



STARDUST DREAMS

by Rachel ☆ Stardust ☆

Publishing date: 2020-04-01

BOM EXPLAINED

BOM stands for Baked On Mesh and allows for up to 63 layers to be baked into a single combined layer on a mesh avatar compatible with BOM. This is quite ingenious and I think, it is one of best things ever made by Linden Labs in collaboration with talented creators in Second Life.

Each layers texture can be a high resolution 1024x1024 pixels texture, where the old system avatar only allowed a maximum resolution of 512x512 pixels. This means much better quality and a better look - be it makeup, stockings, lingerie or tattoos.

BOM makes the appliers redundant and the onion layers of mesh bodies and mesh heads are no longer needed.

Lets us take a look at, how a traditional high end quality mesh body works.

TRADITIONAL MESH BODY



Figure 1. Traditional mesh avatar body.

When you put on your traditional mesh avatar, you must add an alpha-layer, which hides the system avatar body. This means system based layer clothing and tattoos cannot be used, as those layers will not be shown. So how do we use those layers?



Figure 2 – Traditional mesh body (white) where we add a tattoo layer (yellow).

The creators of mesh avatar bodies made further a layer, on which applied clothing or tattoos can be worn. In figure 2 the yellow is the layer you add, an invisible part adding a layer to your body. It is on this invisible layer applied clothing or tattoos worn.

Normally the layer for tattoos is the first layer to be worn to mimic, it is on the skin of avatar.

Now in order for you to add a tattoo, you use a HUD, which communicates with your body and for most creators the layer. This means at least one extra script and also increases the complexity of the body.



Figure 3 – Traditional mesh body (white) where we add a tattoo layer (yellow) and an underwear layer (blue).

If we want to wear applier based stockings or lingerie, we need to add an underwear layer. Otherwise, if we applied it to the first layer (yellow in figure 3), it would replace the tattoos we have added on layer one.

Again this increases complexity and number of scripts.



Figure 4 – Traditional mesh body (white) with a tattoo layer (yellow), underwear layer (blue) and clothing layer (red).

Finally we can add a clothing layer on which we can apply clothing, for example a body tight latex dress. Again with an increase of complexity and script count.

Although the above is a clever solution and gives option for creative combinations of different appliers, we often get alpha glitches, where for example tattoos make stockings or lingerie shimmer. Normally the HUD provided with body have option for alpha masking, but this typical comes with a decrease of the quality of the underlying layer and sometimes also the others layers, for example semi transparent stockings turning opaque or lingerie's fine lace masks destroyed.

To recapitulate the traditional mesh body adds layers to the body, hence called onion layered body, which increase complexity and adds script in order to communicate with normally a body HUD in order to change layers – simply what to wear.

The new Baked On Mesh body (BOM) mesh body solves all of the above mentioned problems.

BAKED ON MESH BODY



BOM solves the problems mentioned above; there is no need for an applicator layer or scripts to apply/remove it on your body. Up to 63 layers can be applied, where each layer gets baked onto the body as one layer.

You can add a tattoo, it gets baked onto your body as one texture only, add another tattoo, it will get baked with the first one into one texture layered on your body. Add stockings – the same – one layer only, add lingerie – same – up to 63 layers in high quality resolution get baked into one texture only layered on the body.

All this is handled clever and fast by the server. Only when you add a layer, you will see how the baking works, as your body or part of it turns gray while the server analyzes what to do and then your body appears perfect in flawless high quality. Quite amazing!

This saves a lot of graphic memory and together with no extra onion layers and script overhead, the overall performance improves with less lag and less texture caching. In the future when nearly everybody has changed to BOM a

general improvement of speed should be seen all over and most notable in places, where many avatars are together as in popular clubs or shopping events.

BOM LAYERS ADDED CORRECT

You must add the BOM layers logical using your common sense – so skin first, then tattoos, then underwear, then clothing. Otherwise you risk a later layer will cover the previous one unintentional. If this is the case, it is easy to fix, just detach the added layers and add them again in the logical order and it is WYSIWYG - *What You See Is What You Get*.

BOM LIMITATION

Well maximum 63 minus one layer (the skin), although this should be more than enough for even a true fashionista.

Remember it is only possible to wear one skin and the skin is the canvas for all the later layers you add.

A little academic, but materials are not supported, so the quality of the original textures made by creators important, a talented creator can make textures mimicking materials.

Nails on hands and feet can have glitches, as each mesh body creator normally makes unique hands and feet. This most clearly if you use a texture of older date made for the system avatar. Using nail polish etc. specific made for your mesh body solves the problem.

BOM EXTRA BENEFITS

Remember the alpha glitches mentioned earlier using appliers and onion layers or shimmer effects? BOM is your saver – no longer will the tattoo turn stockings opaque or destroy lingerie's fine lace masks.

ENABLE BOM ON BODY

See the documentation to your BOM mesh body (for example [Lara Mesh Body V5](#)), but basically follow the steps:

- Be sure to enable BOM on your mesh body, normally found in the HUD
- Remove all alpha layers! BOM handles alpha for your best possible way
- **Red body zones** mean, you wear alpha – remove the alphas by detaching
- Add layers you want – freckles, tattoo, stockings, lingerie – just remember to do it in logical common sense order

BAKED ON MESH

EASY SIMPLE ELEGANT

