

Full-color daily pagination

Christian Science Monitor links desktop to high-end assembly, output

By Lawrence J. Goodrich

One of the premier examples of the use of color in U.S. newspapers, the *Christian Science Monitor* is perhaps the only such paper produced daily on desktop systems and printed with full color on every page.

The 20-page weekday tabloid is entirely computerized, from local and remote text entry to layout, color processing and pagination.

"Color is technologically as easy for us today as black-and-white," says Monitor editor Richard J. Cattani. "It brings a sense of activity to the newspaper, and of equivalence to television and glossy magazines in visual veracity and impact. In the areas of the arts and the environment, it reflects the sheer beauty of today's world."

Publishing in color is attractive to advertisers, as well.

"It's a well-known fact that color sells more effectively than black-and-white," says ad sales manager Nicholas Drinker. Because the paper is printed in color, he says, "I can add color to an ad easily and not have a huge expense. Then I can use that as a selling point. Color helps advertisers sell their products."

Since January 1989, when the current production system was introduced in two stages, the Monitor has used Scitex software and equipment for making color separations and plotting negatives, and QuarkXpress on Macintosh II computers for layout and pagination.

High-quality Monitor color reproduction results from careful attention to detail at every production stage. Photographers, who shoot mostly color slides, believe Fujichrome 100 and Kodak Ektachrome 160 tungsten films give the best results for publication.

Slides from staffers, Agence France-Presse and photo agencies are scanned on Scitex scanners. In addition, the Monitor's electronic photo desk can download digital images from AFP and Reuters via PressLink

using PressLink Access, Adobe Photoshop and TOPS software on Mac IIc's.

Like many other papers, the Monitor is experimenting with electronic photo transmissions from staffers on remote assignments.

During the Republican presidential nominating convention in Houston, Monitor photographers shot Kodak Ektapress 400 and 1600 film. The color negatives were scanned on site using a Nikon 3510AF film scanner connected to a CD-ROM drive as a

are fetched from the Atex front end by modem and fed into the makeup department's Ethernet network for placement on pages already containing photos and graphics.

Deadlines are set by page, meaning that all stories on a page are due at the same time. The process of placing copy on the page and printing a proof takes about 15 to 20 minutes. Editors get a black-and-white copy and usually about 25 minutes to proof it, assuming stories have met deadline.

Pages are released for color pro-

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SCSI bridge into an Apple Powerbook 170, a laptop Mac with 8MB memory and 80MB storage.

The images, 60 picas, one point by 6.7 inches, were captioned and set at a resolution of 60 pixels per centimeter on the Powerbook. Photographers then sent the photos to Boston on AppleShare using a T-56 line directly into a DEC VAX at the Christian Science Publishing Society.

Because the digital image files were not compressed, the process took about 40 minutes per photo. After an operator in Boston had downloaded the files into a Mac IIc with a 150MB hard drive, images were color corrected, sharpened, cropped and sent to makeup, where they were imported directly onto pages.

The procedure resulted in the publication of 13 convention photos in the Monitor.

Most artwork is created in Adobe Illustrator on Mac II's. The graphics department's computers are networked to those in the makeup department. Once created and proofread, the artwork is sent directly to makeup, where it is electronically pasted on pages.

Editors submit layout sketches to the makeup department, which turns them into electronic dummies using XPress. Stories at the final edit stage

cessing an hour after the copy deadline. They are processed on Scitex Assemblers, and color negatives are output on a Scitex Raystar plotter. The pages are then trucked to Gannett Co.'s Boston Offset plant in suburban Norwood. At the same time, digital versions of the pages are transmitted by satellite to Gannett's Phoenix Offset plant.

Beginning some time this fall, Norwood will begin receiving pages electronically, and the color negatives will be plotted at the plant, as they are in Phoenix.

Color reproduction quality also is enhanced by the Monitor's heavier-than-usual newsprint: Abitibi-Price's Premium 70, a special 35-lb., 70-brightness stock.

"This newsprint has the characteristics needed to accept full four-color printing and does not yellow as soon as conventional newsprint. It is also highly compatible with the soy-based inks we use in our color," says Wayne Kayser, assistant director of print publishing for the Christian Science Publishing Society, the Monitor's publisher.

He added that both plants are very pleased with "the consistency of the quality of the paper . . . since it reduces web tears and other press problems."

(Goodrich is publications editor of the *Christian Science Monitor*.)