DIGITAL DIRECTIONS

PMA '92: The Year of Change?

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Editor's Note: Contributing editors Jack and Sue Drafahl own and operate a full-service commercial photo lab just outside of Portland, OR. Services include audio visual productions, computer graphics and stock photography. The Drafahls are also contributing editors to Petersen's Photographic, and specialize in photo lab procedures.

IF WE HAD to give PMA '92 a title, we would probably bill it as "The Year of Change." As we wandered from aisle to aisle, it was obvious that everyone had their bigger, better, new, improved, state-of-the-art everything displayed.

But, we saw a trend developing.

There seem to be three types of photo lab systems emerging. Traditional wet lab systems are still holding ground with new, improved versions of their previous models. The controversial full electronic dry lab systems were shown in force, demonstrating their image capture systems and related electronic printing.

A relatively new kid on the photo lab block, a third photo lab system, we labeled The Hybrid. This more conservative approach to electronic photography combines the best of both the conventional wet lab and electronic photography into one package. Most of these systems are designed to use the newest electronic capture systems and then output

the image onto RA-4 printing paper.

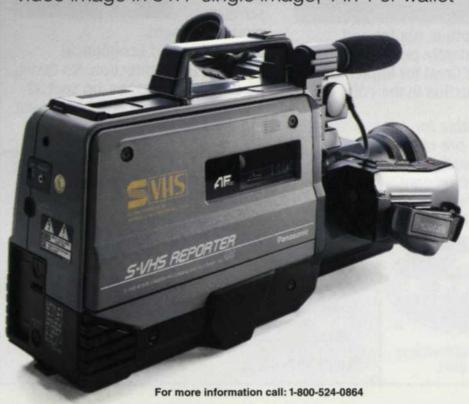
There are new additions in the film market as well as some cameras and lenses that made their debut at PMA. But, the main activity seemed to come from the retailer who needs information and a helping hand to break into the electronic age.

Some of the other more popular electronic items shown at the show included: flat bed, drum and film scanners; CRT printing systems; video still cameras; CDs and high-resolution continuous-tone color electronic printers. To give you a better idea of how photo labs are going electronic, we decided to review a few items we found most interesting.

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Nutek, Inc.'s Digital PhotoPrinter takes advantage of both high-quality digital imaging and printing on the most economical RA-4 color paper. This system is designed to work on either Macintosh or IBM 486 computers and the images are scanned into the system via a Microtek flat bed scanner or Nikon's film scanner. The scanned image can be manipulated for contrast, color balance, and exposure or electronically retouched and text can be added. The finished image is printed on RA-4 color paper using a new imaging technique called Fiber Optics Technology (FOT).

Nutek claims that the benefits of lower cost per print, higher output, lasting capability and high quality of color paper make this an ideal system for the lab of the future. Most impressive was the cost comparison between electronic paper output and RA-4 paper output. Nutek's research showed that the electronic dye sublimation paper costs between \$2.50 and \$4.50 per print for an $8\frac{1}{2}x11$, while the RA-4 paper

cost is between 30 and 50 cents.

A special high-speed CRT printing system was shown by Agfa as its contribution to the hybrid processing systems. The Digital Print System is more specialized in its operation as it is designed to input only color slides, and output them to color negative RA-4 paper. The system includes an entire workstation with a high-speed slide scanner, image processor, and CRT printer. The unit is designed for extreme high speed and can output up to 1,400 31/2x5 prints per hour. The CRT printer can produce prints up to 8x12. The majority of the slides can be scanned in using the normal automatic setting, but there is also an override button to correct for over or under exposed slides.

Fuji's contribution to the new high-tech lab comes in the form of a full electronic dry lab operation, the Fujix Pictography 2000. The original image is scanned in with a unique three cluster LED scan and imaged on thermal transfer imaging film.

The dry image forms in the film and thermal transfer of this dye image gives the finished copy. The first image takes about 2.5 minutes from input to output, and the remaining copies take about 1.5 minutes. The advantages to this system are the lack of darkroom and related facilities, high-resolution and long-term image stability.

3M's approach to the new hightech lab revolves around their new Laser Imager, now combined with a Pictographics image manipulation system. Images are scanned in and exposed on paper or film via three laser diodes which are combined into a single beam. The 3M Color Laser Imager uses special photographic color paper for prints, and transparent, polyester-based material for transparencies. The paper or film is processed in a washless processor system and output at the rate of 175 sheets per hour for the 8x10 paper. The unit can address over 16 million colors, which is required for

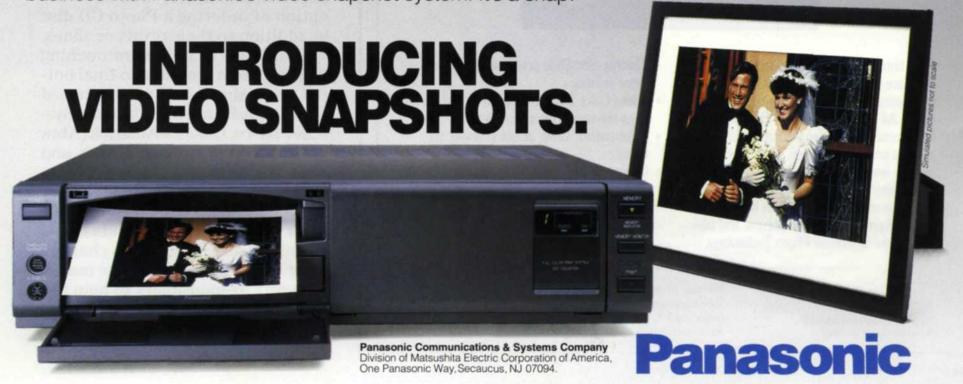
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MADE LIKE THIS

size singles. Your customers will love them; they can even make their own prints with Panasonic's wired remote. (The reverse sides of the prints are postcards.)

Panasonic's video snapshot system is extremely easy to set up. The versatile AG-EP60 video printer features video, s-video and RGB inputs, plus the wired remote port and a character generator port for titling.

Whatever business you're in—photo processing, copying, video rentals, etc., do more business with Panasonic's video snapshot system. It's a snap!



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continuous tone color prints. Multiple processing units can be attached to one Imager for even higher image output.

Polaroid had both electronic scanning and printing technology to offer, displaying several of its various imaging products. Many applications were shown, including digital copy and restoration. Output can be set up for instant or thermal prints and transparencies.

A new portrait retouching system developed by Photo Electronic Corporation of West Palm Beach, FL and marketed by Eastman Kodak Company was shown during a series of private demonstrations at PMA '92. The Digital Laser Retouching

System (DeLores) scans an original color negative image for digitizing and then writes the finished image to 70mm color negative film using newly developed technology previously established by PEC for their laser copy service. A future model will be able to write to 35mm film.

Cymbolic Sciences International featured its newest model, the Fire 1000+ continuous tone film recorder. This unit is designed to meet the needs of photo labs requiring film recorders to produce digital transparencies of quality comparable to

commercial photography. One of the important ingredients in the new electronic photography systems is image manipulation software. Once the scanner or video digitizer has imported an image, the software allows the photographer to edit the image before it is sent to the output device. Wasatch's Portfolio software package is a full-feature photo manipulation software package that includes graphic design, photo retouching, and many illustration features. The software includes 250 postscript (EPS), computer graphic metafile (CGM), tagged image film format (TIFF), and True-

variety of retouching services.

1992 marks the year of the CD. Kodak will formally have the CD workstations ready for shipment in April and the photo CD players will be available this summer. With Kodak's system, consumers can bring their film to the photofinisher for processing and they will have the option of ordering a Photo CD disc in addition to their prints or slides.

vision Inc.'s Format (TARGA) file formats. With this software, photo labs can generate brochures, displays, package designs, and offer a

Additional complete retouching systems, from scanning to final output, were shown and demonstrated by Abra, Advanced Multimedia Systems, Barco, Colenta America (Abra system), Dicomed, Hope, Kodak, and Superset/Photoguip.

PMA '92 offered a wide variety of innovations, but it seemed obvious to us that the photo lab industry is definitely changing. If the changes are going to happen, it is the manufacturers' responsibility to help the lab owner through these changing times.

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