

ROG Modular Armor Documentation

Actual version: 5.3 for UE5.1+ (04/08/2023)

History:

5.2 (beta) (01/26/2023)
5.1 (beta) (10/26/2022)
5.0 (beta) (05/05/2022)
4.14 (02/22/2022)
4.13 (01/25/2022)
4.12.2 (01/09/2022)
4.12 (01/04/2022)
4.5 (11/29/2021)
4.3 Beta (11/23/2021)
4.0 Beta (09/20/2021)
3.1 (09/21/2020)
3.0 (09/17/2020)
2.1 (09/09/2020)
2.0 (08/28/2020)
1.2.0 (07/21/2020)
1.1.1 (06/05/2020)
1.1.0 (05/26/2020)
1.0.0 (04/17/2020)

[Please, read the FAQ!](#)

[Planned & WIP updates](#)

Also this document **describes** how it work in [Reign of Guilds](#) & can help you to make your own modular equipment system.

UPDATE: version 5.3 for UE5.1+

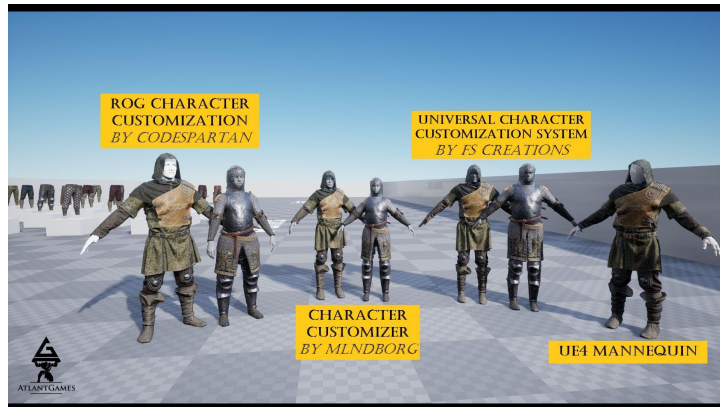
- Manny/Quinn: skin fixes, Clothsim fixes;
- UCCS: fully reskin for UE5 characters support, ClothSim fixes;
- CC: UE5 characters support, ClothSim fixes;
- UE4 Mannequin: ClothSim fixes;
- There are some known issues that will be fixed soon;

[Version History \(since 4.0\)](#)

Compatibility:

Armor & accessories models are prepared for these characters from UE4 MarketPlace:

- 1) **UE5 Manny & Quinn;**
- 2) **UE4 Mannequin (with native skeleton): base & adapted for human anatomy;**
- 3) **Character Customization by CodeSpartan: [Male](#) & [Female](#);**
- 4) **[Character Customizer](#) by mlindborg (*Male&Female*);**
- 5) **[Universal Character Customization System](#) by FS Creations (*Male&Female*);**



- 6) Also, you can independently adapt the armor & accessories for other skinned to UE4 Skeleton characters directly in UE4 using [Mesh Morph](#) ([click](#) to find more info)

Attention!

1. Our assets do not include character's assets, only simplified models without any morph types, textures (for demo);
2. Armor/Cloth models do not have similar "bodyfat" Morphs (adding "bodyfat" is WIP);

FAQ

1. The basic principle of the modular system:

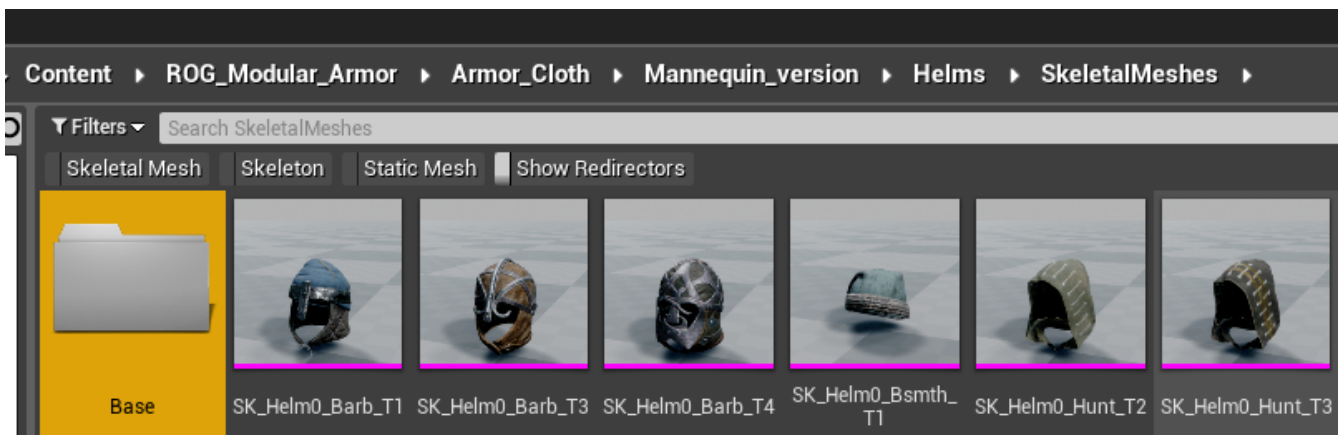
to minimize infiltration artifacts, you need to use the **BodyParts** or **MaterialSlots** option. This means that you turn off the part of the body that is now hidden by the clothes. **You can find BP_ examples in our assets.** Otherwise, the main artifacts will appear on dynamic animations (for example melee combat animations).

2. Why can't you load the full version of the characters, sliced into BodyParts or MaterialSlots?

By agreement with the Authors of the characters, we have no right to add to our project, or distribute in any other way models with a full set of morphotypes and textures.

3. Compatibility with Epic skeleton? Mannequin? Why does the Mannequin have 2 variants of SK_ in some folders?

Version 3.0 (release date: 09/17/2020): fully supports Mannequin with native UE4 Skeleton. In **Base** subfolders of the Mannequin_version you can find SK_ adapted for original mannequin geometry. In main folders are SK_ for Mannequin, but with more human anatomy.



4. What is the difficult with [Character Customization: Male?](#)

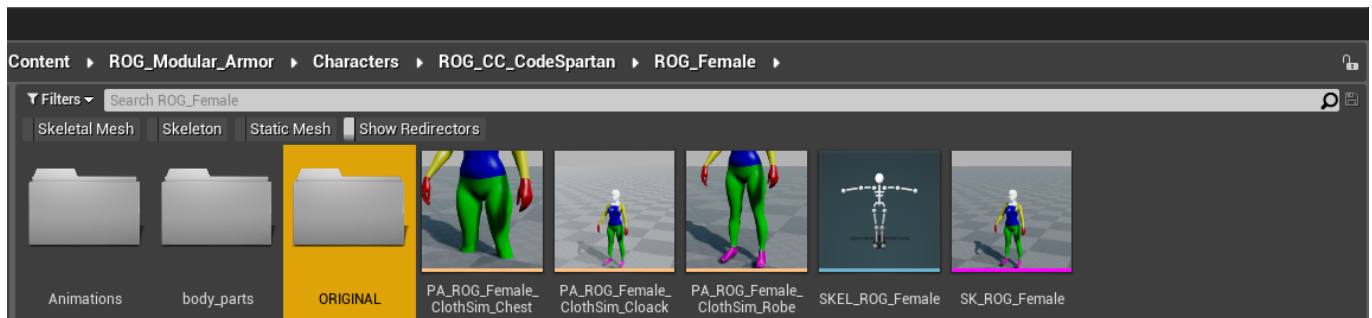
To use animations from MP you need to retarget them. More information about retargeting animations for this asset:

- 1) Video ([Youtube](#));
- 2) [Documentation](#);

5. What is the difficult with [Character Customization: Female](#)? Why did you modify her skeleton? What skeleton should I use?

We improved the skeleton and a little the body geometry and named it *_**ROG_Female**, in the **ORIGINAL** subfolder you will find the basic skeleton of this character, as in the **ORIGINAL** subfolders you will find SK_ for the original skeleton.

We have changed the skeleton because he had a number of shortcomings, and was also too different from Male version. Based on our experience, we recommend you to use *_**ROG_Female**.



6. Can assets be used with MetaHuman?

No. Although the armor and accessories support Mannequin with native Epic SKEL_, MetaHuman needs most of SK_ to be fully reskinned, geometrically adjusted, and morphs added.

7. How can I adapt your assets for other characters?

For characters skinned not to UE4 skeleton you need to RE-skin all the armor & accessories. Otherwise you can quickly adapt the geometry of the armor to other characters directly in UE4 using the

[Mesh Morpher](#)

This asset helps with the SK's geometry adaptation by the Morph target creation.



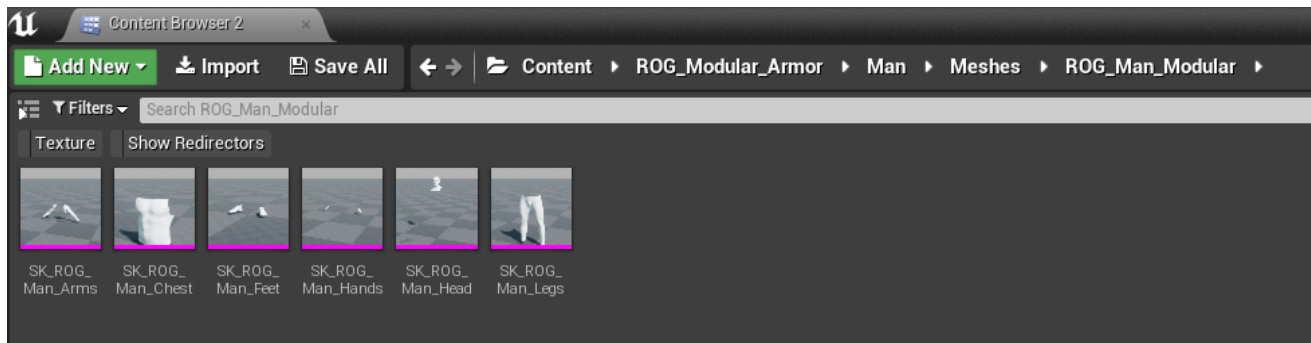
You can find the video tutorials with our armor here:

- 1) [Video_1 \(Youtube\)](#)
- 2) [Video_2 \(Youtube\)](#)

How it works in Reign of Guilds

Body parts

Armor and cloth models often maintain a realistic volume, so they completely hide the body, but to avoid artifacts, it is recommended to divide the body into parts and hide them as you put on the armor.



man_head

never hides, but closed helmets should turn on the last LOD right away, but the *closed* helmet should turn off the hairstyle.

man_chest

is always hidden by any shirt, and when the shirt is hidden by armor/robe, the torso is still off;
The shirt was supposed to be a technical element, and always worn on the first layer under the Armor/Robe. This reduces the number of inconsistencies and also adds a bit of realism.

man_arms

are hidden by a shirt, unless the "Open" parameter is active (for sleeveless shirts/armor/robes). When the "Open" shirt is active the arms remain if only the "Open" parameter is activated on the armor/robe. If not, then the arms also hide.

man_hands

are hidden with gloves if the "Open" parameter is not active;

man_legs

always hide with pants, if there are no pants - you need to make underwear that are always worn and cannot be removed or retexture the original man textures.

man_feet

are hidden by shoes, unless the "Open" parameter is active;

Modular system

Slots

Static & Skeletal meshes names contain information of slot & type to simplify work on the creation of game items (for example SK_**Chest0**_):



Slot "Helm", types:

- 0 - Normal helmet;
- 1 - Long;
- 2 - Normal OPEN (hairstyle visible);
- 3 - Long OPEN;

Slot "Shirt", types:

- 0 - OPEN (Sleeveless);
- 1 - With sleeves;

Slot "Chest", types:

- 0 - Armor OPEN (Sleeveless);
- 1 - Armor;
- 2 - Robes OPEN;
- 3 - Robes;

Slot "Gloves", types:

- 0 - Gloves;
- 1 - Gaiters (long gloves);
- 2 - Gloves OPEN (hand visible);
- 3 - Gaiters OPEN;

Slot "Boots", types:

- 0 - Slippers;
- 1 - Low boots;
- 2 - High boots;
- 3 - Slippers OPEN (visible foot);
- 4 - Low boots OPEN;
- 5 - High boots OPEN;

Slot “Cloak”, types:

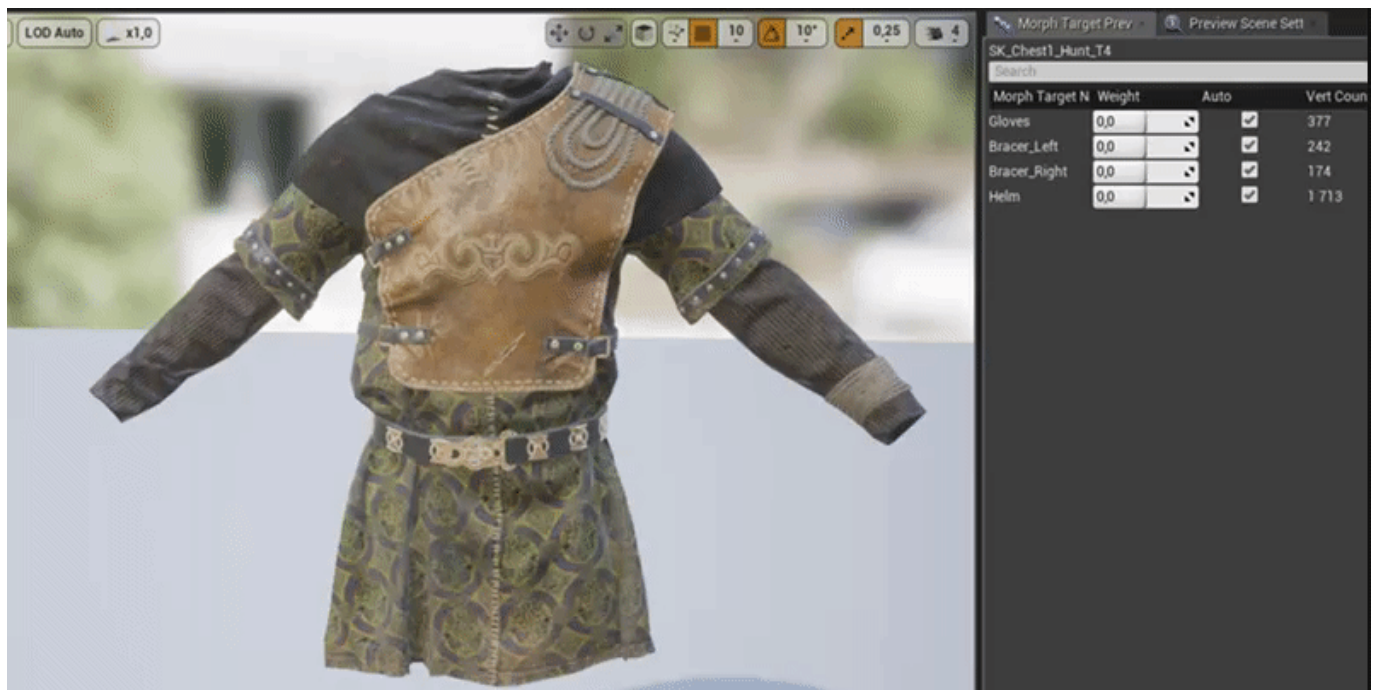
- 0 - Normal;
- 1 - Full;

Slots without types: “Shoulders”, “Pants”, “Bracer”.

Morph types

Chest:

- Gloves;
- Bracer_left;
- Bracer_right;
- Helm (if provided);



Robes haven't got similar morph types, but for wide sleeves there is a morph for **shield**:



Shirt:

- Gloves;
- Bracer_left;
- Bracer_right;
- Armor (shirt with sleeves)



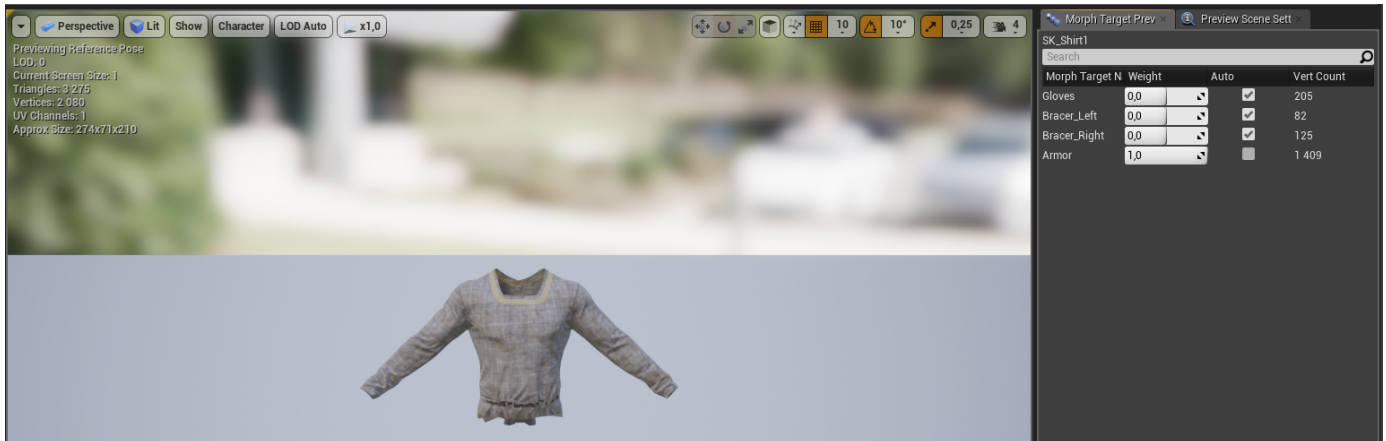
Pants:

- Boots_low;
- Boots_high;

Slot & Morph Interaction

Shirt VS Chest (armor/robe)

- Shirt0_ should be always hidden by any type of Chest (armor/robe slot);
- Shirt1_ should be always hidden by Chest1_ & Chest3_ types;
- Shirt1_ should be used with morph "Armor" when Chest0_ or Chest2_ is equipped.



Long sleeve shirt or Armor VS bracelets or gloves

- There is "Bracer" morph for the sleeve of each hand for bracers (for different bracers for each hand)
- Short gloves (Gloves0_, Gloves2_) do not need any morphs;
- There is morph for gaiters (long gloves) (Gloves1_, Gloves3_);
- When gaiters are used bracers should be hidden.

Shirt or Armor VS long helm (Helm1_, Helm3_)

Some armor has a morph "Helm" for long helms/hoods (Helm1_, Helm3_)

The shirt has no such morph, because it does not conflict with this type of helm.

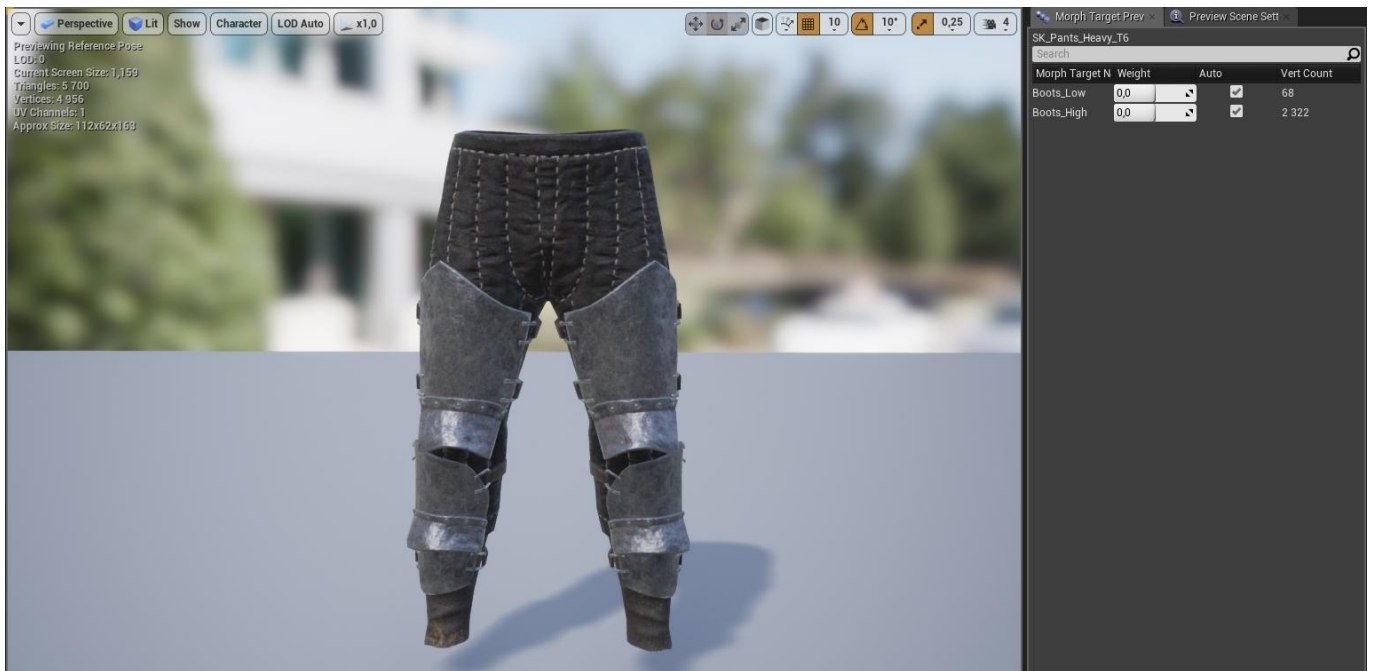
Armor VS Shoulder

All shoulders should put ONLY on the Chest (armor/robe slot) because of a gap, therefore they do not cause chest morphing.

Also you can provide a slight scale reduction and lowering of the shoulders, if they are worn without armor.

Pants and Boots

- Boots0_ (slippers) & Boots3_ (Slippers OPEN) do not conflict with pants;
- Boots1_ & Boots4_ should be used with morph "Boots_Low";
- Boots2_ & Boots5_ should be used with morph "Boots_High".



Robe VS bracelets or gloves

- Sleeveless (OPEN) robe (Chest2_) looks fine with any bracers or gloves;
- Any robe looks fine with short gloves (Gloves0_, Gloves2_);
- Robe with regular or wide sleeves (Chest3_) should turn off the display of the bracers;
- Robe with regular or wide sleeves (Chest3_) do not stuck with gaiters (it looks too strange), so there are 2 ways;
 - block using this type of robes with gaiters by gamedesign (we've chosen this one);
 - cut a short gloves from gaiters & display them, when used with this type of robes;
 - make morphs for gaiters to sleeve it up;

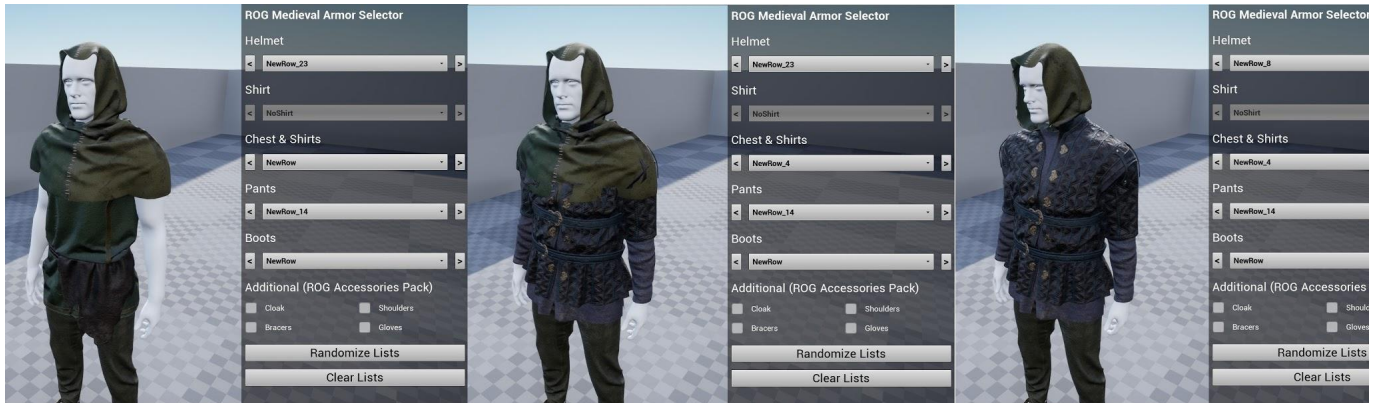
Cloaks

- Regular cloak (Cloak0_) looks normal even with shoulders & fine with everything else;
- Full cloak (Cloak1_) should hide the shoulders;

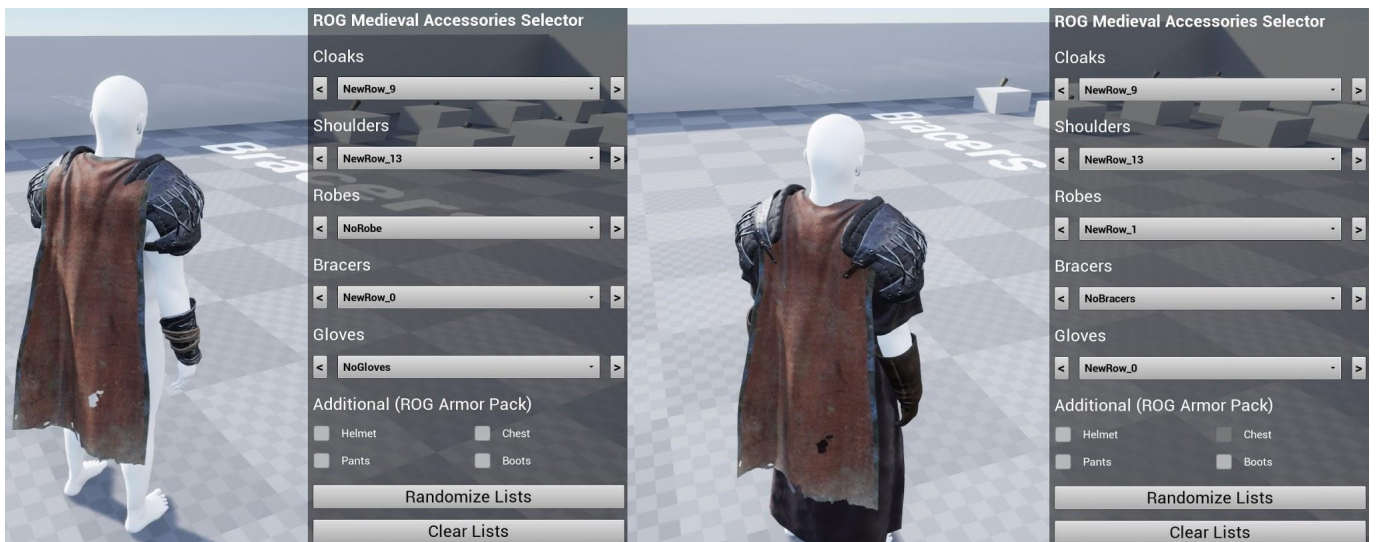
Limitations

Some modular parts are not compatible with another one

1. We prepared **full & short** version of hunter's hood:
 - 1.1. the **full** version looks fine with shirts or "*slim*" armor, but conflicts with massive chests;
 - 1.2. for massive chests we prepared the **short** version of hood;



2. The cloaks & shoulders conflict can easily be resolved by the "Y" offset of the cloak's slave component:



but we preferred to leave a reserve on the back for the weapon so that it penetrates less into the cloak.

Version History (since 4.0):

UPDATE: version 5.1 (beta) (10/26/2022):

- Manny & Quinn supported;
- New approach to setting up chaos ClothSim (teamwork with [Vladislav Jurat](#));
- Improved structure and naming of assets;
- There are some known issues that will be fixed soon;

UPDATE: version 5.0 (beta) (05/05/2022):

- UE5 support with no UE5 skeleton support;
- Support for the UE5 skeleton is planned for future updates;

UPDATE: version 4.14 (02/22/2022):

- (FIX) 61 minor fixes: Robes/Chests/Shirts (ROG_Female, CC_Male, UCCS_Female);
- (FIX) Helm MorphType selection;

UPDATE: version 4.13 (01/25/2022):

- 143 minor & major fixes: chests/robes/pants (ALL characters)

UPDATE: version 4.12.2 (01/09/2022):

- (FIX) Character selector UI/UX;
- 12 minor fixes for gloves (all characters);

UPDATE: version 4.12:

- (ADDED) New Demo Sets of Armor & Accessories for ALL characters;
- (ADDED) MorphTypes support in BP_ for DemoMode;
- (ADDED) MaterialSlots instead of BodyParts example;
- (ADDED) ClothSim presets for ALL chests/robes/cloaks;
- (UPDATED) ClothSim PA_ for ALL characters;
- 223 minor/major fixes for ALL characters;

UPDATE: version 4.5 (11/29/2021)

- (UPDATED) ClothSim PA_ for ROG_Male & ROG_Female_Origin;
- (ADDED) Textures for 3x Heavy Pants;
- (ADDED/CHANGED) Cloth simulation for 5 Characters;
- 48 minor fixes;

UPDATE: version 4.3 Beta (11/23/2021)

- (ADDED) compatibility with origin CodeSpartan's Female SKEL_ (for those who cannot use its corrected version);
- (ADDED) character switcher to DEMO maps;
- (CHANGED) ROG_Female (the area of the female breast);
- (CHANGED) ROG_Male ClothSimulation (new way for future BodyFat morph);
- 200+ minor fixes;

UPDATE: version 4.0 Beta (09/22/2021)

- Compatibility with 4 new characters from MarketPlace;
- NEW 976 SK_, 546 SM_, 300+ fixes;