
Overview

As digital workflows have developed, the complexities of colour reproduction have increased significantly for the pre-press technician. An image that looks fine on a display monitor may look nothing like it when printed on a printing machine.

There are many reasons why colour shifts occur. Understanding digital colour workflows and managing them to achieve the correct output is now at the heart of the pre-press technician's job.

This standard is about having control over the digital pre-press workflow to ensure that colours are properly represented to the customer from the outset, and that the colours when printed are predictable and meet the customer's expectations or are within acceptable commercial parameters for that piece of work.

Performance criteria

You must be able to:

Maintain digital pre press equipment in calibration

1. calibrate display monitors in the workflow to produce accurate colour reproduction
2. calibrate all output devices to meet requirements, including image setter/CTP setter and proofer(s)
3. calibrate any scanners in the workflow to meet requirements
4. store any device profiles created during calibration of monitors, scanners and printers in the correct location
5. check at regular intervals that all calibrated devices are still within calibration
6. adjust profiles or equipment parameters to bring devices back into calibration, allowing for various substrates
7. keep accurate records of calibration checks as required

Configure pre press software within the workflow

8. assess the settings for each colour management feature in each software application against job requirements
9. check that any software colour management features that may alter the colour values are correctly configured
10. establish the typical dot gain and configure the application software or workflow to make allowance for this
11. save software settings in the correct way once configuration is complete
12. use the correct processes to inform relevant colleagues
13. use appropriate reference material to check that hardware and software colour management configuration produces reliable colour reproduction on press and on 'high resolution' proofing device(s)

Use colour profiles correctly

14. select the correct destination profiles for outputting to specific devices
15. check that the correct source profiles are embedded in image files, assigning new profiles when appropriate
16. advise the appropriate person of the consequences when embedded source profiles is not correct or is missing
17. assign correct profiles to files after conversion to new colour modes
18. set all application software in the workflow to use source and destination profiles as required

Knowledge and understanding

You need to know and understand:

Health and safety

1. the hazards and risks in your own job, their assessment and the action to take to deal with them
2. manufacturer's health and safety requirements relevant to your job

Security and storage

3. computer system security and virus protection

Communication requirements and processes

4. how to communicate with colleagues
5. how to communicate with customers
6. how to communicate with suppliers

Workplace policy and practice

7. workplace objectives, priorities, standards and procedures
8. the range of work carried out in the workplace

The operation of equipment

9. the set-up of digital imaging equipment and software
10. the operation of digital imaging equipment and software

Digital imaging

11. colour theory and additive and subtractive systems such as RGB, CMYK colour gamuts
12. colour management and how to set up, maintain and use image profiles
13. how colour profiles, dot gain compensation or simulation, colour mode conversion or total ink content calculations can alter colour values in digital images
14. the principles of digital colour workflow, how it is configured and where colour mode changes and colour profiles are used
15. causes of colour shift and how to resolve them
16. the range of methods, equipment, material and software appropriate to the imaging requirements
17. the assembly and set-up of image editing and output systems

Digital files

18. embedded information

19. file management procedures
20. file types and which files formats can carry embedded profiles

Administrative procedures

21. the nature and use of record-keeping systems

Quality assurance and control

22. the main features of quality assurance and quality control systems
23. techniques for controlling quality, including inspection, testing, sampling, use of input and output controls
24. equipment for controlling quality in pre-press

Problem solving

25. techniques for solving complex problems
26. how cleaning, lubrication and maintenance can affect operation
27. the maintenance plans for machines which you operate

Proofing

28. the principal types of proof and their role in the printing process
29. the operation of image editing and output systems

PRODPP122 (SQA Unit Code - H9K7 04)

Manage colour reproduction in digital pre-press



Developed by Proskills

Version Number 2

Date Approved October 2014

Indicative Review Date April 2019

Validity Current

Status Original

Originating Organisation Proskills

Original URN PRODPP122

Relevant Occupations Originators compositors and print preps; Printers; Printing machine minders and assistants; Printing Trades; Bookbinders and print finishers; Graphic designers

Suite Pre Press

Keywords digital, print, pre-press, pre press, colour reproduction
