MSFID6002 Apply 3-D visualisation techniques to represent interior designs

Release: 1

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Modification History

Release 1 - New unit of competency

Application

This unit of competency covers using 3-D computer visualisation techniques to represent designs for interior environments using computer program applications commonly used to create 3-D visualisation representations.

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

Pre-requisite Unit

Competency Field

Unit Sector

Interior Decoration and Design

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.	
1 Analyse project	1.1	Applicable work health and safety (WHS), legislative and organisational requirements relevant to producing visual representations are verified and complied with
	1.2	Project brief is reviewed, confirmed and clarified with client
	1.3	Parameters for the project are assessed and confirmed
	1.4	Resources are selected appropriate to work requirements and checked for operational effectiveness
	1.5	Communication with relevant personnel is established and maintained as required

2	Select rendering application	2.1	Features of rendering software packages used in interior design and decoration visualisations are identified and uses determined
		2.2	Rendering requirements are determined from project documentation
		2.3	Rendering software with capability to achieve desired effects within the project timeframe and budget is selected
		2.4	Equipment and media are assessed as suitable for software and the achievement of desired effects
		2.5	Planning tasks are undertaken to prepare for rendering
3	Apply rendering functions	3.1	Image resolutions are selected and applied to meet project requirements
		3.2	Image aspect ratio is selected and applied
		3.3	Pixel ratio is selected and applied
		3.4	Renderer attributes are adjusted to obtain desired visual effects
4	Check render integrity and quality	4.1	Render integrity is tested and refined
		4.2	Missing images and textures are identified and re-linked as required
		4.3	Render times for optimising process are tested
		4.4	Alpha channels and opacity matts are tested
		4.5	Render layers and passes are tested
5	Optimise images for render processes	5.1	All relevant pre-rendering optimisations tasks are completed
		5.2	Renderer attributes are adjusted and refined to optimise render time
		5.3	Appropriate file output format is selected
		5.4	Appropriate file names and output destinations are selected

6	Render image	6.1	Final rendering processes are undertaken and completed
		6.2	Files are stored and archived
		6.3	Completed render is reviewed to ensure compliance with system and client requirements

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency. Detail on appropriate performance levels for each furnishing unit of competency in reading, writing, oral communication and numeracy utilising the Australian Core Skills Framework (ACSF) are provided in the Furnishing Training Package Implementation Guide.

Range of Conditions

Specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit context includes:	• WHS requirements, including legislation, building codes, material safety management systems, hazardous and dangerous goods codes, and local safe operating procedures or equivalent • work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures, Liveable and Accessible Housing Design guidelines, and organisation insurance requirements
Project brief includes:	• client needs and objectives • client aims and objectives, and criteria for evaluation • milestones • organisational or personal profiles and aims • image requirements and function • target market • budget • timeline • consultation requirements • colour requirements
Clients include:	• suppliers • manufacturers • private clients • colleagues • retailers • the public
Parameters include:	• scope of brief • approval to make changes • effect or feel trying to be achieved • functionality (short and long term) • budget restrictions • established timelines
Resources include:	• computers • computer software • design software • computer-aided design (CAD) software • colour boards

	• storyboards
	• swatches
	• product based colour systems, such as Munsell or similar
	• colour matching system, such as Pantone Matching System (PMS)
	• journals (directions magazines)
	• artistic equipment and products
	• model making equipment
Relevant personnel include:	• interior designer
	• modeller
	• texture animator
	• programmer
	• technical director
	• systems support officer
Rendering software packages include:	• AutoCAD
	• AutoCAD Revit 9
	• 3D Studio Max
	• Form Z
	• Animator Pro
	• Rhino
	• Photoshop
	• Illustrator
	• CorelDraw
Rendering includes:	• the pictorial representation of plans and elevations using colours, highlighting and shading to provide depth and photo-like drawings
Equipment and media include:	• computer workstation
	• ergonomic furniture
	• 3-D animation software
	• rendering software
	• render network distribution software
	• hubs
	• switches
	• input device (e.g. stylist tablet, keyboard and mouse)
	• output device (e.g. monitor, TV, printer and speakers)
	• render farm
Planning tasks include:	• research
	• production planning
	• production management
	• team discussions
	• lighting
	• texturing

	• shading
	• networking
Pre-rendering optimisation tasks include:	• selection of most appropriate renderer for specific outcome
	• assessing options with key personnel
	• deleting any unnecessary geometry and components
	• preparing renderer attributes
	• preparing layer or pass control
	• preparing opacity mattes and alpha channels
	• testing and diagnosing rendering issues
	• optimising and refining for best render performance
	• rendering
	• organisation of output
File output format includes:	• TIFF

Unit Mapping Information

Supersedes and is equivalent to LMFID6002A Apply 3-D visualisation techniques to represent interior designs.

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73