

RADIOLOGY

T O D A Y

A patient is lying on a large, blue and white radiation therapy machine. The machine is complex, with various components and a large circular opening. The patient is wearing a dark shirt and is looking up at the machine. The background is dark, making the machine and the patient stand out.

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Selecting an IMAGER

Your Facility May Be Filmless, But
What About Your Referrers?

BY JEANNE PHILLIPS

The more things change, the more they remain the same. In radiology, nothing proves the point better than film—the stacks and stacks of it still found in today's advanced digital radiology workplaces.

While digital workflow and archiving are rapidly becoming mainstream, for many physicians, hard-copy images are still a way of life.

"I don't see film going away anytime soon—probably not until a whole new generation of doctors begins to practice," says Greig Huggins, a former technologist and radiol-

ogy administrator who also has held a full range of radiology business management positions. He is currently vice president of business development for Utah Imaging Associates, a group of 30 radiologists practicing in Salt Lake City. During his career, Huggins has helped develop more than 30 imaging centers, from initial planning and construction to equipment purchase.

"Film is still in favor among many radiologists, in part, simply because old habits die hard," he says. "Adjusting to soft-copy reading takes a significant period of time. The transition is slower for referring physi-

Don't expect film to go away completely—at least until a generation of referring physicians accustomed to working with it have retired from clinical practice.



icians who look at diagnostic images only occasionally and need even more time to adapt.”

Even in a PACS environment, most practices need a high-performance dry imager to cater to the needs of referring physicians who demand top-quality hardcopy images. Huggins believes a free-standing center cannot survive today without providing high-quality hard-copy images.

SERVICE BUSINESS

“Radiology is a service business, and most referring physicians demand film,” he says. “Moreover, even hospitals and large self-referring, multipractice groups have a tough time convincing surgeons and orthopedists to read from monitors in the operating room in a completely filmless environment.”

Of course, in practices of all sizes, digital imagers are rapidly replacing dark rooms and the time-consuming film developing process. Huggins believes imagers have become an essential radiology tool in most practices, whatever the size and setting. “Today, selecting the right imager,” he says, “plays a crucial role in fast, efficient radiology workflow.”

Naturally, image quality is a primary consideration when selecting an imager. The specific image resolution needed depends on the type of studies. Mammography, for example, requires an extremely high-quality image. In addition to resolution, experts suggest that you also focus on the image contrast ratio and the ability to optimize grayscale for all modalities as well as black levels.

“Many purchasers assume that price is an indication of quality, and image quality in particular,” comments Huggins. “However, there are many reasonably priced high-performance models available today. Our Sony FilmStation dry imager, for example, delivers superior images equivalent to those produced by equipment costing several times the price.”

COMPARE PRINTS

When shopping for an imager, Huggins recommends examining actual prints from all imagers being considered. Look at several prints because consistency is important for accurate film reading.

Huggins believes today’s rapidly evolving digital radiology workplace imposes a special set of demands on a dry imager, and that these demands should be considered seriously when purchasing an imager. “Today, first and foremost, a dry imager must be versatile and adaptable,” he says, noting that as technology races forward, many practices are upgrading equipment on an ongoing basis and are moving in stages toward a digital environment.

This means that an imager often must be interfaced with new modalities and software applications, including PACS.

To meet the demands, an imager must be DICOM-compatible. It should also support multiple devices and modalities to grow with a practice. Some systems can link a second imager to the first, sharing the workload through a single interface and nearly double the throughput.

Look for plug-and-play connectivity with both modalities and the hospital network. “Especially if you don’t have IT support,” emphasizes Huggins, “valuable time can be wasted trying to connect a printer to the network.”

GOING MOBILE

Imagers frequently get moved through the facility as new equipment is added. A compact, lightweight imager with minimal siting requirements offers an important benefit. Moving the large, heavy imagers common in the past was a significant undertaking.

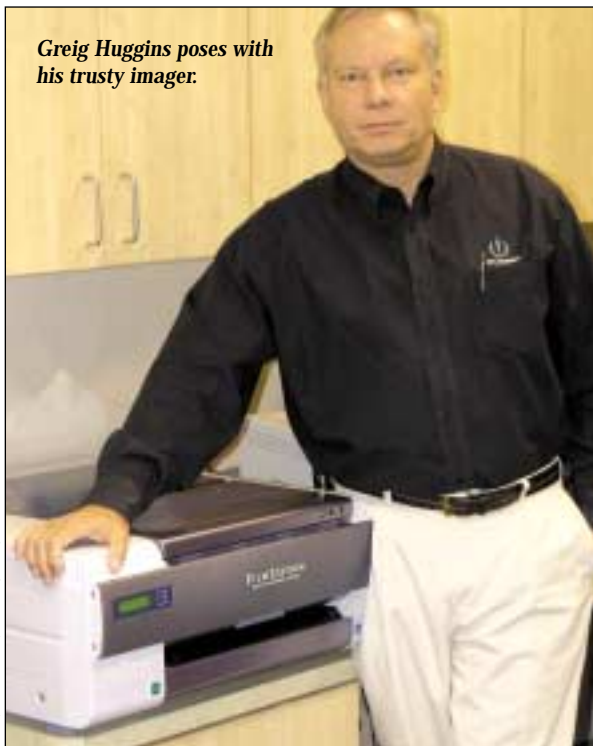
“A small-footprint device is a much better choice,” Huggins advises. A system that can be positioned vertically as well as horizontally offers additional versatility. It can easily be located on a desktop and alongside a PC. “Look for a similar high degree of flexibility in whatever imager you choose,” Huggins notes.

Also important is selecting an imager that operates on standard 110-volt current, so it can be plugged into a nearby wall outlet if moved, eliminating the need to call in electrical contractors.

With space at a premium in many practices, compact size provides additional flexibility in room layout. Huggins also notes that a small unit enables siting where convenient and easily accessible—not simply where space exists. This can create important workflow benefits.

How many images do you print in one day? For installations generating a significant volume of film, the importance of throughput cannot be overemphasized. Slow print output can easily become a major radiology bottleneck and the bane of technologists’ professional existence. “Compare prints firsthand from all the imagers being considered,” Huggins says. When comparing output, he reminds managers to match apples to apples by

Greig Huggins poses with his trusty imager.



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— Greig Huggins, vice president of business development, Utah Imaging Associates

— Image courtesy of Utah Imaging Associates

using the same film size and resolution to compare competing machines.

DECENTRALIZED PRINTING

As an alternative to relying on a single centralized, high-volume imager, a large practice can consider purchasing several smaller devices to create distributed workflow. “A major advantage of this strategy,” notes Huggins, “is that individual imagers can be placed nearby technologists and modalities to eliminate walking back and forth from a single large device. Many hospitals have successfully implemented distributed workflow and boosted their exam throughput.” The strategy will not elevate costs because the purchase price of a series of smaller printers often compares favorably to the cost of a single, large device. Multiple imagers also provide backup if one unit goes down.

Ease of use is also important, particularly in a practice where multiple clinicians rotate through the facility and use an imager only occasionally. Make sure that films are simple to load and that you can calibrate an image both manually and automatically, Huggins suggests.

Making the most of a budget and selecting an imager that delivers good value is important to every practice. Huggins advises radiologists to carefully

consider a full range of imagers and compare the features offered at various price points. “Remember that many intangibles come into play,” he says, “and again, price is not necessarily an indicator

of quality. Our Filmstation offers a full range of high-end features but was moderately priced.” Also keep in mind the total cost of ownership. Huggins says many people fail to consider the price of supplies—film, in particular—and are unpleasantly surprised when they have to budget far more than expected to keep turning out images day after day. “Suddenly, what seemed like a great bargain can become a major drain on the radiology budget,” he says.

COST OF OWNERSHIP

Another unexpected expense can be the print head and related supplies. “These can be quite costly,” Huggins says. He advises purchasers to check the price and print quantity ratings for all printing supplies before purchasing equipment. “At Utah Imaging, our original print head is still turning out crisp, clean images after 2½ years. You’d be surprised at the cost differentials in these type of supplies among some of the most popular imagers on the market,” he says.

One of the most important but difficult-to-judge considerations is reliability. An imager that is frequently out of commission will take a major toll on workflow, significantly affecting the bottom line. Perhaps the best way to get a handle on this, accord-

ing to Huggins, is to talk to other radiologists and learn what their experience has been with various manufacturers.

When an imager does fail, quality service and support is important. Check the details of your service contract carefully. To maximize uptime, some manufacturers can monitor imagers over the Internet to head off potential problems before they occur. Some manufacturers will ship a replacement unit overnight if a problem cannot be easily remedied on site—which means a practice can remain up-and-running even when its only imager has gone down.

WHAT YOU’LL NEED TOMORROW

Make sure that the imager you are purchasing has all the special features you need today and may look for tomorrow. Most imagers print film in a variety of standard sizes. Make sure your imager offers the formats you need. Remember, printing to smaller film whenever possible pares down film costs.

Some applications call for printing to the edge of films, and not every printer offers the capability. Also, modalities such as nuclear medicine and functional MRI call for color prints, another special considerations. Finally, high-volume facilities will benefit from such features as simultaneously printing to multiple film sizes and automatic film sorting.

Huggins concludes: “A good imager will serve you long into the future. Choose it wisely.”

— Jeanne Phillips is a veteran writer and communications consultant. Sony Medical Systems, mentioned in this article, is one of her clients.