



PowerScribe®

Department of Pathology at the Hospital of the University of Pennsylvania Chooses Dictaphone Speech Recognition—
“Proven Technology From A Known Force In The Market.”

Today, the Department of Pathology and Laboratory Medicine at the Hospital of the University of Pennsylvania (HUP) is using Dictaphone PowerScribe Speech Recognition to dictate and self-complete over 70% of their 30,000 annual report volume. Using this technology has helped improve dictator productivity, enhanced report consistency, and delivered more timely results, while saving the organization an estimated \$120,000 in yearly transcription costs.

Legacy Speech Recognition System—Beneficial, But Very Limiting

Over the years, pathologists and pathology assistants (PAs) at HUP have used a variety of reporting tools, ranging from cassette-based tape systems, to first-generation speech recognition technology from a vendor other than Dictaphone. “When we first began with Speech Recognition over six years ago, we were using what was then considered state-of-the-art technology,” said Dr. Michael D. Feldman, Pathologist. “That system fulfilled our goal of cost savings, however much has changed since then in terms of accuracy and ease-of-use, among other things.”

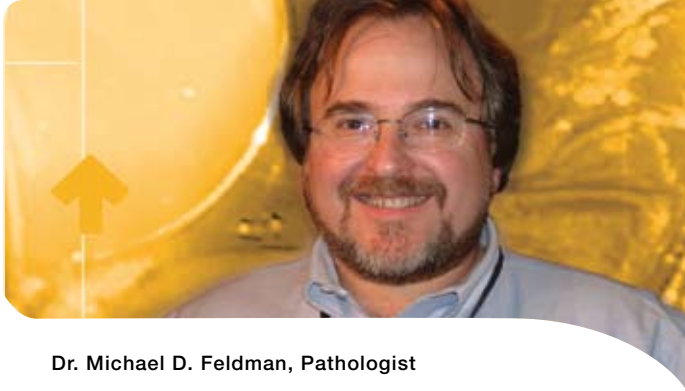
PowerScribe Delivers Rapid ROI

Dr. Feldman’s justification for the new PowerScribe Speech Recognition system is straightforward. “Transcription is expensive,” Dr. Feldman indicated, “and if you’re putting in place technology that offers a direct alternative to hiring FTEs, you have the ability to demonstrate very rapid ROI. I don’t have to explain that to our administration...they get it,” he emphasized.

HUP estimated that if they did not implement PowerScribe as a replacement for their older system they would need to incur over \$125,000 in recurring transcription salaries and benefits. “Since implementation, the PowerScribe system has paid for itself in the first 7-8 months of use,” said Dr. Feldman. “That has been achieved through the efficiencies gained by our 3 PAs using

Highlights

- Large, university teaching hospital.
- 10 pathologists and 3 PAs generate 30,000 exams a year.
- Ability to go to full live Gross Room production with PowerScribe® in the first day of use.
- Eliminated \$125,000 annually, versus the need to hire 3 FTEs.
- System has paid for itself in 7-8 months of use.



Dr. Michael D. Feldman, Pathologist

the system within the Gross Room to dictate an annual volume of 20,000 reports,” he said.

Proven Technology From A Known Force

Dr. Feldman, who has been one of the driving forces in bringing technology to the Department of Pathology at HUP, has been a long-time user of speech recognition, and is considered by many as an authority on its application within Pathology. “Our decision to go with Dictaphone, versus considering one of the small VAR vendors out there, was a ‘no brainer’ in terms of their proven technology and the company as a known force within the field.”

The University of Pennsylvania Health System is comprised of its flagship hospital, the Hospital of the University of Pennsylvania, consistently rated one of the nation’s “Honor Roll” hospitals by U.S. News & World Report; Pennsylvania Hospital, the nation’s first hospital; Presbyterian Medical Center; a faculty practice plan; a primary-care provider network; two multi-specialty satellite facilities; and home health care and hospice services. HUP’s Department of Pathology consists today of 10 pathologists, with plans to expand to over 15, and 3 PAs.

Pathologists In Control

Dictaphone’s PowerScribe Workstation brings together highly accurate speech recognition software and powerful pathologist self-editing tools to help healthcare organizations realize substantial productivity gains in the reporting and transcription process.

A specialized hands-free ergonomic headset with microphone and speaker is used in conjunction with a customizable foot control. In addition, the software incorporates voice commands and controls. This combination allows a great deal of user flexibility in the recording and playback of dictated voice files, as well as in the navigation of templates and report fields.

Using these hands-free controls, pathologists can dictate, navigate, select, and activate functions and fields within report templates and post-recognition generated text documents, and then self-complete reports independent of external transcription support.

“PowerScribe lets you take control of your documentation by creating and reviewing the report in one simple step, so that when you’re complete, you’re done with it, and it’s available in a matter of minutes,” Dr. Feldman said. “With less precise documentation, often times I’d have to go back and review the slide again days later, to verify information contained in the transcribed report. Self-correction of reports has a very positive implication for patient care in that the turnaround is instant,” noted Dr. Feldman.

Fast & Efficient Speech Recognition Implementation

Dr. Feldman outlines a very straightforward and efficient implementation for PowerScribe. “Our past system took over six months before we were fully comfortable with it,” he said. “I assumed that the PowerScribe system would ramp faster than that, but even I was amazed that we were able to go from training to live production in the Gross Room the very first day we turned on the system.” Dr. Feldman goes on to elaborate, “Realistically, the system needs only a few minutes of enrollment to be able to reach 98% recognition accuracy.

We needed less than a day of training to become comfortable, then after that, the rest was up to us in working with the system to become increasingly more productive,” Dr. Feldman said.

Kevin Hirokawa, Pathology Assistant, and dedicated PowerScribe user, agrees with Dr. Feldman’s assessment. “I read a series of ten screens to PowerScribe, and was up and running, with the system trained on my voice.”

"I estimate that templates give me a 20-30% productivity increase, and they are flexible and can be simply edited on the fly."

Templates Cut Dictation Time

PowerScribe actually works to reduce dictation time by offering the ability to create and use templates for frequent and recurring studies. Entire blocks of standard report text are easily invoked through short trigger words and voice commands, while form fill-in capabilities can be activated through simple microphone buttons and voice. The use of templates also helps to improve report accuracy and consistency, as users are prompted to include all pertinent information.

"With standard dictation systems you're creating the report off the top of your head," Kevin Hirokawa said. "Templates give you an on-the-screen reminder, with fields indicating where key information is needed. And the headset and foot control make it easy to navigate template fields, with the ability to use voice to fill in information or edit report text."

Joe Milano, who uses PowerScribe in the Gross Room to dictate an average of 35-plus reports a day, indicates that templates save him a lot of time as well. "You can quickly scroll down templates, select fields, and use voice to fill in sections, such as Pre-Op Diagnosis, Post-Op Diagnosis, Description, Number of Parts, Measurements, and Summary of Sections. I estimate that templates give me a 20-30% productivity increase; they are flexible, and can easily be edited on the fly," Milano said.

Highly Accurate Pathology Language Models

Pathology Assistant Hirokawa also speaks to the PowerScribe system's accuracy and ability for him to easily train the system to recognize "new" words. "Definitely it cuts dictation time, and the need to correct dictation is very little. With our past speech recognition system, 40% of all reports needed

Challenge: Legacy speech recognition was cumbersome to use, and did not offer leading-edge technology in terms of user flexibility, accuracy, and ease-of-use.

Strategy: Implement Dictaphone's pathology speech recognition solution, allowing rapid transition to new, more flexible self-editing model, featuring recognition accuracy of over 98%.

Results: \$125,000 annual transcription savings, reduced pathologist dictation time, and a significantly improved report production process.

some form of correction relating to recognition inaccuracy. With PowerScribe I find that as little as 2% of my reports need correction. And, if a word is not properly recognized, it only takes a few seconds to train the system, and that solves it for the other four hundred times you use that word."

Meets Workflow & IT Needs

Hamid Moattari, Laboratory Manager, comments on PowerScribe from an IT perspective. "We were particularly impressed with PowerScribe in that it was capable of supporting both a dictation/self-correct workflow as well as traditional dictation/transcription workflow, if needed. An additional benefit we have realized is that if our LIS system goes down, we are still able to use the PowerScribe system to create reports, so in this way it acts as a back-up system."

Looking Ahead

With plans to replace and update their Laboratory Information System (LIS) well underway, the HUP Department of Pathology's next phase of speech recognition implementation will be to broaden its use as the department grows, adding pathologists to the system, and further expanding the benefits of PowerScribe in terms of productivity gain and cost savings. "We are confident that even greater savings are possible as we further roll-out use," concluded Dr. Feldman.

For product information please visit Dictaphone Healthcare Solutions at www.nuance.com/dictaphone or call 888-350-4836.

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