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# Using IRIS Proofs for Contract Proofing

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## Abstract

Contract proofing in prepress is a process where, for various reasons, only film-based halftone (or analog) proofs produced from separation films are being used and accepted. This paper describes the use of IRIS four-color continuous-tone ink-jet proofer using, producing proofs from digital data, for contract proofing. To achieve this prestigious task, IRIS proofs meet almost all contract proofing requirements with the exception of halftone dots. This paper also discusses how IRIS proofing devices change prepress workflow by providing users with intermediary controls during the job production process.

## Requirements for Proofing

The importance of proofing in prepress can not be denied. Initially provided to pressmen as press guides, proofing today is present in all the companies that deal with graphic arts, in prepress as well as in printing applications. Proof users, on top of expecting good color repeatability and compliance to industry standards, do ask for the presence of halftone dots and a control scale that will make pressmen comfortable.

These requirements are still valid. With prepress and graphic arts activities making increasing usage of digital data, film production with electronic prepress systems has almost stopped. In parallel, computers also entered press rooms, either inside the printing presses or in printing process and/or quality control procedures.

Because the evolving prepress and printing activities and also economical constraints, proofing requirements are changing. Issues like color repeatability, compliance to industry standards, presence of a control scale, cost-effectiveness, proofing time and usage of proofs for purposes other than contract proofing become more demanding. At the same time, prepress and press professionals started to talk, learn and think about colorimetry as an alternative to densitometry.

Presence of halftone dots on proofs, one of the major issues in proofing, started to lose its importance. Essentially because the vast usage of contone proofs in every prepress workflow phase and because the high labor and consumable cost of analog and digital halftone

proofs. Given these considerations, today, prepress and press professionals are questioning themselves if they really need halftone dots on proofs: if so, how much money is the industry willing to pay for halftone proofs, and, if not which kind of contone proof would be appropriate to replace halftone proofs.

## Re-engineering the Prepress Workflow

Usually, prepress workflow consists of phases: scanning the photographic originals and bringing in the text and graphics, photo-retouching, page makeup with images-text-graphics integration, and production of separation films. In general proofs in the intermediary phases of the workflow are produced rarely, if at all. In other words, proofs are produced at the end of the workflow, when the job is finished. And this, for two reasons: first, because nobody produces separation films during intermediary phases and, second, analog or digital proofing is very much time, labor and consumable intensive for this purpose. As a result, remakes involving one or more workflow steps are performed only after the final control, due to the unique halftone proof produced at the end of the workflow.

IRIS proofs are changing this methodology. More than 1,500 IRIS proofers installed in prepress and graphic arts environments witness this fact for the following reasons.

1. To generate proofs from digital data, there is no need to produce separation films. In other words, you can pull an IRIS proof before, during and after any phase of the workflow.

2. The cost of consumables being 1/10th of a halftone proof -analog or digital- and 1/5th of a dye sublimation proof (for the same imaging area or page size), users don't hesitate to produce an IRIS proof whenever they feel the necessity. Doing that, they become sure of the previous phase operation before starting the next one. Therefore, they minimize the number of remakes and they rework only the phase that really is involved when they a remake or a correction is necessary. Overall, this early diagnostic increases the turnaround time, without actually increasing proofing expenditures.

3. Albeit these good news, IRIS users do not have to make any quality trade-off. The proof-to-proof color repeatability is equal to that of film-based proofs. A recent experiment ran at a large American printer and additional tests performed at our premises and other customers sites showed us that IRIS proofs display a densi-

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tometric color consistency of  $\pm 0.05$  (around the baseline densities) for the primaries and overprints.<sup>1</sup>

4. Printing from digital data, IRIS proofers have also the capability that allow users to have multiple and user adjustable color tables. Doing that, the same digital image can be printed to have different color looks that match different color setups. This very important capability can be achieved thanks to the printable color space (gamut) of IRIS proofs that are larger than any color printed material.

This is basically why IRIS users feel so comfortable of using IRIS proofs and are already re-engineering their workflow.

## Reference

1. J. Ingraham, "Color Consistency of Continuous Ink-jet and Analog Proofs", *Advanced Printing of Third Technical Symposium on Prepress, Proofing and Printing*, Chicago, October 1993. (*see page 94*)