

# FOR THE RECORD



## BACK-END TO THE FUTURE

By Kate Jackson



*Doc Brown's DeLorean has nothing on back-end speech recognition, according to experts who view it as a vehicle that can make life easier for medical transcriptionists.*

Until recently, if you mentioned speech recognition to medical transcriptionists, they'd roll their eyes and call it a pipe dream. They'd tell you that it simply doesn't work well and cringe at the impending threat of obsolescence. But these days, many MTs are singing its praises.

Why the new tune? Early experiments with speech recognition involved so-called front-end products—those physicians use, after training, to dictate and edit their own reports. These types of early systems, explains Peter Bulkley, director of project management at SoftMed, a company that produces speech-recognition solutions, were “overpromised and underdelivered.” As a result, he says, most systems introduced in the mid-1980s were returned.

Today, back-end speech recognition is becoming widely used. The technology—which may be purchased by doctors and medical transcription service organizations but is most often bought by hospitals—is invisible to physicians, who can continue to dictate as they always did without changing their workflow. The change occurs on the transcription end, where transcriptionists—who no longer have to type the reports, only read and edit them—use their fingers less and their minds more.

Explains Kulmeet Singh, CEO of MedRemote, which offers both front-end and back-end solutions, physicians using the former must train the system. They also have the choice of editing the reports themselves or sending them to MTs. Those using the latter need not be involved in training the engine and seldom edit the reports themselves; instead, the draft reports produced with speech-recognition technology are edited by transcriptionists.

These solutions will do nothing to improve transcription of poorly dictated reports, says Bulkley. No technology can solve the problems caused by physicians who eat lunch while they dictate, he insists, but providers interested in quality of care can achieve recognition rates with speech recognition that compete with those of traditional transcription. In the best cases,

accuracy rates of 99% can be achieved.

Ben Chigier, CEO of eScription, says one of the biggest stumbling blocks with front-end speech-recognition deployment is that physicians have to train the systems and then do the editing themselves—something few have the time or inclination to do. In response, eScription built on this new back-end paradigm. The company's EditScript product, which is based on the premise that it's faster to edit than type, is typically sold on an enterprisewide basis to hospitals. The product isn't designed to allow physicians to see their dictations when first transcribed by the software; they typically see the final documents after MT editing. In fact, physicians generally aren't even aware of the existence of the speech-recognition program.

In back-end speech recognition, the software is designed to make MTs more productive. It has three chief components: a voice-capture system similar to those physicians typically use to record, a server that manages the system's workflow, and the speech-recognition element, which converts the dictated words into text, interprets and formats them in a particular way on the screen, and gives MTs the tools with which to efficiently edit the documents. In addition, the product has a distribution component that allows users to print, fax, and electronically sign documents. Chigier sees this process as so different from what's traditionally labeled speech recognition that he calls it by another name: computer-aided medical transcription.

Transcriptionists, says eScription spokesperson Lauren Richman, welcome the product as a tool. They see that, unlike some of the solutions that seek to replace them, EditScript enhances their work and makes them more productive. “Some of the MTs we've talked to say that it emphasizes more of their specialized skills and deemphasizes their more mundane tasks,” she says. “The software automates the rote provision of the formatted document and lets MTs use their expertise to proofread, to make sure, for example, that dosages and

other critical elements in the report are correct.”

Richman says training takes roughly a day or a day and a half, and transcriptionists improve over time as they get used to the system and the system gets used to them.

Among the reasons MTs have warmed up to the product, suspects Richman, is that it was designed to mimic their workflow. “One of the things the engineers did early on in creating this unique approach to speech recognition was to actually watch MTs at work, look at how they typed, and review their documents. They built those approaches into the software.”

The creators spent a great deal of time watching and obtaining feedback from MTs to make sure that the product would be something that would improve their productivity, she says, adding that the company continues to incorporate MT feedback. “Many of the customers [who] use the system say that once they started to edit, they didn't want to go back, simply because we take away the need to be the athlete—to do the physical part of traditional typing—and let them rely on their more cerebral skills to edit,” says Chigier.

Chigier notes that this industry is littered with vendor claim and “consequently, we refer anyone interested in how well our products work to our customers, who can provide disclosure on savings, productivity, and the percentage of volume that is edited vs. typed. It's important that all three criteria are measured. For instance, it is vastly different if 1% of the dictations get 500% productivity gains and 99% of the work is still being typed, compared to 80% of the work being edited and getting 100% productivity gains.”

Sherry Doggett, director of corporate transcription services at The Health Alliance of Greater Cincinnati, recalls an early experiment with a front-end product. “It failed miserably because it added additional time to the physicians' days because they were becoming their own editors—in essence, their own transcription pool. It ended up sitting in the closet. Now, using EditScript, the physicians aren't bogged down. They

just pick up a phone and dictate, and the editing is all done on the back end. Where front-end was a disaster, back-end has been a huge success.”

### **The Benefits**

According to Chigier, EditScript is saving the University of North Carolina and Brigham and Women’s hospitals more than \$1 million per year with enterprisewide deployments. MTs are realizing significant productivity gains—generally, he says, roughly a 100% increase. Doggett says the EditScript software has more than doubled the productivity of her staff—in some instances, she’s even seen a tripling in productivity. “We’ve seen a steadily rising productivity increase, and today we have reached doubled and tripled productivity levels,” she says.

MedRemote notes that its users see dramatic productivity gains—from 50% on the low end to more than 150% on the high end, with the highest gains being experienced by the least-experienced MTs. Accuracy is also improved, Singh observes, because the speech-recognition engine is less likely to make medically significant errors. Singh also sees back-end speech-recognition technology as a way to keep work from going offshore. “With this technology,” he says, “you can take new or less-productive transcriptionists and make them more productive so they’ll be competitive with offshore transcriptionists.”

### **Not a Ticket to Obsolescence**

“One of the most important things about implementing this kind of technology,” says Doggett, “is transcriptionist buy-in. It’s very important that when you begin to implement this, you make sure that your transcriptionists understand that it’s not a replacement for them.” Rather, she explains, it’s the key to a transition that actually elevates the MT’s role. “It allows a transition from listening and keyboarding to listening and editing,” Doggett notes. It’s a tool, she emphasizes, much like speed-typing products, that helps MTs get the job done better and more quickly.

“We presented this to the MTs as an enhancement, so once our staff under-

stood that this was not a means by which to replace them, they were not threatened, and the implementation went well,” Doggett says. Her transcriptionists embraced the software and have harbored no regrets. One of the reasons for acceptance, she says, is that using speech-recognition software takes the physical burden off MTs. “Keyboarding is strenuous and very hard on MTs physically,” she says, noting that’s especially true for the quickest and most productive transcriptionists. Doggett, who’s lost MTs to carpal tunnel syndrome and other hand injuries, observes that speech-recognition software can help keep MTs on the job longer. “We had one transcriptionist who seriously injured her hand with an electric knife and had to have surgery on three fingers,” she recalls. “If we’d been working in the old manner, she’d have had to leave the business. But because we have this tool, she’s now editing rather than vigorously keyboarding.”

Doggett says another advantage of speech recognition is that it underscores the fact that an MT’s work is truly knowledge-based. “People think of transcription as a matter of keyboarding, but the job is really about the knowledge that these people have and that they can put to better use through editing,” she says.

### **Or Is It?**

While many speech-recognition vendors calm MTs concerns about being squeezed out of the transcription business, Singh indicates that automation will ultimately shrink the opportunities for MTs. While back-end is a boon for many, Singh points out that it’s not for everyone—a fact the company is quick to tell its potential clients. “When we sell our basic offering to the hospitals, we tell them that a certain portion of their dictation is a very good candidate for front-end speech recognition, a certain portion is good for back-end, and a certain portion will have to be done in the old vanilla transcription model,” he says. Over time, however, physicians will move from one segment to another. “They may not be good

candidates for front-end now, but may become good candidates in a year or two,” Singh notes.

“At the end of the day, front-end speech recognition may be the most compelling from a value proposition because the physicians will edit the work themselves and they’ll eliminate the cost of transcription,” Singh continues. “We not only recognize it, but we encourage it, so we’ll be moving doctors away from back-end toward front-end—to what we call intelligent template-based front-end.” One factor to be evaluated is the “hidden cost” for physicians of training software and editing documents vs. handling their other tasks.

How do transcriptionists receive that news? “We’re honest with them,” says Singh. “Front-end speech recognition only works for a small percentage of physicians, so MTs should not be needlessly concerned because it’s not as if this shift is happening tomorrow. We encourage them to be cognizant that back-end speech recognition is a way that they can improve their productivity and that it will always have a role.”

Still, although he won’t guess when, Singh predicts that manual transcription will diminish significantly. In the meantime, he advises MTs to embrace back-end speech recognition to extend their role. “Back-end speech is a way in which they can prepare themselves to use technology to remain very relevant.”

### **The Way of the Future**

Whichever way you look at it, according to Doggett, MTs need to learn everything they can about this up-and-coming technology. “They must embrace it if they’re going to move forward, and they need to understand how their positions are going to change,” she advises. No longer will they be keyboarders. Instead, their responsibilities will evolve, as will, more than likely, their titles. Doggett predicts MTs could soon be called medical editors or medical language specialists—new titles for new roles.

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