Test Report

MULTIFUNCTIONAL PRODUCTS
Xerox CopyCentre/WorkCentre/WorkCentre Pro 45
45 PPM / Segment 4
Copier/Printer/Fax/Scanner

GENERAL APPRAISAL

BUYERS LABORATORY INC
HIGHLY RECOMMENDED
LAB TESTED
20 04

Demonstrating reliability, outstanding productivity, excellent multitasking, very good ease of use and good output quality, the Xerox WorkCentre Pro 45 proved to be an outstanding overall performer in BLI's tests. A 45-ppm Segment 4 multifunctional product that offers copy and network print functionality in its standard configuration, the WorkCentre Pro 45 was also tested with its network scan and walk-up fax and Internet fax options.

Particularly impressive was the WorkCentre Pro 45's exceptional productivity. Overall efficiency received high marks across the board, in all modes, breaking records in some modes and ranking very near the top in others. For example, when compared with other tested Segment 4 multifunctional models, while its overall efficiency is competitive in simplex copy mode, it is well above average—indeed, the highest—in 1:2 duplex copy mode, and it's above average and among the highest in the 2:2 duplex copy mode. Overall efficiency in print mode is also outstanding—above average and among the highest in simplex mode

and well above average and the highest in duplex mode. Significant is that overall efficiency rates in the 1:2 copy mode and the duplex print mode are about 20 or more percentage points higher than those of most other currently available Segment 4 models tested. The unit's first-copy time from platen, at 4.6 seconds, is among the fastest for tested Segment 4 models, while first-copy time from the document feeder is competitive. Based on a 433-MHz processor, the Xerox WorkCentre Pro 45 also performed well overall in the raster tests, efficiently processing most of the file types used in testing, demonstrating a first-print-out time for the Word file that is among the fastest for Segment 4 units tested to date and competitive first-print-out times for the PageMaker, PDF and JPG files.

A reliable unit, the Xerox WorkCentre Pro 45 completed its three-month, 225,000-impression test with just one service call required to correct a manufacturing issue that, according to Xerox, was observed in a small percentage of units (the unit's right door was bowed slightly and contacting the inverter shaft, creating noise and possibly causing misfeeding) by trimming the tabs on the panel. According to documentation provided by Xerox, a new panel was cut into production for this series of products in late November 2003, just shortly after BLI's test units was produced, and Xerox service technicians have been instructed to trim the tabs on

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the right panel if this issue is observed. The unit misfed 13 times for a misfeed rate of one per 17,308 impressions. The unit's employment of user-replaceable components including the drum (xerographic module), fuser module, document feed rollers and waste toner container, should contribute to high uptime for the product, since instead of placing a service call and waiting for service when these components reach their life expectancies, users can replace them themselves. Replacement of all the components, while it requires more user involvement than with most competitive units, proved to be simple. The cost of the components is built into the cost of service contracts, which most users will still likely desire.

The Xerox WorkCentre Pro 45 also offers excellent multitasking capabilities. Testing revealed that multiple copy jobs, limited only by memory capacity (which was not reached in testing), can be programmed while a copy or print job is in progress. Some products in this range are limited to four or five jobs that can be programmed ahead. Also noteworthy is that another job can be programmed as soon as the programming of the previous job is complete, while originals are still being scanned. Moreover, a priority of 1 or 2 can be assigned to two of the functions in order to have these types of jobs take precedence over others. Output quality of the Xerox WorkCentre Pro 45 was also good, earning BLI's highest image quality rating for all types of output (text, line art, halftones and solids) evaluated in both print and copy modes.

Ease of use is another strength of the Xerox WorkCentre Pro 45. An attractively designed unit that is very compact for this speed range, it fea-

tures a distinctive dark blue panel in the back that indicates all the functions of the unit and a work surface to the left of the platen that serves as a resting place for users to organize their copies and originals. Unlike most systems, it allows for a left-to-right workflow, with documents fed into the feeder on the left side of the machine and picked up from the finisher on the right. The uncluttered control panel features an easy-to-read LCD touch screen with an intuitive menu system and a "help" function. Users can choose the default screen for the control panel. For example, in environments where users will frequently switch among a range of different functions, the "All Services" screen, which presents the user with all the different functions available, would be a good choice. The copier screen offers a good layout that presents users with all the features required for most typical copy jobs from the main screen, without requiring them to access additional menus. The control panel also offers extensive status information on all jobs in queue (including the number of sets programmed and completed), as well as completed jobs, and enables walk-up users to move their job to the head of the queue with a single keystroke. In addition, a machine status key provides access to a wide range of device information, including the life of consumables and meter counts for each function, including meter counts by user.

In addition to the extensive information provided at the control panel, the Xerox WorkCentre Pro 45 offers good feedback to PC workstations, via very well designed bidirectional print drivers that inform users at the point of need—right before they send their job—of such factors as the approximate amount of available paper or if a problem exists that would interfere with the produc-

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tion of a job. Whether or not an error condition exists, the user can click on the "Status" button on the driver screen to obtain additional information on device status. And although users don't receive a pop-up print job completion notification, they can view lists of active jobs (to see where their job is in the queue) and completed jobs, along with status information, from the status screen within the driver. In addition, a good range of device and print job status information is available from the Web utility (CentreWare Internet Services). Ease of removing misfeeds was also judged to be good in spite of the unit's compact design, as the modular components are easily moved out of the way to provide access to misfed sheets.

Connectivity

Another strength of the WorkCentre Pro 45 is the highly automated procedure for setting it up on the network and for installing the drivers on users' PCs. BLI test technicians found the installation procedures to be among the best, if not the best, seen to date in testing of multifunctional products. Configured standard with the network print controller, the Xerox WorkCentre Pro 45 includes Microsoft-certified PCL 5e, 6 and PostScript 3 (emulation) print drivers for Windows 98, 2000, NT 4.0, Me and XP, as well as the necessary PPDs for Macintosh operating systems. Installation of the drivers on Windows XP workstations is automated, as is installation on Windows 2000 workstations (provided there are no open utilities); the auto-install routine does not work for Windows 98 (an error is generated). Installation onto Windows 98 workstations was accomplished using the Windows Add Printer wizard. BLI test technicians liked the fact that

multiple drivers can be installed at once (other multifunctional products require repeating the installation process for each different driver desired). Once the installation process is complete, any configured accessories are automatically detected and the information is available for viewing in the driver, without the user having to initiate the process, as is the case with some systems, or having to manually specify the configuration, which is the case with some other systems. The PCL and PostScript drivers are very similar in appearance and functionality (with the only differences being those that are typically found between PCL and PostScript) and are very easy to use, although one criticism cited was that while most commonly used features can be selected from the main screen, quantity must be selected from a separate screen.

In addition to offering most of the features that would be expected of a unit in this range, such as secure print and proof print, and the previously mentioned status information, including a paper gauge, the drivers offer delayed print, the ability to select a banner page (alternatively, service can enable generation of banner sheets from the controller), job review, accounting (optional; when enabled, the user must enter a code in order to print) and a choice of enhanced resolution modes in addition to 600-x-600-dpi resolution. Direct printing of a range of file types, including TIFF and PDF, is possible without needing to open the application. Also supported is IP printing, whereby from the embedded Web page, users can submit print-ready PCL or PostScript files for printing.

Configured as tested, the Xerox WorkCentre Pro 45 supports scan to e-mail, Internet fax and scan to network-connected PCs via FTP, all of

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which performed well in the tests. The scan function is integrated, with no additional hardware (such as a server) required. The system supports LDAP, so walk-up users can access e-mail addresses residing on a corporate mail server directly from the control panel of the WorkCentre Pro 45, eliminating the need to manually enter such addresses. Destinations can also be entered on the fly at the control panel via a QWERTY touch-screen keypad; e-mail and/or Internet fax destinations cannot, however, be stored on the device. Also supported is network authentication, a security feature that requires users to log in with their network user name and passcode in order to access the scan function. Scan-to-file destinations are set up in templates via the Web utility. The procedure was very simple, requiring entry of a file destination and format for the scan and assigning it a name that will appear on the control panel. The Scan to PC Desktop Deluxe software option includes Image Retriever software, which runs minimized on users' workstations and checks for incoming scanned files, either notifying users of received scans via pop-up message or automatically opening scanned images into PaperPort Deluxe 8.0 (a 25-user license is provided). PaperPort also allows editing of the scanned images with annotations, highlighting and cropping among others, as well as OCRing of text documents.

Administration of the device on the network is accomplished via the CentreWare Internet Services Web utility, which is very easy to use, thanks in part to an exceptional help function. In addition to allowing configuration of device settings and creation of scan-to-folder destinations, the Web utility also provides a good range of information, including error messages, paper status, consumables gauges and meter counts for copies, prints, scans, Internet faxes and receptions, including meter counts by user. Also offered is CentreWare Web, which allows monitoring and management of multiple output devices on the network (not just Xerox models).

The unit's performance as a 33.6-Kbps walk-up fax was also good, demonstrating a competitive scan-to-memory speed of 2.03 seconds per page and good procedures for transmitting from memory after a failed communication. A choice of fax options is offered, one with support for a single phone line and one with support for two (the option tested, which enables simultaneous transmission and reception and effectively doubles capacity). Both offer a competitive feature set. The WorkCentre Pro 45 also supports integration with network fax servers offered by Xerox partners. When so configured, walk-up fax is automatically enabled on the device without requiring purchase of the walk-up fax option. When the unit is configured in this manner, walk-up and network faxes are routed to the fax server, which handles all transmissions and receptions for the enterprise.

Other noteworthy features of the Xerox WorkCentre Pro 45 include competitive standard and maximum paper capacities of 1,200 sheets and 4,800 sheets, respectively, which includes a higher-than-average bypass capacity of 100 sheets; a throughput range of from 16-lb. bond to 110-lb. index from the paper drawers; the ability to produce up to 9,999 copies in a single run (most competitors can make up to 999 in a single run); a standard DADF (Duplexing Automatic Document Feeder) with a competitive capacity of 75 sheets; 2,150 copy control codes—the high-

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est number for units in this speed range; and a 320-MB RAM (expandable to 512 MB), which is higher than most competitors. Although the copy function lacks a hard drive and does not enable electronic storage of hardcopy documents on the device for printing on demand from the control panel, the print controller has a 9.1-GB hard drive, plus a separate 128 MB of memory.

The output options available include the tested office finisher, which holds 2,250 sheets and staples up to 50 sheets per set in multiple positions. Two-hole and three-hole punch options are also offered. Other noteworthy options include the security overwrite option, which protects information stored on the device by overwriting it either at specified times or on demand; and Copier Assistant software, which is designed to make it easier for users who are visually impaired, have limited dexterity or use a wheelchair to access and use the system. It provides users with an alternative to the standard touch-screen controls, displaying an enlarged user interface on a PC and features text-to-speech capability that walks users through copying steps.

Shortcomings

Testing revealed the following shortcomings of the Xerox WorkCentre Pro 45: 1) The processing time for the TIFF file used in BLI's raster tests is slower than average. 2) While not difficult, the need to always press a key to confirm the paper size after opening the paper drawer, even if just loading paper of the same size, was found to be an inconvenience. Moreover, if a user forgets to confirm the size, any waiting print or copy jobs will be held up. This requirement does provide the advantage, however, of letting users

accurately know the color, type and size of paper in each drawer from the driver and the control panel. 3) Other models in this speed range offer more choice in finishing options, including booklet finishers. 4) Users can pull from only one paper drawer for any one print job, so for example, users cannot choose to print on letterhead for one page of a document and print the rest of the document on plain stock loaded in another drawer.

Pricing Analysis And Summary

BLI's retail pricing analysis reveals that the Xerox WorkCentre Pro 45 is priced competitively with the average for units in the 40- to 50-ppm speed range. While toner cost per page is competitive with the average for Segment 4 units tested to date, complete cost per page for supplies could not be calculated, since Xerox factors the cost of xerographic modules and other consumables into service contracts.

The Xerox WorkCentre Pro 45 clearly proved itself in testing to be among the most impressive Segment 4 multifunctional products tested. BLI recommends this outstanding performer for offices in need of a multifunctional product with copy, print, scan and fax functions for monthly volumes of up to 100,000 impressions.

Copy Quality:
   Text: .... Good
   Line art: .... Good
   Halftones: .... Good
   Solids: .... Good

Print Quality:
   Text: .... Good
   Line art: .... Good
   Halftones: .... Good
   Solids: .... Good

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General Appraisal *continued*

Ease of use: .... Good

Ease of maintenance: .... Good

Estimated waste: .... Low

Estimated downtime: ..... Low

Misfeeds: 13

Misfeed rate: .... 1 per 17,308 impressions

**Total service calls
(including PMs): 1**

MIBF: .... Not applicable

MIBS: .... Not applicable

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