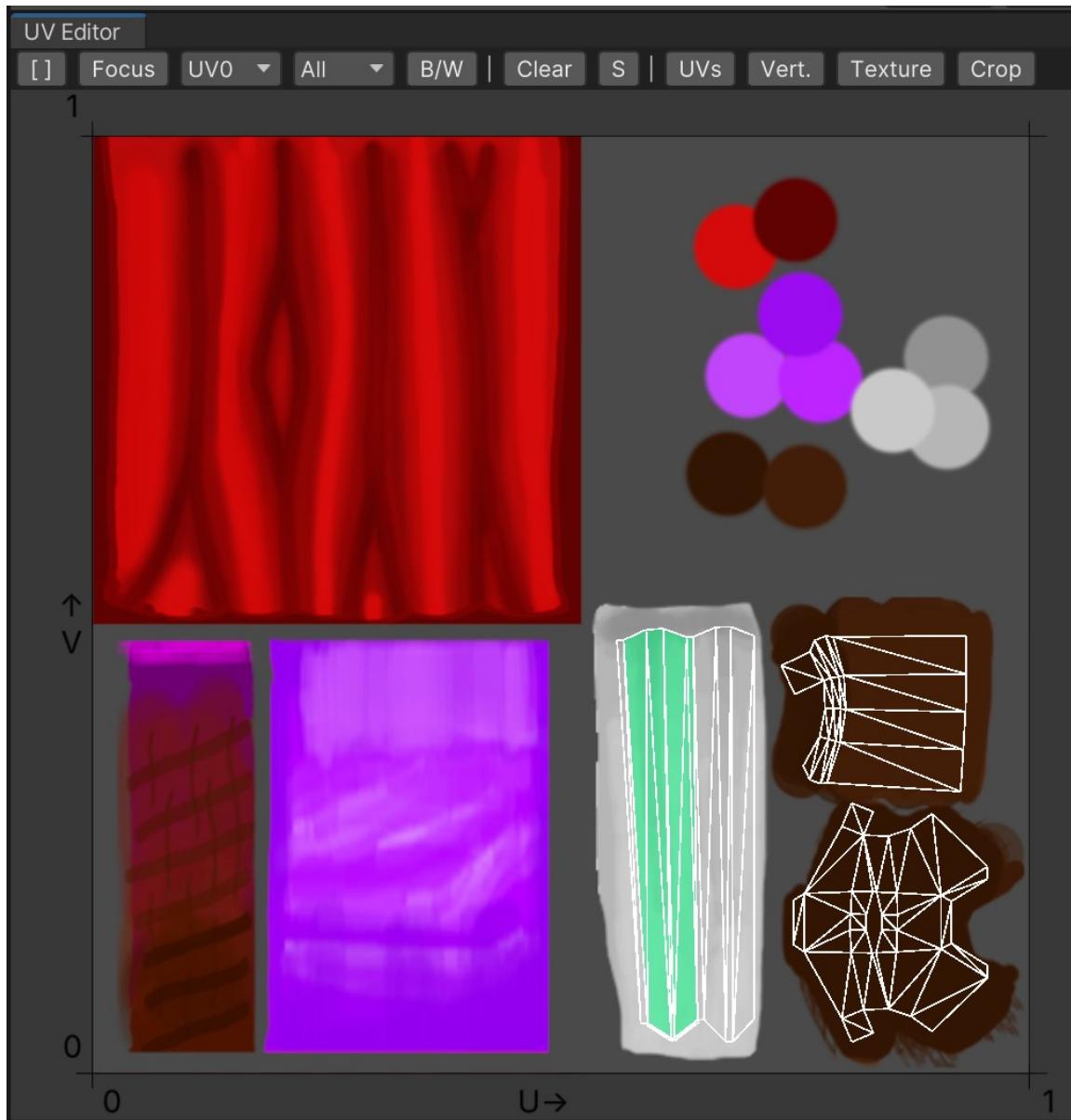


Once you have selected some triangles you the „Open UV Window“ button will turn green:



If you click the „Open UV Window“ button you will get an additional window for UV Editing.

HTIN: You can also start the UV Editor Window right away via Tools > UV Editor > UV Editor Window.



Hint: You don't have to select in the scene view, you can also select here in the UV Editor.

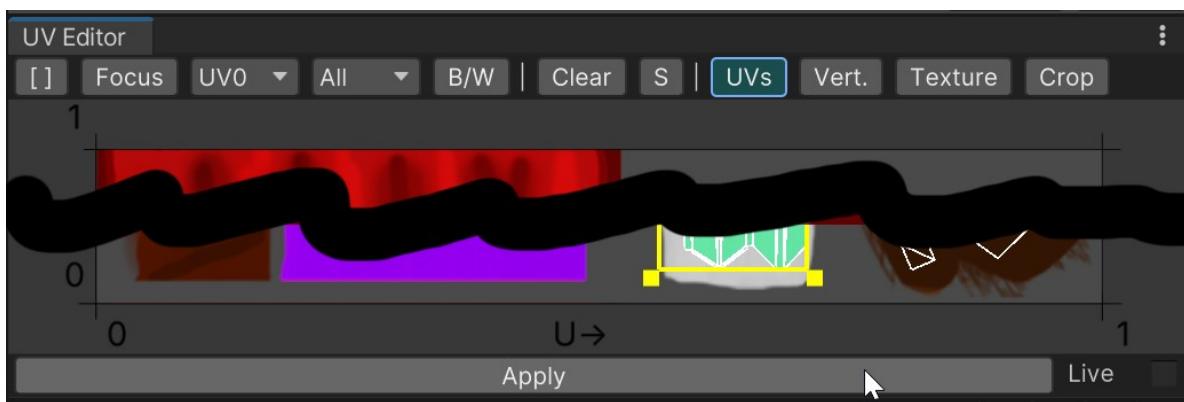
Hint²: If you select one triangle here and the press „S“ or click the S button then all the linked triangles in UV space will be selected. Hint³: Press „Shift + S“ to deselect linked.

Hint³: If you hold ALT you can pan the UV view.

What do all these buttons do?

The scene view editor button should be mostly self-explanatory. I admit it uses the same layout and logic as the Mesh Extractor (because that's where I have copied it from). So I will link to that manual for reference (my apologies, hopefully I will soon have copied the proper docs over here): <https://kamgam.com/unity/MeshExtractorManual.pdf>

Now, the UV Editor has a lot of buttons on top and (NOTICE) some at the bottom too.



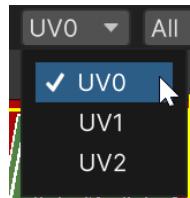
Recenter:

This button will recenter and zoom the UV window to the $0 \rightarrow 1$ range. Useful if you have scrolled too far in or out.

Focus:

This button will focus (zoom in) on the selected UVs (triangles and vertices). It is useful for fast zooming. HINT: You can toggle between „Recenter“ and „Focus“ with the „F“ key.

UV0:



This is the selection of the currently edited UV set index. Once mesh can have more than one UV set. The Editor currently supports three UV sets.

B/W (Black/White):

This toggles the UV lines color between black and white (white by default). Useful for dark textures.

Clear:

Clears the current selection so you can start over (or switch to another selection) quickly.

SI (Select Island):

SI

If you select one triangle in UV Editor Window and the press „S“ or click the SI button then all the linked triangles in UV space (!) will be selected. This is useful for selectin UV islands quickly.

Hint: Press „Shift + S“ to deselect linked.

NOTICE: This works differently than the „select linked“ in the scene view window. In the scene view the linked triangles in the MESH are considered, here it's only the triangles in UV space.

UVs:

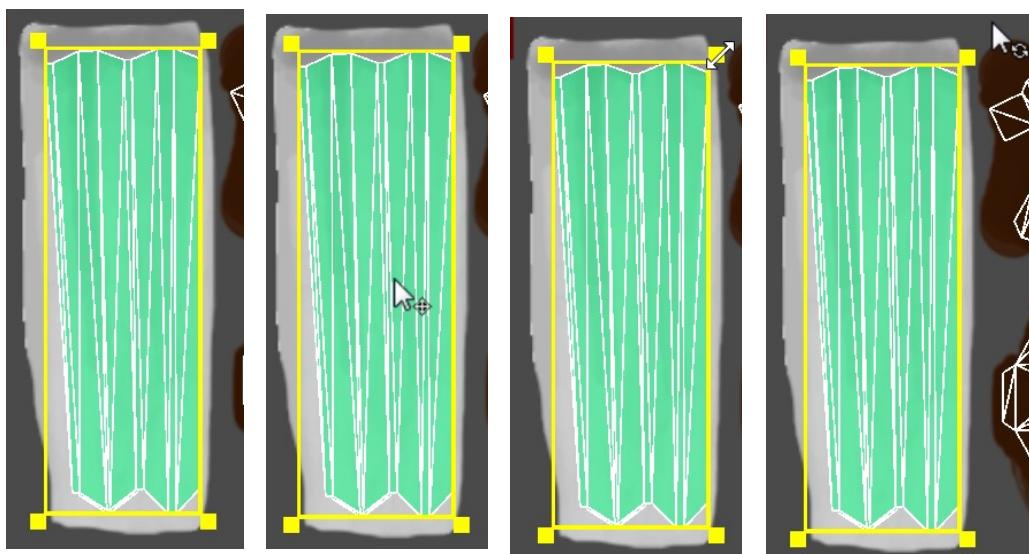
UVs

This toggles the main mode of the whole editor the „UV Editing Mode“. If you press this button you will get a yellow rectangle and some gizmos around your selection. Using these you can MOVE, SCALE and ROTATE all the UVs that are part of the selection.

Move: To move you have to move your cursor into the middle of the gizmo rect and drag.

Scale: To scale move your cursor over one of the corners and drag.

Rotate: To rotate move your cursor outside the yellow rect next to a corner and drag.



Hint: While scaling you can hold SHIFT to constrain the aspect ratio.

In order to apply the UV changes you have to hit the „Apply“ button at the bottom:



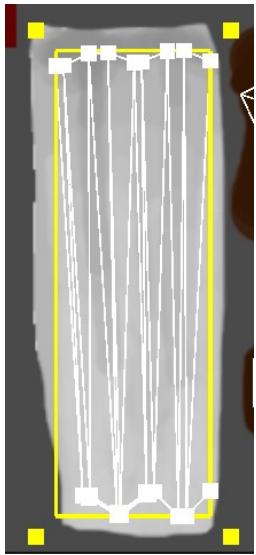
However, especially for UV editing it is very handy to see the changes immediately on the mesh. Therefore the is a „Live“ mode which you can activate (button on the right). Once that is active your UV changes will be applied automatically.

Vert. (Select Vertices): Vert.

The „Select Vertices“ mode can only be enabled if you are in the UV mode (it enables the UV mode automatically for you if not yet enabled). If active it will allow you to add or remove single vertices to your selection.

Add: To add a vertex all you have to do is click on the white square.

Remove: To remove a vertex hold CTRL and click on the white square.



All the selected vertices can be moved, rotated and scaled just like in the UV mode.

NOTICE: Adding and removing does not always add just one vertex. The action affects ALL vertices that are very close to your mouse cursor at the time of clicking.

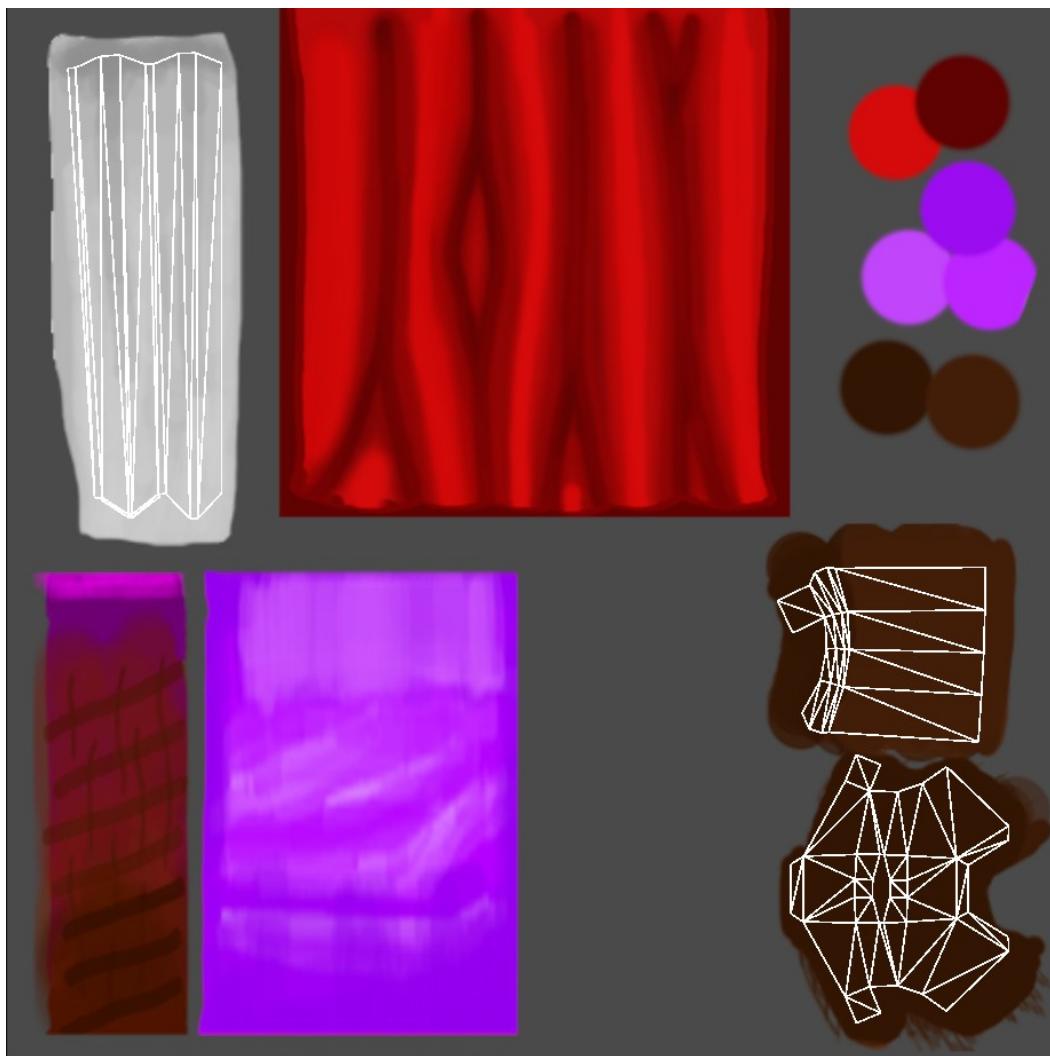
HINT: Selecting the triangles only selects the tris vertices. You can use this to select single vertices even if they are at the very same position (if the mesh is split that is).

HINT: To move a single vertex select only one of its adjacent triangles and deselect the other two (CTRL + click). It's a bit cumbersome, I know (it's on the TO-IMPROVE list).

Texture: Texture

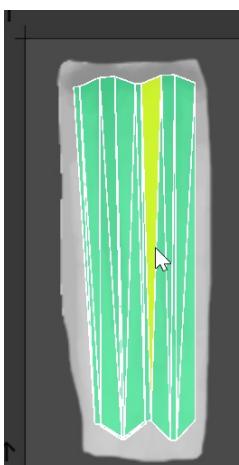
This mode allows you to move the pixels under the selected UVs in unison with the UVs. What?!?

An example: Let's consider this text and UV layout:



Well, that layout is not ideal. The red and purple areas are not used at all. Ideally we would move the UVs and the pixels from the top left corner down to the bottom right and then trim the texture. HINT: That's what we will do right now.

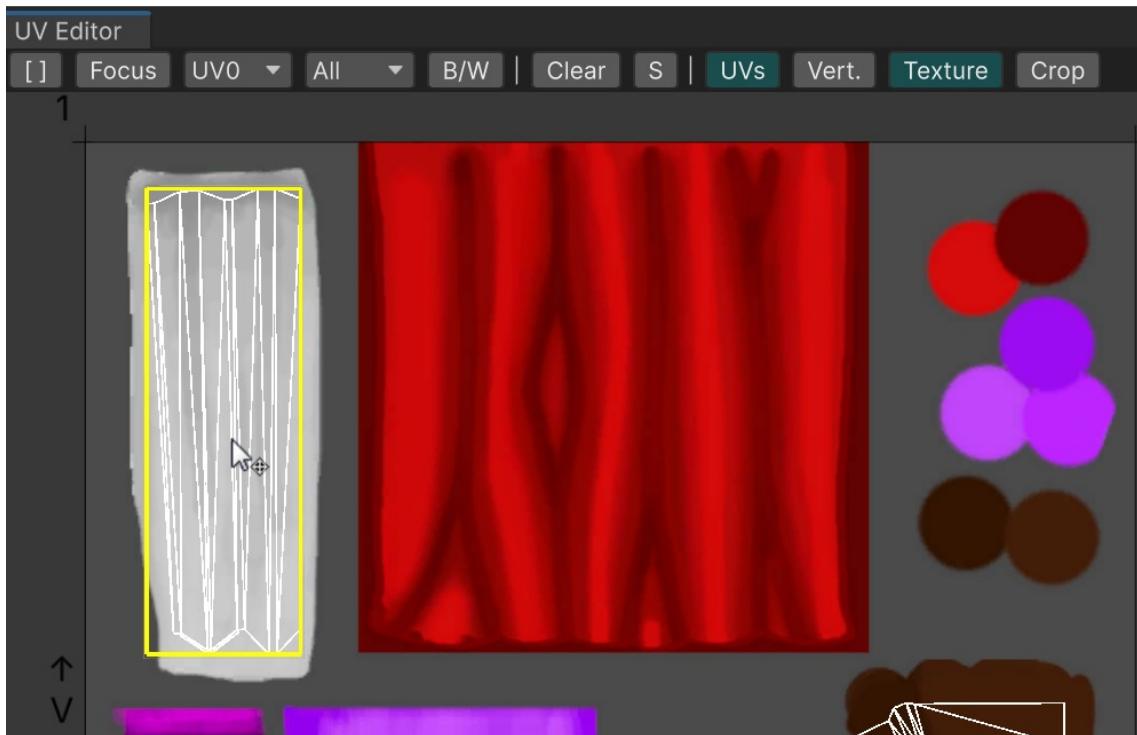
First let's select the blade UVs, like this:



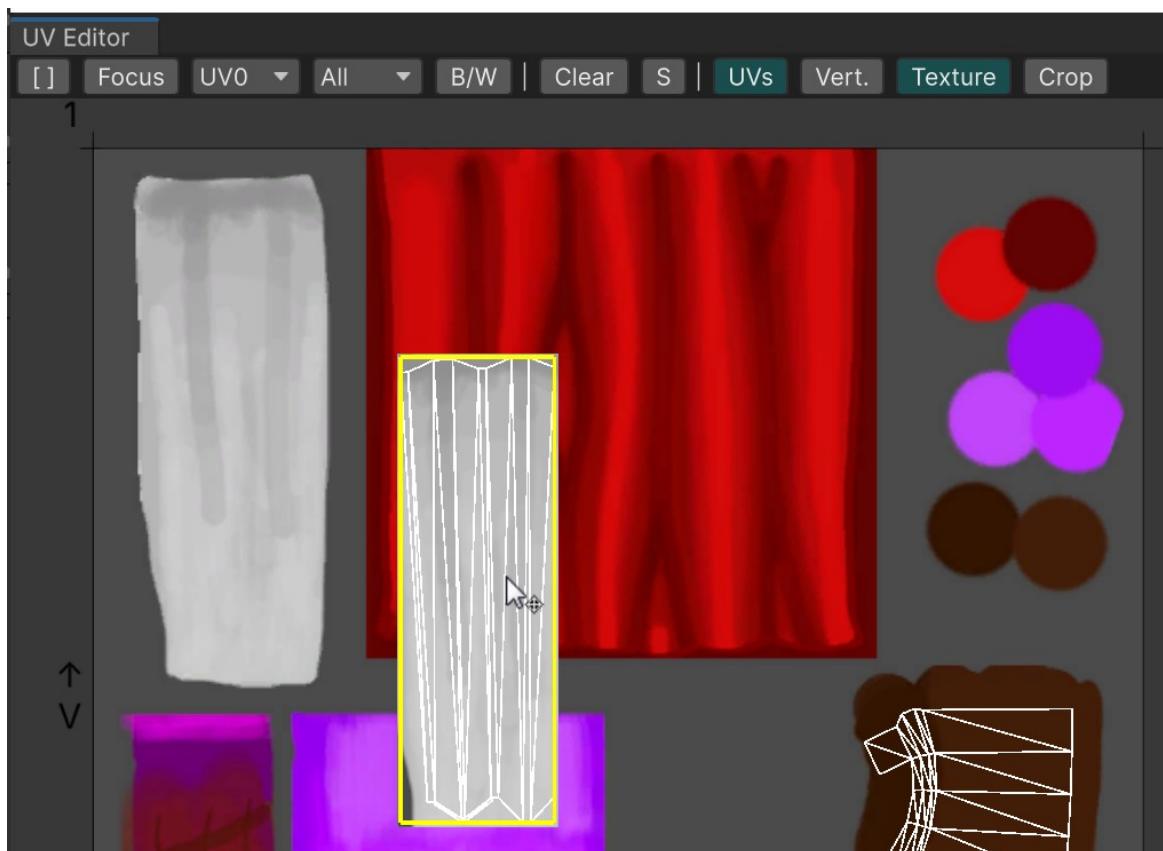
Then we hit the „Texture“ button in the Editor. And.. not much changed, except that the UV mode is not active but we do not have any scale or rotate gizmos. That's because (as of now) the texture mode does not support rotating or scaling textures.

Anyways, all we want is to move the UVs and the texture, right?

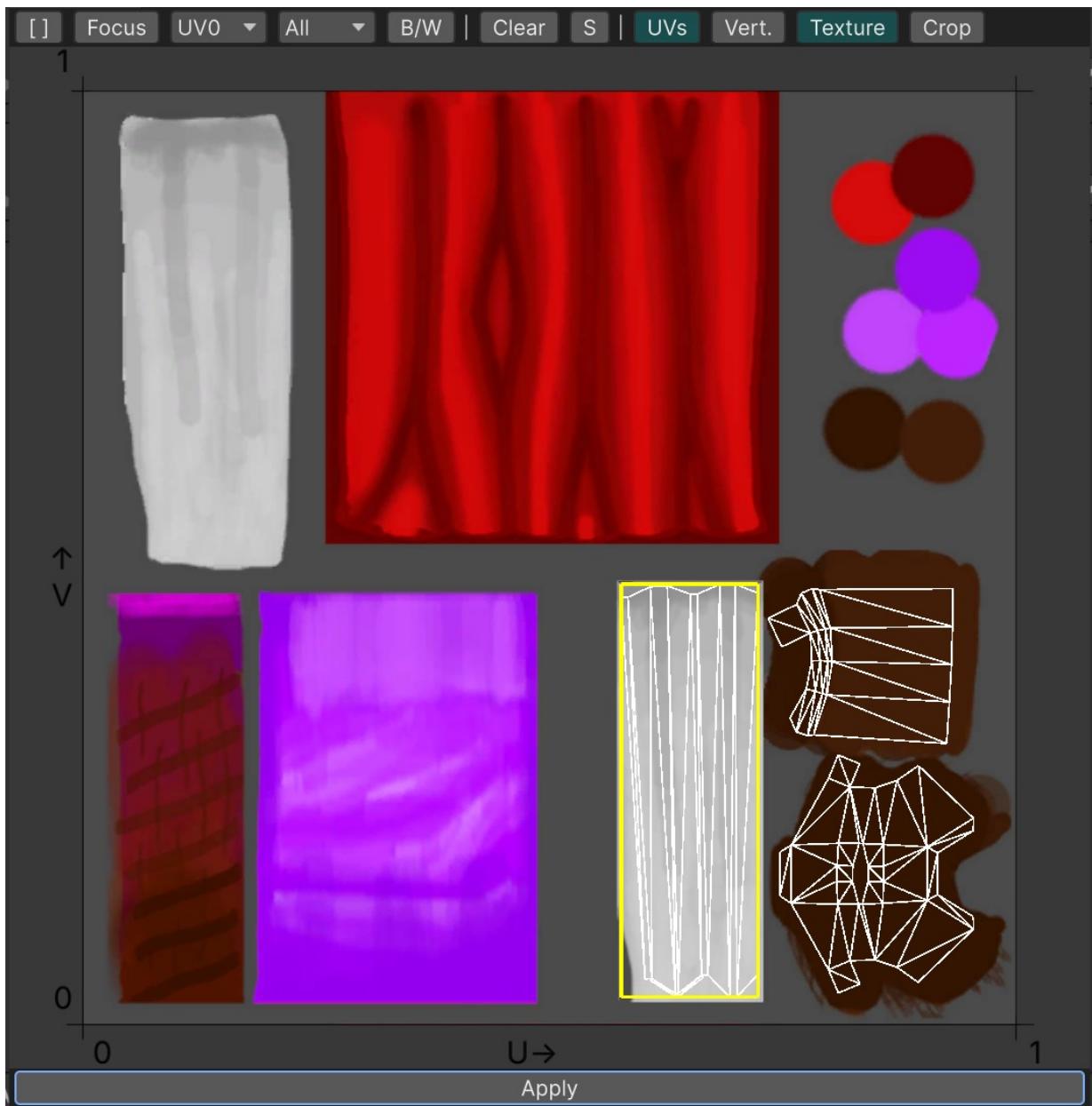
Well, the move part of the UV editing gizmos still works so now we can start dragging it:



While we drag it you will notice that the pixels of the texture are moved (copied) in sync with the UVs.

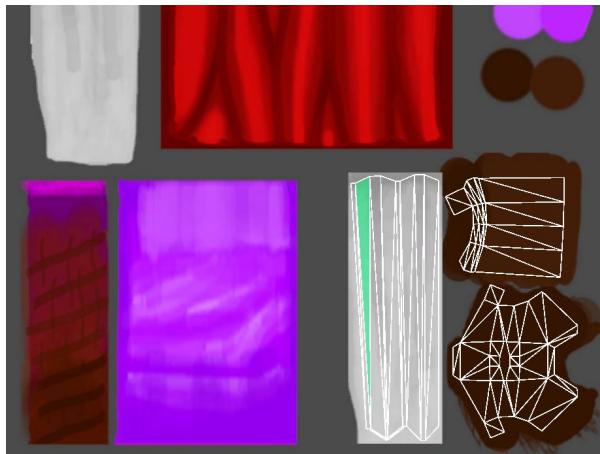


Once we have moved it to the proper place (bottom right) we can hit the „Apply” button, et violá, we now have properly layed out texture and UVs.



Now all that is left to do is to get rid of all the other stuff we don't need (see „Crop” below).

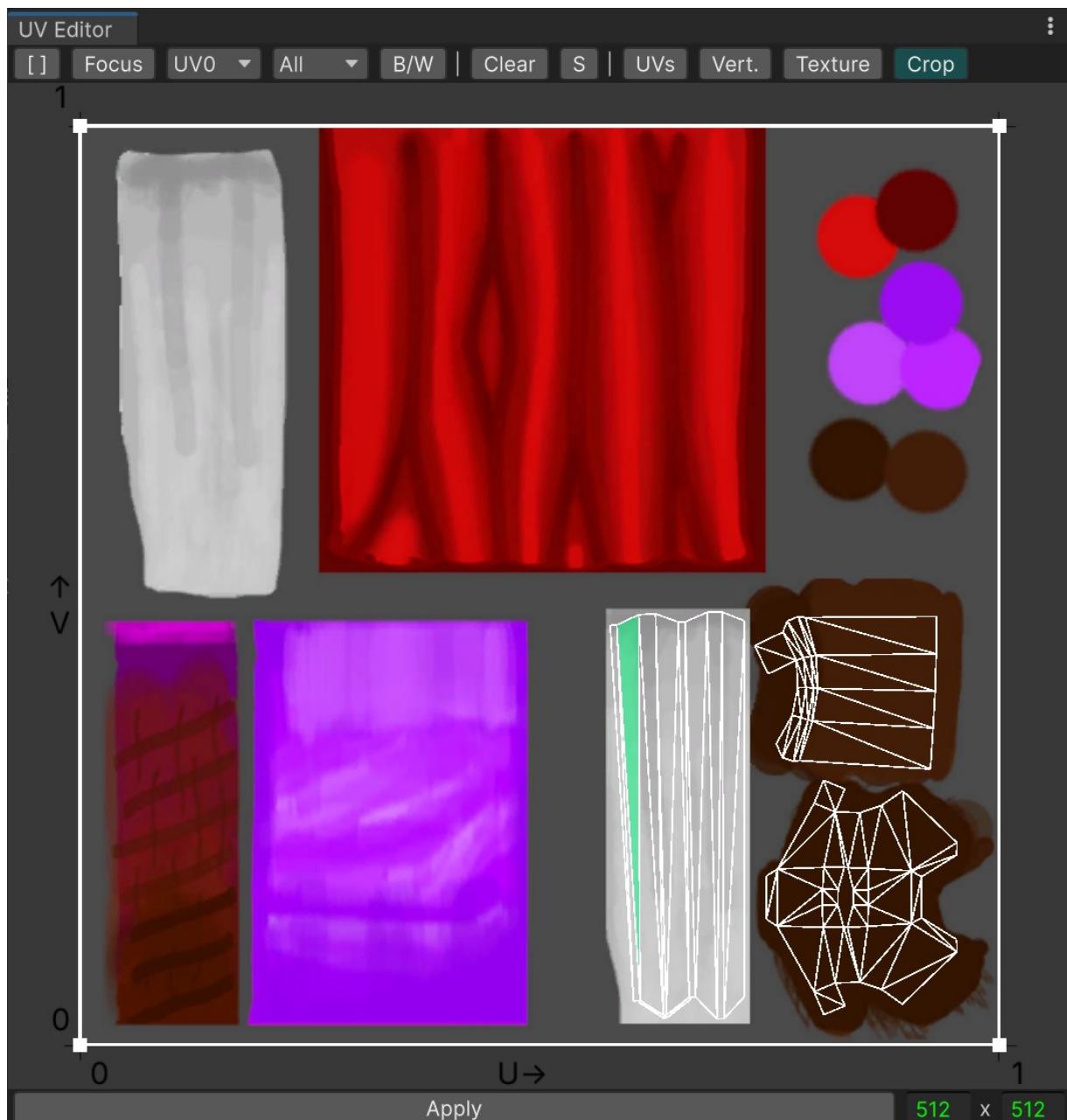
Crop: Crop



The crop mode allows you to generate a new texture based on only a part of the existing texture. The nice things is, it also remaps the UVs for you. Let's consider this texture:

There is a lot of texture space waste on stuff that does not have any UVs using them (assuming no other mesh uses it).

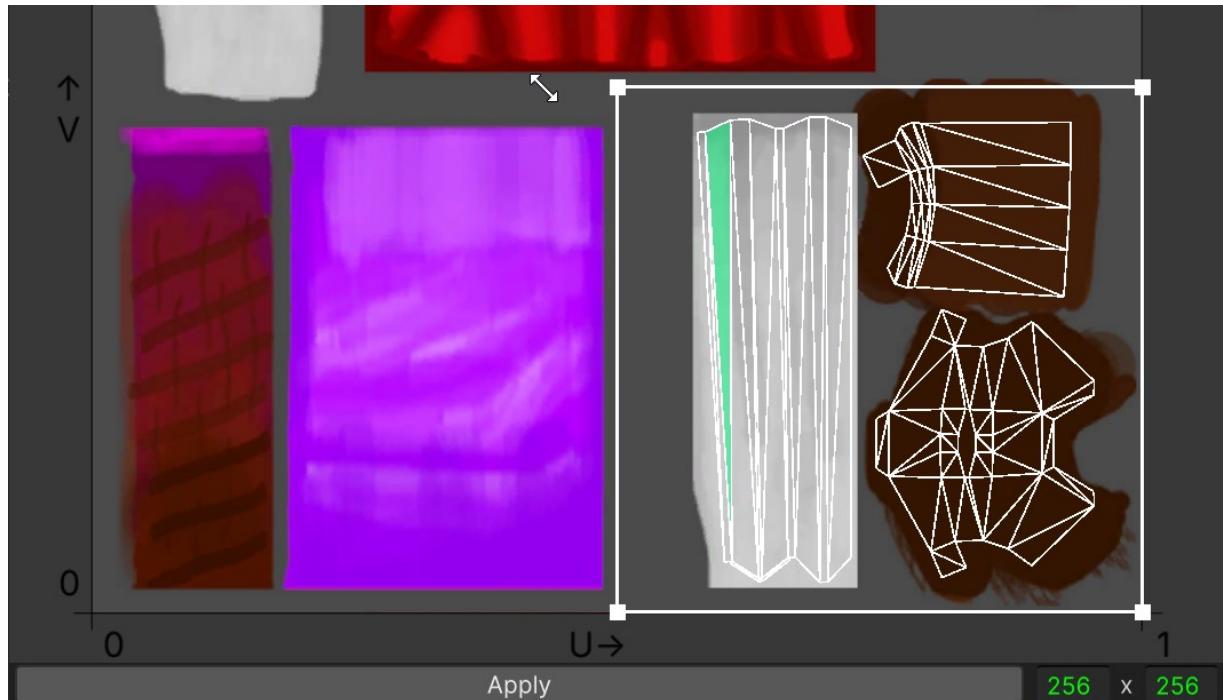
If we enter the crop mode we will get a white rectangle that allows us to choose the crop area.



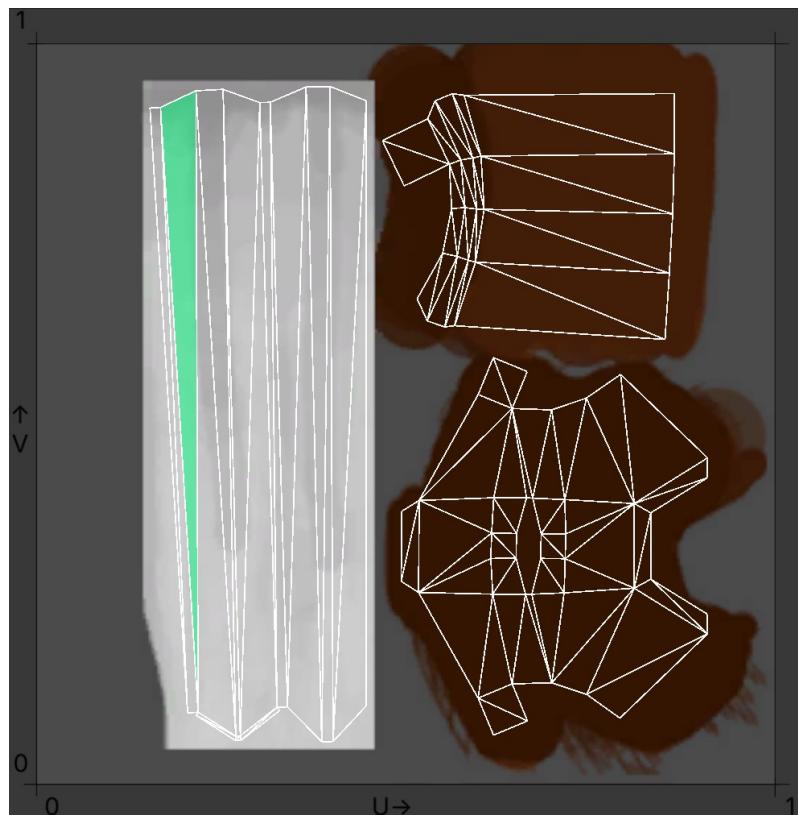
Let's trim it down so only the pixel with UVs remain.

HINT: You can enter the exact pixels size in the lower right corner (they will be colored in green if they are a power of 2).

Hint²: If you hold SHIFT while dragging then the aspect ratio of 1:1 will be preserved.



Once that's done you can hit „Apply“ and you will get a new cropped texture and mesh with proper UVs, like this:

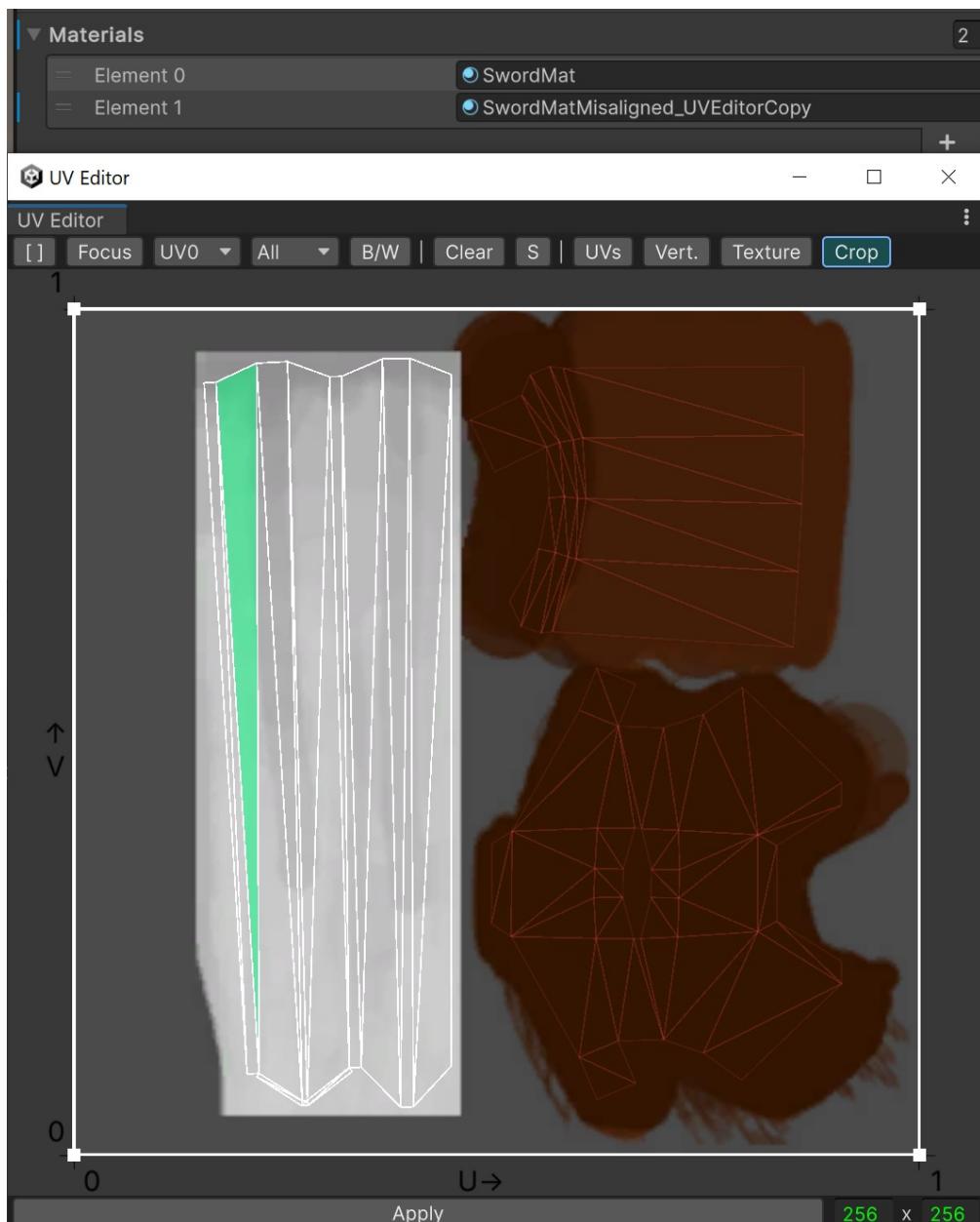


Frequently Asked Questions

Some of the UVs are colored red in „Crop“ mode, why?

Before cropping the tool checks which UVs are using the same texture. After all, you are cropping just one single texture and only the UVs that are using that texture should be remapped. The red UVs are those that use another texture and are therefore not remapped during the crop process.

HINT: Sometimes it happens that they look as if they used the same texture because maybe you edited the texture with the tool before and in truth they use different texture but with the same pixel content. In order to fix this check the materials on the renderer and make sure they are all using the same texture. Once all UVs use the same texture they will be affected by the crop operation.



Can I copy & paste UVs from one channel to another

Yes you can:

- 1) Select the UVs you want to copy (or just one tri if you want to copy them all).
- 2) Press Ctrl + C
- 3) Switch to the target UV channel in the dropdown.
- 4) Press Ctrl + V - You will be asked whether you want to paste only the selection or all UVs.

Please notice that if you chose to copy only parts of the UVs the rest will have to be initialized at pos 0/0 too if they did not yet exist in that channel. This may result in some tris being distorted.

