The Myths & Realities of ROI in Implementing Speech/Voice Recognition Technology (Dragon) in Law Firms

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By Alexandria

"Voice Recognition Software, the business case on paper looks compelling, but does the perceived ROI actually get delivered?"

This was an excellent question recently asked by Tim Bond. And it's a good question that deserves an honest and thorough answer. This is a fairly lengthy post, and I apologize in advance, but I do hope that it provides some answers sought by IT managers and other law firm staff. By way of quick background for those who do not know me, as part of Speakeasy Solutions Inc., based in Vancouver BC, I have been providing speech recognition solutions to lawyers for over 10 years. Prior to that I worked in the legal department of an engineering firm. I have also been a passionate user of Dragon for over 13 years. My aim, as always, is to provide truthful answers based on experience and observation.

What follows are myths, misconceptions and the realities behind the statements I see frequently tossed about during a discussion of implementing speech/voice recognition in law offices — namely, Dragon NaturallySpeaking.

Speech recognition is best implemented when used with a (digital voice recorder / handheld microphone / headset microphone).

There is no single best solution for everyone. As I blogged previously for medical practitioners, Dragon is not a cookie cutter solution. Dictation solutions are designed in a myriad of ways, and each user's situation (preferred method of working, support staff availability, locale of work, applications and devices used, and so on) must be taken into account in order to establish which options best suit their needs and which provide the most impact in terms of efficiency gains.

For example, if a lawyer spends a tremendous amount of time writing email, it is advantageous to implement a dictating direct to PC with Dragon solution. Long gone are (or should be) the days of dictating into a recorder and having an assistant type out the email. Yes, Dragon transcribes digital voice recordings, but again, email is very much an immediate exchange with high expectations on turnaround time for responses. And of course, if a lawyer performs routine tasks with email such as sending FYIs and forwards to specific people or lists, custom Dragon voice commands are created to complete these tasks in a fraction of the time it would take using mouse and keyboard.

On the other hand, for the lawyer who is seldom in the office, a digital voice recorder may be an essential tool. Dictations are transcribed by a human or Dragon. And if the lawyer has no access to a computer anywhere, there is Philips' iPhone or Blackberry application that will send dictations through these devices.

THE TRUTH: There are a number of considerations to be taken into account when designing a solution for a client. Speakeasy Solutions Inc. prefers to spend some time discussing an office's overall needs, along with each user or group of user's preferred method of working. It has been our experience that one size does not fit all and very simply put: the right tool for the right job will encourage adoption and provide real gains in productivity and ROI.

Dragon takes a long time to learn my voice.

Honestly? This is where Nuance's hype is spot on. If a user is taught how to dictate effectively for Dragon using a quality microphone and an optimized high end computer system, Dragon should be very close to 100% accurate after the initial 5 minute training. Certainly, some are able to boast this without the initial 5 minute training, but what is 5 minutes of reading to jump-start Dragon?

While Dragon's vocabulary may not contain all words and phrases used by the lawyer, this is easily remedied by way of utilizing various features within Dragon. When all is said and done, a couple weeks to a couple months of regular Dragon use will fine tune the vocabulary to very acceptable levels. Ongoing maintenance to include new vocabulary items takes seconds and is performed on an as needed basis.

THE TRUTH: The learning process is a two way street. I explain to our clients that Dragon must learn their voice, but they must also learn how to use Dragon effectively. Dragon is fully capable of learning most voices with near perfect accuracy in about 5 minutes plus the time required by the user to further augment Dragon's performance. The latter of this statement may be a brief process or may take a few weeks of ongoing use and allocating a few minutes every day to this task. Speakeasy Solutions Inc. training lessons are designed to reduce the learning curve and showcase the quickest and most powerful methods for bending Dragon to a user's will, positively impacting ROI.

Nuance says that the latest version of Dragon doesn't require any training.

When you create a new user profile you are given the option of no training or the initial 5 minute training. As a support provider, I'm grateful for the no training option when I need to test a client's system, however, what is 5 minutes of your time to ensure that Dragon use is off on the right foot? What Nuance doesn't tell you is that while you are able to achieve high

accuracy without training (if you have the right equipment and know how to speak effectively for Dragon), you will still need to spend time learning to use the software, including the vocabulary enhancing features within the software.

THE TRUTH: Not training Dragon shaves off a mere 5 minutes in your learning curve, and you will simply need to perform more corrections than if you had spent the initial 5 minutes training the software your voice. I wager the amount of time you need to spend performing these make-up corrections will be at least 5 minutes over what you would need to spend if you had taken the initial 5 minute training. In other words, Speakeasy Solutions Inc. does not tout this marketing claim. 5 minutes of training will not truly affect ROI.

Everyone should use Dragon!

You will be hard pressed to find a more staunch supporter of speech recognition technology than myself, but at my core I am a realist. Every so often I encounter a client who becomes an ardent fan (which is fantastic), but they cannot believe why everyone isn't using the technology. Dragon is actually not for everyone.

If someone is quite simply resistant to adopting new technologies, we arm them with a Philips DPM9600 or Olympus DS-5000 (both resemble and function the familiar slide switch voice recorder) and share all the virtues of a well set up digital dictation solution (Philips has excellent workflow management software for larger offices).

There is little to gain in fighting a client's perspective, and I've learned that people will either see value in a technology and a provider such as Speakeasy Solutions Inc. or they do not. As much as I would like to convert the world at large, not everyone is ready to embrace Dragon. But at the very least many individuals should be updating their offices with a professional digital dictation solution.

And of course, if someone has a very thick accent that Dragon cannot account for (although Dragon does have allowances for a variety of accents), or the user is a chronic mumbler, I'm afraid Dragon will not be useful for them.

THE TRUTH: There must be buy-in from the user in order for adoption to succeed. At the very least, the user should be interested, open minded and willing to use Dragon for a few months. With the appropriate implementation and training, Speakeasy Solutions Inc. has observed even the mildly curious become passionate users and receive benefits from the technology. But there must be some interest. A firm-wide deployment that includes everyone is not recommended. In fact, Speakeasy Solutions Inc. suggests a pilot of two to five individuals, and a gradual rollout to those with interest. As individuals begin using and benefitting from Dragon, their colleagues (even those not previously interested) will be far more receptive and eager to use the software.

I am a Luddite, so I can't learn Dragon.

This one always makes me smile. One of my first lessons in this business was to never ever underestimate people. I have been pleasantly surprised when an absolute computer novice has taken Dragon by the wings and soared with this technology in a matter of two weeks (sometimes even less time). I have also been given pause when tech savvy individuals deem Dragon as useless because they expect it to work perfectly in 5 minutes and refuse to invest the time needed to learn the software.

Prerequisite computer skills are not entirely required. Yes, it's imperative that someone understand computer basics; know how to turn a PC on and off, and also have some basic understanding of the applications that they use or will be using. But after that, the most important ingredient is simply the desire to learn something new, exciting, and ultimately quite beneficial.

THE TRUTH: Most lawyers are curious, driven by an innate yearning for learning and harnessing a competitive edge; this is far more a requirement for succeeding with Dragon than being tech savvy. Speakeasy Solutions Inc. is delighted to work with lawyers with all technical (and non-technical) backgrounds. The prerequisite for learning Dragon is a desire to learn and this will see very positive effects on ROI.

I already type over 100 words per minute, so I don't need Dragon.

Math & Story Time: Driven by the need for speed and efficiency, I learned to type on average of 90 words per minute (80 comfortably, up to 110 when urgency requires). While using Dragon I dictate on average of 140 words per minute (120 while being overly thoughtful, up to 160 when urgency requires), sometimes more. However, I am the first to say that dictating quickly isn't enough — a Dragon user must proofread their dictation and this sometimes involves correcting. The most efficient correction technique with Dragon will take anywhere between 4 and 15 seconds per correction. Most people proofread between 250 and 500 words per minute. A 99% accuracy rating is more than obtainable.

For myself, let's compare typing vs dictating, given the above information and a 1,000 word email.

Straight typing: 90 wpm = **11.11 minutes**, no proofreading allowance, correcting errors as typed.

Dictating with Dragon: 140 wpm dictating (7.14 minutes) + 300 wpm proofreading (3.33 minutes) + correcting 10 errors @ 10 seconds each (1.67 minutes) = **12.14 minutes**.

For an average professional, typing speed is rated at 50 wpm. A 1,000 word email would take approximately **20 minutes** to type.

For an average professional, their dictation with Dragon stats would approximate my own (**12 minutes**) — they are not unreasonable.

Simply taking into account text creation, you need to be capable of sustaining a typing speed of 83 words per minute (including correcting errors as they are typed) and without time allotted for proofreading, to match the voice to text benefits of using Dragon. If you are able to maintain a minimum typing speed of 83 words per minute, then please also consider the following:

The benefits of Dragon do not end with voice to text. Most computer users are mouse heavy when clicking on buttons and options, rather than using keyboard shortcuts. Mousing takes more time than using keyboard shortcuts. However, using voice commands to perform single or multi-click tasks is considerably faster. Whether you are sending an email, moving a message, creating a new email to a list, forwarding an email to a colleague and so on, equivalent voice commands saves considerable time over mousing and even some keyboarding sequences.

How many times a day do you visit certain websites? Execute Google searches? Perform a time entry? Open a specific precedent? Create a memo to file? Open a specific folder on your network? Send a simple FYI to an assistant? Dragon can perform these tasks, and more, faster than via conventional mouse and keyboard methods. If you really wish that competitive edge, take the time to learn to use voice commands as this is where most people fall short of learning Dragon.

After having said all of the above, I would like to now share my quick story:

I did not fully grasp the difference Dragon made in my life until I was stricken with laryngitis. Email is my primary use of Dragon and in addition to voice to text, I take advantage of numerous voice commands as well so that I am able to speed through my Inbox. Moreover, my accuracy is higher than 99% and it's very seldom I need even perform a correction.

One day I came to work with laryngitis and I was forced to revert to hands on keyboard and mouse as my sole means of contending with my email. After several email responses I became agitated at the length of time it was taking me to reply, type, send and file email. I found that I was also becoming more minimalist in my responses so that I did not have to type as much and move on to the next email more quickly.

It wasn't long before the true realization of how much time and effort is saved in using Dragon. I had become completely dependent on the technology; not just because I have physical limitations (although I am able to still type very quickly for short bursts if needed), but simply because it IS easier and faster.

THE TRUTH: When you are "on a roll" with your thoughts, being able to speak 160 words per minute or more is very advantageous. How often do you find that your fingers just can't keep up with your thoughts? Could the quality and content of your email, memos and letters be improved if all you had to do was speak? Dragon encourages more detailed text creation, and truly is faster with an effective implementation of this technology. So yes, even those who type at high speeds will see a return on their investment in an effective Dragon solution.

Dragon NaturallySpeaking Legal is a waste of money. All I need is Dragon NaturallySpeaking Premium.

Possibly. I will be the first to say that no one has proven to me yet that the Legal version is useful to Speakeasy Solutions Inc.'s Canadian clients. The Legal version offers a vocabulary designed for those practicing American law. How does this benefit Canadians? I do not believe it does, but I'm open to being proven wrong. Unlike Dragon Medical which contains 80 specialty vocabularies that actually DO make a massive difference in recognition accuracy for medical practitioners, I have yet to witness any gains from Canadian lawyers using Dragon Legal.

Dragon Legal boasts that it contains 30,000 legal terms. While there may be some shared terms between Canadian and American lawyers, Speakeasy Solutions Inc. teaches clients to utilize several key vocabulary enhancing features within Dragon NaturallySpeaking Professional — this is more appropriate and helpful to the end user. And while I may not be convinced regarding Dragon Legal's efficacy, I will advocate and encourage the purchase of Dragon Professional over Premium. And this is why:

- Custom Voice Command Creation — this is perhaps the most significant and powerful difference between Premium and Professional. Professional allows for the creation of custom voice commands that truly save you time. This may sound like a sales pitch, but I guarantee you that it is not. Almost any repetitive task you perform on your computer, with almost any application, are accomplished in a fraction of the time by taking advantage of Dragon Professional's custom voice command feature. These custom commands are also deployed firm-wide.
- Firm-Wide Custom Vocabularies — if deploying Dragon firm-wide, Professional allows for the creation of a custom vocabulary useable by every user as a basis to finesse their personal vocabulary. Firm-wide vocabularies are enhanced with firm and region specific phrases, removing the need for each user to add such phrases over time.

- Firm-Wide Custom Word Lists — instead of a custom vocabulary, a custom word list is used to augment a vocabulary without affecting the individual user's writing style. This is fairly key, and allows the firm's IT administrator to maintain a list of words and phrases that are specific to all users or groups of users. It is indeed a pleasant surprise for a lawyer to turn Dragon on in the morning and find new phrases related to a new client transcribe perfectly as a result of such behind the scenes maintenance.
- Third Party Proofreading — if you have a lawyer who does not wish to perform their own proofreading (they wish to simply dictate), their voice is saved with the document (to a network location) which will be proofread by an assistant. The user's Dragon profile is also improved, minimizing future errors and saving the assistant even more time in the future.
- Easily Dictate Direct & with Digital Recorder — for lawyers who use a microphone directly in real time dictation (usually for email), plus a digital recorder while away from the office, an assistant receives the digital audio dictation by email or LAN, subsequently proofreading Dragon Professional's transcription and providing the lawyer with a finished document. Dragon's transcription may be performed automatically and proofread when convenient for the assistant.
- Speakeasy Solutions Inc. Value Added — for our clients who purchase a package solution, we provide a Canadian vocabulary, regional & legal word lists, efficiency commands (we pick up where Dragon leaves off), and sample commands for the most commonly created custom commands by lawyers.

THE TRUTH: If you are a solo practitioner ONLY looking to convert voice to text, then Premium may suffice. However, for firm-wide deployments, true efficiency gains and the flexibility of a workflow that incorporates an assistant or others, Dragon Professional will certainly satisfy. Implementing the right software is critical to ROI — think long term.

Dragon isn't good enough. I know a lot of people who've tried it, but it doesn't work as advertised.

Granted, Dragon is not without its bugs (no software is), but the improvements from version to version are very real. In all honesty, I thought Dragon was ready for prime time at version 6. However, every version has truly improved in terms of accuracy and speed (largely due to hardware advances). In fact, I have never known software to improve so dramatically between versions as Dragon does.

I may sound like a broken record at this juncture, but success with Dragon depends on:

- the variant of Dragon (Premium, Professional etc.),
- hardware (computer, microphones and digital recorders),

- software used (applications and versions of resident software such as MS Office, Internet Explorer, antivirus, PC Law, Casemap, Amicus Attorney etc. and even the OS of the computer),
- effective implementation (preparing a system, installation with time-saving defaults and more), and
- a user having the opportunity to learn to use the software effectively.

While it is my preference to train users at the time of implementation, I am also happy to assist users after the fact. Sometimes an unlearning process is necessary, other times I merely need to correct some unproductive habits or point the user in the direction of the truly effective methods of using Dragon. I can honestly say I've never failed to improve a user's results with Dragon.

Dragon is conceivably an involved deployment, contingent on a variety of factors. However, the use of a speech recognition specialist such as Speakeasy Solutions Inc. encourages adoption, increases success, and provides a valuable resource.

THE TRUTH: You CAN dictate over 120 words per minute with a 99% (and higher) accuracy, however, the recipe for success involves hardware, software and knowledge. If, at the very least, the first three bullet points above cannot be delivered, then there is little chance for success. The final two bullet points ensures success. Speakeasy Solutions Inc. reduces the learning curve and accelerates adoption by providing consultative, installation, training and support services in addition to Dragon and dictation hardware. Investing in future ROI with an effective implementation of speech recognition is very helpful to all.

Speech recognition will allow a firm to reduce their support staff.

Possibly, yes and no. Not quite the answer you were hoping for, I imagine, but it's not so simple. Both the current state of the support staff and the workflow desired from the dictator need to be taken into account. For example, if the only goal of the lawyer is to improve their efficiencies via using Dragon for email, then this will not impact support staff unless they have been transcribing email for the lawyer.

On the other hand, if Dragon is implemented in such a way that the lawyer uses Dragon for their email, memos, letters, legal documents, etc., this will undoubtedly reduce the time required of the support staff. However, if the lawyer does not proofread their own work (with the exception of email and memos to file), some support staff time will be required.

Moreover, how strained and busy the support staff were before implementing Dragon will also need to be considered. Reducing demands placed upon them by a lawyer's requirement for transcription may result in increased productivity from the support staff. Of course it's also possible to reduce overhead.

THE TRUTH: Speakeasy Solutions Inc. encourages legal offices to consider all variables when determining the impact of Dragon implementation on support staff. The results can be dramatic on an ROI, or they may improve productivity without support staff contributing greatly to ROI. We are happy to assist you in making this determination.

In Conclusion

Sure, Speakeasy Solutions Inc. will break out the Excel spreadsheet, offering up an ROI based on billable rates and time spent on dictation by lawyers and support staff, but more than that we prefer to provide a solution based on a legal office's needs, increase adoption, and focus on factors that will impact the bottom line. There is no doubt that speech recognition (potentially with digital dictation) will increase productivity and value for a law firm. However, the extent of this depends upon various factors and we would be delighted to work with you in designing an appropriate solution, sharing our years of experience and mutual desire for efficiency and investment gains.

Speakeasy Solutions Inc., based in Vancouver BC, provides speech recognition (Dragon) and professional digital dictation (Philips and Olympus) solutions across Canada. Whether you are a single lawyer office or large firm, we are pleased to assist you. Contact us for more information.

— *Alexandria Carstens, Consultant & Trainer, Speakeasy Solutions Inc.*