B2C Technology Story

Web Summary:

Going the All-in-One Route?

by Leon A. Enriquez

Reading Time:
8 minutes

Reader Benefit:
♦ Gain from an understanding of AIOs and MFPs;
♦ Insights about how AIOs and MFPs work?;
♦ Jargons related to AIOs and MFDs.

Today's technologically enhanced office or home will most likely have a PC, an inkjet or laser printer, a personal copier, a fax machine, and perhaps even a scanner. However, to get all of these things to fit on your desktop will often pose a problem because of your space constraints. Enter the AIO or MFP to the rescue!

Just what is an AIO (All-in-One) or MFP (Multi-Function Peripheral) machine? In simple terms, an AIO printer incorporates the essential elements of four separate peripheral devices, i.e., apart from the basic functionality of printing, they also copy, fax, and scan. A MFP device is a good example of what happens when an equipment is designed to be all things to all users. You end up with a versatile solution that offers innovative features and performance.

Going the All-in-One Printer Route?

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Today's technologically enhanced office or home will most likely have a PC, an inkjet or laser printer, a personal copier, a fax machine, and perhaps even a scanner. However, to get all of these things to fit on your desktop will often pose a problem because of your space constraints. In fact, you may be surrounded by high-tech devices and yet, don't even have the desktop space available for low-tech devices such as pencils, pens, and paper!

If you care to look, you will notice that printers are everywhere! We live in a world where printing on paper is the norm. If you observe the inner workings of a printer, copier, fax machine, and scanner, you would discover that very similar technology and parts are used in each individual device to make it work. It only makes sense to place all of this similar technology inside one machine. Enter, the All-in-One printer.

Just what is an All-in-One printer? In simple terms, an All-in-One (AIO) printer or Multi-Function Peripheral machine (MFP) incorporates the essential elements of four separate peripheral devices, i.e., apart from the basic functionality of printing, they also copy, fax, and scan.

Fortunately, popular printer manufacturers such as Brother, Canon, Epson, Hewlett-Packard, and Fuji Xerox have developed affordable multifunction devices that place all of those features in one device that may actually fit on the desktop next to your PC. Versatile multifunction devices replace your printer, and connect directly to the existing bidirectional parallel printer port, or USB port.

MFP is a good example of what happens when an equipment is designed to be all things to all users. You end up with a versatile solution that offers innovative features and performance.

In price terms, a multifunction machine is less expensive than buying four separate machines. Because of the form factor, a MFP is compact and thus saves valuable desktop space. In addition, the device is easy to set up and program. The advantages extend one step further as almost all MFPs can perform multiple tasks simultaneously such as printing while receiving a fax.

When choosing a printer, your printing requirements and budget will help you decide on whether to choose a laser printer or an inkjet printer.

A laser printer is usually capable of producing professional-looking text and images in your print copy. Also, a laser printer is ideal for handling heavier printing jobs at a lower cost per page. When compared to a laser printer, an inkjet printer is less expensive, but is designed for modest printing needs.

How to Choose?
Which is the right All-in-One printer that meets your requirements? That performance level is usually enough for the professional working within the limited confines of a small company or a home office with a limited tech budget. If you count yourself among either group, a MFP are worth investigating when it's time to purchase your next printer, copier, fax, or scanner. Even if you don't need all those functions in one unit, it's nice to have backups should your primary equipment fail.

Today's vendors have finetuned their multi-function peripheral machines into imaging and communications solutions that combine print and copier functions with scanning and faxing. The last few years have seen advances in technology where both print speed and resolution have increased. More units now feature a flatbed scanner, which is more versatile than the sheet-fed variety in making copies, scanning images, or sending a fax. And colour faxing is now standard on inkjet models.

As for pricing, you can buy a good MFP for what you would have paid for a decent laser printer just a few years ago. The best buy for your small office or home are colour inkjet MFPs with prices starting around $800. If you're buying for a networked workgroup of say, three or more people, your colour options are limited and prices start above $1,000. Considering all these units can do, that's quite a bargain in either case.

Beyond price, the defining difference among MFPs is whether or not, they print in colour. Most of the true MFPs are colour inkjet models, developed to serve as an All-in-One solution for the individual or small office with a limited space and budget. The high-volume workhorses are developed to serve primarily as a copier or fax for workgroups, and usually sacrifice colour for speed and volume.

Be sure to understand how much the MFP will rely on your PC. Most monochrome units and some inkjet models can copy, fax, and scan independently of a PC. If a unit doesn't have a built-in fax, but offers PC faxing, it can send and receive faxes through your computer and its modem. Note that this ability may slow you down if you're trying to multitask with other computer-related tasks done at the same time.

Note also that a MFP's appeal, i.e., its wide capability, is also its major drawback. By combining everything in one compact unit, you lose all functions if you send the unit for repairs.

A multi-function peripheral machine even may save you a few hundred dollars when compared to the total cost of purchasing each device individually. Inkjet printers are available for between $300 and $600; laser printers range from $800 to $1,600; personal copiers can be found between $400 and $1,000; a fax machine can be priced from $400 to $800; and a flatbed scanner will cost between $300 and $1,000. The multi-function peripheral machine, with all of these components, ranges from $800 to $2,000.

Points to Note
Before you buy a MFP, do decide which function is most important to you. Then, use that functionality as your primary guide. The key points to compare and evaluate are as follows:

1. Printer speed gauged in pages per minute (ppm), and maximum print resolution;
2. Copier speed and reduction and enlargement options;
3. Scanner speed and colour resolution;
4. Hardware-based versus PC-based faxing;
5. Fax transmission rate and features, such as speed dial, page memory, and broadcast faxing;
6. Physical size of the unit;
7. Network support;
8. Equipment warranty, don't forget to ask about warranty; and
9. How much you can expect to spend on consumables, such as paper and ink cartridges. They can be a hidden cost of owning a MFP.

Most of the leading vendors – such as Brother, Canon, Epson, Fuji Xerox, Hewlett-Packard, Panasonic – with such product offerings highlight that the market for multi-function printers/machines or All-in-Ones is growing at a steady pace. This is driven by a surge in inkjet MFPs, which are putting increased pressure on single-function inkjet printers, according to an IDC report. Increased connectivity rates for monochrome laser MFPs is also driving this market.

Riley McNulty, senior research analyst for Document Solutions, Multifunction Peripherals and Printer services at IDC, highlighted that the following are areas to watch within the MFP market. They include

♦ The continued transition from sheet-fed to flatbed configurations within the inkjet segment;
♦ Heightened competition in the monochrome laser segment;
♦ Continued growth in colour; and
♦ Increased adoption of scanning overall.

Extrapolating from the U.S. figures, the Asia-Pacific growth is expected to be about the same, i.e., at about 47% in the year 2003.

Box Story 1:

All-in-One – Jargons to Note

To help you decide which is the right All-in-One printer that meets your requirements, consider the following features.

Compatibility:
Most MFPs work fine with Windows PCs but not with a Mac system. So don't forget to check the compatibility of your PC with the particular multifunction printer. Also make sure that your system has room in hard-disk and RAM for your MFP, as is required.

Printer function:
♦ *Speed:* Pages per minute (ppm) is the average speed printing black and white pages only. Since colour images need to be scanned thoroughly and printed differently, they tend to take longer than black and white copies.
♦ *Resolution:* Resolution is measured in dots per inch, and thus the more dots, the finer the resolution of the text or image. As images are more complex to copy than text, image resolution can be different than the text resolution.

- *RAM:* RAM (Random Access Memory) or buffer memory holds the graphic information on its way to be printed. It follows that the larger the buffer memory, the faster the printer can print complex graphics.
- *Parallel Port:* An interface cable is typically used for two-way communication between the printer and the PC.
- *USB Port:* A USB (Universal Serial Bus) port is a different and new way to connect printer and computer. A USB port allows more than one external devices connected to the same port, to the computer. Not only are USB ports easier to install, they transfer data much faster than the parallel port or serial ports.
- *MacIntosh Port:* Some printers come with Mac interface port which looks like the round keyboard and mouse ports on PC.

Fax (facsimile) function:
- *Fax:* If there are going to be multiple users for the same machine, a single click copy and fax function with easy to read front panel is ideal.
- *Fax Speed:* This is the maximum bits per second that can be sent or received by the fax machine. The actual speed can be different as it also depends on the machine on the other end of the fax.
- *Fax Forwarding:* This feature automatically forwards received faxes to another number programmed.
- *Fax Page Memory:* A larger memory allows you to leave the fax machine unattended for a longer period of time. It keeps recently received faxes in memory if the fax machine runs out of paper. After refilling the paper for the fax, it then prints out the faxes that were stored.
- *Automatic Document Feeder (ADF):* ADF is convenient as you don't have to feed each page by hand. A large feeder has a number of pages and hence is more appropriate for long documents as it requires less frequent reloading of paper.
- *Speed Dial:* Frequently dialled numbers can be programmed into the unit's memory for convenience.
- *Junk Fax Block:* This feature provides the freedom to program numbers from which you don't want to receive faxes. The fax machine still answers the call; it just doesn't print anything out. On the other side, the fax machine thinks the fax was transmitted and doesn't call back.
- *Broadcast Number Locations:* This features helps you in saving some money as it sends the same fax to different phone numbers. You only feed the documents into the machine once, enter a list of phone numbers, and the fax machine takes care of the rest.

Scanner function:

- *Scanner:* A scanner makes a digital copy of an image and outputs that into a file that you can view and change on your computer. Some MFPs combine a colour scanner with a colour printer, so they can function as colour copiers. Others offer only a black and white scanner, providing you monochrome copies even if they include a colour printer. Generally, all scanners let you scan to copy or fax, but some of them let you scan to disk, giving you the full benefits of a scanner.
- *Copy Speed:* Is the speed in pages per minute for a series of copies. Copy speed of 1st page is different than the copy speed 2nd pages. Since the copier has to scan the original to generate the first page, it takes longer than the rest of the pages.
- *Enhanced DPI:* The scanner enhanced DPI resolution indicates the resolution that the device is capable of yielding through interpolation i.e., a software program in the machine does this.
- *Optical DPI:* The scanners optical DPI is the physical resolution at which a device can capture an image. The larger the number of the optical dpi, the sharper the image will be.

Box Story 2:

Optimising Your MFP

A multifunction peripheral machine (MFP) can print, scan, fax, and copy, plus the space-saving benefit. Since this All-in-One (AIO) already does it all – it can help you it accomplish even more.

Just by mastering a few tips, and by getting to know some special features, you can learn how to get the most from your AIO.

Faxing:
Features like group dialling, junk-fax blocking, fax forwarding, and standalone faxing are worth checking into. Besides normal faxing as you know it, you can even send a computer file as a fax directly without a fuss.

Copying:
Copy options abound, with customisable reduction and/or enlargement, and one-button access to features such as "two-on-one" i.e., two sheets on a page, and "poster" i.e., tiled sheets. Some models also have a "creative copy" button to create instant wallet-size photos, mirror images and more.

Scanning:
The utility tool lets you create multiple copies of the original on the same sheet, making it easy to create a page full of wallet-size digital pictures.

The OCR (Optical Character Recognition) software is one of the most useful AIO features. The OCT can be used to convert your hard copy documents to soft copy for easy archiving. Perhaps it's time for you to start an electronic filing system just to get rid of the piles of paper around your desk. Just use OCR software to scan all that paper. OCR scans documents and transforms them into editable rich text.

Longevity Tips:
One of the easiest ways to keep your AIO in peak condition is by placing it in the right location and cleaning it regularly. Make sure your printer is placed on a sturdy, level spot in a well-ventilated room. Keep it out of direct sunlight and avoid abrupt temperature or humidity changes. Every month or so clean up the area around it, and wipe down its surfaces. Keep dust to a minimum inside your printer and also promote proper ventilation.

Updating drivers:
A driver is a piece of software that makes a lot of decisions for your All-in-One. Among other things, it controls the resolution and colour. And it helps your machine communicate with cameras and other products.

Drivers are regularly updated and new versions can help fix problems and improve performance significantly. So it's important to make sure you have the most current drivers to keep your AIO running well.

Box Story 3:

All-in-One Office Solutions

Can a single machine really change the way you do business? It might, especially if it's a multifunction All-in-One (AIO) – which basically combines the functions of printer, scanner, copier, and fax into one convenient device.

Let's face it, computers and the peripherals attached to your PC have changed radically in recent times. Even the most elaborate computer desks rarely allow space for more than one device, and you're forced to find room for them in whatever space you can find – on top of filing cabinets, on makeshift tables, or even an unused corner of the floor. And that's not even considering the multiplicity of wires and cords needed to connect them and keep them all running.

That's where the simplicity of the AIO comes into practical application. Because everything you need is neatly combined in one machine, you'll free up space in your office, and free yourself from the stress of having to maintain a number of different devices. For example, instead of having to buy three different kinds of toner for your printer, fax machine, and office copier, you now have to deal with just one for the AIO.

Creative Tool

An AIO is more than just a space saver for your home office. With so many handy, integrated functions at your fingertips, you'll discover how easy it is to complete professional-looking projects that will help your business grow.

An AIO is ideal for producing the documents you need to keep your business competitive. Scan in your own photos and use them to create flyers and brochures to help promote your product or service. Print and copy them as the need arises, to save the cost of large print runs. Produce correspondence, presentations, and company reports, and then fax them to partners and clients for quick response.

Whatever you create for your business, you will get the best results every time by using the right paper for the job. There are paper stocks that are specially designed to help you take your business to the next level with professional-looking documents.

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