Australian Government

Department of Education, Employment and Workplace Relations

ICPPR387A Use colour management for production

Revision Number: 1

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Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to obtain an acceptable match across colour devices. It includes the correct use of colour profiles and calibration of monitors and output devices. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Application of the Unit

Application of the unit	This unit requires the individual to manage colour in digital production operations to ensure that proofs, monitors and final products match.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		
	ICPPR284A	Introduction to colour management

Employability Skills Information

Employability skills	This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Indentify colour requirements	1.1. Printing conditions are determined to identify colour management requirements 1.2. Printer's requirements are established to guide the provision and use of colour profiles
2. Calibrate digital devices	2.1. All ***digital devices*** in the workflow are calibrated to produce accurate colour reproduction 2.2. Device profiles created during calibration are correctly used and stored 2.3. Digital devices are checked regularly to ensure they are still within calibration 2.4. Profiles or equipment parameters are adjusted to bring devices back into calibration, when required 2.5. Records are stored to ensure calibration occurs regularly
3. Use colour profiles	3.1. Source and destination profiles are identified within the workflow 3.2. Profiles are used to ensure that colour on monitors, proofs and final product match as closely as possible 3.3. Images are converted to correct profile if incorrect profile is embedded 3.4. The correct rendering intent is used to ensure accurate conversion of colour
4. Configure software within the workflow	4.1. ***Software applications*** in the workflow with colour management features are determined 4.2. Software applications with colour management features are configured to meet output condition 4.3. A range of colour management presets are configured, saved and correctly used for various output conditions
5. Maintain colour management workflow	5.1. The colour management system is checked regularly to ensure consistent colour match 5.2. ***Monitors*** are calibrated regularly to ensure accurate reproduction of colour 5.3. Digital devices are re-calibrated regularly or when ***conditions change*** from initial calibration

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- occupational health and safety (OHS) skills for using correct ergonomics when operating the computer
- communication skills for expressing ideas and information by printing a test file on proofer
- collecting, analysing and organising skills for determining printing conditions in order to identify colour management requirements
- planning and organising skills for clarifying colour requirements before generating a proof
- teamwork skills for maintaining the production process in association with others
- numeracy skills in relation to densitometry, spectrophotometry and colour profiles
- problem-solving skills used when diagnosing and correcting colour problems
- self-management and learning skills to evaluate and enhance personal effectiveness
- technical skills for utilising software and hardware correctly to ensure consistency of output

Required knowledge

- OHS issues related to managing colour for digital production
- densitometric and spectrophotometric measurement
- International Colour Consortium (ICC) profiles and their use
- device independent colour and profile connection spaces
- colour space conversions and rendering intents
- effects ICC profiles have on output
- factors that influence selection of highlight and shadow aim points
- grey balance requirements in relation to colour correction
- process of determining grey balance requirements
- ink/toner light errors - 'ideal' versus 'actual' inks/toners
- viewing light conditions and metamerism
- factors determining the requirement for colour correction
- how different stocks affect colour
- effects different inks have on colour reproduction for proofing and final production
- how dot gain effects colour
- type of press and what printing process are being used for final output
- solutions to common problems for colour management
- effects of using the wrong profile on output
- sources of information about colour management

Evidence Guide

EVIDENCE GUIDE The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to: • manage colour in pre-press operations to ensure that proofs, monitors and final products match • locate and use information relevant to the task from a variety of information sources • check monitors and software to ensure that they have different loaded profiles that match jobs • apply colour management system maintenance procedures • produce three jobs with final product printed on various stocks and matching digital proofs on simulated stock.
Context of and specific resources for assessment	Assessment must ensure: • that conditions are typical ambient conditions found in the workplace • access to relevant facilities, equipment and materials used for colour management production, such as high-end graphics and layout software, densitometers, high-end colour output devices, proofing systems, scanners and digital cameras • use of culturally appropriate processes and techniques appropriate to the language and literacy capacity of learners and the work being performed.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • a portfolio that demonstrates all criteria have been met • practical demonstration by the candidate in matching proofs, monitors and the final product.
Guidance information for	Holistic assessment with other units relevant to the

EVIDENCE GUIDE	
assessment	industry sector, workplace and job role is recommended, for example: • ICPPP324C Create pages using a page layout application • ICPPP325C Create graphics using a graphics application • ICPPP386C Undertake digital proofing • ICPPP322C Digitise images for reproduction. For valid and reliable assessment of this unit, evidence should be gathered over a period of time through a range of methods for assessment to indicate consistent performance.

Range Statement

RANGE STATEMENT The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
Digital devices may include:	• monitors • proofers • printers • scanners • digital cameras • digital presses.
Software applications may include:	• colour management software, e.g. Colorsync • page layout software, e.g. InDesign and/or QuarkXPress • image editing software, e.g. Photoshop and/or Illlustrator • raster image processors (RIPs), e.g. Apogee, Spire and Fiery.

Monitors may include:	• range of monitors used in the pre-press sector, including:
	  • cathode ray tube (CRT)
	  • liquid crystal display (LCD).

Conditions may include:	• change of stock • ink cartridge • lighting.

Unit Sector(s)

Unit sector	

Competency field

Competency field	Printing

Co-requisite units

Co-requisite units		