



Australian Government

ICTGAM433 Prepare and complete image rendering processes

Release: 1

ICTGAM433 Prepare and complete image rendering processes

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

Application

This unit describes the skills and knowledge required to select applicable rendering software packages and prepare and optimise rendering for 3-D modelling, animation and game development.

It applies to individuals who support the design, development and programming of basic digital games as part of a larger development team.

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. Identify and analyse rendering requirements and select rendering software	1.1 Identify project requirements and applicable equipment and media 1.2 Identify and evaluate features of rendering software packages used in the film and games industries 1.3 Analyse design brief and other reference sources and plan and determine rendering requirements 1.4 Select rendering software according to timeframe and budget requirements 1.5 Confirm selection according to brief, system limitations and requirements

ELEMENT	PERFORMANCE CRITERIA
2. Prepare rendering software and check render integrity and quality	2.1 Select and apply required image resolutions, image aspect ratio and pixel ratio according to project requirements 2.2 Adjust renderer attributes and obtain required anti-aliasing and other visual effects 2.3 Refine render integrity 2.4 Re-link any missing images and textures 2.5 Test render times for optimising process 2.6 Determine alpha channels and opacity matts 2.7 Identify render layers and passes
3. Optimise images prior to render processes	3.1 Complete pre-rendering optimisation tasks 3.2 Adjust and refine renderer attributes required in optimising render times 3.3 Select required file output format according to project brief 3.4 Identify and determine applicable filenames and output destinations according to organisational procedures
4. Render images and save files according to organisational procedures	4.1 Test and perform rendering processes according to project brief 4.2 Seek feedback from required personnel on rendered images, and amend accordingly 4.3 Store and archive files according to organisational procedures 4.4 Review completed render and confirm compliance with system and brief 4.5 Confirm final rendered image with required personnel

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Numeracy	- Uses whole numbers, decimals and percentages applicable to measurement, resolution aspect ratio, pixel ratio, scale, coordinates, colour, shading and other attributes and variables in rendering processes - Interprets numerical information and applies basic mathematical

Skill	Description
	calculations applicable to timelines and budgetary information
Oral communication	• Uses listening and questioning techniques to obtain information about design brief, system limitations, software capabilities and requirements • Presents rendering outcomes using industry-specific terminology
Reading	• Interprets a design brief containing complex games-design terminology • Interprets and comprehends a large range of diagrams, icons, symbols, text and letters required in using complex rendering software
Teamwork	• Collaborates with others as required and confirms required rendering output
Self-management	• Applies formal processes when planning rendering requirements, producing plans with logically sequenced steps with awareness of time and resource constraints • Implements actions as per plans, making slight adjustments as required • Recognises and takes responsibility in addressing predictable and some less predictable problems in familiar work contexts • Identifies key principles and concepts underpinning design and operation of digital systems and tools
Technology	• Manages and maintains files securely in a variety of storage media and formats

Unit Mapping Information

Supersedes and is equivalent to ICTGAM416 Prepare and complete image rendering processes.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for ICTGAM433 Prepare and complete image rendering processes

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- optimise and render at least three images using required rendering software, according to design brief.

In the course of the above, the candidate must:

- use and optimise rendering software components
- adhere to requirements related to file sizes and formats
- store rendered components according to requirements.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- software features used for:
 - 3-D animation
 - 3-D modelling
 - lighting
 - rendering
 - shading
 - texturing
- file format and size requirements
- system requirements
- industry standard rendering software packages
- pre-rendering optimisation techniques
- why rendering is required in 3-D modelling, animation and game development
- organisational procedures.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- required hardware, software and peripheral devices
- graphic rendering software packages
- input and output devices
- models and scenes requiring rendering
- style shots
- file storage
- project and design briefs, specifications and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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