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**Graphic technology - Prepress data exchange - Preparation and
visualization of RGB images to be used in RGB-based graphics
arts workflows**

印刷技术 印前数据交换 基于RGB印刷工作流程中使用RGB图像的准备和可视化
(English Translation)

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Reference

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is equivalent to ISO 16760:2014 "Printing technology prepress data exchange based on RGB printing workflow use Preparation and Visualization of RGB Images.

Introduction

This document provides guidelines for image preparation and press simulation in a print workflow using RGB images (RGB workflow).

Digital camera (DSC) images have now largely replaced film in the prepress stage of printing technology, and most printed original images the standard document conversion using PDF/X-4 and PDF/X-5 formats supports the use of RGB content and provides a A "late binding" printing solution that performs color conversion only when the document is printed. In this way, all original image data is preserved.

These standard document formats provide a the ideal framework for an RGB workflow.

The best method for current image preparation is to view and adjust the image on a monitor. When adjusting RGB images, use a calibrated monitor.

Select the proofing mode with reference printing conditions. In this way, users can accurately preview the printing results. The workflow is shown in Figure 1.

shown.

Figure 1 The current best RGB workflow solution

This workflow has some limitations.

--- Although it is possible to set the display and calibration specified by AdobeRGB (1998) color image encoding or ISO/IEC 61966-2-1 viewing environment, but usually not all parties involved have calibrated monitors and the same viewing conditions.

In the workflow, stakeholders can easily share RGB reference prints;

--- For inexperienced users, evaluating color on screen is more difficult than evaluating it on print and the color results may not be what you expect.

As expected by users, the proposed RGB workflow is suitable for both experts and inexperienced users;

---The expected printing conditions must be communicated to each relevant party in an independent manner. All users need to know how to establish a suitable printing condition.

In the proposed RGB workflow, the expected printing conditions are included in the image as metadata;

---The approval status of the image is not clearly expressed. In the proposed RGB workflow, the approval status is included in the image as metadata.

Like in.

The proposed RGB workflow describes these limitations, as shown in Figure 2. In this RGB workflow, candidate images are Print on a standard RGB reference printer to produce an accurate simulation of the expected printing conditions. Check these the image is printed and, if necessary, further adjusted to achieve the desired printing result.

Add metadata that describes the intended printing conditions and approval status of the image.

Figure 2 RGB workflow from scene to print using RGB image data

Careful preparation of RGB images is key to a successful RGB workflow. When preparing images for printing, there are many aspects to consider, including the image Confirmation of highlights and shadows, and accurate mapping of important image colors to the press color gamut.

The size and shape of the image are significantly different from the set of colors represented in the image, so when editing the image, you need to be careful to preserve important colors.

This is done efficiently by associating RGB images with CMYK printing profiles. This document describes how to prepare these RGB images. Figure 2 shows the RGB workflow described in this document, R'G'B' is the prepared RGB image.

Note: For the proposed workflow, although the soft proofing observation environment does not need to be calibrated, the reference printer needs to be calibrated and the observation needs to be observed in the standard calibration observation environment.

If possible, use an automatically calibrated printer if the user is not familiar with the calibration process.

This workflow allows images to be prepared and merged into documents that can be printed on a variety of printing systems to produce external View similar prints.

When RGB image data is received based on hard copy prints, consistent judgments can be obtained.

The workflow supports PDF/X-4 and PDF/X-5 standard document formats. Documents are expected to be in ISO 12647-8 (certified print) or ISO 12647-7 (contract sample) for audit.

A printing system that meets the requirements of ISO 12647-8 or ISO 12647-7 can be developed to produce printed products in accordance with this document.

The system will be expanded to produce RGB reference prints. This system will provide users with a simple way to ensure that these images are printed reliably.

images or documents containing these images.

This workflow involves images that will be printed in four colors for commercial use. Photographers need to be aware that other possible printing methods may be required under certain printing conditions.

An alternative version of the image file.

Appendix D provides key details of the RGB workflow concept.

Printing Technology Prepress Data Exchange RGB -based printing workflow using RGB Image preparation and visualization

1 Scope

This document specifies the RGB working principle for print production based on reflective prints (RGB reference prints) as a means of evaluating color images.

Provides guidelines for the creation of RGB images targeted for printing (RGB reference images) and simulated printed products.

This document specifies that two ICC (International Color Consortium) profiles are required for each image to be recognized. an image profile and A profile that describes a reference printing system. These profiles provide individual color transformations for gamut mapping and separations.

Any guidance on how to specify these gamut mappings or separation transformations is