Speech Recognition Tips for the Busy Radiologist

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By Todd Neff [1]

CHICAGO — Correct that. Tips. A few simple tricks can make one’s time with computer-based speech-to-text engines much more pleasant — and productive, said David Weiss, MD, speaking during an RSNA 2011 session on practical informatics for radiologists.

Weiss, a radiologist with the Carilion Clinic in Roanoke, Va., has made an avocation of optimizing his interactions with the speech recognition system that turns his words into reports. He shared his wisdom during his turn in a diverse RSNA 2011 session on practical informatics for radiologists. The goal, he said, is to keep one’s eyes on the screen as much as possible while maximizing speed and accuracy. Here are a few of his suggestions.

- While sometimes speech recognition systems may seem downright dullard, they are learning all the time, and learn best when exposed to continuous phrases. Use phrases rather than individual words for more accuracy. Also, when the software makes a mistake, try to correct the entire phrase rather than the offending word, particularly if you’re using an older system.

- Speaking of correcting the system, rather than training a word/doing a “correct that,” get into the software’s vocabulary editor and do it there. There, you can add words and phrases, change pronunciation, even delete problem words. Weiss gave the example of his system constantly insisting his phrasing of “one of these” should be written as “wannabes.” He deleted “wannabes” from the dictionary. Problem solved.

- Consistency pays. If you’re seeing the same thing study after study, describe it exactly the same way. It will boost accuracy.

- Pick away at your system’s errors. Correct a single word or phrase per reading session and in a month you’ll have eliminated dozens of potential errors and boosted accuracy without feeling like you’re spending undue time doing software calibration.

- Don’t leave the microphone on if you’re going to be using your eyes rather than your mouth for a bit, as it picks up extraneous sounds.

- Be aware of the split-second delay from the moment you turn the microphone on to the time it actually starts listening. It can be the difference between “Her brewery 4th” and “February 4th.”

- A programmable mouse capable of many commands is a help. Weiss uses the Razr Naga, a gaming mouse, to which he maps keyboard commands and sets speed. Radiologists throughout his department use it. The aim is to avoid icon clicks, drop-down menus and keyboard use, all which distract from the screen. “I find that the experienced radiologists get almost into a trance, that focused zone,” he said. “Anything where I have to move my eyes disrupts that.”

- Weiss has a $200 foot-pedal set, but places it on the keyboard. One pedal, off to his left, he hits only to when it’s time to sign off a report.

- Headset microphones eliminate accuracy-sapping problems associated with microphone distance (optimally a quarter inch from the side of one’s mouth).

- Weiss uses macros and templates heavily, both for navigation and common phrases in reports. “macro base right” yields “there is pleural and/or parenchymal disease in the right lung base.” One can program macros to insert time and date stamps also, eliminating the need to customize boilerplate text at the top of reports.

- Finally, having used three different speech-recognition systems in the past 12 years, Weiss quipped that the best vendor system is “always the other guy’s.” Most speech-recognition systems are comparable, so choose one that’s interoperable with your RIS/PACS.
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