

Making speech commands work well on the desktop: it's all about steps

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Notes:

The speech commands I used during the talk are in green.

We had enough questions during the talk that I didn't have time to show the five-minute tour at the end.

UC Slides Short File (opens slides)

Function 5 (puts slides in full-screen view)

Questions for the audience: How many use NaturallySpeaking, and what are the pluses and minuses of using NaturallySpeaking?

I've been using speech recognition software since DragonDictate 1.0. It's been both enabling and frustrating. I started using it because I had a bad case of repetitive strain injuries in my hands. But when I was hurt and it hurt to type I found myself cheating a lot despite the pain -- not when I was dictating, but when I was trying to control the computer. That told me the command-and-control interface was frustrating.

Utter Command came out of that frustration. It works with NaturallySpeaking Pro and makes the command-and-control part of using speech much easier and faster.

It's been 15 years since I began using speech to control the computer and more than 5 years since I got serious about making the speech interface better.

I can boil down what I've been doing all this time to three important concepts:

Speech Screen Down (advances slide while the microphone is asleep)

First, make commands that **follow the way the brain works**

Second, make commands **consistent** across programs

And third, reduce the number of **steps** it takes to carry out a given task.

I'll talk a little more about the system behind Utter Command, then I'll give some short demonstrations that will step you through the basics -- how Utter Command speeds word processing, accessing menus, accessing documents, folders and websites, and mouse control. I'll also show you some of our learning materials.

Then I'll give you a five-minute whirlwind tour that will give you a sense of many of UC's other abilities. And then we can open things up for questions.

As you watch, think about the three important concepts:

Make commands that **follow the way the brain works**

Make commands **consistent** across programs

Reduce the number of **steps** it takes to carry a given task.

Speech Screen Down etc. (*go through the rest of the slides -- an overview of the logic and science behind Utter Command*)

Speech On

Window Close Times 2 (closes full-screen view, then PowerPoint)

Word Open

NaturallySpeaking gives you the ability to select words by saying them -- but this doesn't work in every program. · new paragraph

Size 14

NaturallySpeaking also allows you to select words near the cursor. These commands work in programs that don't support the select words ability, but the wording requires several steps.

Move left 4 words

Select back 3 words

Press Control b

Go to Bottom of Document

New Paragraph

Natspeak: 5 steps · New Paragraph

Utter Command adds finer control in moving and selecting as you dictate in any program -- and it takes fewer words and fewer steps.

4 Before · 3 Before Bold

Another Graph

NaturallySpeaking plus Utter Command: 2 steps · New Paragraph

Utter Command also gives you finer control at the character level -- you can say as many as four keys in a row. · New Paragraph

Size 20

Cap Fact Line Size 20	Fact	Cap Fact
Left Backspace s	Fas t	Press Left Arrow, Backspace, Press s
Backspace · Right e	Fate	Backspace, Press Right Arrow, Press e
Backspace · 2 Left e	Fe at	Backspace, Move Left 2, Press e
Delete e	Fee t	Press Delete, Press e
2 Backspace i	Fi t	Backspace 2, Press i
Left Lima	Fl it	Press Left Arrow, Press l
1 1 Letters Delete	F t	Backspace, Press Delete
Letter a c	fac t	Press a, Press c
End Exclamation	fact	Press End, Exclamation Mark
Exclamation Times 5	fact!!!!	Exclamation Mark, Exclamation Mark, Exclamation Mark, Exclamation Mark, Exclamation Mark
6 Backspace · Home Delete	t act	Backspace 6, Press Home, Press Delete, Press t
Tango	F act	Backspace, Press Cap f
Backspace · Cap f		

Another Graph

Size 14

That took 16 steps. If I were to use NaturallySpeaking alone it would've taken 41 steps. · new paragraph

Utter Command also adds flexibility in document level navigation. People who use speech often get tired of saying screen down screen down etc. · new paragraph

I'm going to show you several solutions, but first I need to make this document longer. · new paragraph

1 Through 8 Period Enter

7 Up End

Cap Introduction

Down End

Cap Topic

Down End

Cap Another Topic

2 Before Copy

Down End Paste Repeat 4

Down End

Cap Summary

8 Up Home

Down 3 Enter Repeat 8

Bottom 2 Enter

Here are a couple of simple ways to get around. · new paragraph

Screen 1

Screen 3

2 Screen Up

Go Bottom

If you use numbers, letters or symbols to organize your documents you can jump among sections. · new paragraph

Find One Period

Find Six Period

Go Bottom

You can also find keywords or phrases this way. · new paragraph

Find Introduction

Find Summary

Go Bottom

I can find these words because they're on my keyword list.

UC Keyword

Introduction

Summary

Window Close

Here's how to add words or phrases to your keyword list -- watch the bottom of the list.

2 Before Add keyword

Enter

Another

Enter

Yet another one

Enter

Control s Window Close

Another Graph

Utter Command also allows you to combine keyboard shortcuts. This guarantees you a viable way to do everything across all programs. - new paragraph

NaturallySpeaking allows you go through menus by saying the words on the menu -- this works in many, but not all programs. - new paragraph

Tools
Word Count
Close

With Utter Command you can go through menus much faster using keystrokes that can be combined. - new paragraph

Under t
Letter w
Close

Under t w Close

This allows you to access any menu item using a single speech command. And it works in any program -- even programs like OpenOffice writer, which you can't access by saying menu words. - new paragraph

Writer Open
Under t w Close
Window Close Under d

Utter Command also makes navigation easier at the file system level. You can go to any file, folder or Web site that's on your File, Folder or Site list. - new paragraph

UC File
Demo 1
UC Folder
Notes
UC Site
Redstart Systems
Window Close

Demo 1 File
Redstart Systems Site
Notepad Open Notes Folder

Window Close Times 2
WordPad Close - Word Open

In Firefox, we use a Firefox add-on that puts screen numbers on links. You can turn the numbers on and off and say the numbers to go to a link. You can go to a link number even if it's off the screen. - new paragraph

Firefox Open
5 Go
11 Go
16 Go
Window Close

Utter Command also allows you to move the mouse and click anywhere on the screen using a single command. - new paragraph

Solitaire Open - Rulers Open
Window 5 By 5 (moves window)
15 By 10
Touch
By 16
Drag By 25
Etc.

Function 2 (new game)
Window Close - Rulers Off

You can put rulers on any edge of your screen, and you can use the mouse commands with or without the rulers on. - new paragraph

Every command is documented in detail in 10 lessons. There's also a full reference that includes a brief explanation for every command. And we have an index of commands. You can get to any subsection of the electronic version of the documentation using a single speech command. - new paragraph

UC Lesson 1
UC Lesson 1.2
UC Lesson 3.2
UC Index - page 5
Window Close

We also provide onscreen guides that contain useful information like the radio operator alphabet, top shortcuts for programs, and self-guided tours. - new paragraph

UC Alpha
UC Top Word
UC Task
Bottom Find Tour 3
Bottom Find Tour 7
Window Close

There are also custom On-screen Guides - new paragraph

UC Custom 1
Go Bottom
Put your Commands here
Window Close - No

There's also material on the Redstart systems website that aids learning, including videos of many of the task tours.

Redstart Systems Site
3 Go

Window Close
Window Close - No - Speech Off

Now I'll give you a quick tour -- you'll recognize some of the things I've showed you, and you'll also see some new things. I'll do writing and editing, open the word count dialog box, make a table, use the Insert Picture From file dialog box, prepare email, control the sound system, manipulate text and Windows and access the Internet. - new paragraph

This tour uses 85 speech commands and will take about 5 minutes. The same tour via keyboard and mouse would take 281 steps and more than twice as long. The same demo using NatSpeak alone would take more steps and a little longer than the keyboard and mouse.

<p>Speech On · Word Open Today Long new paragraph · we saw many many little birds skimming over the water 4 Befores swooping over the marsh 2 Before · 1 Befores Delete around · spacebar 3rd Word · 2 Words Bold Go Home This morning · spacebar Delete w Another Graph</p> <p>Under i p f Bird Pictures Folder 1 Right Enter</p> <p>new paragraph · This afternoon we assessed productivity Colon · new paragraph</p> <p>Excel Open Max Cell Charlie 6 Days Short Tab Cell Bravo 7 Cap Brainstorms Enter Up Under Oscar Charlie Apple</p> <p>Tab 1 Tab 2 Tab Short 4 Point 7 Tab Short 6 Point 5 Tab Short 9 Point 8 Tab Short Repeat 3 Alternate Equals · Enter</p> <p>93 by 8 No Touch Cell Echo 7 · Touch Cell Golf 7 · Touch</p> <p>5 2 Letters 1 Ups Copy to Word All Copy</p> <p>Express David Eileen CC Kim Cap Today's activities Tab Paste new line · Cap Cheers Comma · new line · Kim Window Close · No · Window Close</p>	<p>Notepad Open Watch speech make words and Windows dance Size 14 Size 50 by 40</p> <p>Media Player Open Local 80 by 80 Down Enter Win Min</p> <p>Window 0 by 50 Window 50 by 50 Window 0 by 0 Size 80 by 90</p> <p>Line duplicate Repeat 10 Down Enter Repeat 10 Up Backspace Repeat 10 Home Hyphen Space Down Home Hyphen Space Repeat 10 Size 55 by 40</p> <p>Media Pause Media Play Media 2 After</p> <p>Weather Site New York Times Site Redstart Systems Site 6 Go Zoom In Zoom In 2 Zoom Out 2 12 Go 13 Go Go Back 2 Back Screen 2 Tab Back Tab Forward Document Close Times 2 Screen Clear Notepad Open Max Word Close · No Excel Close · No Window Close · No Firefox Close · Speech Off Speech Media Stop Speech Media Player Close</p>
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We have a few minutes for questions.

I should mention that my email address is at the bottom of the handout. That's a good way to you get ahold of me for questions for feedback of any kind.

I should also mention that we're in the last stages of building our training program, and we're looking for pilot projects to try things out on. Once you get the steps down it's important to be able to learn the steps quickly.

Questions, comments?

Further resources:

Redstart Web site:

www.redstartsystems.com

Utter Command overview (system requirements and recommendations are at the bottom of this page)

www.redstartsystems.com/uttercommand.html

Utter Command Steps graph, tour scripts and videos (scroll up for tour scripts and videos):

www.redstartsystems.com/uctasktours.html#graph

Utter Command Papers and presentations

<http://www.redstartsystems.com/papers.html>