Master Your Mac

simple ways to tweak, customize, and secure os x

MATT CONE

10 Talking to Your Mac

You don't need a degree in computer science to know that talking to your computer is one of the ultimate geek dreams. Popular culture reinforces this dream with famous talking computers like HAL and the computer that made Earl Grey tea for Captain Picard.

With OS X, the future is here today. You too can have a little piece of nerd nirvana by enabling the built-in speech recognition feature and controlling your Mac with voice commands. If you need to write a letter, you can tell your Mac exactly what to type by using the dictation feature. And if having full-blown conversations with a computer is your thing, you can give your Mac a voice so it can respond to your commands, tell you jokes, and read alerts displayed on your screen.

Project goal: Tell your Mac what to do and give your Mac a voice with the built-in speech recognition and text-to-speech features.

What You'll Be Using

To talk with your Mac, you'll use the following:

System Preferences

AppleScript Editor

Setting Up Speech Recognition

Speech recognition in OS X converts spoken words into commands that can be understood by your computer. When you enable your Mac's speech recognition features, you can speak dozens of recognized voice commands to do things like switch applications, create email messages, or log out of your computer.

Here's how to turn on speech recognition:

1. From the **Apple** menu, select **System Preferences**.
2. Click **Accessibility**.
3. From the sidebar, select **Speakable Items**. The window shown in Figure 10-1 appears.

Select On to turn on speech recognition.

Select this option to change the speech recognition settings.

FIGURE 10-1: *Enable the speech recognition settings.*

4. Select **On** to activate **Speakable Items**.
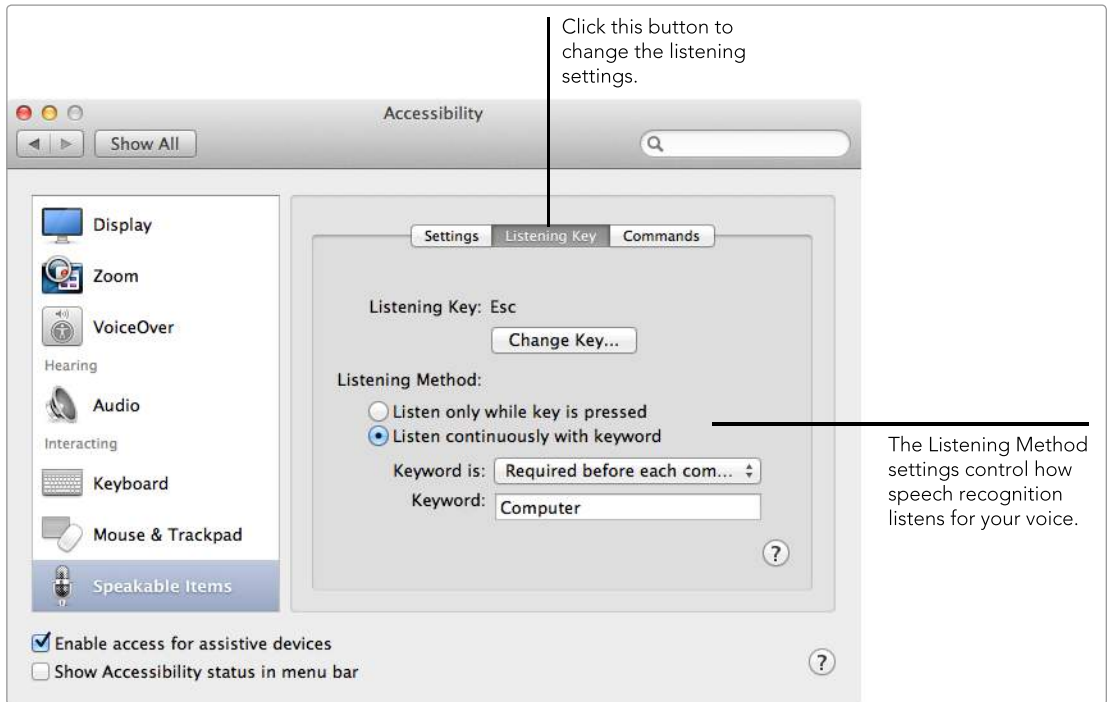5. Click **Listening Key**. The window shown in Figure 10-2 appears.

FIGURE 10-2: *Customize the speech recognition settings to match your personal preferences.*

6. Select a listening method. You can configure your Mac to listen continuously for a keyword or listen only when a key is pressed.
7. (Optional) Click **Change Key** to change the listening key. ESC is the default listening key. You'll press this key when you want the Mac to start listening to you.
8. (Optional) If you selected the **Listen continuously with keyword** option, you can change the keyword settings. *Computer* is the default keyword—it's required before every command when set to the default **Required before each command** setting. So you'll need to preface commands with "computer" like this: "Computer, tell me a joke."

Speech recognition isn't perfect—sometimes your Mac doesn't understand what you're telling it to do. That's why you'll want to pay special attention to the "command acknowledgment" settings, which you can use to tell your Mac to play a sound or speak when it recognizes a command (see Figure 10-1).

If you're having trouble getting your Mac to recognize your voice commands, click the **Calibrate** button (Figure 10-1). You'll be asked to read through a series of sentences so the microphone sensitivity level can automatically adjust to your voice.

Talking to Your Computer

When your Mac is listening for voice commands, the speech feedback window appears, as shown in Figure 10-3. You can use the window to see the current volume level being received by your Mac's microphone. If the level is too high—in the red—then you know that you're speaking too loudly or positioned too close to the microphone.

The speech feedback window floats above all other windows, but you can minimize it to the Dock by double-clicking it.
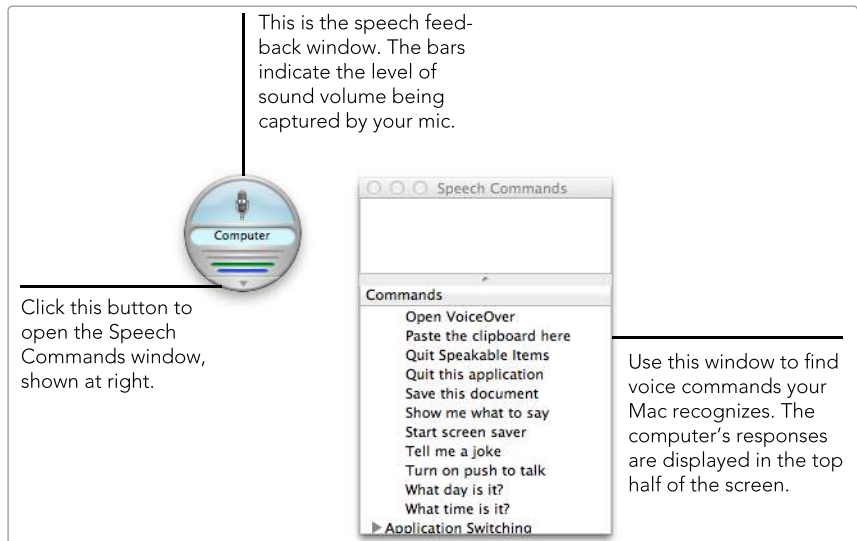

This is the speech feed-back window. The bars indicate the level of sound volume being captured by your mic.

Click this button to open the Speech Commands window, shown at right.

Use this window to find voice commands your Mac recognizes. The computer's responses are displayed in the top half of the screen.

FIGURE 10-3: Use the speech feedback and Speech Commands windows to talk to your Mac.

It's time to talk to your computer. What should you say? You can speak any of the commands listed in the Speech Command window (see Figure 10-3).

Try it out by saying, "Tell me a joke." (Remember, if you set your Mac to listen continuously, you'll need to preface the command with a keyword, like "computer." Otherwise, you'll need to press the listening key.) The computer acknowledges the command by playing a sound or speaking a command acknowledgment. If you're lucky, the computer will tell you a knock-knock joke. It says, "Knock, knock." And then you're supposed to say, "Who's there?" You get the idea. You're having a conversation with your computer!

Many commands are straightforward and easily guessable. For example, you can say, "Switch to Safari," and your Mac should make Safari the active application. "Get my mail" retrieves your new email messages with the Mail application, and "Log me out" logs you out of your computer.

Telling Your Computer What to Type

If you'd rather tell your computer what to write in a word processing document than type it yourself, enable the dictation feature. Just open a new text file, push a button to activate dictation, and start talking. Once you're finished, your Mac will send the audio recording to Apple's servers to transcribe what you said. It all happens in the blink of an eye.

Here's how to enable and activate dictation:

1. From the **Apple** menu, select **System Preferences**.
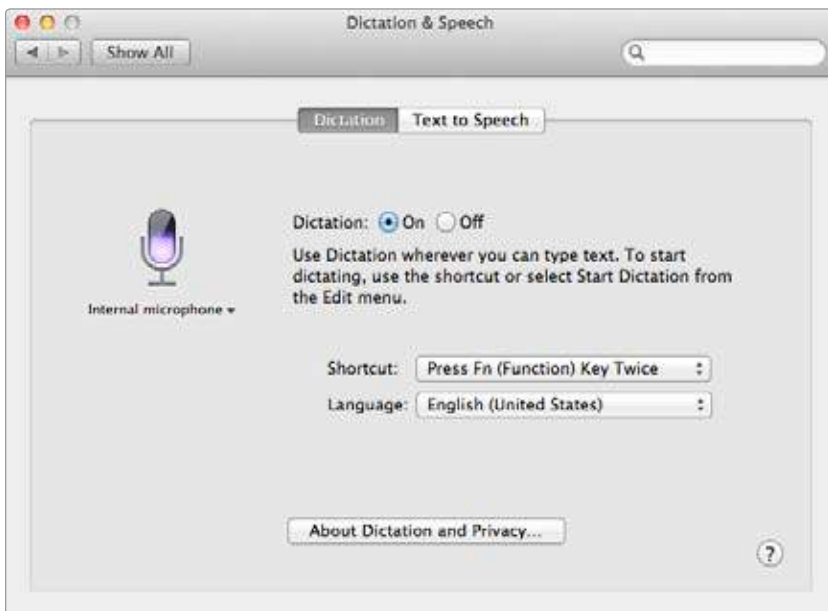2. Click **Dictation & Speech**. The window shown in Figure 10-4 appears.

FIGURE 10-4: *Enabling Dictation*

3. Select **On** to enable Dictation.
4. From the **Shortcut** menu, set a key to activate dictation. You can press the function (FN) key twice by default.
5. Open a text document and press the shortcut key twice. The dictation icon appears, as shown in Figure 10-5.
6. Start talking. When you're finished, click **Done**. Apple's servers will transcribe what you said and then paste the text in the document.
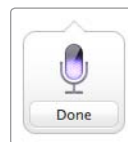

FIGURE 10-5: *Start talking when you see this microphone on your screen.*

Here's a trick that will prevent a headache or two: Punctuation needs to be enunciated. For example, if you wanted Dictation to type the following:

```
Here I am, at home, alone.
```

you would say, "Here I am comma at home comma alone period." It sounds weird, and it takes some getting used to, but it's a trick you'll need to use if you don't want to have to manually add all of the punctuation later. That brings up another good point: Make sure to proofread the text after it's been transcribed—this technology isn't perfect yet, so you will find typos.

Giving Your Computer a Voice

Talking to your computer is great, but unless it can respond, you'll be having a one-way conversation. In this section, you'll give your Mac a voice so it can respond to your voice commands, notify you of alerts that need your attention, and read selected text to you out loud. You'll also learn how to find and install voices that sound more realistic than any previously available.

Finding and Installing High-Quality Voices

OS X provides several high-quality voices in a variety of languages, but due to the enormous size of the files (approximately 300MB–500MB per voice), most voices aren't installed on your computer by default. If you plan on regularly using the text-to-speech feature, you'll want to download a high-quality voice. It will be much more realistic than the older voices, which sport the "spliced-together" sound typically associated with computer voices.

Here's how to download voices for your Mac:

1. From the **Apple** menu, select **System Preferences**.
2. Click **Dictation & Speech**.
3. Click **Text to Speech**.
4. From the **System Voice** menu, select **Customize**. The window shown in Figure 10-6 appears.
5. To play a sample of a voice, click the voice (do not select the checkbox) and then click **Play**.
6. To download a voice to your computer, select the checkbox next to the voice and then click **OK**.

After the voice downloads to your computer, you can select it from the System Voice menu.

If you ever want to permanently delete a voice from your computer, you'll need to drag the files and folders associated with the voice in */System/Library/Speech/Voices* to the Trash—deselecting voices in System Preferences doesn't delete them.
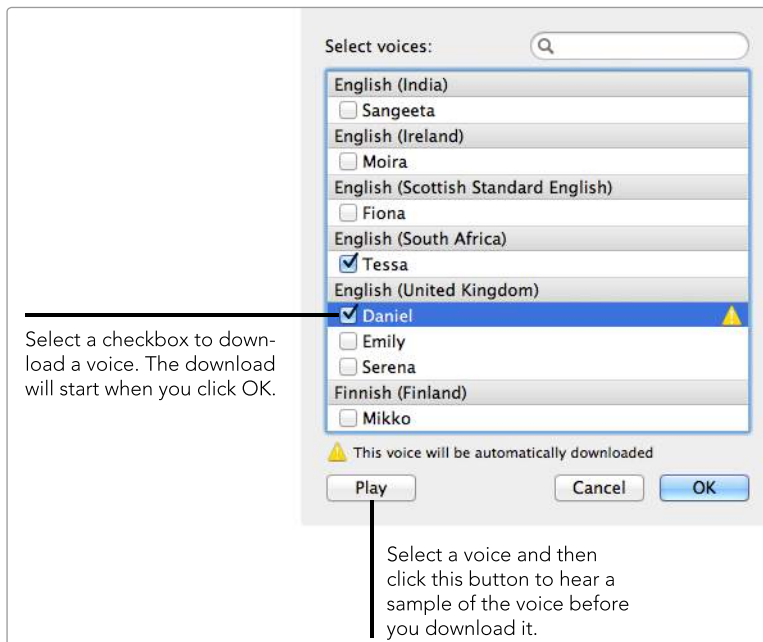
Select a checkbox to download a voice. The download will start when you click OK.

Select a voice and then click this button to hear a sample of the voice before you download it.

FIGURE 10-6: *Download high-quality voices for your Mac.*

Customizing Text-to-Speech Settings

When do you want your computer to talk to you? That's the question you'll answer when you customize the text-to-speech settings in System Preferences. Some people appreciate the voice emanating from their computer; others find it annoying. Use trial and error to strike a balance between the convenient and the obnoxious.

Here's how to customize text-to-speech settings:

1. From the **Apple** menu, select **System Preferences**.
2. Click **Dictation & Speech**.
3. Click **Text to Speech**. The window in Figure 10-7 appears.
4. Select a voice from the **System Voice** menu.
5. (Optional) Select the **Announce when alerts are displayed** checkbox if you want your Mac to speak alerts displayed on the screen.
6. (Optional) Select the **Announce when an application requires your attention** checkbox if you want your Mac to verbally notify you when an open application needs you to perform an action.
7. (Optional) Select the **Speak selected text when the key is pressed** checkbox if you want your Mac to read selected text from any application. CONTROL-ESC is the default keyboard shortcut for this feature—click **Change Key** to modify the shortcut.
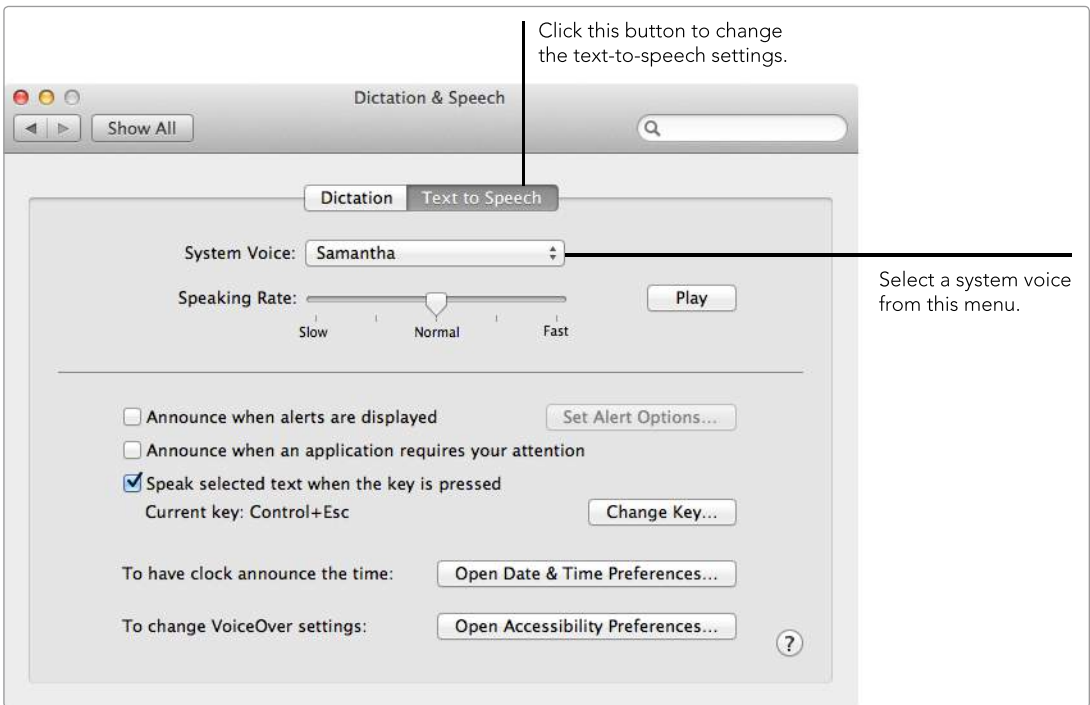
Click this button to change the text-to-speech settings.

Select a system voice from this menu.

FIGURE 10-7: *Customize text-to-speech preferences to give your Mac a voice.*

The last feature—speaking selected text when the key is pressed—is really useful in certain circumstances. For example, you could have the computer read you a news article while you cook dinner.

Creating Custom Commands for Speech Recognition

You've learned how to use your Mac's built-in speech recognition and text-to-speech features. Those are pretty awesome by themselves, but now it's time to take things up a notch. You can create custom voice commands that will tell your Mac to perform the actions you designate.

All voice commands are stored in */Users/<username>/Library/Speech/ Speakable Items*, where *<username>* is your user account on the computer. The voice commands stored in that folder are universally available no matter which application is currently active; commands nested in */Users/<username>/Library/ Speech/Speakable Items/Application Speakable Items* are available only within their respective applications.

✳ *NOTE:* **Your Library folder is hidden by default. To access it, switch to the Finder, hold down the OPTION key, and select *Library* from the *Go* menu.**

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You can use the AppleScript Editor to create new voice commands with AppleScript. For example, if you wanted to create a voice command for opening a new tab in Safari, you could type this into a new window in the AppleScript Editor:

```
tell application "System Events" to keystroke "t" using {command down}
```

This script tells your computer to press ⌘-T, which is the keyboard shortcut in Safari for creating a new tab. Save the script to */Users/<username>/Library/Speech/ Speakable Items/Application Speakable Items/Safari* and name it *Open new tab*. Now when Safari is the active application and you say, "Open new tab," a new tab opens in the web browser.

To make other custom voice commands, you can write new scripts in AppleScript or save existing scripts to the Speakable Items folder. Just make sure the filename is the same as the voice command you want to speak. For example, if you want to say, "Do a silly dance," you would save the file with the name *Do a silly dance.*

Additional Ideas for Talking to Your Mac

The dictation option built into OS X is good, but there are other third-party dictation products available. For example, take a look at an application called Dragon Dictate (*http://www.macspeech.com/*, $$$). It's been around for a while, and you just might find that it's more effective.