

**SKILLS FRAMEWORK FOR MEDIA
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE DOCUMENT**

TSC Category	Visual Graphics					
TSC Title	Surfacing and Texturing					
TSC Description	Develop textures and surface details to transform 3D models into real-world characters and props to achieve the desired look and feel for the animated visuals					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		MED-MPN-2063-1.1	MED-MPN-3063-1.1	MED-MPN-4063-1.1	MED-MPN-5063-1.1	
		Create textures for application to background and prop models to meet production requirements	Develop textures and surface detailing for 3D characters and object models to achieve the desired visual appearance	Lead the development of textures and surface detailing for objects, backgrounds and characters to achieve the creative vision of the production	Establish creative guidelines, identify technology and drive the development of textures and surface detailing for 3D objects, characters and backgrounds to achieve the creative vision of the production	
Knowledge		<ul style="list-style-type: none"> • Concept art • Illustration and drawing techniques • Fundamentals of materials and their surface properties • Principles and concepts of optics • Digital texturing and painting tools • Types of textures, lighting and other effects that can be applied to 3D objects and environments • Normal maps and transparency maps for depth depiction • UV mapping techniques for skinning 3D models with textures 	<ul style="list-style-type: none"> • Electrical and optical properties of metals, non-metals and dielectrics • Principles and concepts of optics • Principles of impact of forces and natural wear and tear on surfaces • Features, functionalities and applications of digital texturing and painting tools • Types of textures, lighting and other effects that can be applied to 3D objects and environments • Normal maps and transparency maps for depth depiction • Applications of surface, light, volume and displacement shaders • UV mapping technique for skinning 3D models with textures 	<ul style="list-style-type: none"> • Creative vision and artistic direction of the production • Processes involved in creating animation for films or games • Features, functionalities, capabilities and limitations of digital painting and texturing tools • Photorealism and photorealistic textures • Asset pipelines and production workflows • Assets optimisation techniques and methods • Rendering process and impact of textures on rendering efficiency 	<ul style="list-style-type: none"> • Techniques for developing creative guidelines and style guides • Industry standards and upcoming technologies and approaches in texturing and surface detailing • Features, functionalities, capabilities and limitations of digital painting and texturing tools • Applications of surface, light, volume and displacement shaders • Photorealism and photorealistic textures • Asset pipelines and production workflows • Tools required to implement asset pipelines • Rendering processes and impact of textures on rendering efficiency 	

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			<ul style="list-style-type: none"> Assets optimisation techniques and methods 			
Abilities		<ul style="list-style-type: none"> Conduct research to obtain ideas and visual references for the textures to be created Select the technical approach to be taken for developing textures based on understanding of creative brief Liaise with other 3D artists to refine 3D models to overcome surfacing challenges Create textures for objects, backgrounds and characters Perform skinning of 3D models to apply textures and surface detailing Store files as per appropriate conventions to enable the next stage of production to run efficiently 	<ul style="list-style-type: none"> Interpret creative briefs to understand texturing requirements for 3D models Analyse concept art to understand the nature and properties required from the textures Create textures to surface 3D character and object models Create surface detailing to depict wear and tear, surface deformations and other special surface properties using cavity maps, transparency maps and normal maps Perform complex skinning procedures using specialised techniques for applying textures and surface detailing Review textures developed by junior artists and suggest modifications for refinement if required Refine textures iteratively to achieve the artistic vision and production requirements Present textures and skinned models for review to the creative leadership Optimise surfaces based on feedback from 	<ul style="list-style-type: none"> Plan the development of textures and surface detailing to meet production requirements Oversee the development of textures and surface details for 3D models to meet the production requirements Develop specialised textures and surface detailing to depict complex surfaces comprised of multiple materials Review the textures and skinned models to achieve the creative and technical goals pertaining to the artistic direction, animation requirements and rendering efficiency Perform refinement of the textures and surface detailing to meet specific creative requirements Identify the scope of optimisation required for the textures from the rendering process Oversee the optimisation of textures and surface details to ensure the achievement of the creative vision as well as the technical efficiency required 	<ul style="list-style-type: none"> Define the technical goals for texturing to achieve the overall creative and technical goals for projects Drive research to review proofs-of-concept for the selection of new technologies and approaches for surfacing Determine the complexity of textures to be used depending on the level of photorealism required Determine the technology to be used for textures and surface detailing for 3D models based on the creative and technical goals of the production Establish creative guidelines, style guides and colour palettes to guide the development of textures Drive the creation of custom tools to meet the texturing and pipeline requirements Drive the creation of custom shaders to meet the surfacing requirements of production Review textures and skinning of 3D models for alignment with the 	

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			rendering to enhance the efficiency of the rendering process		artistic direction of production	
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