

# Color Business Report

## Color, Computers, and Reprographics

February 2006

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### HP Enters the Large-Format Solvent-Printer Market

On January 25, 2006, **Hewlett-Packard Company** (Palo Alto, CA) announced the Designjet 8000s and Designjet 9000s large-format printers. Both six-color units take 64"-wide media and print with the same solvent-based inks through piezo print heads.

#### *Deskjet 9000: No Longer the 64s*

The print heads on the Designjet 9000s contain 512 nozzles per color, twice the number of nozzles on the Designjet 8000s. And the 9000s is twice as fast, too, printing 176 square feet per hour in Normal Mode on vinyl media. Print resolution is 720 dpi, with 12-pl droplets. Ink is fed from 1000-ml cartridges, which sell for \$369.99 each. Media can be spooled in one of four ways in the built-in take-up reel on the Designjet 9000s. PosterShop 6.5 from Onyx Graphics is delivered with the "sf" version of the printer. The Designjet 9000s is shipping now. The Designjet 9000sf, with an Onyx RIP and an Air Purification System (described below), sells for \$38,995. The basic Designjet 9000s unit sells for \$32,995.

The Designjet 9000s is HP's version of the Seiko ColorPainter 64s. HP and Seiko I Infotech established a



*HP has introduced two 64" solvent printers, co-developed with Seiko I Instruments.*

Source: Hewlett-Packard Company

development partnership in September 2005. The products that HP has just introduced were jointly developed and are exclusive to HP. Seiko will no longer sell the ColorPainter 64s. HP's Designjet 9000s is different from Seiko's version in several respects: HP has reformulated the ink to reduce the emission of volatile organic compounds (VOCs); a "Draft Normal" mode has been added; and HP's Designjet 9000s connects via USB 2.0, while the Seiko machine used a

*(continued on page 2)*

#### **Highlights in Color Business Report (see page 2 for contents):**

**HP Has Solvent** Suddenly HP, as steeped in thermal ink jet as a company can be, has a pair of solvent-based 64" printers that use piezo heads. One is a modified version of Seiko's ColorPainter 64s. The other is new from the ground up. Seiko I Instruments, HP's new partner in large format, will stick to development and manufacturing, and will no longer actively market large-format products ..... **1**

**Samsung Creates New Low End** Samsung's previous entry-level color laser line, starting with the CLP-500, was loaded: standard duplex, standard PostScript. Where do you go from there? The company's latest products have no duplex and no PostScript ..... **3**

**Sharp: Extensible Architecture** Sharp will use the same basic printer architecture to build a whole line of color MFDs, with speeds ranging from 23 ppm to 70 ppm. The first four products are ready now ..... **4**

**Ricoh Goes to \$999** Ricoh's CL3500N is a four-engine, 22-ppm color laser that will sell for \$999. It uses the powerful processor from the CL4000DN to squeeze extra performance out of the engine from the now-discontinued CL3000e ..... **7**

**QuickLabel Adds EP** Astro-Med's QuickLabel group has added an LED-based electrophotographic print engine to a color label-printing line that until now was all thermal transfer. QuickLabel is not saying whose engine they are using or what they had to do to it. We can say that the paper feed, at least, has been modified-take a look at the photo ..... **8**

**Aellora: Print On Anything** Aellora Digital is putting the final touches on its TKMP1000 printer, an ink jet that uses special UV-cured hybrid inks to print onto just about any surface. The printer is meant to be used in a factory environment ..... **8**

**Pen Entry Returns** Anoto from Sweden has qualified Oki's C5400 to print pages to be used with Anoto's pen-based input system. HP showed us Anoto's pen input technology several years ago, and HP eventually released it as the Forms Automation System. Recently, though, HP walked away from forms automation. Digital Pen Systems, formed by ex-HP staffers, and about 100 other Anoto partners, including Oki Data, are continuing on ..... **10**

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SCSI interface. Said HP's Oscar Vidal, who works on the large-format printing program at HP's Barcelona, Spain facility, "Another change is the way we have built a solution around the printer. With the Seiko printer, there was no option to buy the Air Purifying System, there was no option to buy a RIP. And our high-speed dryer accessory is smaller, lighter, and easier to operate than the one that was sold with the Seiko printer. So it's not just the printer itself, it is the way we have packaged the solution that is unique." (The dryer is available as an option, for \$3,195.)

**DJ 8000s: Entry-level Solvent Printer**

About the Designjet 8000s, Enrique Lores, Vice President and General Manager of HP's Inkjet Commercial Division, said "The value proposition is that it delivers a breakthrough in price/performance. It has been designed for new customers. For example, small sign shops may have decided to go digital, but are concerned about making a very big investment. We now offer them an entry solution. As their business grows, they will be able to move eventually to the Designjet 9000s, and then to Scitex." (HP acquired the Scitex Vision large-format business in September 2005.) The Designjet 8000s prints 88 square feet per hour in Normal Mode on vinyl. The ink cartridges hold 500 ml of solvent-based ink, half the size of the Designjet 9000's cartridges. Print resolution is 720 dpi, with 13-pl droplets. The "sf" version of the Designjet 8000 comes with Onyx Sign EZ v. 2.0. On the Designjet 8000s, the take-up reel is a separate accessory. The Designjet 8000s will list for \$22,995. The "sf" version,

with the Air Purifying System and Onyx RIP, will sell for \$25,550. The Designjet 8000s is not yet shipping.

**Nozzles and Heaters**

The nozzles on both the Designjet 9000 and 8000 are configured to print a 1.4" swath. On both printers, the print head can be positioned at 2.1 mm or 2.6 mm from the base of the media. Media from 0.07 mm to 0.63 mm (0.002" to 0.024") can be fed. Both printers have an exhaust fan in the box to direct VOCs away from the printer.

Both machines have three integrated convection heaters. To help the ink adhere to the media, the media is heated prior to being drawn across the platen. A second or center heater under the print head also helps ensure good ink absorption. The third heater speeds evaporation of solvent from the ink as it dries.

**Air Purification**

Solvent-based inks adhere to materials such as vinyl, and the pigments they carry withstand the rigors of outdoor use. During printing, though, solvent-based inks release VOCs into the air, which must be controlled. VOCs are controlled by providing ventilation, by being careful about waste-ink recovery and disposal, and by using filtering devices like HP's Air Purification System. "We capture volatile organic compounds at the source," said HP's Oscar Vidal. Depending on the nature of the other equipment being used, and the number of solvent-based devices used in the same facility, HP's Air Purification System may be a more economical alternative than an industrial venting system. The Air

Purification System is a separate floor-standing filter unit. Through a pair of 3"-diameter hoses, the Air Purification System creates an air flow going across the print region, where the ink is jetted onto the media. The VOC-laden air is drawn through an activated filter, which captures 90% of the VOCs. Clean(er) air is then released back into the room. "The concept is not new," Vidal explained. "What is new is that a printer manufacturer has taken an active role to make sure that this is incorporated into the product line. And we have redesigned the filters to match our ink composition, to maximize the efficiency of the filters." Standard on the "sf" versions, the Air Purification System is also sold separately for \$4,895.

**Drivers from Onyx and Others**

Customers who already use Onyx software (RIPCenter, PosterShop, or ProductionHouse 6.5) can add drivers for the Designjet 8000s or Designjet 9000s for \$495 each. New Onyx software packages purchased after the release of the printers will include the drivers. ColorGATE's ProductionServer4 also drives the Designjet 8000s and 9000s. In addition, drivers are available from Scanvec Amiable, PosterJet, Caldera, and Maintop.

The new solvent-based large-format printers will be distributed to resellers by Tekgraf. HP will also sell direct.◇

**Samsung CLP-600N Specifications**

|                        |   |
|------------------------|---|
| <b>Print Speed</b>     | Up to 21 ppm, color and B & W   |
| <b>Resolution</b>      | 2400 dpi by 600 dpi<br>"effective" resolution   |
| <b>PDL</b>             | SPL-C (GDI equivalent)  |
| <b>Processor Speed</b> | 250 MHz   |
| <b>Memory</b>          | 32 MB   |
| <b>Interface</b>       | USB 2.0, 10/100 Base TX   |
| <b>Networking</b>      | Ethernet 10/100Base TX standard   |
| <b>Paper Handling</b>  | 250 sheets in main tray,<br>100 sheets in multipurpose tray   |
| <b>Paper Weights</b>   | Main tray: 16 lb. to 24 lb.<br>Multipurpose tray: to 43 lb.<br>bond (60 lb. cover or 163 gsm)                             |
| <b>Paper Sizes</b>     | 8 1/2" by 11", 8 1/2" by 14", A4,<br>A5, A6, B5, various envelope<br>sizes. Custom from 3" to 8 1/2" W<br>by 5" to 14" H. |
| <b>Duty Cycle</b>      | 45,000 pages/mo.  |
| <b>Size</b>            | 18.3" W by 17.5" H by 18.3" D   |
| <b>Weight</b>          | 62.8 lbs.   |
| <b>Price</b>           | \$499   |

Source: Samsung

**Printers**

On January 7, 2006, **Samsung Electronics Co., Ltd.** (Irvine, CA) introduced the CLP-600N color laser printer. The 21-ppm unit is Samsung's first single-pass (multi-engine) color laser. The CLP-600 uses the same basic paper feed and imaging apparatus as the CLP-500 series. The cabinet's shape is similar, but the dimensions are slightly different. Since the new printer is a GDI printer, with RIPping tasks handled on the host, on-board printer memory is only 32 MB.

On January 7, 2006, Samsung announced the CLP-300, "the smallest and lightest color laser printer in its class." With a footprint of 15.4" by 13.5" ready to print, the CLP-300 weighs only 30 lbs. The printer is meant to be a convenience printer. Although the "N" version connects to the network, the maximum paper capacity of 150 sheets probably places some limits on the number of users the product can support. The toner supply is diminutive, as well, with color toner cartridges good for only 1,000 pages, and the black toner good for 2,000 pages.

By placing the GDI-based CLP-300 and CLP-600 at the bottom of its line, Samsung has a basis for

*(continued on page 4)*

**Samsung CLP-600N Supplies**

|                                      |          |
|--------------------------------------|----------|
| Color Toner (C, M or Y, 4,000 pages) | \$119.99 |
| Black Toner (4,000 pages)            | \$99.99  |

Source: Samsung

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establishing another tier in its color laser line—probably later this year, when it replaces the CLP-550. Unlike its newest products, the CLP-550 has duplex and PostScript standard.◇

Brian Bissett's *The MFP Report* (Bissett Communications Corp, Ceritos, CA) sent us over to Brother's Japanese web site, where we found five ink jet MFP models in addition to the MFC-820 Brother introduced in the U.S. in January 2006. Like the MFC-820, the new products, part of the MyMio family in Japan, include an LCD display for previewing digital photos prior to printing. The MFP Report says prices in Japan range from ¥12,000 to ¥41,0000. The top-of-the-line MFC 840 appears on the web site but not in *The MFP Report's* coverage. Brother did not respond to our request for pricing for the line and for U.S. introduction plans.◇

On January 25, 2006, **Sharp Document Solutions Company of America** (Mahwah, NJ) announced the MX-2300N, MX-2700N, MX-3501N, and MX-4501N, the first four color MFD products based on its new "MX"

architecture. The products announced last month range in speed from 23 ppm to 45 ppm. Sharp is emphasizing the scalability of the basic imaging engine: within six months, Sharp said, it will double the number of SKUs in the line, and will offer models as fast as 70 ppm, all using the same basic architecture. The new products appear on Sharp's web site under the "Workgroup B & W plus color" heading. For the time being, Sharp's AR-BC260 (17 ppm color) and AR-BC-320 (26 ppm color) remain in the line. The new products were to begin shipping in January 2006.

The MX line uses a multi-tasking controller with dual job queuing. Print and scan functions are linked to removable USB storage, so users can print jobs directly from removable thumb drives. Scanned jobs can be saved to removable storage, as well, in TIFF, JPEG, PDF or encrypted PDF formats. The USB interface can also be used to upgrade firmware, and to transfer common settings via "sneakernet" across an inventory of machines. The units use many of the same consumables.

Sharp has signed ten companies to integrate software with the MX line, including eCopy, Equitrac, Kofax, Liberty IMS, AirZip, Captaris, FabSoft, net COMPASS, and Notable Solutions, Inc. Sharp did not identify the tenth partner.

As one would expect with products sharing the same basic architecture, differences between the four products, other than speed, are few. The faster units

**Samsung CLP-300 Specifications**

|                       |   |
|-----------------------|---|
| <b>Print Speed</b>    | Up to 4 ppm color<br>Up to 17 ppm black and white |
| <b>Resolution</b>     | 600 dpi<br>2400 by 600 dpi "effective" resolution |
| <b>PDLs</b>           | SPL-C (GDI equivalent)                            |
| <b>Processor</b>      | Samsung, 300 MHz                                  |
| <b>Memory</b>         | CLP-300: 32 MB<br>CLP-300N: 64 MB                 |
| <b>Interface</b>      | USB 2.0   |
| <b>Networking</b>     | Ethernet 10/100Base TX standard on CLP-300N       |
| <b>Paper Handling</b> | 150 sheets in semi-cassette                       |
| <b>Paper Weights</b>  | 16 lb. to 43 lb. bond (60 to 163 gsm)             |
| <b>Paper Sizes</b>    | 3" to 8 1/2" W by 5" to 14" H                     |
| <b>Duty Cycle</b>     | 24,200 black pages/mo.                            |
| <b>Size</b>           | 15.4" W by 10.4" H by 13.5" D                     |
| <b>Weight</b>         | 30 lbs.   |
| <b>Price</b>          | CLP-300: \$299<br>CLP-300N: \$399                 |

Source: Samsung

**Samsung CLP-300 Supplies**

|                                      |         |
|--------------------------------------|---------|
| Color Toner (C, M or Y, 1,000 pages) | \$49.99 |
| Black Toner (2,000 pages)            | \$59.99 |

Source: Samsung



In Japan, Brother has several ink jet MFDs in its MyMio line. Source: www.brother.com.

use a faster processor (700 MHz vs. 600 MHz), and have a larger hard drive (80 GB vs. 40 GB). Also, the black toner cartridge used in the MX-3501N/MX-4501N is different than the one used in the slower models. The transfer kit and the heat rollers used in the faster units last longer, as well. A Fiery controller is an option with the MX-3501N/MX-4501N, but is not available on the other two units. A chart with supplies and accessories for the “MX” products appears on Page 6. Sharp did not disclose pricing for the Fiery controller. ♦

On January 23, 2006, **Panasonic Digital Document Company** (Secaucus, NJ) announced the availability of Adobe PostScript 3 for the DP-C322 and DP-C262 color MFDs the company introduced last summer (see *Color Business Report*, May 2005 and June 2005). PostScript is a \$2,195 option. The base price for the 32-ppm version of the MFD is \$13,495. The slower DP-262 sells for \$11,995. Panasonic also announced a free utility that lets DP-C322 and DP-C262 customers print PowerPoint and Word documents directly from the MFD’s SD memory slot.



Within six months, Sharp plans eight MFDs based on the same “MX” platform.

Source: Sharp Document Solutions

**Sharp MX-3501N/MX-4501N Specifications**

|                           |  |
|---------------------------|--|
| <b>Print/Copy Speed</b>   | MX-3501N: 35 ppm, black and color<br>MX-4501N: 45 ppm, black and color   |
| <b>Resolution</b>         | 600 dpi (1200 dpi monochrome with optional PS)   |
| <b>Processor Speed</b>    | 800 MHz  |
| <b>PDLs</b>               | PCL 5c, PCL 6<br>PostScript emulation optional.  |
| <b>Memory</b>             | 768 MB (copier),<br>640 MB (printer/network scanning)<br>80-GB hard drive  |
| <b>Interface</b>          | USB 2.0  |
| <b>Networking</b>         | 10/100Base TX  |
| <b>Paper Handling</b>     | Duplex standard, on sheets to 110 lb. index (200 gsm)<br>Two 500-sheet cassettes<br>100-sheet bypass<br>Up to 5,600 sheets with options              |
| <b>Paper Weights</b>      | Paper drawers & large-capacity tray:<br>16 lb. to 28 lb. bond (60 to 105 gsm)<br>Bypass: 15 lb. bond to 56 lb. bond (56 to 210 gsm)                  |
| <b>Paper Sizes</b>        | Paper drawers & large-capacity tray:<br>letter, legal, ledger, statement<br>Bypass: Envelopes of various sizes, letter, legal, statement, 12" by 18" |
| <b>Size (base unit)</b>   | 25.4" W by 37.8" H by 26.4" D  |
| <b>Weight (base unit)</b> | 282 lbs.   |
| <b>Price</b>              | MX-3501N: \$16,495<br>MX-4501N: \$19,095   |

Source: Sharp Document Solutions

**Sharp MX-2300N/MX-2700N Specifications**

|                           |  |
|---------------------------|--|
| <b>Print/Copy Speed</b>   | MX-2300N: 23 ppm, black and color<br>MX-2700N: 27 ppm, black and color   |
| <b>Resolution</b>         | 600 dpi (1200 dpi monochrome with optional PS)   |
| <b>Processor Speed</b>    | 600 MHz  |
| <b>PDLs</b>               | PCL 5c, PCL 6<br>PostScript emulation optional   |
| <b>Memory</b>             | 768 MB (copier),<br>640 MB (printer/network scanning)<br>40-GB hard drive  |
| <b>Interface</b>          | USB 2.0  |
| <b>Networking</b>         | 10/100Base TX (RJ 45)  |
| <b>Paper Handling</b>     | Duplex standard.<br>Two 500-sheet cassettes<br>100-sheet bypass<br>Up to 5,600 sheets with options   |
| <b>Paper Weights</b>      | Paper drawers & large-capacity tray:<br>16 lb. to 28 lb. bond (60 to 105 gsm)<br>Bypass: 15 lb. bond to 56 lb. bond (56 to 210 gsm)                  |
| <b>Paper Sizes</b>        | Paper drawers & large-capacity tray:<br>letter, legal, ledger, statement<br>Bypass: Envelopes of various sizes, letter, legal, statement, 12" by 18" |
| <b>Size (base unit)</b>   | 24.4" W by 37.4 " H by 26.4" D   |
| <b>Weight (base unit)</b> | 256 lbs.   |
| <b>Price</b>              | MX-2300N: \$11,295<br>MX-2700N: \$12,895   |

Source: Sharp Document Solutions

**Sharp MX Series Supplies and Accessories**

|   |         |
|---|---------|
| Black Toner (for MX-2300N/2700N, 18K images)    | \$74    |
| Black Toner (for MX-3501N/4501N, 36K images)    | \$98    |
| Color toner (C, M, or Y, 15K)                   | \$145   |
| Black developer (100K)                          | \$35    |
| Color developer (60K)                           | \$605   |
| Drum (100K black or 60K color)                  | \$50    |
| Drum Kit (drum plus parts)                      | \$195   |
| Heat Roller Kit (for MX-2300N/2700N, 200K)      | \$145   |
| Heat Roller Kit (for MX-3501N/4501N, 300K)      | \$250   |
| Primary Transfer Kit (for MX-2300N/2700N, 100K) | \$115   |
| Primary Transfer Kit (for MX-3501N/4501N, 150K) | \$115   |
| Secondary Transfer Kit (300K)                   | \$115   |
| 500-sheet Paper Feed                            | \$845   |
| 1000-sheet (2x500) Paper Feed                   | \$1,075 |
| Large-capacity Tray (3,500 letter-sized sheets) | \$1,495 |
| Inner Finisher                                  | \$1,795 |
| Saddle-stitch Finisher/Paper Pass Unit          | \$3,320 |
| Punch for Inner Finisher                        | \$698   |
| Punch for Saddle-stitch Finisher                | \$698   |
| Exit Tray Unit                                  | \$150   |
| PostScript 3 emulation                          | \$745   |
| Internet Fax                                    | \$545   |
| Super G3 Fax                                    | \$1,295 |
| Bar Code Font Kit                               | \$595   |
| Application Integration Module                  | \$495   |
| Data Security Kit                               | \$549   |
| 5-user Sharpdesk License                        | \$500   |

Source: Sharp Document Solutions



Oki's C9600 joins the C9300 and C9500 in the Color Signage Solutions program.

Source: Oki Printing Solutions

in January 2005. The C9600 printer was introduced in May 2005. The new C9600 Color Signage Solution costs \$4,279. The existing 30-ppm Color Signage Solutions cost \$5,099 for the product based on the C9500, and \$4,099 for the product based on the C9300. (The C9500 has a maximum resolution of 1200 dpi, compared to 1200 by 600 dpi on the C9300. The C9500 has more memory and a faster processor, also.)

Addressing the needs of vertical markets is one of the hallmarks of Oki's marketing program. Of the six vertical market programs described on the company's web site, the retail signage program is distinct because of the need to print on uncommon materials. In addition to offering a line of special media for signage and shelf-labeling applications, Oki has modified print drivers and the print process itself to accommodate special media.

**Media for Oki Color Signage Solutions Printers**

| Media                              | Sheets              | Dimensions     | Price    |
|------------------------------------|---------------------|----------------|----------|
| Clear Film Cling Labels            | 150                 | 8 1/2" by 11"  | \$109.99 |
| White Film Cling Labels            | 150                 | 8 1/2" by 11"  | \$139.99 |
| 4-up White Labels                  | 250, four per page  | 8 1/2" by 14"  | \$159.99 |
| Premium 10 pt. Gloss Paper         | 1000                | 8 1/2" by 11"  | \$119.99 |
| Banner Paper                       | 100                 | 12.9" by 35.4" | \$69.99  |
| Premium Card Stock (60 lb. Cover)  | 250                 | 8 1/2" by 11"  | \$19.99  |
| Premium Card Stock (90 lb. Index)  | 250                 | 8 1/2" by 11"  | \$19.99  |
| Premium Card Stock (110 lb. Index) | 250                 | 8 1/2" by 11"  | \$19.99  |
| Shelf Strips                       | 100, six per page   | 8 1/2" by 11"  | \$79.99  |
| Table Tents                        | 250, three per page | 12" by 19.125" | \$169.99 |

Source: Oki Printing Solutions

The three main controls that may be modified to meet particular media requirements are the fusing temperature, engine speed, and toner transfer voltage. Media selections in the driver have been modified to match the nomenclature of the Oki's special media. For instance, Oki has added a selection for "table tents." In a similar fashion, the drivers include special sizes as presets.

Looking at the other vertical-market programs on Oki's "Industry Solutions" web page, one can see that the retail program has the highest degree of industry customization. The Education and Government pages focus on accommodating government and educational bid and contract purchasing processes. Most of the discussion under Financial Services has to do with ways to use personalization. But banks are retail establishments, too, so Oki dips into signage again for banks. Also under the Financial Services heading is the Advantage Branch System Solution, which combines Oki's printers with monitors from Samsung and teller stations from Paoli Furniture. According to Oki, the Advantage Branch System Solution does just about everything but make breakfast: "increase sales, lower facilities costs, improve profitability, retain employees, and acquire new customers."

The special needs of the health care industry are met with special document formats and special workflow requirements. For instance, Oki offers a Positive Patient ID Solution in conjunction with Option Software and Objectif Lune, which provides barcodes and other patient information for patient wristbands. Oki also offers a forms automation system tailored for the health-care environment.◇

On February 2, 2006, **Ricoh Corporation** (West Caldwell, NJ) introduced the Aficio CL3500N, a 22-ppm four-engine color printer that will sell for \$999. The product is slightly slower than the 26-ppm CL4000DN introduced a year ago, but sells for half the introduction price of the earlier product, which is available now for \$1,199. But the CL3500N "earns" that lower price. The duty cycle is 50,000 pages per month, while the CL4000DN is good for 150,000 pages per month. The toner cartridges are smaller, too. CL4000DN customers could use high-capacity or low-capacity cartridges. The cartridges for the CL3500N are good for 6000 prints (7000 for black). So with the CL3500N, Ricoh provides a speedy network printer at a competitive price, but it is a printer for smaller workgroups.

Customers want fast printing, even customers who don't do a lot of printing. As the demand for color becomes more universal, vendors must populate their lines with products that do not compromise on basic performance, but rather make trade-offs elsewhere. In the case of the CL3500N, the trade-off is in toner cartridge capacity and

**Ricoh Aficio CL3500N Product Specifications**

|                       |   |
|-----------------------|---|
| <b>Print Speed</b>    | 22 ppm black and color  |
| <b>Resolution</b>     | 1200 dpi, 1200 by 600 dpi, 600 dpi  |
| <b>Processor</b>      | 533 MHz RM7035  |
| <b>PDLs</b>           | Ricoh RPCS, Adobe PostScript 3, PCL 5c, PCL 6, PFD Direct   |
| <b>Memory</b>         | 128 MB, expandable to 512 MB  |
| <b>Interface</b>      | USB 2.0   |
| <b>Networking</b>     | 10/100Base TX   |
| <b>Paper Handling</b> | 530-sheet main tray<br>100-sheet bypass tray standard<br>1,690 sheets maximum<br>Duplex optional                    |
| <b>Paper Weights</b>  | Main tray and duplex: 16 lb. to 28 lb. bond (60 to 105 gsm)<br>Bypass: 16 lb. bond to 110 lb. index (60 to 199 gsm) |
| <b>Paper Sizes</b>    | Main tray: Letter, legal, A4, B5<br>Bypass: 3.56" by 5.85" to 8.5" by 14", A4, A5, B5.                              |
| <b>Duty Cycle</b>     | 50,000 pages per month  |
| <b>Size</b>           | 16.5" W by 15.7" H by 21.1" D   |
| <b>Weight</b>         | 72.6 lbs.   |
| <b>Price</b>          | \$999   |

Source: Ricoh Corporation

**Ricoh CL3500N Supplies and Accessories**

|   |         |
|---|---------|
| Black toner (7K pages)                  | \$57    |
| Color toner (C, M, or Y, 6K pages)      | \$121   |
| Black photoconductor (15K pages)        | \$129   |
| Color photoconductor (15K pages)        | \$358   |
| Fusing unit (100K pages)                | \$293   |
| Intermediate transfer unit (100K pages) | \$140   |
| Waste toner bottle (56K impressions)    | \$30    |
| Hard disk                               | \$315   |
| 128 MB DIMM                             | \$360   |
| 256 MB DIMM                             | \$430   |
| 530-sheet tray                          | \$375   |
| Scan unit IS200e                        | \$1,750 |
| Table for IS200e                        | \$300   |
| 802.11b Type H interface                | \$375   |
| Bluetooth interface                     | \$340   |
| 1284 interface                          | \$99    |
| 1394 interface                          | \$475   |

Source: Ricoh Corporation



The 533-MHz controller from the CL4000N helps boost the speed of the CL3500N to 22 ppm.

Source: Ricoh Corporation

the lack of standard duplex. “We feel that entry-level does not have to mean low quality,” said Ije Rodgers, Color Printer Product Manager. “We took the engine from the CL3000e, which the CL3500N replaces, and combined that with the controller from the CL4000N. That way customers get faster performance and 512MB of memory. The two products are separated by purchase price—the CL400DN is more expensive—and running cost—the CL4000DN has very a low cost per page. The ideal candidate for the CL3500N is somebody who wants to move up to color laser printing, but maybe their volume requirements aren’t so high.”

The CL 3500N will be sold through all channels Ricoh is using: traditional third-party dealers, Ricoh direct branches, and two-tier IT distribution and VARs.◇

On February 6, 2006, the **QuickLabel Systems Product Group** of Astro-Med Inc. (Warwick, RI) introduced the Vivo! full-color label printer. QuickLabel has modified a 600-dpi LED electrophotographic print engine to accept 8"-wide continuous label stock. The printer operates at two inches per second, meaning that the Vivo! printer will produce 1,000 4" by 6" labels per hour. The printer has a list price of \$24,995. QuickLabel would not say who supplies its LED print engine, and



Astro-Med’s QuickLabel group has added an electrophotographic print engine to its line of thermal transfer label printers.

Source: QuickLabel Systems

would not discuss the nature of the modifications needed for the printer to handle special label media. QuickLabel has direct coverage for the U.S., Canada, France, and the U.K., and authorized resellers elsewhere. Vivo! joins a product family of six color thermal transfer label printers.

In December 2005, at the SGIA Digital Expo in Phoenix AZ, **Aellora Digital** (Keene, NH) demonstrated a prototype of the SureFire TKMP1000 printer, a product designed to jet Aellora Digital’s hybrid UV-curable inks directly onto products in a factory-floor environment. The device handles image files: bitmaps, JPG files, or TIFF. Customers can configure the system with Aellora’s single-array SureFire or Aellora’s new six-array SureFire 65 print heads. Customers can select 300-dpi

**Industry Notes**

|  | <b>Date</b> | <b>Comments</b>   |
|--|-------------|---|
| Office Depot acquires Best Office              | 2/15/2006   | Office Depot has acquired a controlling interest in Korean Best Office, with 70 franchise and company-owned outlets.                                |
| X-Rite and GretagMacbeth to merge              | 1/21/2006   | X-Rite will spend \$280 million to acquire Amazys Holding, who owns and operates GretagMacbeth.   |
| Fujifilm acquires ink jet business from Avecia | 12/26/2005  | Fujifilm will acquire the Avecia Group's pigment, dye, and ink business. Avecia's Inkjet Printing Materials was formerly Zeneca Specialties (U.K.). |



*This prototype demonstrated by Aellora last year has an 18" table. The production version to be demonstrated at ISA will have a print area of 1 square meter.*

Source: Aellora Digital

(80 pl) or 600-dpi (30 pl) piezo drop-on-demand print heads.

In "Production Quality" mode at 600 dpi, the SureFire TKMP printer images at 250 square feet per

hour. Objects up to 6" in height can be printed. The addressable print area is one meter square. During printing, the print head is stationary and the material moves at 30 inches per second under the print head. After a pass is complete, the print head advances and the material moves under it again for another pass. If a customer has the same color in all six 100-dpi arrays of the SureFire 65 head, a swath 2 1/2" wide is printed. If the printer is configured for process-color printing, head movement is 1/600" for six passes, then the head advances 2 1/2" to print another 600-dpi band. Change-over from one product type to another is said to be less than five minutes when using previously designed print images.

Aellora's inks are called "hybrid" because they share characteristics of both liquids and solids, depending on temperature. The ink behaves like a liquid when it is jetted at 68° C, and has characteristics of a solid because it becomes highly viscous almost immediately when the droplets contact a room-temperature substrate. This non-liquid characteristic provides several benefits. "Our inks can adhere to a lot of different substrates," said Michael Stoudt, President. "If we jet at 68° C, we can use monomers and oligimers that could not be jetted at lower temperatures. The benefit to the customer is that they can jet and print on a wider variety of substrates." Another advantage is that the image is stable on the substrate as it is being assembled. Subsequent layers of color (if white has been used for a background color, for instance) will not interfere with earlier layers of color—there is no need for immediate UV curing. In fact, UV curing can occur separate from the printer altogether. "I can actually print the entire piece without having to cure," said Schmidt.

Aellora Digital will ship ONYX Production House with the TKMP1000, with drivers that acknowledge the

*(continued on page 10)*

| Distribution Notes  | Date      | Comments   |
|---|-----------|--|
| EFI/XMPie   | 2/7/2006  | EFI's direct sales force to sell XMPie's PersonalEffect (for servers) and uDirect (for desktops) variable-data software.   |
| Danka/Pitney Bowes  | 1/17/2006 | Danka extends relationship with Pitney Bowes Management Company to become the preferred supplier to service Pitney Bowes' U.S. copier fleet.   |
| EFI sells print management software business to Printellect | 2/13/2006 | Startup Printellect has acquired EFI's Printellect (formerly Enterprise Suite) and Impresse "print spend management" software products. The new enterprise is located in Pittsburgh, PA.   |
| nQueue embeds software in Ricoh MFDs                        | 1/30/2006 | Ricoh Alliance Partner nQueue's nQembedded software has been embedded in Ricoh MFDs, for sale to law firms as a cost-recovery (accounting tracking) system.  |
| ACD and CeWe partner for web photo prints                   | 1/25/2006 | CeWe Color Holding, Europe's largest photofinisher with 60,000 outlets, is to provide print services to ACDSee Photo software users from within the application, for delivery directly to the customer or for pickup at a CeWe outlet. |

particular head and colorant selections that the customer has ordered. ONYX Production House also lets customers add profiles for their substrates, which, in an industrial environment, will vary considerably from the paper media that most generic profiles might accommodate.

A final-configuration unit will be on display at the International Sign EXPO (ISA) show in Orlando, FL, running between April 5 and April 8, 2006. Prices for the TKMP1000 printer will range from \$120,000 to \$160,000. By and large, we were told, the number of print heads is what determines the final price. In addition, UV is an option that can increase the price. (Many customers already have a UV cure station in house.)◇

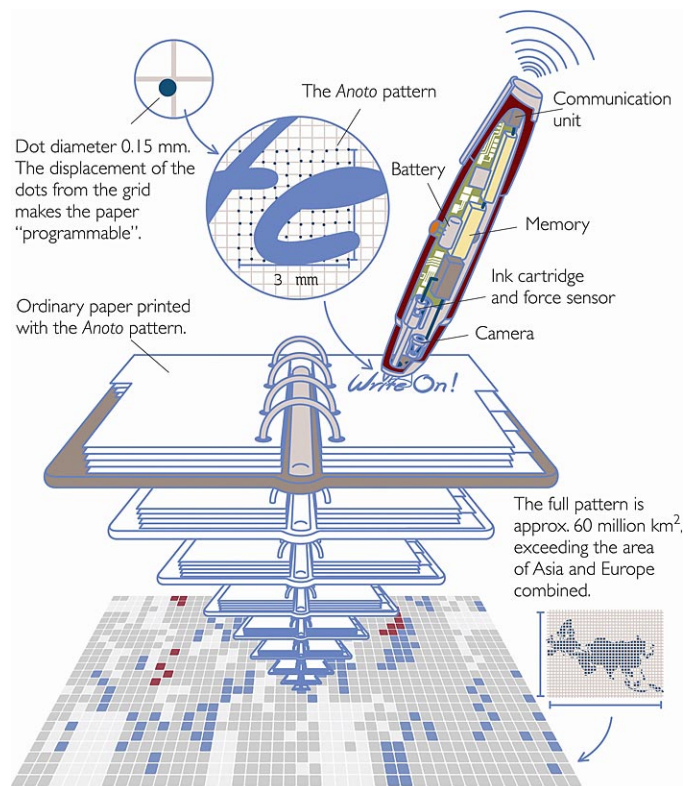
## Short-Run Printing

On January 25, 2006, **Hewlett-Packard Company** (Palo Alto, CA) announced that it has doubled the monochrome speed of the HP Indigo press 5000, to 272 pages per minute or 16,000 impressions per hour. HP has also added HP Professional Pantone Technology, upgraded operations software, and a higher-capacity proof tray. HP Professional Pantone Technology automates the simulation of Pantone colors with four-color process inks. Pantone has established a Partner Affiliate web site for U.S.-based HP Indigo customers that offers up to 25% off on certain Pantone products.

Software improvements for the HP Indigo press 5000 include divider sheets between jobs, support for multiple substrates loaded on press, faster stops when interrupting and switching jobs, reduced cold-start time, better front/back registration, remote monitoring of press-job management queues, and additional language support for the interface menus. The product improvements will be installed at no charge to customers with service contracts starting in March, and will be included in new products from March forward.◇

## Scanners and Image Capture

On January 24, 2006, Oki announced that its C5400 is the first color printer to qualify to print pages to be used with Anoto's pen-based input system. Founded in 1996 as C Technologies, **Anoto Group AB** (Lund, Sweden) developed a pen-like tool for reading text and automating data entry using handwriting instead of a keyboard. In 2003, the system was introduced by HP as the Forms Automation System. The system is no longer offered or supported by HP—in 2005, staffers from HP's Forms Automation System group took the technology outside of HP, forming Digital Pen Systems (Boston, MA). In addition to Digital Pen Systems, HP's web site



*A pre-printed pattern of tiny dots tells the pen what data field is being recorded.*

Source: Anoto Group

identifies Formation Systems LLC (Austin, TX), and the FAS Group coalition of companies in Europe and Africa as those who have taken on the FAS reins. In all, the Anoto Group counts 100 such partners today.

The system is operated by using two key components. The first component is an "intelligent" pen. We have reproduced a drawing from Anoto that shows the basic parts of the pen. The second component is paper, and that is where Oki comes in. The paper is printed with a nearly-invisible pattern of dots that provides navigation codes for the pen. Areas of the paper are pre-determined to be filled in with certain types of information. As the user writes with the pen, the pen recognizes where on the page it is, identifies the way the information is to be categorized and stored, and records the pen strokes, which are subsequently translated and uploaded to an application on the user's computer.

HP was selling the system as a forms automation system, and plenty of companies still acquire forms in bulk; so many of the 100 partners listed on Anoto's site are forms printers and commercial printers. And it appears as if, for now anyway, Oki Data is the one and only computer printer provider listed.◇