

UMA – Dynamic Character System

UMA Version 2.11

Overview

What is the UMA Dynamic Character System?

The **Dynamic Character System** (DCS) is a system built into UMA that turns your UMA into a character that has a race and wardrobe. At the heart of the DCS is the **Dynamic Character Avatar** (DCA). Each DCA manages its own colors, wardrobe items (which not only include clothing, but also hair, complexion, etc.) and ensures a consistent result – For example, adding a pompadour hairstyle will replace any existing hair that the character has, and also make sure it's colorized the same.

Let's get started!

First, create a new scene. In the **UMA/Getting Started** folder there are two prefabs. Drop the **UMA_GLIB** prefab into the scene so that the system is setup. At this time, you don't need to make any changes. Create a 3D Cube in the scene, and scale it to 10,1,10 and then drop the **UMADynamicCharacterAvatar** prefab into the scene on top of it. If the new prefab is not selected, select it in the scene Hierarchy and press "f" to focus it. It should show your UMA character with the **"Human Male" race**. Make sure the scene camera is pointing at your character, and press play. Your first character should be standing around on the cube, looking kind of suspicious.

DCA characters can be repurposed on the fly

Maybe you didn't want it to be a "Human Male" (that's the default). Let's change it to a Human Female – select the **UMADynamicCharacterAvatar** in the scene hierarchy, and look at the inspector. The Active Race should say "Human Male". Change that to "Human Female". The character should change in the scene view.

Press play again to stop. Make sure that the Active Race is set to "Human Male" and lets go on.

Let's give it some clothing and features.

In the project view, type **t:UMAWardrobeRecipe** to filter the view to wardrobe recipes. On the **DynamicCharacterAvatar** Component, open the "Customization" dropdown, and then "Default

Wardrobe Recipes” foldout. Drop “MaleHair1” and “MaleRobe” onto the drag area. Since these recipes are for the Human Male race, they will be equipped. (Note: The Default Wardrobe is for items that are automatically added to the character at startup. This is not the characters wardrobe, just a list of items that can be added to the wardrobe. The characters wardrobe will automatically unequip items from slots when you add a different item to the slot.)

Let’s say you want him to be a little tanner - Open the Character Colors foldout on the DCA component, and find the “Skin” color. Click on the base color, and select a nice tan color. Hmm – looks a little flat, so let’s add a hint of gloss. Click the metallic gloss color, and set the alpha to about 50. Play around with the colors until you find something you like.

Next step is to open up the ***UMA DCS Demo – Simple Setup*** scene.

This scene shows how to programmatically change wardrobe, colors and DNA. It’s a complete character designer, and the code is all on the SampleCode class on the SampleCode object.

Press Play, and hit “Randomize” several times. The avatar is rebuilt on the fly.

The “?” button next to “Change Wardrobe”, “Change Colors”, and “Change DNA” describe the steps to programmatically modify the character.