



Australian Government

ICTGAM550 Integrate multiple data sources into interactive 3-D environments

Release: 1

ICTGAM550 Integrate multiple data sources into interactive 3-D environments

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 integrate multiple data sources into interactive 3-D environments.

It applies to those with high-level 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. Prepare to integrate elements into interactive 3-D environment	1.1 Identify and confirm interactive 3-D environment requirements 1.2 Research and identify data sources that can be integrated into interactive 3-D environments according to organisational procedures 1.3 Obtain or create data sources according to interactive 3-D environment requirements 1.4 Identify tools and libraries required for integration of identified elements into 3-D environment 1.5 Research, review and document how tools work according to organisational procedures

ELEMENT	PERFORMANCE CRITERIA
2. Integrate sources into interactive 3-D environment	2.1 Create prototypes and integrate elements into interactive 3-D environment using identified tools 2.2 Test integration of elements according to organisational procedures 2.3 Test functionality of 3-D environment on different digital devices 2.4 Review test results and amend interactive 3-D environment as required 2.5 Confirm elements' integrity is maintained during implementation
3. Evaluate and finalise completed 3-D environment	3.1 Present interactive 3-D environment to required personnel 3.2 Review feedback from presentation and adjust interactive 3-D environment as required 3.3 Evaluate and justify implementation and document use of data sources, tools and libraries according to organisational procedures 3.4 Obtain final sign-off from 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
Reading	• Interprets, analyses and comprehends briefs, instructions and conceptual information to inform job requirements
Writing	• Documents tools functionality according to organisational procedures using required language for specific audiences
Oral Communication	• Uses listening and questioning techniques and effective mode of communication to articulate complex concepts and present conceptualised environment to peers using relevant industry language
Initiative and enterprise	• Uses creativity and initiative in 3D design
Planning and organising	• Evaluates work and implements improvements using a systematic process

SKILL	DESCRIPTION
Self-management	- Plans, organises and completes work according to defined requirements and takes responsibility for decisions and sequencing tasks - Sources, analyses and evaluates data sources with potential to meet 3D design requirements
Technology	Uses key features of specific digital systems and tools to complete design tasks

Unit Mapping Information

Supersedes and is equivalent to ICTGAM524 Integrate multiple data sources into interactive 3-D environments.

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 ICTGAM550 Integrate multiple data sources into interactive 3-D environments

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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:

- create and test prototypes that integrate at least one data source into a working interactive 3-D environment.

In the course of the above, the candidate must:

- research and obtain data sources, tools and libraries needed to integrate elements into an interactive 3-D environment
- select data sources to integrate according to the following:
 - 3-D environment
 - game design
 - game genre
 - game mechanics
 - game-play elements
 - level specifications
- test functionality of interactive 3-D environment on at least one small device and one large device and confirm pixels are optimised
- deliver 3-D environment with working interactions including all data sources and documented reasons for its implementation.

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:

- industry standard data sources for different 3-D environments
- how game design, genre and mechanics, game-play elements and level specifications affect choice of data source

- key features of game-play hardware and software products used for interactive 3-D environments, including any technical constraints imposed on design and development
- technology requirements and human resources required in the process of creating a game, including team members' respective skills
- data source creation processes applicable to interactive 3-D environments
- prototype development processes applicable to integrating elements into 3-D environments
- testing processes applicable to developing 3-D environments
- industry standard tools and libraries used to integrate elements into 3-D environments
- organisational procedures applicable to integration of multiple data sources into interactive 3-D environments.

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:

- hardware, software, tools and libraries applicable to integrating multiple data sources into interactive 3-D environments
- digital devices
- data sources
- the internet
- 3-D environment requirements
- games engine
- file storage
- organisational procedures applicable to integration of multiple data sources into interactive 3-D environments.

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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