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GATF
2004 InterTech Technology Awards
Profiles of 13 Recipients, Plus 20 Nominees

ALSO: COMPLETE YEAR-BY-YEAR LISTING OF RECOGNIZED TECHNOLOGIES SINCE 1978
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Honoring Excellence

As a group, the 13 technological innovations that each earned a Lucite™ star in the 2004 GATF InterTech™ Technology Awards program reflect the current needs, interests, and emphasis of the printing industry: less labor, more quality and efficiency, standardized terminology, better substrates and consumables, and improved response tracking, digital printing, and software.

For this reason, the InterTech program—sponsored and conducted by the Graphic Arts Technical Foundation (GATF), Sewickley, Pa., affiliated with the Printing Industries of America (PIA)—is both a wonderful scorecard of current industry innovation and an accurate barometer of evolving trends and priorities, notes PIA/GATF chairman John Green (president of Automated Graphic Systems, Inc.).

Green adds, "This prestigious program honors excellence in the development of new technology predicted to have a major impact on the graphic communications industries; in this pursuit, InterTech has an extraordinary track record, with more than 80% of past recipient technologies having proven to be commercially successful in the marketplace."

Under the direction of John Lind, PIA/GATF director of research, an independent selection committee—composed of business and production specialists, technicians, and researchers, whose identities remain anonymous—examines the InterTech entries.

JUDGED AGAINST SPECIFIC CRITERIA

Each nominated technology is carefully judged against specific criteria developed to identify promising innovations: it must (1) be proven in industrial application, (2) be available in the marketplace, but not yet in widespread use, and (3) be beyond beta testing.

In the following pages are profiles of all the technologies that describe their intended function and innovative nature, significant impact, and beneficial applications. Particularly insightful are the comments of users and early adopters, derived from letters of nomination in which hard-nosed business and production managers in graphic arts companies size up their experiences and offer expert observations.

2005 Competition

Companies interested in sharing their latest technologies with the industry are urged to submit entries in next year's InterTech Technology Awards program. They should contact John Lind, PIA/GATF director of research, at (412) 741-6860, ext. 585, or jlind@gatf.org, for full details. Entries for the fee-based program must be postmarked by May 15, 2005; judging follows later, with companies earning awards notified soon after.

2004 GATF InterTech Technology Award Recipients

- SPLOX™ Speed Loading Box from Boise Cascade Corporation, Paper Solutions
- FOLDRite™ from Finishing Experts Group, Inc.
- FloClear Fountain Solution Recycling System from FloClear L.L.C.
- Genicap Supergraphx™ from Genicap Corporation NV
- Speedmaster SM 52 with Inline Die-Cutting Unit from Heidelberger Druckmaschinen AG, represented by Heidelberg USA, Inc.
- Hammermill® Color Copy Gloss from International Paper
- Rollin® Stabil-X Offset Blanket Technology from MacDermid Printing Solutions
- Vision 3 Engraving Head from Max Daetwyler Corporation
- Applause No-Process Thermal Printing Plates from Presstek, Inc.
- CONFIRM® Service from United States Postal Service
- iGen3 Digital Production Press from Xerox Corporation
- PersonalEffect™ from XMPie Inc.
in 2004

Readers should not overlook the "Nominees" section, beginning on page S24, where brief profiles provide similar information on 20 additional technologies that were submitted in the 2004 program. The section is packed with gems of information, innovation, and user insights.

Recipients of the 2004 InterTech Technology Awards will accept their Lucite trophies from PIA/GATF on November 13 in Atlanta. The special presentations will take place at a VIP awards banquet held at the Ritz-Carlton Buckhead.

Also, technologies will be presented in detail at GATF’s Tech Alert 2005 Conference, to be held in Pittsburgh February 6-8.

BIBLIOGRAPHY OF INNOVATION

The GATF InterTech Technology Awards program, conducted annually since 1978, has now recognized 188 individual innovations (the complete list begins on page S30). While some years in the 1970s and '80s saw the presentation of only four or five Lucite stars, many more awards have been given in recent years, testimony to the heightened pace of innovation. In fact, nearly 30% of all awards have been bestowed in just the past five years.

Graphic Arts Monthly is proud to cooperate with PIA/GATF in preparing this InterTech Award Presentation Annual Technology Booklet, which profiles innovations representing the very best efforts in development of products and solutions that advance the state of the art of the printing industry.

By Roger Ynostroza
Editorial Director

2004 GATF InterTech Technology Award Nominees

- World Ci/Maxima Digital Spray Dampening System from Baldwin Technology Company, Inc.
- Multi-Drop Array™ Imaging Technology for the Veris™ Proofer from Creo Inc.
- EFI PrinterSite Internal from EFI
- Co-Res Screening, from Fuji Photo Film, Ltd. from Enovation Graphic Systems, Inc.
- Jaws PDF Courier from Global Graphics Software, Inc.
- Prinect Color Solutions from Heidelberger Druckmaschinen AG
- Prinect Printready System from Heidelberg USA
- HP Indigo Press 3050 from Hewlett-Packard Company
- KBA 74 Karat with Plastic Kit from KBA North America, Inc.
- SWORD Excel Thermal Printing Plate from Kodak Polychrome Graphics
- I-Trap Software from Lucid Dream Software, Inc.
- Roland 700 DirectDrive from MAN Roland Druckmaschinen AG
- Roland 900 XXL Press from MAN Roland Druckmaschinen AG
- Roland 500 Press from MAN Roland Druckmaschinen AG
- Acoro Perfect Binder from Muller Martini Corp.
- Concept 21™ Fountain Solution Delivery System from RBP Chemical Technology, Inc.
- PlateRite Ultima 32000S from Screen (USA)
- World Series™ Sheetfed Process Inks from Sun Chemical Corporation
- Nuvera Digital Copier/Printer from Xerox Corporation
- MonacoOPTIXr Colorimeter from X-Rite Incorporated
SPLOX™ “Speed Loading Box”
Boise Cascade Corporation, Paper Solutions, Itasca, Ill.
(888) BOISE 34, www.bc.com

This ergonomically designed delivery system for cut-sheet paper, based on patent-pending design technology, has been shown to significantly reduce the risk of employees’ musculoskeletal injury; improve the speed at which workers can access, transport, and load office paper into equipment; and protect contents from shipping damage, moisture, and dust without the need for individual ream wrapping.

The SPLOX box is the only corrugated paper carton to offer a handle, simple splay-open design, and 25-lb. load.

Boise officials note that SPLOX technology, developed in direct response to customer needs and input, helps minimize employee effort in workplaces that typically are understaffed today. Nationally, they explain, workers’ compensation claims cost employers more than $50 billion per year; musculoskeletal injuries account for about one-third of all workplace reports, but about 75% of all costs. The unique design of the new delivery system dramatically reduces strain on a worker’s wrists, shoulders, lower back, and spine compared to use of a standard carton containing 10 individually wrapped reams.

Third-party testing has indicated 47% productivity improvements. In just two steps, a worker can open the SPLOX carton for direct access to 2,500 sheets of reamless paper, enabling placement of paper into the equipment three times faster than normal. When compared to unloading a standard 10-ream carton, including removal of ream wrap, the effort needed to unload SPLOX paper is reduced in time by 69% and muscle exertion by 77%.

The integrated, wide-grip handle reduces the load on the body by lessening the need to bend when lifting the box; plus users can carry the box at their sides rather than in front of their bodies.

One judge expects the system to have a notable impact on quick-turnaround digital printing centers.

The end-user’s price for the SPLOX box, which is being marketed for the first time this year, depends on volume purchased and delivery requirements through an approved Boise distributor. Customers can expect a slight premium for SPLOX compared to normal 10-ream paper cartons, say officials.
NovaJet® 1000i with Intelligent Mask Technology™
and Rapid Evaporation Drying System

(858) 677-5182, www.encad.com

The NovaJet 1000i, the first printing device to be jointly developed by Encad (strengths in hardware and systems optimization) and Kodak (extensive research and expertise in ink formulation and media), delivers speed, image quality and color brightness, reliability, ease of use, and extremely low cost per print.

The ink-jet system, available in 42" and 60" imaging widths, features innovations in print head technology, pigmented inks, print masking, advanced drying, and software. The unit is designed for use by creators of point-of-sale advertising and display graphics, sign shops, exhibition fabricators, and commercial photographic laboratories.

An all-new 640-nozzle thermal print head allows high-speed production, with an image resolution of up to 1,200 dpi, leading to maximum output speeds of 150 square feet per hour in photo-quality mode. This is said to be at least two times faster in a given unit of time than its nearest competitors. Over a one-year period, this output rate equates to more than 150,000 square feet more production capacity based on an eight-hour, five-day shift.

PATENTED INK PRODUCTION
The NovaJet 1000i utilizes Quantum Ink, developed and manufactured by Kodak using more than 10 patented technologies, some involving nanoparticle milling, which is offered in two choices. Qi Dye Ink features excellent color gamut and superior durability, while premium Qi Pigment Ink, a universal ink set that can be used to print both long-term indoor and UV- and water-resistant images for durable outdoor media (Kodak Performance Guarantee of 30 years), produces a color gamut unmatched by any other pigment ink.

To control and improve print masking, a process in which the ink-jet printing device applies a screen to image files to determine which dots are fired during each pass by the print head in a given print mode, the NovaJet 1000i utilizes proprietary Intelligent Mask Technology. This dynamic technique, which is unique in that it uses a different print mask for each color plane in a given print mode, lays down ink in a randomized pattern for each color. The result: less banding and controlled coalescence.

A dual-component drying system enables images to be rolled onto the take-up roller at full machine speed (actual drying unit rating: 220 square feet per hour), thus maximizing printer productivity, minimizing wait-time for finishing operations such as lamination, and eliminating the need for a print hanging area. The components include a heated nose, which conducts moisture out from the back of the print toward the surface, and an ambient air blower, which transports this moisture away from the media surface, resulting in prints being fully dry when imaged at full machine speed.

Finally, unique software developed by Encad manages workflow with software-enabled precision calibration, automated networking set-up, and remote printer access.

TWO TO THREE TIMES FASTER
One field-test user, Ralf Wilkowski, president of Sign It, a San Diego, Calif.-based provider of point-of-sale and display graphics, reported that, even printing at 115 square feet of output per hour, the NovaJet 1000i is around two to three times faster than any device in the shop, with no sacrifice in quality.

Another early user, Daniel Grewich of Big Ideas, a digital design, banner, and sign shop in Las Vegas, Nev., cited the NovaJet 1000i's high productivity rate, reliable cartridge design, and "plug and play" cartridge and ink refill bottle use.

Pricing for the NovaJet 1000i is $11,995 for the 42"-wide model, $16,995 for the 60"-wide device.
FOLDRite—called by its creator an original, landmark standardization effort for the bindery, one of the last print production areas to be universally defined—is a comprehensive brochure folding classification system based on the establishment of naming conventions and clarification of folding terminology.

Says the creator, Trish Witkowski, president of Finishing Experts Group, Inc., “FOLDRite, the first-of-its-kind industry resource for brochure folding, is a product of seven years of intensive field research with binderies, printers, and designers. It aims to standardize the folding process with a logical system of naming and numbering conventions, levels of difficulty to help with budgetary issues, formulas for proper digital document compensation, and helpful considerations and illustrations.”

Standardizing the language and math behind mechanical brochure folding, she adds, aids in communication of folding intent from document creator all the way to postpress. Moreover, FOLDRite has the potential to pave the way for JDF integration as its formulas and terminology may be integrated into programmable folding machinery, imposition software, and plug-ins.

Remarked one InterTech judge, “We should encourage this standardization.”

186 Styles, Eight Families

The FOLDRite system names 186 folding styles and classifies each into one of eight folding families: accordions, basics, exotics, gates, maps, parallels, posters, or rolls. It describes each fold and assigns it a number, a level of difficulty (four available), and format options. Additional information includes dimensions and directions, special considerations, folding sequence illustrations, and compensation diagrams for proper digital document set-up.

The methodology can be purchased in a two-volume, 850-page book, FOLD: The Professional’s Guide to Folding ($145) or via a subscription to a dynamic, on-line, custom template-building system at FOLDfactory.com ($129 a year). Proper use should lead to fewer errors and less rework resulting from miscommunication, clear and verifiable job specifications in the beginning of the process, easy communication between designer and printer, and affordable access to everyone in the industry.

Says user Kevin Ness of Innovative Technologies in Print, Elizabethtown, Pa., “FOLDRite provides the necessary information to assure that when the press sheets arrive in the bindery, the operators will have the precise dimensions for trims and scores, enabling them to complete the project accurately. Considerations for paper weight, ‘push-out,’ and folding sequence are key.”

Norman C. Beange, president of Specialties Graphic Finishers, Ltd., Toronto, observes, “The Professional’s Guide to Folding book, to my knowledge, is one of a kind, something that should greatly reduce mistakes between designers and finishing companies. It is a useful tool worth several times the price.”

The two-volume book, adds Martin Anson, president of Bindographics Incorporated, Baltimore, Md., will ensure good communication and accurate results from the start of a job to the finish. “This is a must-have resource for print and design professionals,” he says.
PIA/GATF is calling for nominations for the prestigious InterTech Technology Awards

Inaugurated in 1978, the award honors excellence in the development of new technology predicted to have a major impact on the graphic communications industries. Sponsored by PIA/GATF as a service to the industry, the competition encompasses a wide range of technologies that contribute to improving graphic arts techniques and processes.

The award has become a solid indicator of significant trends in graphic arts technology. Over 80% of past recipients have proven commercially successful in the marketplace.

PIA/GATF's post-competition program offers both recipients and nominees an opportunity to increase the visibility of their product or technology. Beginning with the press release that announces the recipients, a full communications campaign gets underway.

The selected technologies are honored at the annual emerging technology PIA/GATF Tech Alert Conference, where the award recipients will be introduced to the top industry technologists and printers from all over the world.

Questions regarding eligibility should be directed to John Lind, GATF Director of Research, Phone: 412-741-6860 ext. 585, Fax: 412-741-2311, email: jlind@gatf.org

Application forms are available by contacting John Lind, or downloading a PDF from our website at GAIN.net (industry awards.)

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FloClear™ Fountain Solution Recycling System

FloClear, L.L.C., Plano, Tex.
(972) 424-0792, www.floclear.com

Utilizing a patent-pending three-stage process, the FloClear system cleans and restores the fountain solution used in web and sheetfed press dampening systems to a fresh-mixed condition.

Adopters report dramatic results: extending the usable life of their fountain solution for six months or more; averting press downtime by not needing to dump or change fountain solution because of necessity or when switching between hybrid, UV, and conventional inks; being able to run metallics and white inks without changing fountain solution; and slashing the cost of hauling away waste fountain solution.

ROI IN A YEAR, OR LESS

Even if a printing facility is not hauling away waste fountain solution (disposal costs typically range from $50 to $400 per drum, depending on location and regulations), the manufacturer says that a return on investment of less than a year—in some cases, a few months—can be attributed to improved press productivity and/or reduced downtime, enhanced blanket life because of less pilling, reduced maintenance, and the saved expense of just one or two reprints caused by color variations.

Lake County Press, Inc., Waukegan, Ill., installed a FloClear system in June 2003 on a central chiller feeding four 40" multicolor Speedmaster sheetfeds, adding a second system two months later for a 12-color Speedmaster perfector. In April, Daniel F. Murphy, pressroom supervisor, reported that both units had been performing exceptionally well.

Murphy added, “We run several million impressions per month and have now gone more than six months without once changing the fountain solution. Before, we were dumping fountain solution every week so we could start fresh on Mondays.” He said operators had to wrestle with variations in water/ink settings as the week progressed.

On the 12-color, running varnishes normally contaminates the water but, he says, “FloClear has been the perfect tool for optimizing the performance of this high-productivity press. We consider FloClear to be the best return on investment we have ever gotten on a pressroom accessory.”

Dean Alger, pressroom technical coordinator for Visual Systems, Inc., Milwaukee, a $14 million specialty shop, cites the importance of fountain solution stability when printing UV inks on plastics and other unusual substrates. “Previously, we flushed our tanks every two weeks,” he says, but after adding two FloClear systems last year, “we now just replenish what’s lost to evaporation.”

Improved water stability represents other crucial benefits, notes Alger, including saved downtime by not having to shut down each press for three hours every two weeks, less chemistry consumption, and better operating consistency and higher quality resulting from steady water settings.

NO NEED TO DUMP FOUNTAIN SOLUTION

A third user is B.F. Nelson, Savage, Minn., a large-format producer of high graphic printed packaging, including paperboard and corrugated. The company previously was dumping fountain solution from its two 56"-wide KBA presses every three days, but since installing a FloClear system and adding a new 64" KBA press, it has not needed to dump fountain solution despite running its equipment three shifts. Also previously, adds printing superintendent Al Gramont, operators had to check and adjust conductivity every hour; now, checking continues hourly but no conductivity adjustment have been necessary since January.

To trap contaminants, the FloClear system uses a three-stage combination of filtration, separation, and adsorption technology that is mechanical in nature, not chemical, so it adds nothing to the fountain solution. Says its developer, Roy Seibert, “The system gets down to the sub-micron level to remove colloidal [very small] ink particles, paper, and spray powders. In fact, fountain solution is almost clear after circulating through the three stages.”

Seibert refers to studies showing that an eight-color 40" sheetfed press typically requires the operators to dispose of 40 gallons of fountain solution each week, or nearly 2,100 gallons per year, equivalent to 38 drums. “At $250 a drum, that’s $9,500 in waste disposal alone,” he says. “Factoring in downtime for fountain solution change-out really adds to the expense, which is why this system is so attractive to printing managers.”

More than one judge said, “I’m going to buy it!”
With FloClear You Can Actually See the Increase in Your Profitability!

- Higher Productivity Leads to Improved Job Delivery
- Improved Color Consistency Results in Fewer Reprints
- Reduced Contamination Minimizes Maintenance and Troubleshooting
- Reduction in Paper, Ink and Chemical Usage Lowers Production Costs

Actual results from a MAN Roland 8 Color, 40" Sheetfed running 24/7

Rave Reviews from FloClear Users

“Water is just not an issue anymore. We no longer chase color or have to change fountain solution when we switch between hybrid and conventional inks. .”
Shawn Welch - American Printing, Madison, WI

“The fountain solution is much cleaner and clear and I haven’t had to shut down to clean the pans. . I am amazed that we haven’t had any problems running UV. .”
Dean Alger - Visual Systems Inc., Milwaukee, WI

“By far the best return on investment we have ever gotten on a pressroom accessory. .”
Dan Murphy - Lake County Press, Waukegan, IL

“The consistency is unreal, 20 washes a day, 23 PMS colors in one job, including metallics. . When can we get a second one. .”
Frank Molina - Global Group, Fort Worth, TX

2004 INTERTECH TECHNOLOGY AWARDS

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Genicap Supergraphx™ Productivity Software
Genicap Corporation NV, Antwerp, Belgium
(011) 32 3 663 05 82, www.genicap.com

This revolutionary series of software plug-ins and stand-alone products uses a recently discovered algorithm (the Gielis Superformula) to simplify the core technology used to define and create simple and complex shapes, both symmetrical and non-symmetrical, in two dimensions and three dimensions.

By significantly increasing the speed of design generation and production, the software enhances the efficiency and productivity of graphic artists, production designers, and print production specialists. In addition, the software improves workflow by reducing file size by as much as 1,000 times, making it easier to work with and transfer graphics files.

The initial titles in the series include a plug-in that expands the 2-D capabilities of Adobe Illustrator, a similar 3-D plug-in for Maxon Cinema4D modeling software, and a stand-alone application for generating 3-D shapes and models with greatly reduced file sizes. Additional titles are being developed for Maya 3-D animation software, Adobe Photoshop, Microsoft PowerPoint, and other popular graphics programs.

Using the Supergraphx software and the Superformula, circles, squares, polygons, triangles, leaves, ovals, and sunbursts, plus an almost infinite variety of shapes can all be described with one simple formula and can be easily scaled or transformed into different shapes by changing only one or two variables. This makes it possible to automatically generate an endless stream of creative options, multiplying a designer's productivity in a fraction of the time, and rendering the final design in a fraction of the file size needed by more traditional programs.

Says one user, Albert Kiefer of Sector A Illustrations in Venlo, The Netherlands, "As a graphic designer and 3-D artist, I am constantly challenged to create highly intriguing artwork...[Two] Genicap applications have enabled me to create shapes and structural forms that have served as either the basis of my 3-D illustrations or even been pushed into the prime spotlight."

He says he could not have realistically created one of his illustrations, Future Fossils (shown at left), in a reasonable time without Genicap's 3D Shape Explorer. Kiefer adds that producing three or four different shell forms, or more than a dozen forms that are genetically different though still recognizable as related shapes, would have been impossible by traditional means. However, he was able to create hundreds of variations during one comfortable afternoon.

Comments a second user, Timm Dapper, who operates his own computer graphics, media design, and software development agency in Duisburg, Germany, "Working with Genicap's Supershape products nearly every day for a while has changed my workflow tremendously. With a very small set of parameters, I can now generate a wide variety of curves and shapes that are a huge hassle to create by hand. Also, creating complex organic objects has become a breeze, and I save a lot of valuable time."

As one GATF InterTech judge remarked of the Supergraphx software, "Brilliant! It's off the charts in terms of innovation."
Designed specifically to meet the needs of small-format commercial printers, the 14 x 20½” Speedmaster 52 specially equipped with an in-line rotary die-cutting unit (model SM 52+D) allows for a fast, efficient, and versatile print-and-finish operation in a single pass.

At full press speed of 15,000 impressions per hour (depending on stock weight and die complexity), sheets can be scored, slit, punched, or perforated; in addition, cutouts up to a certain size can be automatically stripped away by suction.

Instead of traditional clamps, magnets are used to mount the metal die on a special cylinder, which is also equipped with a system for remotely adjusting register in lateral, circumferential, and diagonal directions. A positioning rule facilitates placement.

The entire press and die-cutting unit is controlled from the Prinect CP 2000 Center, where all press-related functions are monitored and from which the operator can adjust color, register, and press speed, as well as die-cutting depth.

**AUTOMATIC WASTE-STRIPPING**

The innovative waste-stripping function eliminates the high-labor step of having to break out die-cut forms by hand. Vacuum supplied through the magnetic cylinder and the die itself holds the cutout onto the die-cylinder surface until waste pieces are picked up by a suction device and conveyed into a container. To operate properly, the plate must have gaps corresponding to the cutouts so that they can be held on the cylinder until the suction hood takes them off. If waste stripping is not in use, the die plate can be solid.

The same die, which is made using digital data or conventional film, can be used for scoring, punching, perforating, and die-cutting.

For special applications like creasing, a female die can be mounted on the impression cylinder.

The array of single-pass output is extensive, from self-adhesive postage stamps (requiring high-precision rules and exact adjustment of cutting depth to avoid cutting through the backing material) to folding cartons (blanks can be cut and scored with still-wet inks). Complex folding carton forms require an appropriate counter die, which is clamped in place on the impression cylinder (for simpler applications on lighter-weight stock, a counter die can be glued onto the impression cylinder).

The SM 52+D is available in four-, five-, and six-color configurations; the system cannot be combined with an on-press coater.

**RADICAL SINGLE-PASS PRODUCTION**

Reports Paul Coulson, managing director of In-Print Color & Die Cutting, North Yorkshire, United Kingdom, “The six-color SM 52+D we installed in August 2003 gives us a radical new approach to printing multicolor work and varnish in a single pass while turning work around faster and producing much higher quality.” Compared to the previous two-step process of printing and finishing, he says, in-line die-cutting eliminates work-in-process handling and significantly shortens makeready.

Automatic waste removal also eliminates tell-tale “tags” common in old-style die-cutting, Coulson adds.

In the Netherlands, Druckerei Van den Bosch and Flikker replaced two offline cylinder systems for its finishing work, says Jan Willem Kamerling, chief executive. A job with 150,000 impressions that once took three weeks to complete can now be finished in just a few days.

Says Kamerling, “By going after new markets, we’re now using the die-cutting unit 80% of the press time and we’re running the equipment two full shifts, producing cigarette boxes, stickers, presentation folders, and brochure covers.”

Heidelberg has conducted productivity and cost studies comparing the single-pass SM 52+D with an off-line system using a conventional SM 52 for printing and a cylinder press for die-cutting. On a 25,000-copy job, the SM 52+D cut production time to about 25%; on a run of 1,000, required time amounted to less than half.

As for production costs, the off-line system proved to be 81% higher on a run of 25,000 compared to the SM 52+D, 30% higher on a run of 10,000. Because of high die costs, considered identical in the cost study for both in-line and off-line production, the SM 52+D had little cost advantage in very short runs; however, on 5,000 copies, it was 14% less costly than off-line production.

A six-color Speedmaster 52+D lists for about $1.1 million.
Ten years of research and product development have led to the creation of a patent-pending innovation, Hammermill Color Copy Gloss, called the only commercially available coated sheet that will run in electrophotographic copiers and printers without feeding jams or blistering.

The cast-coated sheet, which has an aqueous undercoat layer and an aqueous overcoat layer, is designed to eliminate all the common problems associated with high-heat toner fusing on coated stock, including melted coating (sticking to the drum and color problems), jamming issues, and cracking at the fold.

Combining the benefits of a gloss sheet with the performance guarantees of a premium uncoated paper gives small and medium-size commercial printers a reliable alternative to offset printing when they want to use a gloss sheet that's imaged on a digital printing device or copier.

**CRUCIAL PERFORMANCE MEASURES**

Three critical performance measures—runnability, image quality, and blister resistance—are important.

The smooth surface of gloss-coated sheets presents challenges for runnability in sheeted digital color copiers and laser printers. Sheets that are too slick will slip and jam. Hammermill Color Copy Gloss is coated on both sides with a mixture of pigments and a binder that gives the surface enough roughness and friction to run well in electrophotographic equipment.

The binder resin for the pigment coating is critical to toner adhesion. If the binder resin does not have sufficient binding strength, poor toner adhesion and even fuser backing can occur. Hammermill's new product offers excellent toner adhesion and superior image quality in both color and black-and-white printers and copiers.

Finally, color copiers and even some high-speed black-and-white copiers use high heat to fuse toner to the surface of the paper. With high heat, moisture under the coating layer can cause the sheet to blister. Color Copy Gloss from Hammermill offers excellent blister resistance.

According to the manufacturer, while other commercially available gloss-coated stocks have failed to overcome the shortcomings of blistering and feeding jams in high-speed copiers and printers, the new product has made short-run commercial printing on gloss paper an affordable and reliable alternative.

A jammed piece of equipment can be a serious expense. For example, a typical service call to clear the jam costs $225 for the first hour, $42 for each additional quarter-hour. By the time users factor in productivity losses attributable to downtime and missed deadlines, a paper featuring superior runnability clearly offers a better return on investment.

"EXCITING ALTERNATIVE" TO DULL, MATTE

Chad Schembri of Marketing Technologies, Kansas City, Kan., says, "Over a year ago, we were looking for an alternative to the usual dull, matte, and uncoated papers required for standard laser copier equipment. As an integrated direct-mail marketing company that requires inventive, practical, and highly personalized solutions for our clients, Hammermill Color Copy Gloss paper was an exciting alternative."

"After significant testing on all our equipment, we found Hammermill's product to be highly consistent. The product did not jam or wrinkle and it imaged simplex or duplex with no problem. Toner adhesion to the gloss surface was superb."

Schembri's company uses the new coated paper for the gaming, jewelry, and financial industries.

David Pike of The Pikewood Companies, encompassing five firms that have been providing affordable color printing products and services to the Bethlehem, Pa. community for 15 years, reports, "We've used Hammermill Copy Color Gloss over the past year and have been exceptionally pleased with its performance. Most coated papers run poorly on copiers and printers, but Hammermill has created a gloss sheet that runs consistently well."

He adds, "Toner adhesion to the glossy surface is notable, and the sheet always makes our work look good, quickly and consistently. This premium sheet has made printing on glossy stock hassle-free."

Dispatch is an enterprise in Erie, Pa. encompassing five affiliates offering offset and digital printing, forms, fulfillment, and creative/preflighting services. Chief executive E. Joseph Mehli says, "Since we added full-color digital printing to our product line, our customer base has demanded digital reproduction on gloss papers. Until the introduction of Color Copy Gloss, the choices were quite slim and the performance of the papers very inconsistent. Hammermill's new product line has changed this environment."

Adds Dan Moschhauser, manager of Dispatch's Fulfillment Plus unit, "Color Copy Gloss is an excellent choice for digital printing on gloss paper."
Award winner.
(What were the judges thinking?)

For the first time in its history, the Graphic Arts Technical Foundation gave a GATF InterTech® Technology Award to a paper: Hammermill® Color Copy Gloss. It's the first gloss-coated sheet that runs well in color printers and copiers. So now you can make your next comp an award-winner—starting with the paper.
Rollin® Stabil-X Offset Blanket Technology

MacDermid Printing Solutions, Atlanta, Ga.
(423) 586-4441, ext. 245, www.macdermid.com

Called the first significant breakthrough in offset blanket technology since the introduction of the compressible layer many years ago, the Rollin Stabil-X blanket makes use of high-tech synthetic fibers and a polymer backing instead of traditional nitrile rubber and cotton fabric.

As tests and applications prove, the high-tech design and structure provide higher print quality, better blanket stability on press, and new limits for the productivity of a press.

The STX 107 blanket, the first product release in a planned line of blankets for various uses, is designed for commercial printing and packaging printing on sheeted presses. In field tests and commercial applications, the STX 107 blanket lasted twice as long as a conventional blanket, required fewer washes because of lower ink and water settings, showed improved resilience, provided quicker startups, and reduced customers’ ink consumption.

At the same time, the construction and surface features of the Stabil-X blankets were shown to produce excellent dot reproduction and solids coverage, resulting in consistent print quality over the life of the product.

The dimensionally stable polymer construction eliminates the need for periodic re-torquing and re-tensioning, plus its consistent thickness over its useful life eliminates sinking, or loss of gauge on press. Use of engineered polymer also requires a thinner layer, which allows room for a much thicker compressible layer (0.028") compared to that found in a traditional blanket (0.016"); this thicker layer enables the Stabil-X blanket to withstand smashes and edge cutting unlike any fabric-backed product.

CHEMICALLY INERT, LONGER LIFE

The polymer backing, which unlike fabric backings can be ground on both sides to exact dimensions, is chemically inert, which means that it is immune to chemical soaking and moisture pick-up commonly found among fabric-backed blankets. This leads to longer blanket life, explains the manufacturer.

In the cushion layer, high-performance aramid yarns, adopted from use in aerospace, ballistic life vests, and sports competition, feature high strength and high elasticity. The result is reduced elongation to break under increasing loads compared to traditional blankets, plus greatly improved blanket creep under tensile stress, again without need for re-torquing.

Also compared to traditional blankets, Stabil-X products have been proven to swell much less when immersed in blanket washing solutions, whether those used in manual or automatic washing systems, and also less when immersed in conventional or alcohol-free dampening solutions.

Graham Gould, production director of MiroPress Limited, Suffolk, United Kingdom, says the company has been using Stabil-X blankets on its two five-colors, a Heidelberg Speedmaster 74 and Speedmaster 102 perfector with coater, printing on stocks ranging from 70-gsm bonds up to 400-gsm boards.

Gould reports, “None of these materials have posed any problems while using the Stabil-X blanket. I attribute this excellent performance across such a wide range of stocks to superior release performance and ink transfer, improved dot reproduction, and excellent wear characteristics.”

BLANKET USAGE DROPS 50% TO 60%

Although the Stabil-X blanket is initially more expensive, he adds, “Its cost savings and extra durability have helped us cut overall blanket usage by about 50% to 60%.”

Another client is Litografia Gela, Nichelino, Italy, which has been using the Stabil-X blankets for sheeted and web production. Andrea Soldano says, “Since we began using the blanket last October on our finest sheeted, a five-color Roland 700, we have seen improved printing quality, flexibility when switching sizes and papers, excellent ink transfer, absence of swelling, and better blanket life.”

Also in Italy, Giampietro Mandini of Cantelli Rotoweb, Castel Maggiore, reports, “We began using the Stabil-X 106 blanket in April 2003 on our Nebiolo Target II web press for commercial jobs of higher quality. Right away, we noticed better quality, both as print results and mechanical resistance. When we started using the Stabil-X 107 blanket on our Nebiolo Target III sheeted press earlier this year, we achieved similar results.”
THIS IS INNOVATION

Stabil-x

TECHNOLOGY

Revolutionary Blankets

Award Winning Technology

Stabil-x technology is the first major innovation in offset blankets in over 20 years.

Its unique construction and high tech, synthetic materials produce a blanket that can last up to two times as long as conventional blankets.

Stabil-x

THE NEW STANDARD IN OFFSET BLANKET TECHNOLOGY

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MacDermid
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www.macdermid.com
800.348.7201
Vision 3 Engraving Head

Max Daetwyler Corporation, Huntersville, N.C.
(704) 875-1200, www.daetwyler.com

The Vision 3 engraving head offers publication and packaging printers increased productivity using the highest engraving speeds available: 8,600 Hz for fine-screen cell depths up to 35 microns deep, and 8,100 Hz for depths up to 60 microns deep, typically used for packaging screens. The head can be retrofitted to existing M820 and M850 engraving machines, upgrading the speed of 3,200-Hz heads by 153% and 4,500-Hz heads by 80%, with no variation in print image.

In an electro-mechanical engraving system, the engraving head uses a diamond stylus to cut cells into the copper cylinder based on image data, for example, moving the stylus fully into the copper to cut a full cell for a 100% black tone or moving it away from the copper altogether for a 0% white tone. The stylus moves into the copper proportionally for intermediate tone values. A second AC signal causes the stylus to vibrate back and forth to create the individual cells.

Engraving speeds are automatically determined based on the screen and diamond stylus used. The cell rate of 8,100 Hz is the most common speed, covering the largest portion of packaging and publication requirements. This speed is constant throughout the depth range of 35 to 60 microns and screen range of 125 to 500 lines per inch (lpi).

At the 8,100 Hz cell rate, the Vision 3 head reaches a true engraving speed of nine square feet per hour at 150 lpi. For screens requiring less than 35 microns in depth, the Vision 3 head automatically adjusts to 8,600 Hz, further increasing productivity without physically changing to a different head.

The Vision 3 head also features digital mid-tone correction, a simple correction curve applied to the engraving data as cells are cut to adjust for subtle differences in the 50% range between two heads, one calibrated for 25% highlight cells and the other for 100% shadow cells.

Edward Broadhurst, vice president of Keating Charlotte, Charlotte, N.C., reports improving engraving throughput by 33% while maintaining high quality.

Dick Batchelor, engraving manager for CNW, Inc., Cincinnati, praised the Vision 3 unit for dramatically cutting engraving turnaround times, producing excellent head linearity, and maintaining high quality.
Applause No-Process Thermal Printing Plates
Presstek, Inc., Hudson, N.H.
(603) 596-7000, www.presstek.com

The Applause process-free plate is based on a unique coating structure that applies an ablative, hydrophilic ceramic coating to an ink-receptive substrate. A thermal laser exposure system physically ablates, or removes, the hydrophilic coating where the laser strikes the plate; the subsequent printing image is formed by revealing the ink-receptive layer beneath the hydrophilic coating.

Because image formation is accomplished by physical removal of the hydrophilic layer, the plate is 100% prepared for printing inside the computer-to-plate (CTP) imager, with no additional steps required before printing.

The Applause No-Process Plate can go directly from the imager to the press; in fact, no further preparation or treatment of the plate is required on press, unlike plates requiring “on-press developing,” which also are sometimes described as “process-free.”

NO BAKING BEFORE OR AFTER
The new plate requires no pre- or post-bake step and can be handled in all lighting conditions. It can be used with virtually all commercially available fountain solutions, with alcohol and alcohol substitutes, with all commercially available inks, and in manual, semi-automatic, and fully automatic plate loaders.

Says Presstek, process-free, digital platemaking offers many benefits to offset printers, starting with elimination of all cost concerns associated with the purchase, storage, and disposal of plate-developing chemistry. These costs can be substantial as some studies reveal that developing chemistry accounts for about 25% of plate cost for CTP systems; in addition, there are expenses attributable to product inventory and disposal of spent chemicals, which represents an environmental issue.

There are also high overhead and labor expenses in operating and maintaining chemical plate processors, which by their nature represent a more complex process, introducing risk of errors, inconsistency, and unpredictability.

Finally, the use of a ceramic compound to form the wetting surface of the Applause plate eliminates the need to gum the plate before, during, and after printing. Gum contributes to roller glazing in offset presses, and excess gum on traditional offset plates can slow the roll-up to color. Applause plates, says Presstek, wet out readily and achieve color stability very quickly.

After using Applause process-free plates for several months, Denny Curry of Gemini Printing & Office Supply, Marathon, Fla., says, “Print performance has been excellent and we are realizing significant savings in our platemaking operation because of the eliminating of developing chemistry. We print with various ink and fountain combinations and routinely achieve fast roll-up and exceptional color stability through the press run.”

CAN'T IMAGINE GOING BACK
He adds, “Having completely eliminated plate processing and all associated materials and steps, I cannot imagine going back to traditional platemaking. We're achieving better quality, we cut makeready times by 37%, and we’ve eliminated alcohol and plate-related gums, etches, and finishing solutions.”

After 41 years of experience in dealing with offset processes, Curry says Presstek’s Applause No-Process Plate ranks up there with the negative polymer plate as “an infinite advancement in the offset field.”

After a year of using Applause No-Process Plates, president Gene D. Scott of Pony X Press Printing Services, Reynoldsburg, Ohio, cites monthly savings of more than $3,000 on developing chemistry. This is in addition, he notes, to a significant improvement in the operation’s environmental impact, i.e., eliminating the purchase, use, and disposal of developing chemistry.

At the same time, Scott adds, “Print performance has been excellent; we are very pleased with this product...I cannot imagine going back to traditional platemaking.”
CONFIRM® Service
United States Postal Service, Washington, D.C.
(202) 268-7221, https://mailtracking.usps.com

Postal experts note that, in the $900 billion mailing industry, direct mail represents the most targetable, measurable advertising medium available; however, up to now designers, printers, advertisers, and retailers have had to rely on focus groups and seeded mail pieces to gain a campaign's effectiveness. By providing accurate, real-time, actionable data, the CONFIRM Service enables mailers to monitor their campaigns, document which concepts work best, and maximize their investment.

Subscribers apply a Planet Code to each mail piece, along with a PostNet Code already in the address block, to uniquely identify each letter or flat. During processing, executed at sorting throughput rates of more than 30,000 pieces per hour, the U.S. Postal Service scans each piece using high-speed equipment. CONFIRM technology collects location-specific data, allowing subscribers to track their individual items in the mail stream, that is, each solicitation en route to the consumer, and each new order mailed back.

WHEN DELIVERED, IF A RESPONSE IS EN ROUTE
Retailers know precisely when an advertisement is delivered, and can calculate with certainty not just whether the offer produces a response, but how quickly the response comes in. Thus, the CONFIRM Service enables companies to identify the most effective graphic treatments and offers, know what combinations of advertising media yield the highest response rates, and even act real-time to reinforce their messaging to stimulate traffic and sales.

"CONFIRM technology tells us when our customers receive our offers," says Martin Bernstein, postal affairs manager for J.C. Penney Co., Plano, Tex. "That may sound like a small thing but when we mail more than a billion pieces a year, it is critical to know when customers receive the advertisements, how long it takes them to come into our store or place an order, and which themes, offers, and presentations work best. I can't imagine operating without CONFIRM service."

Bank of America's Peter Glenn, director of postal operations working in the corporate and procurement services unit in Charlotte, N.C., says the bank has used CONFIRM Service for more than two years, each month coding and monitoring about 20 million pieces each way, to and from their destinations. "This service is saving us more than $1 million per month," reports Glenn. "It has helped Bank of America become more intelligent about the way we produce and present mail, and has allowed us to vastly alter our collection call centers' procedures. Customer mail has become more valuable to us and to our success."

Capital One, a global financial services company that is a leader in both the U.S. credit card field and in consumer lending products, relies on advanced information technology for acquiring and retaining customers. Peter Deck of Capital One Services, Inc., Richmond, Va., says that, although the company has done very well in marketing the right offer to the right person, the challenge has been timing, that is, determining when a prospective customer actually received an offer.

PROVIDING THE MISSING LINK
He says, "CONFIRM Service technology provides the missing link..."

...the delivery data we need to synchronize our marketing efforts, determine what products prove the most valuable for our prospects, and begin new relationships with customers."

The new service also helps Capital One manage its incoming payment operations. "For the first time, we know not only how many payments are en route, but from whom, allowing us to staff and process inbound payments more efficiently, and avoid the call center costs and negative repercussions of placing unwarranted calls to our customers," Deck explains.

He concludes, "We currently track millions of pieces annually, and are achieving savings as a result."
SHIPPING WITHOUT THE SCHLEPPING.

When you can't come to the Post Office,™ let the Post Office come to you. Just go to usps.com, where you can print labels, pay for postage, and your carrier will pick up your packages for you. To learn more, visit usps.com/clicknship. It's just one more way the U.S. Postal Service® is working for you.
DocuColor iGen3 Digital Production Press
Xerox Corporation—Production Systems Group, Webster, N.Y.
(585) 423-5090, www.xerox.com

The DocuColor iGen3, described as a completely digital xerographic color production press unlike any other imaging device, is designed to fulfill the print media trends of shorter run lengths and faster turnaround, plus the growing demand for variable-data output that's key to one-to-one marketing and programs that emphasize customer relationship management.

The unique system—more than 300 patents are issued or pending—utilizes a totally new imaging process, coupled with intelligent paper handling and advanced control algorithms. The result, say officials of Xerox's Production Systems Group, is a press with benchmark quality and reliability.

Output quality, they note, has the look at feel of an offset print, surpassing the "glossy" appearance often associated with xerographic products.

REINVIGORATES ONE FIRM, ADDS TO ANOTHER
One early user is Mike Pannagio, chief executive of DME, Daytona Beach, Fla., a direct marketing firm that billed about $80 million last year and maintains a steady annual growth rate of about 20%.

"I've been waiting for the Xerox iGen3 digital press for more than 20 years," he says. "Now that it's here, I am successfully migrating over our direct mail work from laser overprinting on offset shells. With our three iGen3 systems, we are producing as many as 800,000 impressions per week and are on track to top 20 million by the end of this year. Within three years, we expect to move 80% of our 185 million pages of annual print work to the iGen3 platform. Truly, the iGen3 is reinvigorating our business."

Adds John Green, president of Automated Graphic Systems, Inc. (AGS), White Plains, Md., "I am very pleased to report that 85% of my company's production on our new iGen3 is new business—which we are winning by adding value, not cutting prices...Customers are willing to pay for next-day delivery of marketing materials, which we provide with the iGen3's outstanding image quality and registration."

AGS, which prints one- and two-color books, journals, and loose-leaf books, is part of the Consolidated Graphics, Inc. network, composed of 65 printing companies in 25 states. On the basis of AGS's success, Green notes, Consolidated Graphics recently made Xerox the exclusive provider of digital color printing technology for all its locations; already, the company has installed five other iGen3 systems.

CONSISTENT, PREDICTABLE, ACCURATE
To gain the confidence of commercial printers, quality had to be consistent, predictable, and accurate, sheet to sheet and machine to machine, and for print-on-demand operations the system reliability had to be paramount, with a low problem rate, easy diagnosis, and simple repair.

Finally, the system had to offer extensive paper versatility; the standard configuration runs stocks from 16-lb. bond up to 110-lb. cover (60 gsm to 300 gsm), coated or uncoated, smooth or textured, plus specialty stocks and labels, in sheets up to 14.33×20.5" in size.

To ensure sheet-to-sheet and shift-to-shift consistency, the press calibrates the color between every impression, then executes single-point transfer to the paper, the only system so configured. To help boost productivity, paper feeders can be replenished and the output stacker cart unloaded while the system is running; plus the easy-to-load dry ink containers can be replaced at full press speed.

A top tray enables production of press proofs and intelligent fusing and decurling adjusts for differences in stock and ink coverage.

The iGen 3 system, rated at up to 6,000 letter-size CMYK prints per hour, utilizes three modules in Xerox's patented SmartPress Technology, an intelligence and engineering controller:
• SmartPress Imaging, which controls print and resolution functions, plus benchmark gamut;
• SmartPress Media Handling, which controls all substrate functions, from sheet position and velocity to set collation and in-line and off-line finishing; and
• SmartPress Sentry, built-in intelligence that uses sensors and algorithms to monitor every print, adjust to paper characteristics, provide on-line diagnostics, and provide maintenance and service notification.

EXPERT CONSULTATION AVAILABLE
A fourth module, SmartPress Services, involves expert consultation for customers and prospects in which Xerox specialists study a given business, help develop a profitable business plan, perform a workflow analysis, then, as appropriate, guide the planning, installation, and successful deployment of an iGen3 system at the site.

The press also connects directly to users' networks, their customers, and the Internet, enabling a streamlined workflow; from remote job submission to proofing to print on demand.

Users can choose a Creo Spire color server, a Xerox DocuSP color controller, or an EFI Fiery color controller as their RIP.
PersonalEffect™ Application Suite and Platform

XMPie Inc., New York City, N.Y.
(212) 479-5137, www.xmpie.com

PersonEffect software from XMPie was specifically developed for the efficient, timely creation of dynamic documents—in print and digital media—utilizing contemporary one-to-one marketing strategies, on-demand enterprise publishing solutions, and modern data-intensive documents, all founded on the premise of intelligently combining marketing and information, with desktop simplicity.

The software enables enterprises and their marketing service providers to quickly and efficiently design and produce highly customized, information-driven, cross-media campaigns that rely, not on mass marketing, but on pinpoint database or “relevancy” marketing: relevant content, at a relevant time, through a relevant media channel, for each recipient.

The result, studies and experience show, is dramatically higher response rates, at impressively cost-effective returns on investment. Media options can include print, the Internet, e-mail, mobile communications, and more.

DESKTOP-CALIBER EASE OF USE

Core to the PersonalEffect software is desktop-caliber ease of use so that originators of publishing work—including authors, creative professionals, and document owners—can prepare high-impact marketing materials, complete with commercial-grade production and workflow integration. Significantly, the originators can accomplish this without extensive training, yet without having to rely on production specialists, programmers, or HTML or scripting wizards.

XMPie’s flagship application suite and software platform consists of three main modules:
• uPlan, for specifying business rules and data interaction;
• uCreate, for creating dynamic documents; and
• uProduce, for originating the campaign-development workflow and managing multiple-media production, including connectivity to databases, uGen rapid Web-development environment, and extensive APIs to ease Web enablement of campaigns.

With XMPie’s platform architecture, a single business or several collaborating entities, such as enterprises, agencies, and print service providers, can prepare dynamic documents via a streamlined, unified, cross-functional workflow. In this way, a print document and a Web page, for example, can share the same logic and data, leading to efficiencies and consistency.

Recommended users of this application software, according to XMPie officials, include innovative digital commercial printers, direct marketing advertising agencies, marketing services providers, and publishing enterprises.

LESS-EXPENSIVE DYNAMIC MARKETING

According to XMPie officials, compared to using conventional methods, developing dynamic marketing campaigns using PersonalEffect software can be much less expensive, in many cases amounting to just 50% or even 33% in terms of time and money.

More affordable and effective campaigns, they add, can lead to even better results. In one case, a return on investment of 400% was measured comparing sales directly attributed to investments made in campaign development, while in another, a service provider improved its capabilities so much that it was able to increase its revenues by 65%.
World Ci/Maxima Digital Spray Dampening System
Baldwin Technology Company, Inc., Shelton, Conn.
(800) 654-4999, www.baldwintech.com/spraydampening

The use of commercial-grade technology in Baldwin's World Ci/Maxima spray dampening systems for heatset commercial and insert-type web presses promises an array of benefits: quality improvements, in terms of reduced dot gain, better contrast and gloss, and more consistent ink density; less electricity use and gas consumption; time savings, via faster make-ready and set-up, with less downtime and maintenance; reduced fountain solution and ink consumption, and less paper waste, resulting from shorter makereadies.

Companies such as Banta, Courier Printing, Fischer Printing, ProLine, Transcontinental, and Vertis have equipped more than 50 new and existing press lines with World Ci/Maxima dampening technology over the last year, reports Baldwin.

EFI PrinterSite Internal
EFI, Foster City, Calif.
(650) 357-3500, www.efi.com

This Internet-based system can increase a printing company's bid-to-win ratio by streamlining the workflow between field sales personnel and plant employees in creating RFQs (requests for quote). EFI PrinterSite Internal, available today with EFI Hagen OA, EFI Logic, and EFI PSI management information systems, collects, organizes, validates, and delivers print job specs and status information.

From an interactive, Web browser-based "desktop" at a remote location, sales people can access customer information such as quote management, order processing, job status, and invoice and job history tools. The suite can be operated on a notebook computer, personal digital assistant, cell phone with Web browser capabilities and wireless networking support, or any computer with Internet access.

Multi-Drop Array™ Imaging Technology for the Veris™ Proofer
Creo Inc., Burnaby, British Columbia
(604) 451-2700, www.creo.com

Multi-Drop Array imaging technology in the Veris proofer generates identical 3-picolitre ink drops, then precisely steers each to its exact pixel location, creating proofs with higher color precision and image quality than more expensive halftone proofing technologies. Eight million ink drops per second are delivered to the media, resulting in fast production printing at full 1,500 x 1,500 dpi resolution, producing exact colors, plus smooth vignettes, excellent shadow detail, and fine text clarity.

At ColorGraphics, Inc., San Francisco, pressroom technicians were initially skeptical about ink-jet proofing, but the company now expects that the Veris proofer will substantially eliminate all or most of the halftone-dot proofing systems in use.

Co-Res Screening, from Fuji Photo Film, Ltd.
Enovations Graphic Systems, Inc., Hanover Park, Ill.
(900) 877-0555, www.enovationsgraphics.com

Co-Res (pronounced Co-Ray) software allows printers equipped with computer-to-plate (CTP) devices to apply the advantages of conventional screening to fine-line, high-quality printing, gaining increased productivity of high-line screening and superior reproduction of details in highlight areas.

For example, Co-Res Screening allows 300-line screens to be output with a resolution of 2,400 dpi, half that required for conventional 300-line screens. This eliminates the coarseness commonly associated with halftone dot reproduction. Additionally, the moiré effect caused by conflicting halftone dots is suppressed, while the rosette pattern is minimized because the dots are smaller in size. The combination allows once-difficult textures (flesh tones, clothing, textiles, metals, scenery) to be printed with realism.
New Dimension Excel CTP systems make platemaking better, faster, and more economical.

Dimension Excel CTP systems with Presstek process-free plates help you achieve maximum profitability and higher productivity.

Dimension Excel CTP systems are available for a range of format sizes and productivity requirements, including the newly announced full automation add-on.

Learn more about a Smarter Way to Print.

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800-524-0003 ext. 3399,
info@presstek.com or at

www.presstek.com
**Jaws PDF Courier**
(703) 266-9588, www.globalgraphics.com

This Internet-enabled electronic document delivery toolkit enables print service providers to receive only print-ready PDF files from their customers. The software development kit consists of an easy to configure set of client- and server-based applications. Customer-generated PDF files are automatically encrypted for security, can be previewed and preflighted prior to submission, and are delivered exclusively back to the print provider’s site for decryption.

Also, browser-based applications such as Web-based job ticketing, tracking, auditing, and billing can be integrated into a Jaws PDF Courier workflow. Features include a Client Builder Application, SendIt Application, and Server Applications, plus a preflighting option.

**Princtect Printready System**
Heidelberg USA, Kennesaw, Ga.  
(770) 419-6567, www.heidelberg.com

Called the world’s first prepress workflow based entirely on the JDF standard, Princtect Printready simplifies and accelerates all prepress tasks, allows more efficient job planning, and enables central monitoring of the entire process. The system can “talk” to JDF-compliant management information systems and also deliver data for presetting presses and finishing systems.

The highly scalable system consists of desktop tools, for controlling and working on jobs, and engine modules, for fully automated production. A common user interface can be expanded to accommodate new components or optional extension of existing modules.

Crowson Stone Printing, Columbia, S.C., a field-test site for Printready, MedaDimension, and SignaStation, uses the workflow for all its proofing and CTP demands, producing up to 1,000 plates per week on average.

**Princtect Color Solutions**
Heidelberger Druckmaschinen AG, Kennesaw, Ga.  
(770) 419-6572, www.heidelberg.com

This new development in closed-loop color management between prepress and press is designed to reduce press makeready to the absolute minimum, maintain color fidelity and consistency throughout the run, and ensure the closest possible match between proof and press based on ICC standards. It builds on the Speedmaster CP2000 press console, Princtect Image Control quality measurement system, and the Princtect Printready workflow system.

The use of special “MiniSpots” provides the means for automatically detecting changes in dot gain due to variables such as paper, ink, and even blanket wear. This technology slashes makeready time and waste, especially during job changeovers; typical makereadies may require just 200 to 300 sheets, rather than up to 1,000 sheets as commonly required.

**HP Indigo Press 3050**
Hewlett-Packard Company, Littleton, Mass.  
(888) 238-0749, www.hp.com/go/graphic-arts

The digital HP Indigo press 3050, specially designed for demanding production environments, provides medium- to large-size commercial printing companies with high quality, on-demand, variable-data printing capability, delivering up to seven-color printing, high-definition images, and excellent substrate selection.

The press’s high image quality (said to rival and in some cases surpass that of offset), combined with high-volume printing capacity, says HP, is ideal for creating high-impact, high-return marketing collateral and direct-mail pieces.

The system, which utilizes innovative liquid electrophotography technology, prints Electroink, which combines liquid ink containing electrically charged particles with HP Indigo’s offset color process. Rated throughput is 4,000 four-color 8½x11” single-sided images per hour, imaged two-up.
KBA 74 Karat with Plastic Kit
(802) 878-9400, www.kba-print.com/vt,
www.karatpress.com

The 74 Karat, known as the world’s only waterless 20×29” digital offset press, featuring quick startup and low waste, is designed to produce short-run conventional offset printing.

With a Special Plastics Option, the keyless press can be used to print on a variety of plastic substrates, including PVC, ABS, PC, PS, and PET, both transparent and opaque, producing a wide array of products, such as credit cards, adhesive labels, packaging foils, PVC advertising banners, three-dimensional posters (including lenticular screens), signage, point-of-sale materials, gift cards, and security items.

The configuration includes a special ionizing system, extra air systems, and an extra coating tank, which is used for switching between gloss or matte varnishing and opaque white printing on plastic.

I-Trap Software
(847) 202-8424, www.luciddream.com,
www.trapping.org

According to Lucid Dream Software, I-Trap is the first product in the market that “upgrades” an existing RIP to include both “in-RIP” and interactive trapping solutions in one package. Similarly, I-Trap Viewer’s “graphical configuration” tool is the first such product to adjust ink-based trapping parameters using a graphical user interface tool with a clear intuitive representation of the values.

Additional tools include “trap on the fly,” “zone trapping,” and “trapping workflow,” in addition to the innovative I-Trap “TRLE-TIO” raster data format, which compensates for mechanical shifts or stretching and provides for color overlap to prevent unprinted paper from showing in the final print.

SWORD Excel Thermal Printing Plate
Kodak Polychrome Graphics, Norwalk, Conn.
(203) 845-7000, www.kpggraphics.com

This daylight-handling, presensitized aluminum printing plate, designed for digital exposure in 830-nm laser thermal platesetters, displays a dynamic range of 1% to 99% at 200-line screening, utilizes no-preheat/no-postbake negative-type processing with non-oxidizing developer (a unique feature), is UV and EB ink solvent compatible without post-bake, and yields up to 500,000 impressions depending on press conditions.

All other thermal plates on the market are processed in high-alkaline, positive-type developers, which can be affected by atmospheric contact regardless of plate-processing loac. As a result, SWORD plate users gain processing stability, beneficial to use of stochastic screening techniques and low weekly or monthly plate volumes, plus elimination of the need for developer neutralization prior to disposal.

Roland 700 DirectDrive
MAN Roland Druckmaschinen AG,
Offenbach, Germany
(011) 49 69 8305 0, www.man-roland.com

In this innovation, the plate cylinder of a given printing unit on a Roland 700 sheetfed press is powered by its own high-torque motor, which is controlled by MAN Roland’s Prinnet digital press operating system. By decoupling the plate cylinder from the main press drive, press operators gain the advantage of parallel plate changing; thus, all of the plates on a multicolor Roland 700 with DirectDrive can be changed simultaneously, instead of one at a time, slashing makeready time.

Moreover, while DirectDrive and Automatic Plate Loading complete the plate exchange, wash-up routines can be completed on the rest of the press, resulting in a zero-makeready plate change. Also, changing individual plates without stopping the press permits versioning and language changes.
Roland 900 XXL Press
MAN Roland Druckmaschinen AG,
Offenbach, Germany
(011) 49 69 8305 0, www.man-roland.com

Developed to revitalize wide-format sheetfed printing, the Roland 900 XXL is offered in six distinct sheet formats (from 32.3×44.5" up to 51×72.8") so that printers can size their presses more precisely to the requirements of their marketplace. Current options include an equipment package for printing E-flute and F-flute corrugated, an in-line slitter for sheet halving, non-stop deliveries, UV and hybrid UV capabilities, and a digital roll-to-sheet feeder.

Extensive automation makes the press comparable to a standard 40"-wide machine in operating efficiency, but with dramatically increased productivity, up to two times or even three times higher, because of the larger sheet size.

Roland 500 Press
MAN Roland Druckmaschinen AG,
Offenbach, Germany
(011) 49 69 8305 0, www.man-roland.com

To help four-up printers compete with eight-up equipment, MAN Roland developed a very fast, highly automated, and extremely versatile sheetfed press in the extended 29" format (23.23×29.13", or six-up configuration).

The Roland 500 is rated at 18,000 sheets per hour, utilizes the PECOM networking command and control system plus three-quarter automatic Power Plate Loading (PPL) system, and has the ability to handle substrates up to 1 mm (40 points) thick. Thus, the system can produce books, cartons, commercial printing, blister packaging, flat and in-mold labels, publications, and plastic printing. It also can print on microfiche and corrugated, up to G-flute.

Options include in-line anilox coating, integrated drying systems for aqueous, UV, or a combination; and in-line finishing, including die-cutting and embossing.

Acomo Perfect Binder
Muller Martini Corp., Hauppauge, N.Y.
(631) 582-4343, www.mullermartiniusa.com

The Acomo perfect binding system is designed to cost-effectively bind books and pamphlets in very small quantities by automating the makeready process, while also reducing waste, to deliver a first-off product that is salable. At the same time, the system is capable of storing and recalling all vital project parameters, making it efficient when jobs are interrupted or run again for repeat orders.

By applying automation to numerous job-changeover adjustments, the equipment minimizes downtime and operator attention. Typically, makeready time for book format and thickness changeover on an Acomo binder is less than 90 seconds, compared to an hour or more on conventional perfect binders.

The Acomo is the first short- to medium-run perfect binder equipped with Muller Martini's Commander control console.

Concept 21™ Fountain Solution Delivery System
RBP Chemical Technology, Inc., Milwaukee, Wis.
(800) 558-0747, www.rbpchemical.com

Two concentrated chemistry components (desensitizers and wetting agents), along with a specially designed metering and mixing unit, comprise the Concept 21 system. Users, by precisely adjusting the chemistry components with water to form a working solution or press-ready mix, which is then fed to an existing recirculating system, can provide "custom" fountain solutions to their presses to meet the exact needs of a specific job or a type of job.

The result is a previously unprecedented range of flexibility on press to accommodate different press types and choices of papers, plates, inks, and dampening systems. Using the Concept 21 system also enables a printer to duplicate the performance of most available fountain solutions by adjusting the mixing ratios.
PlateRite Ultima 32000S
Screen (USA), Rolling Meadows, Ill.
(800) 372-7737, www.screenusa.com

The thermal computer-to-plate PlateRite Ultima platesetter, which accommodates from four-page plates up to 32-page plates, relies on the Grating Light Valve (GLV) module, which affords precise control of laser energy. A 512-channel imaging head using GLV technology delivers a high-intensity beam array that allows fast and exact imaging at low drum-rotation speeds.

Rated output is up to 12 32-page plates per hour and 15 24-page plates per hour at 2,400 dpi, which Screen (USA) says is faster than any platesetter currently available; smaller-size plates can be output even faster. Also, two plates of eight pages or less can be loaded side by side and exposed in less time than a single large plate.

World Series™ Sheetfed Process Inks
Sun Chemical Corporation, Northlake, Ill.
(708) 562-0550, www.sunchemical.com

World Series inks, constituting a single ink series that is based on vegetable oils and is 100% free of mineral oils, have proven to deliver excellent lithographic performance on small- and large-format multicolor presses, printing on a wide variety of substrates, including coated papers and boards used in commercial, publication, and folding-carton printing, says the manufacturer.

Studies have shown that the new process inks perform very well and very consistently in markets around the world; thus, data from a job printed in one country can be easily transferred to any other location worldwide and be readily matched. World Series inks also are shown to work well in perfecting and with every type of dampening system and fountain solution blend, with and without alcohol or substitutes.

Nuvera Digital Copier/Printer
Xerox Corporation—Production Systems Group,
Webster, N.Y.
(585) 422-4447, www.xerox.com

This on-demand printing solution for the mid-production monochrome marketplace is designed to produce complex, high-quality jobs in lower volumes than a production environment. It features an onboard, dual-head scanner that inputs documents at 600×600 dpi at up to 120 images per minute, plus dual-beam xerographic imaging that utilizes SmartPress Imaging and non-contact Hybrid Jumping Development technologies to produce 125-line screens at 1,200×1,200 dpi.

From up to eight feeding trays, the Nuvera system can run bond, bristol, cover, index, offset, and recycled stocks, plus transparencies, carbonless, labels, tabs, and preprinted forms. An optional second feeding unit brings the total paper supply to 11,520 sheets. The system handles sheets from 5.5×8.5” up to 12.6×18.5” in size.

MonacoOPTIXxr Colorimeter
X-Rite Incorporated, Grandville, Mich.
(616) 534-1466, www.xrite.com

This colorimeter is designed with state-of-the-art, patent-pending technology to produce highly accurate ICC profiles for CRT and flat-panel color displays, giving creative professionals the ability to view images accurately on their monitors. A calibrated and profiled display ensures accurate and consistent color throughout the digital workflow.

Tom Collins of Quad/Graphics, Hartford, Wis., an early adopter, says, “The product has performed extremely well and is quickly becoming a valuable tool in our process by bridging the gap between our vision and measured reality… We have a stronger confidence in our soft proofing process. Images moving through our system can be viewed consistently from one workstation to another; this has taken the guesswork out of the color matching game.”
Bibliography of Innovation

Following is a list of the award-winning technologies since the inception of the Intertech program by the Graphic Arts Technical Foundation. Naturally, a number of the original technologies have been superseded or discontinued.

Also, while the name of the originator company appears in parentheses, note that some companies have discontinued operation, merged with other companies, or changed names. Appropriate notations appear after entries for which such information is known. This listing is presented for informational purposes only.

2003
- Plate Cell Patterning (Artwork Systems Inc.)
- Oris Color Tuner 5.0 (CGS Publishing Technologies International)
- HyperFlex Screening Software (Crescendo, Inc.)
- Epson Stylus Pro 7600/9600 with UltraChrome Ink and Epson Professional Media Line (Epson, Inc.)
- FastFacts Software Suite (Esko-Graphics)
- Goss Digital Inking System (Goss International)
- Magnapack Insert Packaging System (Heidelberg)
- Stitchmaster ST 400 Saddle Stitcher (Heidelberg USA)
- Remote Director Proofing Solution (Integrated Color Solutions)
- Matchprint Virtual Proofing System, Version 1.0 (Kodak Polychrome Graphics)
- Lithrone 540 Sheetfed Press (Komori America Corporation)
- RealTimeProof Express (RealTime Image, Inc.)
- Xerox Square Fold Booklet Maker (Xerox Corporation/Plockmatic International AB)

2002
- Adobe PDF Transit (Adobe Systems Incorporated)
- Arpeco Injector System (Arpeco Engineering Limited)
- Enfocus Certified PDF Technology (Enfocus Software, Inc.)
- Gerber Sector Coating Blanket Production System (Gerber Innovations, a division of Gerber Scientific, Inc.)
- ColorQuick Press Analysis System (Graphics Microsystems, Inc.)
- JobPro and PressMonitor (MAN Roland Druckmaschinen AG)
- Hydro H2O Inks (Midwest Ink Corporation)
- Primus AMYRS (Muller Martini Corporation)
- NexPress 2100 Digital Production Color Press (NexPress Solutions, LLC, now part of Kodak Graphic Communications Group)
- JetPlate Computer-to-Plate System (PIECE-P Print Imaging Sciences, Inc.)
- Printcryption PrintFlow Dynamic Scheduling (Printcryption, Inc., now part of EFI)
- Timson T48A ZMR Book Press (Timson, Inc.)

2001
- DigiMarc MediaBridge Solutions (DigiMarc Corporation)
- EcoCool Dryer & Chill Roll System (Heidelberg Web Systems)
- Supertrap/Supertrap Plus Plug-ins (Heidelberg USA)
- Imation Matchprint Professional Server (Imation Corp.)
- CIP4 Job Definition Format-JDF (International Cooperation for the Integration of Processes in Prepress, Press and PostPress)
- DigitalWeb Press (MAN Roland Druckmaschinen AG)
- MarkzNet Preflighting Software (Markzware, Inc.)
- Digi-Stitch 2000 System (Oce Printing Systems USA, Inc.)
- Dimension CTP System with ProFi Imaging Technology and Anthem Thermal Plates (Presstek, Inc.)

1999
- Collabria Print Commerce Solution (Collabria, Inc.)
- Digital Offset Press (DOP) System (CreoScitec, a division of Creo Products, Inc.)
- Acoustic-Optic Deflector Multi-Laser Beam Technology (Fujifilm Photo Film U.S.A., Inc.)
- ImageControl Color System (Heidelberg Druckmaschinen AG)
- Kodak Approval Recipe Color Software (Kodak Polychrome Graphics)
- Digital Register Analysis 2000 (Mitsubishi Lithographers Presses)
- Preview System (Preview Systems)
- Sinarbuck Digital Camera System (Sinar, Tokyo Imaging, a division of Sinar AG)

1998
- Chromapress IntellStream with Personalizer-X (Agfa Division of Bayer Corporation)
- AFX 410 Storage Server System (Augment Systems)
- EuRiPides Digital Prepress Workflow (Corrotor Corporation)
- PrintLink Ink Coverage Profile Generator (Creo Products)
- CPC 32 Prepress Interface (Heidelberg Druckmaschinen AG)
- No-Process Lithographic Printing Plates (Imation)
- PolaProof Digital Half-tone Proofing System (Polaroid Graphics Imaging)
- InkoPro Digital Ink Management Software (Scitex America)

1997
- Renaissance Scanning System (Creo Products)
- Digital Imaging System (DuPont/Barco Graphics)
- Digital Proofer (DuPont/Professional Computer Corporation)
- Impress Double-Sided Signature Proofer (Gerber Systems, which was purchased by Barco Graphics)
- Contweb FMR Web Splicer (Heidelberg Web Press, Contweb BV)
- Prepress DeltaTechnology RIP (Linotype-Hell, now part of Heidelberg Prepress)
- CraneJacket Plug-In (Lantana Research Corporation)
- DemandStream 8080 DI Printer (Oce Printing Systems USA, Inc.)
- Dry Tech Imagensetting Film (Polaroid Graphics Imaging)
- Fiber Laser for Thermal Imaging (Polaroid Graphics Imaging)
- PearlGold Thermal Plate (Presstek)
- Digital Delivery Network (WamNet)

1996
- BB200S Binder (C.P. Bourg)
- Thermal Laser Head (Creo Products)
- Direct Image Thermal Plate (Eastman Kodak)
- ColorQuick Web Scanner (Graphics Microsystems)
- E-Print 1800 Digital Press (Indigo America)
- DPH 2000 Plate Master (Heidelberg/Dick)
- Oscillating Web Cleaner (Polygraph Tek)
- Pearl Plates and Platesetter Systems (Presstek)
- Customer Service Toolbox/Mag-Pro for Windows (Prograph)
- SHOTS Training System (Sinapse)
1995
Color Central OPI Image and Print Server
   (Adobe Systems)
Impact Blanket Cleaning System
   (Baldwin Technology)
Quickmaster DI Direct Imaging Multicolor
   Printing System (Heidelberg)
Colortron Spectrophotometric Measurement Device
   (Light Source, now part of X-Rite, Inc.)
NovaDom Desktop Computer-to-Plate-to-Press
   System (TechNova)
Rainbow Color Proofing System (3M)
DCP-1 Digital On-Demand Short-Run Color Web Press
   (Xelikon)

1994
CristalRaster Screening System
   (Agfa Division of Bayer)
Computer-to-Plate System (Crao Products)
Sunday Web Press Technology
   (Heidelberg Harris, now known as
Heidelberg Web Systems)
799 Model Sheetfed Press (MAN Roland)
CTX Plate Material (Polychrome, which is now part of
the Kodak Polychrome Graphics joint venture with Eastman Kodak)

1993
Approval Digital Color Proofing System
   (Eastman Kodak)
Damping Enhancement System
   (Adapt Dynamics Group)
Fully Automatic Plate Changing System (Kornor)
CocoTech Publishing Series (Xerox Corporation)
Glaze Free/Steady Set Printing Roller
   (Bößl Herff America)

1992
Direct-to-Plate LESS Imagery (Gerber Systems,
   which was purchased by Barco Graphics)
Casaol N90 Digital Laser Plate
   (Hoechst, now part of Agfa)
R-C-L Fountain Solution
   (Graphic Systems Specialties)
RIP 60 with I.S. Technology (Linotype-Hell,
   now part of Heidelberg Prepress)
Waterless Printing System (DIC Americas,
   including Polychrome, which is now part of
the Kodak Polychrome Graphics joint venture with Eastman Kodak, and Sun Chemical)

1991
Photoshop (Adobe Systems)
VS8-5 Automated Vertical Stacker/Bundler
   (Strob/Baldwin Technology)
CPTronic Press Control System (Heidelberg)
PTC Thermistor Hot-Air Dryer
   (Anco Graphic Systems)
Trumatch Color System (Trumatch)
938 SpectroDensitometer and SpectroStart
   Software (X-Rite)

1990
Dust Bunny Magnetic Wiping Fabric
   (Leapfrog Technologies)
Color Toolkit (Pantone)
1440 Platesetter (Printware)
Model BMW Automatic Blanket Washer (Oxy-Dry)

1989
Bright Light Films with X-Stat (DuPont)
4Cast Digital Color Imagery (DuPont)
"Foam Free" Circulator and Foam Eliminator Kit
   (Baldwin Technology)
High-Speed Hot-Air Drying System and Plate/
Blanket Coater (Printing Research, Inc.)
In-Line Former
   (Blavia Technologies; out of business)
Lightspeed Layout System (DuPont)

1988
Automatic Newspaper Blanket Cleaner
   (Baldwin Technology)
AutoSmart Densitometer
   (Graphics Microsystems)
OptiSafe (DuPont)
Signature Color Proofing System
   (Eastman Kodak)
Special Award: Dr. S. Thomas Dunn &
   Vendor Technical Subcommittee of the
Image Technology Subcommittee

1987
Print Manager (DuPont)
GA-C.A.T. Graphic Arts Abrasion Tester (Gavarti)
Hejl Chromacom Proof Recorder 403
   (Linotype-Hej, now part of Heidelberg Prepress)
Iris Color Ink-Jet Printer (SciTex)
MicroTrak CCR Closed-Loop Automatic Register
   Control System (Web Printing Controls)

1986
Data Compression/Satellite Transmission System
   (Crossfield/DuPont)
Designmaster 8000 Flatbed Scanner
   (Eastman Kodak)
Viking Lithographic Plates (3M)

1985
Onyx Cut Film/Plate Material (3M)
Ultrasafe Products
   (Eastman Kodak)
Laser Scan Laser Printing Plate
   (Polychrome, which is now part of
the Kodak Polychrome Graphics joint venture with Eastman Kodak)
Mark-Less Super Blue System
   (Printing Research, Inc.)

1984
Auto-Count Waste Reduction System
   (Automation, Inc.)
Magnascn 6420 Scanner (Crosfield/DuPont)
Option "X" Vacuum Frame (Douthitth)
Sabre Web Press Cylinders
   (Hantscho/Rockwell, now part of
Goss Graphic Systems)
Erosion Typesetting (IBM Corporation)
RGS III Closed-Loop Register System
   (QuadTech, Inc., now known as OBI)

1983
Automatic Blanket Cleaner (Baldwin Technology)
K-Gravure Color Proofer
   (Cutter Systems; out of business)
Lasergravure System 700D (Crossfield/DuPont)
Newman Roller Frame (Stretch Devices)
Super 70 Projection Platemaker
   (Rachwal/Polychrome, the former of which
is now part of the Kodak Polychrome Graphics
joint venture with Eastman Kodak)
System Brunner (System Brunner)

1982
AutoPrep 5000 (Gerber Systems
   which was purchased by Barco Graphics)
Lasercomp Mark 2 (Monotype Systems)
Datamat Microprocessor-Controlled Splicer
   (Butler Web Systems)
Microregistere Web Control
   (Hantscho/Rockwell, now part of Goss Graphic Systems)

1981
Presfex System (Harris Corporation)
Press Management System 700 (Hurletron Altair)
Mergenthaler Omnitex/2000
   (Linotype-Hell, now part of Heidelberg Prepress)
Separation Preparer
   (Hasselt Co.; out of business)

1980
Magnascan 570 Scanner (Crosfield/DuPont)
Hejl Chromacom
   (Linotype-Hell, now part of Heidelberg Prepress)
Automated Illustrated Documentation System
   (Information International, Inc.)
Response 300 (SciTex Corporation)
Electronic Ink and Moisture System
   (AM International)
CPC I and CPC II (Heidelberg)
Roland Ofset/Mithie CCI (MAN Roland)

1979
9700 System (Xerox Corporation)
Telecolor Press Controls (Heidelberg Harris,
   now known as Heidelberg Web Systems)
Opti-Copy Poser (Polychrome, which is now part of the
Kodak Polychrome Graphics joint venture with Eastman Kodak)
Laser Dieboard Cutter (Royal Zenith;
   no longer in operation under that name)

1978
Hejl Chromaskop (Linotype-Hell,
   now part of Heidelberg Prepress)
Multifax Assmblember (Swedish company,
   marketed in U.S. by Royal Zenith, which is no
longer in operation under that name)
Log-E-Scan (Logetronics)
Laser plate exposure device
   (Ecom; out of business)
On-Press Monitor (Kollmorgan)
Chromalite Photopolymer Film (DuPont)
Digitform Photocomposition System
   (Berthold; no longer in operation under
   that name)
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