



Value-Added Offerings Infused Into Modern Copiers for Improved Workplace Efficiency

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Executive Summary

Once a relatively staid component in the office-automation infrastructure, copiers have undergone an impressive transformation in recent years. No longer analog machines that simply reproduce a single page at a time, today's sophisticated document imaging tools help users save time and money, serving as the document management hub of the modern office. Through the use of digital technology, today's devices frequently come integrated with digital scanners, printers and fax machines, becoming multifunction products (MFP) that act more like a powerful networked PC than yesterday's copy machine.

New software-development tools also are creating closer communications links between MFPs and applications, which add value by making it easier for people to locate and distribute information within their company, increasing overall efficiency in the workplace.

Finally, advancements in printing technology and businesses' demand for more vibrant and creative printed materials have opened the door for high-quality but economical color MFPs in the workplace.

Each of these developments are combining to usher in a new era of value-added capabilities that are making MFPs the foundation for document-management and workflow processes that help enterprises reduce costs, increase efficiency and better manage risk.

MODERN INNOVATIONS TRANSFORM YESTERDAY'S COPIERS

The once staid copier has been undergoing an impressive transformation in recent years. A decade ago when copiers were analog machines, they were limited to duplicate one document at a time, by scanning the original and churning out a copy. If an employee needed five copies of a certain page, he or she had to physically scan the document five times because internal technology for recording and storing an image had yet to be developed. Creating copies of sales presentations, procedure manuals and training guides needed to be outsourced, at great expense, mostly because in-house duplication was simply not cost or time efficient.

All of that changed in the mid-1990s when the digital revolution hit the copy machine. Unlike its forefathers, the digital copier could now electronically store one, and later, multiple images and replicate complex projects in-house with greater speed. As the technology grew, the overall functionality increased, and new communication mediums began finding a new home in the copier room. Just as significantly, manufacturers like Toshiba America Business Solutions Inc. (TABS) began packing other digital office-automation technologies into the copier chassis, so in addition to scanning and copying, the units also acted as fax machines and printers, which turned the traditional copier into the multifunction product (MFP) we use today.

As copier manufacturers added graphical interfaces, burgeoning internal storage resources and network interfaces, MFPs became more and

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more like other PCs running on the corporate LAN. Now that people could send, copy, print, and fax jobs from their desktops across the network to a workgroup MFP, yesterday's queues at the copy machine disappeared forever.

OPEN FOR BUSINESS

A second, equally industry-changing development occurred earlier this decade when MFP manufacturers began introducing what their technical staffs referred to as "open architectures" for MFPs. While the somewhat arcane details of this technical innovation may primarily interest developers and engineers, MFP users everywhere quickly understood the concrete business benefits that these programming "hooks" between MFPs and software applications made possible. More formally known as a software development kit (SDK), this technology allows the MFP hardware and related software to communicate directly with each other. This means that when someone scans a document, the electronic output flows directly to a document-management, workflow, or other business application rather than making a time-consuming stop at an intermediary server.

Tight hardware-to-software integration also allows documents to flow in the reverse direction, so someone standing at an MFP can enter selections into its touch screen to locate all the files in the document-management database that pertain to an important customer, for example, and then quickly print out hard copies.

Toshiba is among the manufacturers that will be offering an SDK to software partners this year as an alternative to traditional, closely controlled interfaces that limit the number of software applications able to communicate with each MFP. SDKs are another example of how the modern MFP is blurring the borders between document imaging and standard PCs.

AFFORDABLE COLOR IN THE WORKPLACE

The introduction of color also has led to a new revolution of demand in today's office environment. Economical color output has become a reality for today's MFP thanks to improved technology, rising quality and declining prices for color printer engines and consumables. The result is a declining per-page cost for color output, which once could cost as much as dollar per page. Color output is now is only a few cents

more than monochrome output for present and next generation MFPs, fueling a migration from older, black-and-white units over the past three years. Color MFP sales have been posting annual growth rates of 30 percent or more in recent years, making it one of the fastest growing segments of the office-equipment market.

VALUE-ADDED APPLICATIONS BUILT ON AN MFP FOUNDATION

These three developments—digital multifunction devices, SDKs for closely integrated hardware and software, and the mainstreaming of color—have ushered in a new era of valuable applications that make MFPs and document management software essential components in helping enterprises reduce costs, increase efficiency and better manage risk.

MFPs and electronic documents eliminate paper inefficiencies. Industry estimates calculate that staff time spent searching for paper records in folders and filing cabinets makes hard copies 22 times more expensive to manage than electronic documents. In addition, because companies can store electronic content in backup databases, the risk of losing data is far lower than with paper.

MFPs facilitate business collaboration. Communication increases within and among business units when co-workers can access central document-management databases fed by MFPs, or can send content to workflow applications via the corporate LAN.

Risks decline with MFP-based security and compliance policies. Built-in user access controls that come standard with the best MFPs use passwords or SmartCards to keep unauthorized people from valuable content. In addition, security software bundled with MFPs can audit usage activities, so managers know who used each device, what documents they accessed, and what printing and imaging actions they performed once they had the information. Access controls and auditing capabilities also reduce the complexities of complying with today's ever-expanding list of regulations.

WORKFLOW AND SECURITY PROGRAMS ADDRESS TODAY'S TOP ENTERPRISE NEEDS

An MFP foundation opens up enterprises to a host of new software applications. For example, MFPs can feed electronic content to workflow

processes that automatically route documents for managerial approvals. TABS' partner DocuWare's workflow application places scanned files in custom folders that make it easier for end users to retrieve and distribute the information, as well as send purchase orders, expense reports, and other standard business documents through the sign-off process. DocuWare can automate the process so that every time a designated type of document enters a folder, the program sends it to the proper managers for their electronic signatures.

While managing electronic documents may be more efficient than grappling with their paper counterparts, they may also produce some new challenges. One is the alphabet soup of file formats for text files, spreadsheets, emails, presentations, and other document types. To sort out formats, TABS can bundle into an MFP an application named e-BRIDGE Re-Rite, which automatically converts scanned documents into any of 16 different electronic file formats a company might use.

This can be especially beneficial in a central department, such as an operations group, that's responsible for processing all newly faxed purchase orders. Staff members can scan the documents into an MFP and then forward the electronic files to a document-management server. This allows the operations staff to quickly access purchase orders in a matter of seconds, without spending time translating the information into Excel, Word, Adobe Acrobat, or other formats.

TAKE CONTROL OF SECURITY AND COMPLIANCE

Sarbanes-Oxley, the Health Insurance Portability and Accountability Act (HIPAA), Federal Rules of Civil Procedures (FRCP), and other demanding regulations are pushing enterprises to manage information more closely and securely than ever, and modern MFPs can play an important role in these efforts.

Toshiba's Secure MFP program provides three levels of information protection. First, data-scrambling encryption technology makes information stored on MFP hard drives unreadable to unauthorized users. Further protections result from data-overwriting technologies that remove sensitive information from hard drives more completely than standard erasure commands. Instead of merely deleting the software pointers that help applications find data stored on a drive, data overwriting records over used sectors multiple times

using practices developed by military agencies and security experts.

Second, Secure MFP can build on this basic security by adding user authentication tools, such as passwords and personal Identity Cards or SmartCards. Companies can choose to limit access according to the role of each employee, so only people in the HR department can read personnel files, for example.

The software stores individual access profiles on an LDAP (Lightweight Directory Access Protocol) server, an identity management technology used extensively in Web applications. Security managers enter access rights for each employee into the server's records so each time someone logs into the MFP, the hardware consults the registry to determine what information he or she can view and whether they can copy, fax, print, or scan the data. Thus, depending on the job title, one person may be able to print out a document but not fax it outside of the company.

The third level of security builds on the first two categories with printing controls such as Follow Me technology. The application lets authorized employees print documents from a stand-alone server to any MFP or printer attached to the network. This feature assures that the intended recipient is at the MFP when the documents are created, to guard against sensitive information sitting in the output tray.

Finally, enterprises can use their MFPs to comply with new e-Discovery rules, which require all electronic information, including emails, to be readily available if requested for a legal proceeding. TABS's e-BRIDGE Re-Search goes beyond typical search engines by indexing key information across an entire company's network and converting it into searchable metadata in real time. Re-Search will pull up digital documents that have that name in it, no matter if it is an email, presentation, spreadsheet, or text document.

LOOK AT MFPs IN A NEW LIGHT

These value-added opportunities mean enterprises need to consider a whole new set of criteria when evaluating MFPs and their potential. The first assumption to fall is that the traditional "speed and feeds" evaluation is the best way to choose an MFP. Enterprises shouldn't ask themselves, "How many documents are we copying, and what speeds do we need from our copier?" Instead, the real question is, "How

do we do business, and how can we do it more efficiently?”

The answers to this question will help companies select MFPs based on the features they provide for integration to document-management and workflow applications. Models that support an SDK or those supported by third-party interface vendors will offer buyers the widest range of software applications.

TABS' Encompass application can further help enterprises find the right MFPs and applications for them. The program uncovers the hidden costs associated with printing and imaging output and analyzes the overall infrastructure.

For example, companies can use Encompass to first take an inventory of how many document output and management products they have, a sometimes deceptively difficult task because of independent department purchases over many years. Through connections to the LAN, Encompass identifies all of the imaging devices on the network, and in many cases finds perhaps double the number of devices companies thought they had. The software also compiles summaries of the volume of output each unit typically produces. These aren't just interesting data points—it's potentially cost-saving information, because individual printers are more expensive to operate than modern MFPs. Better control and management of these devices can point to significant cost savings.

Companies then use Encompass to match each piece of equipment to supply-cost profiles contained in an associated database of more than 1,000 products. The result: An accurate picture of an organization's total printing and imaging infrastructure costs by hardware device. Based on this information, enterprises can work with TABS to:

- Reduce their “footprint” of expensive standalone printers, copiers and fax machines and replace them with more efficient MFP technology.
- Determine the optimum placement of work-group MFPs based on departmental traffic flow and output levels.
- Determine the right document-management and workflow applications for streamlining business processes.

Companies that complete this evaluation and redesign their equipment fleet typically cut monthly printing costs by at least 30 percent, according to TABS research.

THE ERA OF INNOVATION CONTINUES

The evolution of copier-based MFPs has progressed quickly so far this decade, and there are signs that innovations will continue. TABS already offers the document output market a wide range of imaging products, spanning 12- to 135-pages per minute (ppm) for monochrome devices and 11- to 55-ppm for color. Later this year, the company plans to introduce high-speed color laser color devices that will push color output ratings to 65 ppm. It's another sign that copier technology has shed its staid image forever ■

ABOUT TOSHIBA

Toshiba America Business Solutions Inc. (TABS) manages product planning, marketing, sales, service support and distribution of copiers, facsimiles, multifunction printing products, network controllers, and toner products throughout the United States, Mexico, Brazil, Latin America, and the Caribbean. Headquartered in Irvine, Calif., TABS has four divisions: the Electronic Imaging Division; the Toner Products Division; the Document Solutions Engineering Division; and TOPAC U.S.A., Inc., dba Toshiba Business Solutions (TBS), a wholly-owned subsidiary corporation of TABS, that operates a network of wholly owned office equipment dealers throughout the United States.

Named the most favored manufacturer eight times by the Business Technology Association (BTA), Toshiba's entire product line, customer support and marketing distribution policies are markers for the industry. Among the many other awards garnered in recent years, Toshiba was named the “Manufacturer of the Year” seven times by Marketing Research Consultants (MRC), and has twice been named to the *CIO* 100 for being among the top 100 “bold” (2005) and “agile” (2004) companies in the world.

TABS is an independent operating company of Toshiba Corporation, the seventh largest electronics/electrical equipment company and the world's 91st largest company in terms of sales. Ranked by *Fortune* magazine as the 10th Most Admired Electronics Company in the World, Toshiba Corporation is a world leader in high technology products with more than 300 major subsidiaries and affiliates worldwide. Fiscal year revenue in 2006 was approximately \$60 billion.

For more information on Toshiba copier, facsimile, multifunction printing products, network controllers or toner products, or for a dealer in your area, call (800)-GO-TOSHIBA or visit the TABS Web site at www.copiers.toshiba.com.