



Australian Government

ICTGAM518 Animate physical attributes of models and elements

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to animate the appropriate physical attributes of models and elements.

It applies to individuals with high-level mathematical, technical and communication skills working as concept artists, game designers, games programmers, animators, and other personnel working in the game development industry.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Game development

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Collect and use reference material	1.1 Create the storyboard sequence of required animation 1.2 Determine the animation attribute sequence of objects, as per the storyboard 1.3 Select the 3-D modelling and animation software tools that best suit the type of production, and target platform, for which 3-D digital animations are being created 1.4 Research and gather the reference material to inform the animation
2. Prepare 3-D digital models using a variety of	2.1 Determine the most efficient animation methodology from the

ELEMENT	PERFORMANCE CRITERIA
manipulating techniques	required models 2.2 Ensure that the models' topology allows the appropriate deformation of objects and their parts, as per the storyboard animation brief 2.3 Apply a variety of manipulation techniques 2.4 Progressively refine animation attributes and check the integrity of models and elements over time, until the storyboard requirements are met 2.5 Submit the pre-model animation to the relevant personnel to determine whether storyboard objectives have been met, then make final adjustments as required
3. Create the required animations using a variety of animated tools	3.1 Animate the object, applying animation principles and techniques to produce the required motions 3.2 Submit the animation for approval 3.3 Make adjustments as required and refine the animation in passes until the storyboard requirements are achieved
4. Use lighting to evaluate texture, quality and performance	4.1 Use nominal lighting to render the component for testing purposes 4.2 Test against the plan 4.3 Continue the manipulation process until the effect is achieved
5. Render 3-D digital model using appropriate render engine	5.1 Evaluate the final render, taking steps to satisfy any further client requirements 5.2 Prepare any required render passes 5.3 Render the component 5.4 Present the edited material to the relevant personnel, as well as the brief and documents, including concept art, in an appropriate format for evaluation
6. Back up work	6.1 Make backup copies of files, and complete workplace documentation, according to chosen predetermined procedures

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.2, 1.4, 2.4,	Interprets and analyses reference sources
Writing	1.1, 5.4, 6.1	Communicates complex relationships between ideas and information, matching the style of writing to the purpose and audience, when creating storyboard and workplace documentation
Numeracy	2.3, 2.5, 3.1, 3.3	Uses mathematical and problem-solving strategies when applying manipulation techniques, animating objects and making adjustments
Interact with others	2.5, 3.2, 5.4	Understands what to communicate, with whom and how, when submitting work for evaluation and approval
Get the work done	All	- Plans a range of routine and non-routine tasks, including collecting resources, determining storyboard sequences, and selecting software tools - Implements actions as per plans, making slight adjustments if necessary, and addressing some unexpected issues - Makes a range of critical and non-critical decisions in relatively complex situations, taking a range of factors into account - Utilises a broad range of features of software applications for specific purposes - Manages and maintains the files securely in a variety of storage media and formats

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTGAM518 Animate physical attributes of models and elements	ICAGAM518A Animate physical attributes of models and elements	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTGAM518 Animate physical attributes of models and elements

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Performance Evidence

Evidence of the ability to:

- research and collate reference materials
- create a storyboard sequence and use the storyboard to prepare pre-model animation for approval
- use animation and rendering software to create animations, according to animation principles and storyboard requirements
- present a final 3-D digital model, together with supporting documentation, for approval
- store files according to procedures.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- summarise the principles of 3-D animation, lighting and modelling
- describe how knowledge of anatomy and physical movement is relevant to animation
- describe the importance of client communication when working on projects
- explain the importance of budgeting and scheduling considerations during projects
- outline the techniques for creating a storyboard
- outline techniques for script production
- describe the application of current game-play hardware and software products
- provide a detailed explanation of the purpose of dope sheets
- describe the principles of the graph curve editor for smooth animation
- outline the physical attributes to create effects, including weight and anticipation
- explain the purpose of rendering
- explain shading and texturing techniques

- provide a detailed summary of transfer methodology, including rotoscoping hand key and motion capture.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the game development field of work, and include access to:

- computer hardware and software
- games engines
- file storage.

Assessors must satisfy NVR/AQTF assessor requirements.

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