SpeechBird 0.3
The Flying Manual

Introduction

Ladies and gentlemen, meet SpeechBird: A hands-free computer-control system.

Several applications handle *dictation* – virtual typing of texts by speech recognition. Speech recognition based *commands*, on the other hand, are handled quite clumsily by existing software, and in some cases, not at all. Applications that claim to handle everyday actions – such as editing and formatting text, clicking buttons and browsing the Internet – do so only in part, using cumbersome commands, making them slow and distracting.

SpeechBird is designed to fix all that. You can think of SpeechBird as your personal secretary, like Miss Layton, who faithfully typed out Winston Churchill's letters and speeches for him. And, she used her brain, and was much more than just a typist. Like a secretary's shorthand, SpeechBird has its own **dialect**, which is easy to learn and means you can speak less to do more. It helps eliminate misrecognitions and reduces cognitive load required for voice control, so you can focus on what you want to do.

SpeechBird helps determine whether what you say is dictation, to be typed; or actions, to be performed. It also adds features like **Command Streaming**, which overcomes the need to pause after each command – allowing you to speak several commands "in one shot", for example the selection of the last 3 sentences + cutting + moving the cursor down 4 lines + pasting – can not only be done by speaking separate commands – but with SpeechBird, it can also be done without pausing between commands, by speaking one "stream". In SpeechBird's dialect, that would be "3 sentences, cut, 4 down, paste", in case you are curious. You could even say "bold" at the end, if you wanted to.

SpeechBird is open source, free to use and share – and even modify by customizing existing commands or adding new ones to your heart's content. It requires WSR (Microsoft's Windows Speech Recognition) and several other applications – all of which are freely available online. SpeechBird takes care of orchestrating everything – first by understanding you, and then by sending the appropriate commands to each of the components. So, once everything is installed you do not need to think about all the individual components. Speak the text you want typed the and / or commands you want performed, and SpeechBird will make sure your computer understands.

Your thoughts and ideas for future versions are welcome. I hope you enjoy reading The Flying Manual and have a nice flight with your own, personal SpeechBird!

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P.S.

Never forget: God loves you more than you'll ever know.

Installing SpeechBird

First Things First: Preparing Your System

SpeechBird requires Microsoft's **Windows Speech Recognition (WSR)** and **WSRMacros**.

1. Activate **WSR**, already installed as a component of Microsoft Windows by following the instructions in the following link: Use voice recognition in Windows (microsoft.com)

   Upon success, you should see the following icon in your "system tray", near the clock at the bottom of your screen:

2. Download & install Microsoft's **WSR Macros**, an add-on to WSR.
   http://www.microsoft.com/en-us/download/details.aspx?id=13045
   At the time of writing this manual, Microsoft's website's download link isn't working. You can use this alternative:
   https://windows-speech-recognition-macros.software.informer.com/download/

   Upon success, you should see the following icon in your system tray:

Installing SpeechBird

SpeechBird's "brain" comes in the form of a *.WSRMac* file. As you may know, Microsoft Word opens *.doc* files. In the same way Microsoft WSR, with the WSR Macros add-on, opens *.WSRMac* files – here is how to get WSR up and running:

1. Copy the **"SpeechBird 0.3 - TheBirdBrain.WSRMac"** file from the **"SpeechBirdWSRMacros"** folder, into your Speech Macros folder, which is normally found at: C:\Windows\Users**YOUR USER NAME**\Documents\Speech Macros\

   To go to your Speech Macros folder, press WIN+R, and in the "Run…" box paste the following, including the quotation marks:
   "%USERPROFILE%\Documents\Speech Macros\"

2. Create a signing certificate if you have never done so before, by right-clicking **WSR Macros** 🐦, hover over **"Security >"**, and choose **"Create Signing Certificate…"**

   Follow the instructions on screen (i.e. press "enter", see a "Certificate Created" window, press "enter" again.)

3. To activate SpeechBird, you need to *sign* it.
   A. Right-click **WSR Macros** 🐦, hover over **"Security >"**, and choose **"Sign Speech Macros…"**

   B. Navigate to your Speech Macros folder. To do so, you may paste that the following (with quotes) as the filename and press "enter":
   "%USERPROFILE%\Documents\Speech Macros\"

   C. Double-click **"SpeechBird 0.3 - TheBirdBrain.WSRMac"**

   If you succeed, WSR should now recognize all of SpeechBird's commands. Go ahead and test it by saying something like "3 up" (cursor should move up three lines), "yep" to click, "yeah" to double-click or a stream of commands, like "2 afters, copy, 3 down, paste, enter" (no need to say the commas), which should copy the next two words, go down three lines, paste and press "enter".

   Congratulations, SpeechBird is installed. You did it!

SpeechBird | https://github.com/leeorhelps/SpeechBird

Last Things Last: Customization

SpeechBird would be glad to serve you by opening your favorite folders and applications at the speed of flight. To enable this function, edit the following section of the **SpeechBird 0.3 - TheBirdBrain.WSRMac** file by opening it in notepad or your favorite text editor. Then, you can replace the place holders with your own favorite folders. Remember to sign ayour .WSRMac file as mentioned above after making changes.

```
<!-- Quick access to common folders -->

<!-- These folders are opened by saying "Open <Folder>", e.g. below would be "Open My
Documents". Pilferage to add as many as you like! -->

<rule name="commonFolders">

  <list propname="path">

        <p valstr="Placeholder! C:\<A folder I like to open a lot 1>">whatIwantToSayToOpenIt</p>

        <p valstr="Placeholder! C:\<A folder I like to open a lot 2>">whatIwantToSayToOpenIt</p>

        <p valstr="Placeholder! Example: C:\Users\Administrator\MyScripts">My Documents</p>

</list>

</rule>
```

To further customize SpeechBird, you can search through the .WSRMac file for other occurrences of **Placeholder!** using your text editors find function. For example, to customize *quick app switching* by changing the line with the "**Placeholder!**". You also need to remove the comment signs around it, that is, the "<!--" and "-->". Otherwise, WSR will ignore this part of the code.

```
<!-- This is a list of common applications that we can switch to just by saying their name, without the
" switch to" -->

<listenForList name="shortNameSwitchedApps" propname="appRealName">

<!--      <item propval="Placeholder! for app's real name">Placeholder! for its switch
command</item>  -->

        <item propval="edge">edge</item>

        <item propval="soundcloud">soundcloud</item>

        <item propval="notepad">notepad</item>

        <item propval="excel">excel</item>

        <item propval="WhatsApp">WhatsApp</item>

        <item propval="skype">skype</item>

        <item propval="contacts">contacts</item>

        <item propval="calendar outlook">calendar</item>
```

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```
        <item propval="to-do outlook">tasks</item>

        <item propval="foxit">foxit</item>

        <item propval="word">word</item>

        <item propval="message">message</item>

        <item propval="outlook">outlook</item>

</listenForList>
```

You can delete lines that you do not need, to avoid misrecognitions. Once you get the knack of it, you may want to edit commands, add new commands, or delete commands that you never use. Remember to sign your .WSRMac file as mentioned above after making changes. When you come up with good stuff, drop me an e-mail to tell me about it!

Recommended Extras

1. **Adding drag and drop capabilities**

    A. Download & install **AutoHotKey**, a powerful automation scripting language for Windows: https://www.autohotkey.com

    B. Run the script **"Mouse drg.ahk"**, found in the **"SpeechBirdScripts"** folder <u>as an administrator</u>.

    Upon success, you should see the following icon near the clock in your system tray:
    You may want to create a scheduled task to do this automatically every time you login.

2. **Hands-free mouse**
    Download & install Enable ViaCam (eViacam, or Viacam), which uses your regular webcam to capture head movements, in order to control the mouse.

    http://eviacam.crea-si.com/

    Upon success, you should see the following icon near the clock in your system tray:

3. **Click By Voice**
    This is an extension for Microsoft Edge / Google Chrome which adds numbers next to each link for easier voice navigation when browsing the Internet. You can get it at the Edge / Chrome stores for free by searching for "click by voice extension edge" (or "…chrome").

    There are several methods of using this extension. The speediest one involves usage of the clipboard, and requires usage of the cmd.lnk shortcut (which simply runs cmd.exe minimized, to send your browsing link selection to the clipboard, as you can see in the macro below). You can edit this macro, which is already inside SpeechBird's .WSRMac file in the same way described above four other customizations. In this case, replace *Placeholder!* with the actual location on your computer's drive to which you copied *cmd.lnk*. This is what the section you will be editing looks like:

```
        <!-- Windows / Explorer -->

<Command>

        <Listenfor>Set Clipboard To [Text]</Listenfor>

        <Run Command="Placeholder! C:\<Location Of Speech Bird Scripts
Folder>\Speechbirdscripts\\Cmd.lnk" Params="/C Echo | Set /P={[Text]}|Clip" />

</Command>
```

4. If you use MS Outlook, you may want to look for the sections that start as follows here to get some extra voice control. Again, replace the *Placeholder!* with your own account/window names.

<!-- When I am looking at the calendar, even if one of my appointments contains the word inbox, we still want to switch to the inbox, right?-->

```
  <command priority="127">

    <appIsInForeground windowTitleContains="Calendar - <Placeholder! YourEmail>outlook.com - Outlook" />

    <listenFor>inbox</listenFor>

    <emulateRecognition>Switch to inbox - <Placeholder! YourEmail>outlook.com </emulateRecognition>

    <waitFor seconds="0.1" />

    <emulateRecognition>English keys</emulateRecognition>

  </command>
```

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Using SpeechBird

To get the most out of SpeechBird, you should learn it's dialect. Compared to any language you already know, this dialect only includes a very small number of words, so there's not so much to learn. Most of the terms are quite intuitive; to copy a selection of text or graphics, you simply say "copy". Easy, right? To copy the last 5 words, just say "5 copies". Adding the "s" means "do this command for the last N words". Can you guess what "3 cuts" would do? – if you guessed "cut the last 3 words", you are right! In the same manner, saying "s" before the command will perform it on the word that is currently under the mouse cursor: "scut" will cut the word you are pointing at. Can you guess what "3 scut" will do? – if you guessed "cut the last three words, starting from the one under the cursor", you are right.

As you can see, the SpeechBird Dialect is modular. "Bold" will bold the word you are at; "2 bolds" will make the last two words bold and "2 sbold" will do that after first clicking the mouse, effectively bolding the last 2 words starting at current mouse position.

The SpeechBird's Dialect is covered in-full in the Speech Bird Dictionary, which is included in a separate file, alongside this manual. I recommend reading it, taking note of commands that you expect to use frequently. You can also view video tutorials at https://www.youtube.com/channel/SpeechBird/.

The Usual

Acknowledgments

The SpeechBird hands-free system relies on various third party applications, primarily open source, freeware and Microsoft Windows' built-in components. Various applications are mentioned in this manual - each of them helps to add more control, speed, functionality and / or accuracy; none of them did exactly what I wanted them to do through voice control -- and that part is what SpeechBird does: It provides an integrated control mechanism, either directly over Microsoft Windows, or over other applications, which in turn help to control Windows or applications in Windows. Each of these applications has its individual owner, who may also own registered trademarks of their names, logos, icons, contents, etc. I claim no credit nor responsibility for these applications, including those featured in screenshots in this manual, and have done my best to acknowledge their owners appropriately. If you happen to be the owner of any applications or information I have shared, and feel that my acknowledgements or information shared are lacking or inappropriate, or perhaps you just wish to be mentioned in a different form – please contact me directly and I will address the issue promptly.

I do endorse the applications I mention and greatly respect those who made them. My confidence comes from having used them heavily and finding them effective (can do what I want, better than alternatives), reliable (they don't do things I don't want, other than the occasional, acceptable bugs in human-made software) and efficient (low CPU usage – at times, astonishingly so – meaning that SpeechBird can happily run/fly on fairly weak computers too). To be clear – These third party applications are not a part of SpeechBird, rather they are installed independently, so that they can be used by SpeechBird to achieve greater heights of hands-free control. Complete copyright information for each application mentioned can be obtained from its respective owners'.

The SpeechBird logo was painted by my brilliant wife and used with her permission – Thanks, Dear.

Disclaimer

I offer no guarantee whatsoever for SpeechBird, the third party software I mention, the information I share or any consequences of its use. Use at your own risk. I am simply sharing what I have learned and built so that you and other people can enjoy it, whether for your fun, your productivity, or maybe for overcoming pain or a disability. I've used SpeechBird and the third party software I mention as a unified system for the past few years, with no issues whatsoever – just increased productivity and health, and the ability to do everything on Windows hands-free. For example, I am using it to write and format this document. Seeing as it replaces my keyboard and mouse, I could also use it to erase everything on my computer, just as an example. In short: Fly carefully.