

# **High Tech Document Drafting:**

***Speech Recognition, Form Building, and Virtual Secretaries***

*presented by*

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# High Tech Document Drafting:

## *Speech Recognition, Form Building, and Virtual Secretaries*

Let's start with some definitions:

**Speech Recognition:** Using a computer to translate spoken word to text. Not to be confused with Voice Recognition, which is typically used to identify a particular person's voice, but not necessarily for the purpose of converting what was said to text.

**Form Building:** Using a computer to create and/or edit a form.

**Virtual Secretary:** One or more software programs that together perform tasks normally done by a person.

Along the way, we will answer common questions like...

- What programs are available for speech recognition?
- How much training is involved for a speech recognition program to learn my voice.
- How accurate is speech recognition?
- What kinds of forms are there?
- What tools are available for creating forms?
- What are the most important things to know about designing a good form?
- What does a secretary do?
- How can I use technology to be more productive?
- Can a Virtual Secretary answer my phone?
- What options are there for storing, synchronizing, and retrieving data from the web?

Do not expect to leave this session thinking you will have all the answers. We will not have time for that. My goal is to help you understand what things are and are not (yet) possible, as well as give you the resources for finding more information on your own.

This is a lot of ground to cover in a very short time. If you have questions that are not answered during the session, feel free to email them to me at

**chuck@macchuck.com**

You can also phone me at (504) 272-7004.

## **OVERVIEW**

Let's start things off with a vision of the future — from 1987. Apple's Knowledge Navigator video is still the "holy grail" for how one might interact with a computer for optimum productivity. We are only showing some excerpts here, but you can view the entire video at <http://bit.ly/bUCIu3>.

That film was created over 20 years ago. It shows everything we want from speech recognition and from a virtual assistant: speaking in a natural language, an artificial intelligence smart enough to figure out vague references, etc. Clearly, we do not have that level of interaction with our computers yet — but we are getting closer. Let's see just how close we can get.

### **Sidebar Comments**

Look for interesting information in the sidebars. Where room allows, sidebars have been placed as close to their related text as possible.

### **About The Links In This Document**

Links to web sites can be such a pain in a printed document. To make it a little easier, I have translated all the links in this document to shorter versions using free service called "bit.ly."

All the links will look something like this:

<http://bit.ly/bu4FOR>

(That's a link to my web site, by the way!)

If you happen to have a PDF version of this document, all links should be clickable.

## SPEECH RECOGNITION

In concept, speech recognition is pretty simple: you talk, the program listens and either turns what it thinks you said into text on your computer screen, or it takes an action based on what you said. Such an action is referred to as a “command.” In common lingo, you are either dictating or bossing your computer around (making it do stuff besides type what you said).

Many people think because they have a mouth and know how to talk, they know how to dictate. This is the number one misconception when it comes to speech recognition. This is no more true than thinking you know how to type because you have fingers.

Learning how to dictate is a skill, just like typing. It requires practice and perseverance. The problem is the part of your brain controlling your fingers is different from the part of your brain controlling speech. To complicate matters further, the creative part that comes up with what it is you want to write is in a yet another part of the brain.

So the biggest part of learning to use speech recognition is learning a new skill. Until you master dictation as a skill, don’t blame the software for poor accuracy.

### Software

There are very few options for speech recognition software:

#### Windows:

- Windows Speech Recognition (Microsoft Corp.; Windows XP or later)
- Dragon NaturallySpeaking (Nuance, Inc.)

#### Macintosh:

- Speakable Items (Apple Inc.; Built-in to Mac OS X, command only)
- MacSpeech Dictate (Nuance, Inc.)

Fortunately, all of these are quite good. If you are interested in dictation and have a computer running Windows XP or later, start with Windows Speech Recognition. If you decide this is something that will increase your productivity, get Dragon NaturallySpeaking — yes, it really is that much better.

If you have a Mac, the built-in Speakable Items is something you can play with, but it is command only (no dictation). For dictation (also referred to as *speech-to-text*), your only choice is MacSpeech Dictate, which was recently purchased by Nuance and uses the Dragon NaturallySpeaking engine. Basically it is Dragon NaturallySpeaking for Mac with a user interface built specifically with Mac users in mind.

### Training

If you have tried speech recognition before, you probably spent 15 minutes or more training the software to recognize your voice. Those days are long gone. No matter which speech

#### Dictation as a Skill

Before you start talking, think about what you want to say, including the punctuation. At first, just think of one sentence, dictate it, then go to the next sentence. If it helps, try closing your eyes while thinking of what you are going to say.

After you are comfortable doing that, try two sentences at a time, then three, then whole paragraphs. In no time you will be dictating faster than you could ever type!

#### More Information

##### Microsoft

Windows Speech Recognition

<http://bit.ly/achWGU>

Using speech recognition for the first time in Office

<http://bit.ly/cxQqY2>

##### Nuance, Inc.

Dragon NaturallySpeaking

<http://bit.ly/dlB9dl>

MacSpeech Dictate

<http://bit.ly/9ULSOw>

recognition system you use, training the software — also called “enrollment” — takes less than five minutes.

Improvements in base models over the years have reduced training time significantly. Over 90 percent of people who will try today’s speech recognition software will get 97 percent accuracy or better after just five minutes of training. Most will get about 99 percent. For “tougher” voices, the software includes additional training stories that can be read to give the program a better sampling of your voice.

During training, the software has you read text it already knows. The software has something called a “base model,” which is an amalgam of speech patterns the software’s manufacturer has deemed “average.” As you read, it is listening for how you pronounce the phonemes that make up the words in the text. It then adjusts for the ways you pronounce things that are different from its base model.

### **Improving Accuracy**

I have found the best way to improve accuracy is to understand how speech recognition works. Most people think it is *word* recognition. It is not. In fact, if you were to pause – between – every – word, the software would actually be less accurate.

As I mentioned, speech recognition listens for the phonemes you utter. Think of phonemes as the atomic particle of speech. If speech were chemistry, phonemes would be atoms. As you speak, the software creates a list of phonemes it thinks were said, storing them in the order they were uttered. It then starts building morphemes, which are the molecules to the phoneme’s atoms.

Morphemes are two or more phonemes that together make up the smallest meaningful unit of speech. From here the software starts compiling a list of words made up of those morphemes. Once it has that list, it starts applying some rules that suggest which words go with each other. On top of that it applies a little grammar to determine its final decision as to what it thinks you said. All of this happens amazingly fast, thanks to the fast processors in today’s computers.

Sometimes speech recognition programs come up with some pretty funny alternatives for what the user actually said. This is because grammar takes the least priority. The speech engine knows humans sometimes say things that don’t make sense, so if it can’t successfully apply grammar rules to an utterance, it will go strictly with what it thinks you said based on the phonemes and morphemes.

There are two key things involved in getting the most accuracy:

- How well the speech engine understands your voice;
- How much data you give it with which it can work.

It is this last one we want to look at now. When you start to dictate using speech recognition software, the program will listen for a natural pause, such as a comma or end of a sentence. This is called an “utterance.” Since the software employs grammar rules to help make decisions for

#### **Definition: Phoneme**

“The smallest phonetic unit in a language that is capable of conveying a distinction in meaning, as the m of mat and the b of bat in English.”

– from The Free Dictionary  
<http://bit.ly/9qv0yJ>

#### **Definition: Morpheme**

“A meaningful linguistic unit consisting of a word, such as man, or a word element, such as -ed in walked, that cannot be divided into smaller meaningful parts.”

– from The Free Dictionary  
<http://bit.ly/cpTnjo>

#### **Did You Know...**

Depending on who you talk to, there are 40-44 phonemes used in US English. There are said to be as many as 88 phonemes used in all variances of English (South African, Australian, UK and all its accents, etc.)

The language with the fewest phonemes (11) is Rotokas. It is spoken by about 4,000 people in Bougainville, an island to the east of New Guinea that is part of Papua New Guinea. The Hawaiian language is a close second with 13.

The language with the most phonemes (112) is !Xóõ also called Taa. (One of those African languages that uses clicking sounds.) As of 2002, this language was spoken by only 4,200 people, mainly in Botswana and Namibia.

sources:

LumonVox  
<http://bit.ly/9LSdII>

Auburn University  
<http://bit.ly/adaHM6>

Vistawide Languages & Cultures  
<http://bit.ly/cfQ0kn>

Wikipedia  
<http://bit.ly/cVlBo1>  
<http://bit.ly/9Nj24A>

what to type, you need to give it enough data to apply those rules. So don't look at the screen while you are dictating. This can be distracting, and will lead to more errors. I call this "leap frogging." You start to talk, then wait for what you said to appear on the screen, then you talk some more, then wait for the program to type, etc. This creates a very unnatural process. This bears repeating:

**Don't look at the screen when you dictate.**

Not only is the software not getting enough information about what was said to be as accurate as possible, but it is interrupting your train of thought as well — making it more difficult for your thoughts to get written as efficiently as possible.

**Microphone Position**

Position the microphone a bit off to the side of your mouth and about two fingertip's width from the corner of your mouth.

**Definition: plosive**

"Of, relating to, or being a speech sound produced by complete closure of the oral passage and subsequent release accompanied by a burst of air, as in the sound (p) in pit or (d) in dog"

— from The Free Dictionary  
<http://bit.ly/cpRF82>

**Microphones**

"Garbage in, Garbage out." GIGO. We have all heard the phrase. The type of microphone used and the position it is in can have a huge impact on accuracy. If possible, use a head-worn microphone that positions the mic next to your lips. For best results you want the mic to be just a bit off to the side and about two fingertips' width from the corner of your mouth. This helps avoid lowering accuracy with *plosives* — that popping sound you have heard on live TV when someone inexperienced talks directly into a microphone.

If you can't wear a head-worn microphone, or prefer the freedom of a desktop or wireless mic, make it is certified by the speech recognition software manufacturer for use with its software.

In general, just talk in a normal voice — not too loud, and not too soft. Think of your speech recognition program as though it were another person: if what you are saying would be hard for someone else to understand, your speech recognition program won't understand it either.

Which brings us to ambient noise. If you use a microphone recommended by the manufacturer of your speech recognition software, it will most likely have noise-canceling properties. This means it will do its best to figure out what is your voice and what is not, and then cancel out the sounds that are not your voice. This only works if you have consistent noise that is not too loud. A fan running in the background or the hum of lights, for instance. If you have to raise your voice to be heard, the microphone will not be able cancel out the noise —no matter how consistent it is.

For this reason, it is important the software is trained in the same environment in which you intend to use it. Doing so will adjust the way the software listens to your voice to exclude those background sounds. If the background sounds change in your environment, or if the software is used in different environments with various types of background noise, create a new profile for each environment. You can have as many profiles as needed.

**Punctuation**

Someday, computers will be powerful enough to glean what you meant to say and automatically insert the proper punctuation. Eventually, I expect software will even be able to do basic

**Speech Recognition Tips & Tricks**

- Take documents you have already written and feed them to the program. Make sure they are documents YOU have written. The program will learn any words it does not already know, as well as the context in which they are used. It will also adjust its rules to take advantage of the frequency with which combinations of words are used together.

This feature is called *Vocabulary Training* and is also referred to as *Learn My Writing Style*.

- Train it to learn words it doesn't already know with the program's built-in Vocabulary Editor.

- Use built-in correction — also called Recognition — to correct mistakes the program makes. This will make it less likely to make the same or similar mistakes in the future.

editing for you — correcting for bad grammar, or forming complete sentences out of conversational speech.

Until that happens, we are stuck with speaking our punctuation. Although Nuance has made saying your punctuation optional in their latest version, experts agree the program is much more accurate if you speak the punctuation as well.

The reason for this is pretty simple: punctuation marks serve as aural landmarks, and they represent a natural place where you are prone to pause speaking. The software has rules about how punctuation is handled, so saying a punctuation symbol invokes those rules and makes what you said before and after that much more accurate.

### ***Dictate Into The Built-in Notepad***

We have all heard the phrase “sell the sizzle, not the steak.” While that may be true, the sizzle does not satisfy. You have to have the steak as well. With dictation software, the “sizzle” is the ability to dictate into any application. On the surface, this seems like a great thing to do, but you may be surprised to learn a lot more accuracy can be achieved from speech recognition by dictating into the program’s built-in Notepad. In order to understand why, we must first understand how operating systems allocate processing time to applications.

Modern operating systems such as Windows and Mac OS X allow multiple applications to run concurrently. The operating system acts as a sort of traffic cop, deciding which applications can use the computer’s processors, when they can use them, and how much time they can spend using them. Whatever application is front-most — the one whose window is presently active — gets the express lane: it gets more of the processor’s time than any other application except the operating system itself.

This means any applications other than the ones being used sit in the background and are allocated less resources with which to work. So when you dictate into Microsoft Word (for instance), Word gets most of the processor’s time to do its work and the speech recognition program must do the best it can with the resources it is given by the operating system. The more resource dependent a program is, (such as Microsoft Word or Excel, and most graphics applications), the fewer resources will be available to background processes such as speech recognition.

If you use your speech recognition program’s built-in Notepad, however, the speech recognition program remains the front-most application. This makes dictation more accurate since the program has more resources at its disposal, which means it will make better decisions about what it thinks you said.

### ***Correct Dictation Mistakes Made By The Program***

Speech recognition software is not perfect. Sometimes it will mis-recognize what you said. Keep in mind that while 98% accuracy sounds pretty good, it means that 2 out of every 100

#### ***Accuracy by the Numbers***

Nuance claims an average person could achieve 99.6% accuracy with the Dragon NaturallySpeaking 10 engine. That means the engine would typically mis-recognize 40 out of every 10,000 words spoken.

With version 11 they claim to have improved accuracy by 15%, which means 34 words per 10,000 would be mis-recognized.

To put that in perspective, for every 1000 words you dictate, the new version will get 3.4 words wrong — an overall improvement of one less word wrong for every 1667 words you speak!

source:

David Pogue, NY Times  
<http://nyti.ms/9VrHze>

#### ***Did You Know...***

The increased accuracy in the latest version of Dragon NaturallySpeaking is due in large part to Dragon’s free iPhone program, Dragon Dictate.

Nuance records the audio and what the speech recognition engine thought was said and compares that to the final text after the user corrects it. (All information is sent anonymously, btw.)

The collected information is used to improve accuracy in the speech engine.

source:

David Pogue, NY Times  
<http://nyti.ms/9VrHze>

words will be mis-recognized by the program. If mis-recognized words are reduced to 1 in 100, you have reduced errors by 50%!

So it is important you use the program's built-in Correction tools to correct mistakes. The more you use the program's built-in correction, the less you will have to use it — this is the most useful and quickest way to increase the program's accuracy.

### ***Summary — Getting the Most from Speech Recognition***

- Train it to recognize your voice
- Speak complete “utterances”
- Use a recommended microphone, positioned properly
- Speak your punctuation
- Use built-in Notepad instead of dictating directly into applications.
- Use built-in tools — especially correction — to improve accuracy



## FORM BUILDING

Naturally, speech recognition can be used to fill out forms. But whether you should or not is another matter. Many forms use proper names for people and streets the speech recognition program might not know. Also, a well-designed form provides choices whenever possible, rather than an open text field. This makes filling out the form faster and more consistent data, but such choices can be difficult to manipulate by speech alone.

### Form Types and Security

There are three types of forms: Online, Electronic, and Paper. Each has unique concerns for the designer in terms of how they will be used and how the data can be validated and secured.

– Online forms are typically used to collect “public” data, such as name, address, age, etc. They can also be used to create transactions, providing provisions were already been put in place to secure the data being transmitted. For instance, going online to pay a parking ticket requires you have the ticket number in hand. Only information about the ticket you have can be seen. Other people’s tickets can’t be seen unless you are authorized to do so. When a ticket is paid, the information is collected on a *secure site*, where the keystrokes entered are encrypted so no one else can retrieve them. Once entered, the data is stored on a secure server.

Other than the security involved for transactions, online forms are arguably the least secure. But keep in mind the amount of information being sent across the Internet at any given time is so vastly huge, that it is unlikely anyone will stumble upon your data. Anyone interested not only has to know it is there, but also know exactly where “there” is and how to get at it, and of course, they have to care enough about it to go through all the effort.

– Paper forms have the potential to be less secure, simply because people are fallible. A form can easily be left visible while waiting to be filed. The only thing the designer can do is to try and make sure the least personal information is on the first page of the form, or better yet, make sure all paper forms have a cover page stapled on top.

– Electronic forms are the most interesting. They can be transmitted easily person-to-person through email with a low likelihood of being intercepted, or they can be placed on a secure server where only those with access can download them. Digital signatures can also be used to further secure either (or both) who sent the form and who is filling it out.

### Software

Many web sites allow creation of online forms and provide code to paste into your web site. I’ve tried many of them. For the most part they are good. In my opinion, however, nothing beats Adobe Acrobat Pro for creating forms. The same form can be designed for the web, print, and electronic distribution. If you distribute electronically, it can be filled out using the freely available Adobe Acrobat Reader.

#### Forms and Speech Recognition

- Say “Tab Key” or “Press the Key Tab” to move from one field to another.
- If the text being typed by the speech recognition program gets garbled, it means the program has lost its place. Say “cache document” (pronounced ‘cash’) to reset.

#### Online Form Builders

If you don’t have Adobe Acrobat Pro there are plenty of online alternatives for building forms.

Email Me Form™  
<http://bit.ly/9Vua38>

Formstack  
<http://bit.ly/bpulb7>

JotForm  
<http://bit.ly/dblaSi>

Wufoo  
<http://bit.ly/anNpaQ>

Zoho HTML Form Builder  
<http://bit.ly/bpulb7>

## Designing a Good Form

Form Design could easily fill an entire day. In fact, it has — I've been to the seminars. I am going to try to hit the most important points as well as things to avoid that really annoy people who fill out forms (which is pretty much all of us).

When I worked for Apple, two of the developers with whom I worked were involved in form generation. One had applications for designing and filling out forms. I learned a lot from them on how to make forms look good. The other made a different kind of form — surveys. His software was used to build surveys that people could take online. The software would then automatically tabulate the results to provide key demographic and trending information. From him I learned how to properly phrase questions, and when to choose the right type of answer (true/false, multiple choice, select all that apply, etc.)

*First rule: wherever possible, don't make them think.*

The more someone has to think, the more time it will take for them to accomplish something. Your clients need to think about the reason they came to see you, so the less time they have to think about filling out a form, the better they will be at discussing why they are there.

*Second rule: provide choices whenever possible.*

Choices help both you and the user. They help users by limiting the amount of time they have to think about something. They help you by creating consistency. I'll give you two examples:

- 1). Why select from a range of ages when the user could simply type in their age? For most purposes, an exact age is too granular to provide meaningful results. Do you really care how many of your clients are exactly 29 years old? Probably not, but it might be useful to figure out what percentage of are senior citizens, or how many are in their 30's.
- 2). We have all selected the state we live in from a drop down list. Why not just give the user a field into which they can type? Because the data becomes inconsistent and therefore hard to tabulate. Some people may not know the abbreviation for their state. Others may use an alternate abbreviation (such as Fla. for Flordia). Even putting a period after the abbreviation creates a situation where even the most basic analysis in a program like Microsoft Excel will render separate results when there should be only one: (LA, La, La.,LA., la, la.).

*Third rule: Know when to use radio buttons versus check boxes.*

This may seem trivial, but it is really important. In 1984 Apple introduced a standard for the way people choose from a pre-determined list. That standard is now used throughout the computer industry; on Windows, Macs, and on the Internet. It is very simple: radio buttons are for making *one* and only one choice from a list. Check boxes are for making multiple choices from a list.

### Resources for Form Design

lukew.com

<http://bit.ly/d2tM3s>

Don't Make Me Think

by Steve Krug

<http://amzn.to/9wPcaN>

Creating Graphically Effective Form Design

<http://bit.ly/aBVXuQ>

Here are a couple of examples:

How many TVs do you have in your home?

- ☐ none
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4 or more

In this example, only one choice is allowed.

On what days do you watch the evening news?

- ☐ Monday
- ☐ Tuesday
- ☐ Wednesday
- ☐ Thursday
- ☐ Friday
- ☐ Saturday
- ☐ Sunday

Here we use check boxes, which indicate any or all of the choices can be selected. The point of these examples is that people are familiar with these conventions. Using them properly helps people focus on their answers without being distracted by something unfamiliar.

*Fourth rule: Pre-set formats when possible.*

This applies to online and electronic forms. Form design programs allow you to designate the type of data that can be input by the user. If the user is supposed to fill in a dollar amount, format the field as currency. If they are supposed to enter their date of birth, format it as a date, etc.

*Fifth rule: Set appropriate field lengths.*

We have all tried to fill out a form that didn't leave enough room for our name, or our social security number, etc. Leave enough room for people to enter the requested data. Likewise, limit the field length to help guide the user. Suppose you have a printed form with a place to enter a state. If you want an abbreviation, leave enough room for two handwritten characters, but only two characters.

## **Summary — Designing a Good Form**

We have only scratched the surface when it comes to building forms, but hopefully we have hit on a few of the high points that will make the next form you build a better one.

- Use Adobe Acrobat Pro if possible
- Design for form type: Online, Print, or Electronic
- Don't make them think
- Provide choices instead of open fields
- Use radio buttons and check boxes appropriately
- Pre-format fields (online & electronic only)
- Use appropriate field lengths

### **Data Relevance**

Why collect information you don't need? In the radio button example, "4 or more" is provided as a choice instead of 5, 6, 7, etc. If the intent of the survey is to determine a user's dedication to watching television, or perhaps their affluence, knowing how many TVs above 4 are in the house is probably irrelevant.



## VIRTUAL SECRETARIES

If you search for “virtual secretary,” you won’t see a lot of links to software companies. In fact, you won’t see any. What you will see are a lot of links for companies that provide human assistants located somewhere different from you. That’s not what we are looking for here.

What we want to do is put together pieces of technology in such a way some of the more mundane and repetitive tasks we ask assistants are asked to do can be done by it instead.

### ***What Does a Secretary Do?***

According to both wisegeek.com and carerr.qanda.com, here is a partial list of what a secretary can be expected to do:

- take dictation
- typing
- handle correspondence
- schedule meetings and make travel arrangements
- filing
- answer phone
- make and get coffee

That’s a tall order! When I first started out consulting, my biggest client was (then) the largest law firm in Racine, Wisconsin. They had me train their lawyers on using computers for things like email, accessing Westlaw, and doing much of their own forms processing. We installed a server and created digital versions of their forms as templates in Microsoft Word. All they had to do was open the desired template, fill in the information and print.

That was back in 1989. The partners in the law firm had one goal in mind: make their secretaries a billable resource — “almost like a paralegal” was how one partner put it. They would bill out the secretaries’ time at a lower rate — which made their clients happy — and their lawyers and paralegals were free to take on more clients, which increased the firm’s billings.

Today, everything they implemented is pretty much standard procedure. So the next logical step is how far can we take technology to replace some of those tasks? Are there things that could be done differently involving technology in our work environment to help increase efficiency and productivity?

Let’s take a look at each of the tasks a secretary performs and see if we can find some available technology to help accomplish it.

#### ***Take Dictation, Typing, and Handling Correspondence***

We have already covered this in our segment on speech recognition. One facet we did not cover, however is dictation on the go. This is a little like taking your secretary with you. Nuance offers programs for both the Mac (through its MacSpeech division) and PC that allow you to record your dictation on a recording device such as a digital recorder or your smartphone, then transcribe into text later. This is a great time saver that allows you to make the most of down time, or allows those brilliant spur-of-the-moment ideas to be captured as you have them.

### **Human Virtual Assistants**

There is no reason you can’t have a human assistant as well as a use software to automate many of your tasks.

A Human Virtual Assistant could help with proof-reading, editing for grammar, making sure your schedule is up-to-date, make travel arrangements, etc. Such an assistant could work with the software and web sites you would use every day to help automate your workflow.

There are several advantages to a Human Virtual Assistant. They are not subject to payroll taxes, and they work when you need them — so you only pay for what you use. They can also help put a human face on your business without you having to answer every call personally.

On the minus side, they won’t be able to help you with the filing, and they will be less likely to learn the unique things about you that make a local assistant so valuable: your travel preferences, how you like your coffee, and the types of food you like to eat, for instance.

### **Success Stories**

Nuance has a downloadable PDF about a lawyer that chose NaturallySpeaking instead of hiring a temp to type in his dictation.

<http://bit.ly/9bj3HG>

There is an excellent success story on the MacSpeech web site about an attorney who uses text rendered by MacSpeech Dictate in high court cases.

<http://bit.ly/9aXoXP>

Speech recognition software can also handle part of your correspondence. It can help with all of your email, and you can certainly dictate text that needs to be printed and mailed out. Many attorneys will pass along the digital version of a document that has been dictated and have their secretaries edit for grammar and fill in any missing information.

Can you completely eliminate the need for a secretary by using speech recognition for dictation and typing? If you have the time to handle printed documents and communication yourself, the answer is yes. At the very least the time a secretary has to spend typing can be significantly reduced, which means they will have more time to do other things.

### *Scheduling Meetings and Making Travel Arrangements*

Let's break this down into two areas:

- scheduling travel
- scheduling appointments, reminders, and keeping track of tasks ("to dos")

**Scheduling Travel.** Years ago there were basically two options for scheduling travel: do it yourself by calling the airline, hotel, rental car company, etc. or have a travel agent do it for you. Today there are a plethora of options: pick one of the many travel web sites and everything is scheduled for you right there. Most of them will even email you a file that, when opened, automatically puts your travel information in your calendar — complete with your confirmation numbers.

It is up to you to decide if this can be done without a live assistant. If you tend to stick to one travel service, such as Orbitz, Expedia, or Travelocity, you can probably make arrangements yourself. If you prefer to shop around on sites like Kayak, Cheaptickets, or Priceline (and depending on how much you travel), it may be worth having an assistant who has the time to shop for the best deal while you work on more important things.

**Scheduling Appointments, Reminders, and Tasks.** Here's where things get interesting. There are a lot of options in this area, so I will try to focus on the ones that have the best potential to increase your productivity. If you are already comfortable using other solutions, that's fine. But see if the your existing solution can be folded into one or more of those I am suggesting.

The first thing I recommend is get a Google Mail or "Gmail" account if you don't already have one. Having a Google Mail account gives you access to the free services offered by Google, one of which is Google Calendar. You can have as many Google calendars as needed. Each calendar can be public or private, or shared with just the people you approve. When a calendar with specific people, they can be allowed to view only, edit existing events, create new events, or even manage sharing options. You can also subscribe to other calendars.

Google Calendars can be synced with Outlook on the PC or iCal and Entourage on Macs. The great part about using Google Calendars is they become pervasive, thanks to being on the web. Once your calendars are set up they can be accessed from any Internet-connected device.

When scheduling an event, it can be typed in plain English and Google will figure it out. For example, I entered today's event by creating a new event on 8/27 and typing "Legal CLE

#### **Sync Your iPhone with Google Calendar**

If you have a MobileMe account with Apple, you can easily sync your Google Calendar to all your computers and your iPhone automatically by subscribing to it through iCal.

If you don't have a MobileMe account you can still sync your Google Calendars to your iPhone. The following link will show you how:

<http://bit.ly/9g7xUK>



10:30 to 1 at Sheraton on Canal.” Google translated that to “Legal CLE at Sheraton on Canal” and scheduled it for 10:30AM to 1PM. Since it knows I am in New Orleans (because of my account settings) it even put a link to Google Maps showing where the Sheraton on Canal is located!

One of the great things about having a human assistant, however, is you can just *tell* them what you want and it gets done. (Here we are back at speech recognition again!)

There are several services that allow appointments to be set up simply by calling a phone number and using your voice. There are also apps for iPhone, Blackberry, or Android. We are going to look at two of these services, both of which allow natural English for interacting with them — just like you would with a human assistant.

ReQall (<http://www.reqall.com>)

ReQall has a Standard service, which is free, and a Pro service, which costs \$25 per year. The Pro version adds location based reminders (so it reminds you to buy milk when you get to the store, using your mobile device’s GPS), as well as other features such as push notifications on the iPhone, the ability to add and respond to items via email, “here and now” lists that tells you what you have to remember at this particular time and location, the ability to sync with Outlook and Google Calendar and a few others.

Using ReQall is simple. You either use their free app (versions are available for Android, Blackberry, and iPhone) or you call an 1-888-9-REQALL. Here is how a session might go if you call their toll-free number,

*The system will greet you and ask if you want to “add,” “share,” or “recall.”*

*Suppose you wanted to hear your upcoming events. You say “recall.”*

*The system asks “Which list do you want to recall?”*

*You say “soon.”*

*The system responds with your upcoming events, which could be something like “You have one item coming up in the next week. Meeting with John tomorrow at three thirty.”*

The Pro version you can be asked for things like your shopping list and it will send it to you as a text message.

Jott (<http://jott.com>)

Jott was purchased by Nuance last year. It is a bit more sophisticated than ReQall and there is no free option (although there is a free trial). It costs \$39.50 per year for just the reminder service. Jott also has voice mail and integration with salesforce.com.

Jott has more options over ReQall. Status updates can be added to your Facebook page, tweet on Twitter, send out a message to an entire group, or make a blog post.

### **Free: Siri for iPhone**

Siri does many things that ReQall and Jott do, but with a slightly different approach. With Siri, you simply ask a question and it tries to figure out what you want. It works best for things like making a dinner reservation, finding out about movies or the weather, or getting a taxi, but you can ask it other things, too.

The neat thing about Siri is you can get very specific with it and it doesn’t seem to get confused. For instance, can say “I’d like a great place to take a new client for sushi near my office,” and it will come up with a recommendation. You can also say things like “I’d like a table for two at Galatoire’s tomorrow night at 7:30 and it will make the reservation for you.

I anticipate great things from Siri in the future because Apple bought the company in April of this year. You can find out more about Siri at the link below.

<http://bit.ly/ckWcrF>

### **Dial2Do**

Dial2Do is a service similar to ReQall and Jott. They have a free option for creating and listening to reminders. The Pro service is \$39.99 per year and includes options similar to Jott. Access is via a toll-free number. There are no apps for mobile phones.

<http://bit.ly/9bqLlZ>

### **Did You Know...**

You can use ChaCha to get an answer to just about anything. Here’s how it works: you ask ChaCha a question by texting, calling a toll-free number, through their web site, or by using an app for your mobile phone. You ask it literally any question and in a minute or two it responds with an answer.

Answers are provided by real people who are looking them up on the Internet so you don’t have to! Get more information at the link below:

<http://bit.ly/azlFbr>

### The Myth of the Paperless Office

The term “Paperless Office” was first used in a 1975 Newsweek article called “The Office of the Future.” So what happened?

The simple truth is paper and all those digital bits and bytes that store information electronically complement each other.

While there is no doubt we are becoming increasingly paperless — the post office is losing money due to email replacing a lot of paper mail correspondence — paper is still necessary.

Having an electronic copy of a document protects you from the physical copy being destroyed, but having a paper copy protects you from the electronic copy being erased. Here is a quick and easy way to store your most important documents:

- 1). Have a paper copy. If authenticity is important, have it notarized. If dating is important, mail it certified mail to yourself or someone else and don’t open the envelope (make sure it is sealed with wax to show it has not been opened).
- 2). Have an electronic copy.
- 3). Have a backup of the electronic copy.
- 4). Have a second backup copy stored off site. There are several companies such as Mozy and Backblaze offering this service, or you can do it yourself on data-based optical disks such as CD-R (700MB), DVD±R (4.2GB), or Blu-Ray (18GB).
- 5). Have a paper copy stored off site.

#### sources:

SooperArticles: The Truth About Paperless Office  
<http://bit.ly/cMJLWx>

Reuters: U.S. Postal Service proposes price hikes for 2011  
<http://bit.ly/abzxMe>

**Summary of Scheduling.** Both ReQall and Jott do a great job of scheduling, and tackling your to-do list. The biggest advantage over a human assistant is they are more reliable. The companies running these services are well-funded and won’t be going away soon. They are up 99.99% of the time, and they don’t suffer from things like the flu or car accidents.

There are couple of disadvantages to using technology, however. The first is Internet access. If the power goes out or you are in a location without web access (or the ability to receive text messages), you won’t get your reminders either. This means the system won’t remind you of your appointments and no new appointments or additional tasks can be recorded. For most of us this probably isn’t an issue — if we don’t have access to the web, it is probably intentional most of the time.

There is one other disadvantage, and it is one for which technology can not compensate: the fact that a human assistant is right there in front of you. The technology discussed here is great — and it really does work — but only if you use it. For many of us, it is far easier to tell another human being what we need simply because they are right there in front of us. It takes at least a little dedication to teach yourself to use a service like Jott.com or ReQall.

### Filing

No one has yet come up with an affordable, efficient way for the paper you produce to get filed short of doing it yourself or hiring someone to do it for you. But that doesn’t mean our quest for a virtual assistant comes up empty handed in this area. After all, we are talking about a *virtual* assistant, so let’s take a look at what is available to handle all those documents we create and store in our *virtual* world.

I have already mentioned the benefit of having a Gmail account. In addition to calendaring and email, you also get access to Google Docs (<http://bit.ly/bevLqS>) — another free service. All the major components of Microsoft Office are present with the exception of Microsoft Access, which is a database program. (Although I would bet good money Google is working on it!)

With Google Docs, Microsoft Office documents can be stored and opened in your browser without losing any of the information that makes them unique to Microsoft Office. That’s a big plus. Google Docs can be tagged, stored in folders and you get the power of Google’s search engine when you need to find something specific. Everything created is stored securely, and can be shared with others if you choose.

Microsoft now has a web version of Microsoft Office (<http://bit.ly/a3Q0CT>). Like Google Docs, it is free. There are advantages and disadvantages to both of these services. Microsoft Office Web Apps look and feel more like Microsoft Office on Windows, so if you are already comfortable with that, you might feel more at home using Microsoft Office Web Apps. The trade off is that some browsers are not supported (such as Chrome, Opera, or Safari) and there is no integration with Google’s apps, such as Gmail and calendar.

Google also has an option called *Google Gears* that allows any of your Google Docs to be worked on offline. They are automatically uploaded when you reconnect to the Internet. That’s



a great feature if you find yourself in a place without web access, and it's free. To use Microsoft Office Web Apps offline the software version of Microsoft Office must be installed on your computer.

What about documents not created by Google Docs or Microsoft Office? There are a few services that provide a limited amount of free online storage, and allow more to be rented on a monthly or yearly basis.

### Dropbox

My favorite is Dropbox (<http://bit.ly/arb2h>). It works a lot like Apple's iDisk service — which is part of their \$99 per year MobileMe package —but it is free for the first 2GB of storage. You can upgrade to 50GB for \$99 per year or 100GB for \$199.

Using Dropbox couldn't be simpler. When it is first set up a small program is downloaded that creates a Dropbox folder on your hard drive. This program automatically runs at start up and syncs whatever is in it to your online account and any other devices on which it is configured. Dropbox can be configured on as many computers as needed. If you have a laptop and desktop at work and another desktop computer at home, you can have Dropbox on all of them.

The Dropbox folder is just like any other folder on your hard drive, with the exception that anything in it syncs to your account on the Dropbox web site and any other computers on which Dropbox is installed and configured with your account information. This means any created folders and files moved into your Dropbox folder will be available wherever you have Internet access. Like Google Gears, changes made to your Dropbox folder while offline are automatically uploaded when you re-connect to the Internet.

### Evernote (<http://bit.ly/9CHyGy>)

A lot of the information we encounter are things we did not create: things we see, ideas we have, research we are doing, etc. While Jott, ReQall, or Dropbox could be used for these things, they are not exactly the right tool. Enter Evernote. This is your virtual scrapbook. It holds everything virtual that you don't have a place for yet. You can store virtually anything in Evernote: text, pictures, URLs, videos, PDFs — you name it.

Evernote is great for organizing snippets of information. Like Dropbox, everything you save to Evernote is synchronized between any computer on which you have installed the Evernote application as well as your account on the Evernote web site. Also like Dropbox, there is a free version, which allows up to 40MB of note uploads per month, or the premium version (\$45 per year), which allows up to 500MB per month and unlimited file types.

Where I think they differ is in how the two different technologies seem to want to be used. Dropbox really wants to be a place where the stuff you are working on is stored. It is an extension of your hard drive, and feels a bit more formal in the way it approaches the data it stores.

Evernote is your virtual desktop. It is where you throw stuff you want to get back to *someday*. Unlike your physical desktop, Evernote allows each note to be tagged with keywords that make

#### **How I Use Dropbox**

I used Dropbox to store this document as I worked on it, as well as my presentation files. When I found pictures or videos I wanted to use in my presentation, I saved them to my Dropbox folder. I could then work on this document or my presentation from either my iMac or my laptop without having to worry about transferring files via a thumb drive first.

I also share a folder inside my Dropbox folder with some of my clients whose web sites I host. They can make their changes on their hard drives and the changes automatically go to my Dropbox, from which I can update their site on my server.

This gives my client's an abundance of convenience while keeping me happy in the knowledge my they can't unknowingly goof something up on my server.

### **Using Jott with Evernote**

Recording a note with Jott and having it magically appear in Evernote is a great way to use these two technologies together.

When you set up an Evernote account you are given a unique email address. When you send an email to that address, it automatically goes into Evernote.

Set up your Evernote email address as a contact in Jott, then record a note to be sent to that email address. Poof! It magically appears in Evernote. For more details, go to the link below:

<http://bit.ly/cybrf4>

them easier to find later. Notes can also be stored in folders, and you can have as many different notebooks as you want.

To put it another way, Evernote is where I throw stuff I am going to want to look at later — no matter whether later is just in a few minutes or in a few years. Dropbox is where I store stuff I am working on, which may contain information gleaned from what I threw into Evernote.

**Summary of Filing.** While a real human can't be replaced for filing the paper work in the office (whether that human is you or someone else), there are several services for handling digital documents. Use Google Docs or Microsoft Office Web Apps for online documents, or use Dropbox to synchronize the documents you create on your computer. Use Evernote to create notes and store snippets (including graphics, videos, PDFs, etc.) you may want to use later.

### *Answering the Phone*

Almost everyone has moved from the traditional answering machine to voice mail. We are all familiar with playing “telephone tag,” where you leave voice mail, and they call back, only to get your voice mail, etc. It can be frustrating to try and contact someone and constantly get their voice mail. Yet for some reason, if we get a human assistant instead, we seem to be less frustrated, even though we may not reach the party we are calling any sooner.

I'm going to share a couple of solutions that will keep you in control of your phone (and who can contact you), while maintaining a professional image. Not surprisingly, Google has a free solution here, as well.

### Google Voice (<http://bit.ly/2uGgQ>)

In 2005 a new service called “GrandCentral” was launched with an interesting concept: what if you had one phone number that, when called, could be forwarded to any other number or group of numbers? When someone called this “special” number, both your cell phone and office phone could ring. You could also have your home phone ring. When away, you could log onto your account on the GrandCentral web site and turn off calling your home and office phone, but add the phone number for the hotel at which you are staying.

Sounds pretty neat, right? Google thought so, too, and bought GrandCentral in 2007. I was an early beta tester for GrandCentral and have been using Google Voice ever since the acquisition.

Google Voice is more than just a voice mail service. If you use it as your main number, you get a bunch of great features. It has a great call screening feature that requires callers to record their name before you are notified of their call. Don't want to talk to that person? Send them to voice mail!

Google Voice also allows contacts to be organized into groups. When someone in a group is called, Google Voice treats the call according to the rules set up for that group. Tired of getting calls from certain telemarketers or political groups? Create a group for them and have Google

play an announcement telling them, this phone number is no longer in service. There are other options, such as “Do Not Disturb” that sends calls for that group straight to voice mail.

Another great feature is automatic transcription of voice mail. While the transcriptions do not have near the accuracy of Jott or ReQall, they are usually good enough to tell who is calling and what they want. Transcriptions can be sent as an email, or as an SMS message to your phone. Google Voice has apps for the Android and Blackberry, but not for the iPhone. They do, however, have an iPhone optimized web page for Google Voice which can be accessed using Mobile Safari.

YouMail (<http://bit.ly/9hf6uq>)

I love YouMail for one reason: it greets callers with their name. Like Google Voice, it can employ custom greetings for different people, but with YouMail, people who call are greeted using their name by default — *you don’t have to do anything other than set up the feature as your default greeting*. If the person calling is not in your address book, YouMail will use their caller ID information to greet them.

This has an amazing effect on people who call you. It becomes a topic of conversation, and makes you look incredibly professional — even a human assistant usually doesn’t greet callers with their names!

YouMail can also send an email or text message when someone leaves a message. Unlike Google Voice, the email YouMail sends attaches the audio from the caller’s message. (With Google Voice you must click on a link in the email to listen to the message in your browser.)

They also have thousands of pre-recorded greetings, any of which can be used for your default greeting, for groups of people, or even for one specific person. The basic service is free, but ad supported. Messages can be up to 2 minutes long and the system will store up to 100 messages for as long as you want. Voice mail can also be forwarded to anyone via email or instant message, or you can post them to Facebook or MySpace.

For \$23.88 per year you can upgrade to their pro service, which gets rid of the ads, increases message length to 5 minutes each, and allows you to store up to 5000 messages. For another \$3.99 per month YouMail will have a live person transcribe your voice mails and send them to you via email or text. This is a great feature for people who are unavailable to answer the phone but want to get information as quickly as possible. YouMail also has apps for iPhone and Android (a Blackberry app is in the works).

PhoneValet (<http://bit.ly/d6f02h>)

This is a Mac-only software program that acts as a virtual receptionist. (There are many similar programs available for Windows.) PhoneValet has many of the same features as Google Voice or YouMail, with a couple of notable exceptions:

- It runs on a personal computer, not on the Internet.
- It can be set to announce the incoming caller through your computer’s speakers.

### Google Voice and Evacuation

I first became interested in Google Voice (then GrandCentral) after we were evacuated for hurricane Katrina in 2005. With both land lines and cell phone systems in turmoil, how cool would it have been to have a number where people could reach us at any of the homes or motels where we stayed?

While evacuated during hurricane Gustav we were able to put Google Voice to good use. Since my cell phone never stopped working, I redirected calls to my Google Voice number so it would ring both my cell phone and the home phone for the person with whom we were staying, and I shut off ringing my home phone.

- It can be configured as a phone tree.

These are very useful features for one-man firms or small offices. When the phone rings, PhoneValet announces who is calling, which is useful when you are not near a phone to see the caller ID. The phone tree serves two functions: it allows calls to be directed to different mail-boxes depending on the caller's needs, and it allows customized messages to be left for specific callers. For instance, if you need to leave the office unexpectedly and were expecting a call you could leave a message for the caller telling them when you will be back in the office, or give them the information they were calling to receive. Like YouMail, messages left by your callers can be sent via email (but not as text, since PhoneValet does not transcribe your emails).

**Summary for answering the phone.** Employing various technologies to manage phone calls is one of the more exciting aspects in our quest for a virtual assistant. By using services like Google Voice, YouMail, and PhoneValet (or one of the many PC equivalent programs), unwanted callers can be weeded out, you can impress your contacts with personalized greetings, and never miss a message by having it sent as email or as text to your phone.

#### ***How I use Google Voice, YouMail, and PhoneValet Together***

I give out my Google Voice number to anyone other than existing clients, friends, and family. My clients have my cell phone number and my friends and family have both my cell phone and home phone numbers.

When someone calls my home phone, PhoneValet announces who it is. If I don't know them, I let it ring and it automatically forwards to Google Voice. This allows me to weed out sales calls, politicians, etc. If I decide I don't want to receive calls from them, I tell PhoneValet not to ring the phone when they call and set Google Voice to give them a "phone disconnected" message.

If someone I know calls my home phone, PhoneValet announces them, which is great when I happen to be watching TV or making dinner. If someone I know calls my cell phone, they get a great personalized greeting which makes them feel all warm and fuzzy about me and my consulting services!

#### ***Summary — Is There Such A Thing As A Virtual Secretary?***

There are several things a virtual assistant just can't do — human or not. A virtual assistant can not file paper work or greet people when they enter your office. Further, to employ one or more of these software solutions will require some learning and discipline on your part as opposed to telling someone else what needs to get done.

On the plus side, implementing technological solutions can have very positive effects to lower costs and increase productivity. Although no one has come up with a "one stop" solution for all the tasks I have outlined that don't require a physical presence, you can use these tools to create solutions unique to your situation. While a technological solution may be susceptible to power outages, it won't call in sick or argue with you.

Considering our unique situation here in New Orleans, moving some or all of these tasks to "the cloud" also means you can set up shop anywhere with Internet access should we have to evacuate. This can help you stay in touch with your clients during what is likely to be a very important time in which they may need your assistance.

Even if you have a human assistant, implementing some or all of these technologies will make them more productive, taking more work off your shoulders or freeing up everyone's time to bill out more hours.

Specifically, we learned the following is possible using technology:

- Dictation software such as Dragon NaturallySpeaking or MacSpeech Dictate can handle your correspondence and "boss around" your computer (open applications, send emails, surf web sites, etc.)
- Travel web sites such as Orbitz, Expedia, Travelocity, Kayak, Cheaptickets, and Priceline (as well as others) can act as a virtual travel agent and book all your travel needs (airline, hotel, rental car, etc.) in one place.
- Set up a Google Calendar and sync it with Outlook or iCal. Google will send you a text

message or email to remind you of upcoming appointments. Events can also be shared with others.

- Use services such as Jott or ReQall to schedule appointments, record reminders, send emails or text messages, create shopping lists and even post to Facebook or Twitter.
- Create and store documents in “the cloud” with Google Docs or Microsoft Office Web Apps, which will then be accessible from wherever you have Internet access.
- Extend the reach of your hard drive with Dropbox (or a similar service such as Box.net). Documents stored in your Dropbox folder will appear on any computer on which you have installed Dropbox, your smartphone, and will also through a web browser on any computer simply by logging into your account.
- Use Evernote to store notes, pictures, ideas, audio files. Use it as a scrapbook or virtual desktop where everything can be collected to be sorted through later. Use Jott to create new notes in Evernote.
- By using Google Docs or Microsoft Web Apps, Dropbox, and Evernote you can easily be away from your office and never have to worry about forgetting important documents.
- Use Google Voice, YouMail, and software programs such as PhoneValet (Mac only) to manage phone calls, store voice mail, and send alerts for new voice mail no matter where you are. Also block out unwanted callers and use “Do Not Disturb” to put a damper on interruptions.

We can accomplish a lot with the technology that exists today. Embracing all of these technologies will give you more time to spend on something else. Whether that is doing the physical things that can’t be done by technology (such as filing paperwork), picking up more billable hours, or just for a well-deserved rest is up to you.

One last thing. We mentioned many secretaries are expected to make and get coffee, which is not something we can do with technology. Or is it? As John Stewart of the Daily Show would say, “here’s your moment of Zen:”

<http://bit.ly/cTvFZt>