

Photo courtesy of MedQuist

# Speaking of *Efficiency*

West Coast imaging center achieves enviable efficiency metrics with a planned IT implementation.

By Robin Blair, Editor

For some people, information technology is almost enough—a “solution,” as vendors label it, to a specific problem that stems from manual processes, paper or both. For these folks, replacing a manual task with an automated task, or a paper file with a computer screen, is answer aplenty.

For other people, IT is the tip of the iceberg, a means but not an end. Even cool technology is merely a toolset designed to bring the end-user closer to his desired outcomes. Jon Copeland, CIO of Duvoisin & Associates/Inland Imaging in Spokane, Wash., is the second kind of person. For Copeland, information technology by itself—even cool

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For more information about SpeechQ for Radiology and other dictation/transcription solutions from MedQuist, [medquist.com](http://medquist.com).

IT like speech recognition software—is the vehicle to accomplish a goal. For Copeland, it's about patient care, workflow and efficiency; it's about achieving demonstrated and measurable gains for his organization. Unless one leads to another and to another yet, all the IT in the world doesn't phase him.

## Distribution Difficulties

Copeland's organization is pretty big. Inefficiencies and ineffective workflows that might be overlooked, or targets of benign neglect, in a small organization can be a serious impairment to productivity and profitability for a large organization.

Copeland describes his organization as having three divisions. The first is Inland Imaging, which offers outpatient imaging services in four Spokane-based locations, with an expansion into Seattle now being planned and a possible future expansion into the Phoenix market as well. The second is Duvoisin & Associates, the business services arm that serves Inland Imaging. The third, he says, is the 55 radiologists themselves, the “talent” behind the Inland Imaging organization. These 55 physicians, all with different personalities, practice styles and workflow preferences, represent the revenue-generating component of the organization.

“Our radiologists were reading 600,000 exams per year,” says Copeland, mostly from patients in eastern Washington and Seattle. “That means we also had lots of transcription,

lots of keying and lots of reports.” Inland Imaging also had, and continues to have, lots of external users for those reports—about 7,000, in fact.

The organization has spent the last three to five years surrounding itself with automation, but through a carefully crafted and timed plan. Going filmless and migrating to digital imaging was just the first step. It was a vast improvement, of course, but all it eliminated was film. It didn’t affect the generation or the distribution of reports.

After going filmless, management at Inland Imaging made a deliberate decision to focus attention next on creating external efficiency with customers. This would leave until later the process of streamlining how radiology reports were generated. “With 7,000 physicians, nurses and other medical professionals needing to review the radiologists’ reports and medical images, distribution became the next most pressing challenge.”



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—Jon Copeland  
Inland Imaging/  
Duvoisin & Associates

In the old days, says Copeland, “we would distribute more than 50,000 reports per month manually. In any given month, we had 16,000 film jackets in use and in transit. We had two warehouses and 40 people in medical records, and all of that supported an imaging business. Today we have one warehouse and five or six people in medical records, no film and no film jackets.” Business is healthier than ever.

### The End of “in Transit”

Inland Imaging relied on Web capability for report distribution. With imaging management technology from Stentor, which was subsequently acquired by Philips Medical Systems, Inland Imaging brought its 7,000 report and medical image users online. “It used to take two days to prepare and distribute a report for a user,” Copeland says. “Now, when that report is finalized, it is available online through Web viewing.” The “in transit” segment of the business had been replaced.

He says his organization was very pleased when Philips bought Stentor. “We were exploring speech recognition products and definitely favored the SpeechMagic engine from Philips. We were happy to already be using from Stentor the same product that Philips Medical chose to acquire.”

With the challenges of films and report distribution behind them, the Inland Imaging/Duvoisin team went to work on the next big hurdle: report generation. “We

spent a lot of energy resolving films and distribution,” says Copeland. “Next, we needed to alter the process of report generation, and to the same degree.”

For the radiologists of Inland Imaging, that meant speech recognition technology. Copeland says he is pleased that his organization chose to tackle digital imaging and online report distribution first. “Speech recognition wasn’t nearly as proficient four or five years ago as it is today. It wasn’t ready then.” But it is now.

### The Top Choice

Duvoisin & Associates/Inland Imaging selected SpeechQ for Radiology from MedQuist, headquartered in Mount Laurel, N.J., as its speech recognition system. The choice was supported by substantial due diligence including on-site testing of multiple products as well as site visits to other healthcare organizations to see different products in action. Copeland says SpeechQ was selected because “the architecture was dot-net, and it was nimble. In our view, it was the best technology. The SpeechMagic engine is superior; it learns right out of the chute and continues to learn. The workflow component is also superior; the best products have embedded workflow engines.”

That’s high praise from a CIO, but it wasn’t praise or evaluation alone that won the case for MedQuist. “They sent a high level engineering team on site for four days,” Copeland adds. “That was significant. Most vendors won’t send in their best engineers until they have a signed contract in hand. MedQuist sent in top engineers and their manager of product development, who wrote a 20-page analysis as a precursor to an implementation plan—all before we had signed the contract.” Soon, Inland Imaging signed the contract.

Parenthetically, Copeland adds that MedQuist has continued to send staff on site to the organization’s task force meetings. “They have always encouraged our feedback,” he says, “and new versions of the product release include changes based on our input.”

### Radiologists Embrace IT

Copeland says the “typical bell curve” was in effect as Inland Imaging implemented SpeechQ. “Like most organizations, we had early adopters who embraced it from day one. They eliminated transcription, developed their own templates and self-edited their work from the start. We had others who struggled for a few days. They didn’t give up, but they weren’t extremely adept at the outset. Fortunately, they took the time to learn.”

Also fortunately, SpeechQ provides choices for radiologists. Some, like Copeland’s early adopters, like to immediately dictate, then review and self-edit their files, and finally authorize them in a single step. Other physicians dictate reports and then send their files to a transcriptionist or medical text editor for correction and finalizing. For the



frenzied physician who starts the report-generation process intending to self-edit but runs out of time, SpeechQ allows him to send a partially self-edited file to a transcriptionist for completion, without losing any of the self-edits.

Inland Imaging installed the software in April. Within two months, 31 of the 55 radiologists were trained and using the system; of those 31, 23 radiologists self-edit all their work, and another five perform some self-editing. The remaining three use transcriptionist services. Copeland says that by the fall, all the radiologists will utilize the system. With more than 90 percent of his physician population having embraced self-editing, he is in a good position to let his super-users encourage and mentor those who come onboard later.

### **Do-it-yourself Software**

That's well and good, but did it achieve the desired outcome? Copeland lets the metrics speak for themselves. "In the old days, the average report turnaround times averaged 45 hours. Now, it's less than 10 hours. In the past, at the end of an average business day, we might have 900 reports needing to be typed. Now, it is zero." Although the


organization still employs transcriptionists, Copeland says that the continuation of the function is evolving and will be reassessed as more radiologists gain in IT prowess.

Some of the Inland Imaging radiologists are already fully template-based, says Copeland. The physician can create custom templates or macros based on standard sets of clinical verbiage that he routinely dictates; with a single voice command, mouse click or keyboard stroke, he can populate a report with a verbiage set, eliminating hours of repetitious dictation.

"No more parroting" is a feature Copeland especially likes. "Typically, radiologists must parrot information that already exists in other systems, to bring it into the report. SpeechQ can pull that information in automatically, so the radiologist can spend his time and his cognitive activity in the interpretation of images, and simply verify the automated information later. That's where we are headed—smart tags and templates—to automate as much as possible."

Duvoisin & Associates/Inland Imaging has traversed far beyond an impressive beginning in this regard. By the time they get to Phoenix, they will be ready for anything. **HMT**

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The logo for MedQuist features the word "MedQuist" in a blue, sans-serif font. The letter "Q" is highlighted in orange and has a blue arrow pointing to its bottom-right corner. A small "TM" trademark symbol is positioned to the upper right of the "t".

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