Creating a Blueprint Asset
with customisable Material Features

Duration	4 hours
Learner Level	Beginner to Intermediate
Industry Focus	Digital Media, Games

Description

This course consists of two parts:
- Part I: Intro, Material Instances and Parameters
- Part II: Blueprint Construction Script and Parameters

This course aims to create a Blueprint Actor containing a Mesh and parameterized (Master-) Material, allowing e.g. a Level-Designer to place the object and change Material Parameters on the go, without the need to go back to the Material itself and / or creating Material Instances.

Prerequisites

Basic 3d modeling, UV-Layout and basic knowledge of PBR Texturing

Outcomes

The learning outcomes of this lecture are:
- Setup a Material and a Material Instance
- Use Vertex Colors and/or Color-ID Textures for Masking
- Use different Material Inputs, e.g. 3Vector, Texture Sample
- Use Parameters in master Materials and expose them to an Instance
- How to alter Material properties (e.g. Color, Roughness) by switching and/or manipulating inputs

Details

This lesson uses a pre-existing mesh (SM_Cellphone.fbx) and textures (a Color-ID and an AO bake, a cellphone display screenshot and a finger-smudges bitmap) in order to create an according Unreal Engine Material.

After setting up the basic values / textures, selected values are exposed as parameters and some properties are setup to be switch- and/or adjustable.

The final instanced Material allows manipulating the following cellphone's properties:
- Switch Phone Colour (black/white)
- Change Case Colour
- Switch Case Material (silicon/plastic)
- Change Display Brightness (+on/off)
- Enable Finger Smudges screen only
- Change Finger Smudges Intensity

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