



**Australian Government**

# **ICTGAM551 Apply digital texturing for the 3-D environment in digital games**

**Release: 1**

# ICTGAM551 Apply digital texturing for the 3-D environment in digital games

## 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 research, select techniques and apply industry standard graphic software tools to digital texturing for the 3-D environment in digital games.

The unit applies to those with high-level technical, interpretive 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. Research industry practices                   | 1.1 Research and identify methods of texture creation and texture mapping according to organisational requirements<br>1.2 Select graphics software to create textures according to organisational requirements<br>1.3 Document design considerations for texturing a 3-D environment according to organisational requirements |
| 2. Create 3-D environments                       | 2.1 Use 3-D modelling and animation software according to task requirements<br>2.2 Create simple 3-D objects                                                                                                                                                                                                                  |

| ELEMENT                           | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                    |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                   | 2.3 Place objects in a 3-D environment<br>2.4 Apply inbuilt lighting effects to 3-D environment                                                                                                                                                                         |
| 3. Create multiple textures       | 3.1 Create textures according to task requirements<br>3.2 Establish the look and the feel of the 3-D environment<br>3.3 Seek and respond to feedback from required personnel                                                                                            |
| 4. Apply multiple texture effects | 4.1 Load textures into 3-D animation and modelling software according to task requirements<br>4.2 Colour 3-D objects and environment<br>4.3 Create multiple texture effects for single 3-D object<br>4.4 Render image of 3-D environment according to task requirements |

## 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                | <ul style="list-style-type: none"><li>Uses whole numbers, decimals and percentages applicable to measurement, resolution aspect ratio, pixel ratio, scale, coordinates, colour, shading, and other attributes/variables in the application of digital effects</li></ul>                                |
| Oral communication      | <ul style="list-style-type: none"><li>Articulates requirements and responsibilities clearly and distinctively, using industry standard technical language intended for audience and environment</li></ul>                                                                                              |
| Reading                 | <ul style="list-style-type: none"><li>Researches common industry practices to interpret technical design terminology</li><li>Interprets and comprehends a large range of diagrams, icons, symbols, text, numbers and letters, necessary to use complex design software</li></ul>                       |
| Writing                 | <ul style="list-style-type: none"><li>Uses applicable spelling and grammar, plain English, specific terminology and required document layout when documenting methodologies and design considerations</li></ul>                                                                                        |
| Planning and organising | <ul style="list-style-type: none"><li>Plans, organises and completes tasks according to defined requirements and schedules</li></ul>                                                                                                                                                                   |
| Problem solving         | <ul style="list-style-type: none"><li>Makes decisions directly related to completion of required tasks</li><li>Uses creativity and initiative to visualise concepts</li><li>Sources, analyses and evaluates methodologies and software with the potential to meet 3-D texturing requirements</li></ul> |

| SKILL      | DESCRIPTION                                                                                                              |
|------------|--------------------------------------------------------------------------------------------------------------------------|
| Technology | <ul style="list-style-type: none"><li>• Uses key features of specific digital systems and software to complete</li></ul> |

## Unit Mapping Information

Supersedes and is equivalent to ICTGAM525 Apply digital texturing for the 3-D environment in digital games.

## 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 ICTGAM551 Apply digital texturing for the 3-D environment in digital games

## Modification History

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

## 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:

- research, select and document suitable techniques and software to create texturing for a 3-D environment.

In the course of the above, the candidate must:

- use graphics software to create multiple textures for a 3-D environment
- produce a final rendered image of a 3-D environment that incorporates multiple texture effects for a single 3-D object.

## 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:

- technology and human resources required in the process of creating textures for the 3-D environment
- capabilities and constraints of graphics software for texturing
- methods of texture creation and texture mapping
- design considerations for texturing including resource limitations and constraints, and target markets.

## 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:

- computer hardware and software
- games engine

- file storage
- the internet for research purposes.

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

## **Links**

Companion Volume Implementation Guide is found on VETNet -

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