Australian Government

ICTGAM432 Create audio for digital games

Release: 1

ICTGAM432 Create audio for 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 produce and manipulate audio assets for digital games, using a variety of tools.

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

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
Elements describe the essential outcomes.	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
1. Research and document game audio in digital games	1.1 Identify and document trends and evaluate their impact on the future of game audio 1.2 Identify and document different methods of using audio in digital games 1.3 Identify and document role of music in creating mood and atmosphere 1.4 Determine and document how sound effects and vocals are used within digital games

PwC's Skills for Australia

ELEMENT	PERFORMANCE CRITERIA
2. Source existing sound effects, music tracks and voice recordings	2.1 Find sources of sound effects, music tracks and voice recordings
	2.2 Create and maintain a small collection of audio assets
	2.3 Identify different audio formats in audio asset collection
	2.4 Differentiate between compressed and uncompressed audio formats
	2.5 Identify different genres of music required for digital games
	2.6 Identify audio copyright laws and royalty-free audio
3. Record and manipulate game audio	3.1 Identify game context and establish client requirements for game audio
	3.2 Evaluate a range of industry standard audio-editing software and select software applicable to game audio requirements
	3.3 Record character voices, music and sound effects according to game audio requirements
	3.4 Develop a soundtrack using audio-editing, according to game and client requirements
	3.5 Rearrange audio samples using audio-editing software and apply required audio effects
	3.6 Select required sample format and bit rate
	3.7 Normalise audio samples and make volume uniform
	3.8 Trim audio samples according to task requirements
	3.9 Export audio to required format
4. Create sound effects and music for a game	4.1 Evaluate a range of music production software and select software applicable to game and audio requirements
	4.2 Identify digital sound waveforms
	4.2 Apply basic music theory to music production software
	4.3 Determine required musical notation
	4.4 Identify and use musical tools within music production software
	4.5 Compose a simple piece of music according to game audio requirements
	4.6 Create various sound effects according to

ELEMENT	PERFORMANCE CRITERIA
	game audio requirements
5. Research audio-programming libraries and integrate sound, music and vocals into digital games	5.1 Identify and compare functional capabilities of a range of industry standard audio-programming libraries
	5.2 Explore use of channels and mixing
	5.3 Play a mixture of cached and streaming audio sources
	5.4 Incorporate music and sound effects into different sections of digital game according to game requirements
	5.5 Locate and play positional audio sources
	5.6 Present to required personnel and confirm audio integration fulfils client and game 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	• Uses whole numbers, decimals and percentages applicable to file size, software and hardware specifications, measurement, pitch, speed, tempo, time, frequency, amplification and other attributes and variables in developing audio
Oral communication	• Uses listening and questioning techniques to gather information and requirements using industry language for intended audience
Reading	• Identifies and evaluates documentation containing complex technical and audio terminology • Researches use of audio in games and identifies required hardware, software and assets • Interprets and comprehends computer-generated text, audio tracks, abbreviations, symbols, icons, numbers and letters required in using audio-editing software
Writing	• Prepares documentation detailing research and sound effects

Skill	Description
	according to organisational requirements
Planning and organising	• Plans, organises and implements tasks required and achieves required outcomes
Self-management	• Takes personal responsibility and adheres to legal and regulatory responsibilities applicable to own work context and copyright laws • Implements actions as per plan, making slight adjustments as required • Identifies new ideas and adapts existing ideas to applicable context using exploration, analytical and lateral thinking
Technology	• Creates and saves files in required formats using digital systems and tools

Unit Mapping Information

Supersedes and is equivalent to ICTGAM414 Create audio for digital games.

Links

Companion Volume Implementation Guide is found on VETNet -
https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2