Specification of Competency Standards
for the Information & Communications Technology Industry
Unit of Competency

Functional Area - Operations Management

Title	Prepare character animation
Code	107931L4
Description	This unit of competency applies to all Digital Media Technology (DMT) practitioners who are involved in game graphics designing. Game character animation is the techniques of developing and animating amazing characters for the games in concern. This UoC is concerned with the activities and steps in creating exciting, believable, engaging game characters in the capacity of a graphics designer.
Level	4
Credit	3

Competency	Performance Requirements
	1. Knowledge for character animation
	
	• Understand the game specifications and detailed requirements as prepared by the game development team
	• Get hold of the resources and support for character animation tasks
	• Understand the current industry trend and player preferences towards game characters
	• Understand skeleton in 3D animation
	• Understand kinetic and inverse kinetic
	• Understand key frames in the context of game applications
	• Understand motion bending, such as real time conversion of a motion from another motion
	• Possess the knowledge in creating animation loops, such as:
	    o The difference with fixed animation in movies
	    o Synchronous between the first and the last frames, etc.
	
	2. Prepare character animation
	
	• Gather requirements towards game characters animation as part of the graphics designing tasks
	• Make use of logic and artificial intelligence to drive game characters to act and react to different situations
	• Fully consider the relationships between kinetic, hierarchy and inverse kinetic
	• Apply human mechanics in the process of game character animation as appropriate and when needed, for examples:
	    o Line of action, which refers the flow of the body shape
	    o Energy burst, for storing a huge amount of energy before a burst happens
	    o Balance, to help the character in gaining a stable pose
	    o Momentum, to be applied to motions of the game characters
	• Use mathematical strangeness in actual motions to produce 3D game character animations, such as:
	    o Acceleration
	    o Deceleration
	    o Forces
	    o Dynamics
	    o Weights and curves, etc.
	• Apply skinning / enveloping techniques as appropriate, such as:
	    o Vertex blending
	    o Matrix palette
	    o Linear blend skinning, etc.

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	• Use the technique of animation loop where appropriate, and define related parameters such as the loop time
	• Create motions for different game characters based on the above considerations, which may include:
	    ◦ Attack
	    ◦ Use magic
	    ◦ Walk
	    ◦ Run
	    ◦ Sit
	    ◦ Die, etc.
	• Make appropriate adjustments to the character animations until the desired results are achieved
	• Present the completed character animations to the game development team for comment and seek agreement for adoption
	
	3. Exhibit professionalism
	
	• Always devote fully to all activities related to the preparation of character animations
	• Always perform the character animation preparation according to requirements of the game specifications, and place the interests of potential players as the highest priority consideration

Assessment Criteria	The integrated outcome requirements of this UoC are the abilities to: • Complete the character animation preparation tasks within time and budget constraints; and • Complete the character animation preparation work for the game in concern, and fulfilling all requirements specified in the game specifications
Remark	