# Using the Macintosh with VoiceOver & Zoom

Bruce McClanahan, Assistive Technology Specialist

Vancouver, WA

May 2020

Version 6.0

This manual contains coverage of using the Macintosh computer with VoiceOver speech/Braille access and Zoom screen enlargement. macOS 10.15 Catalina needs to be installed to use this manual.

## Trademarks

ABBYY Fine Reader 15 is a trademark of ABBYY. iA Writer is a trademark of Information Architects. VoiceOver is a trademark of the Apple Computer Corporation. Macintosh, iPod, iPad, iTouch, iPhone, Pages, and VoiceOver are trademarks of the Apple Computer Corporation. Any other products listed are registered trademarks of their respective companies.

[Class Objectives 2](#_Toc395275300)

[Resources Available from Apple 3](#_Toc395275301)

[VoiceOver Basics 6](#_Toc395275302)

[Navigating the Finder 8](#_Toc395275303)

[Macintosh Settings 9](#_Toc395275304)

[VoiceOver Essential Commands 10](#_Toc395275305)

[Using VoiceOver with Pages or iA Writer 12](#_Toc395275306)

[Inserting and Deleting 15](#_Toc395275307)

[Screen Magnification 19](#_Toc395275308)

[Using Safari with VoiceOver 21](#_Toc395275309)

[Braille VoiceOver Commands 23](#_Toc395275310)

[VoiceOver Gestures 24](#_Toc395275311)

[ABBYY Fine Reader 15 25](#_Toc395275312)

[Using Dictation in the Mac 26](#_Toc395275313)

[Braille Translation 27](#_Toc395275314)

# Class Objectives

1. \_\_\_\_\_ Able to use keyboarding program

2. \_\_\_\_\_ Able to demonstrate basic VoiceOver concepts/commands

3. \_\_\_\_\_ Able to demonstrate advanced VoiceOver concepts/commands

4. \_\_\_\_\_ Able to demonstrate basic Macintosh concepts/commands

5. \_\_\_\_\_ Able to use the Dictionary

6. \_\_\_\_\_ Able to demonstrate basic Pages/iA Writer keystrokes

7. \_\_\_\_\_ Able to use the spelling checker with Pages/iA Writer

8. \_\_\_\_\_ Able to configure the Macintosh for low vision students

9. \_\_\_\_\_ Able to access an encyclopedia with VoiceOver

10. \_\_\_\_\_ Able to access the Macintosh built-in dictionary with VoiceOver

11. \_\_\_\_\_ Able to access information on the web on a basic level with VoiceOver

12. \_\_\_\_\_Able to access information on the web on an advanced level with VoiceOver

13. \_\_\_\_\_Able to use dictation with the Macintosh

14. \_\_\_\_\_Able to produce a Braille copy from iA Writer or Pages

15. \_\_\_\_\_Able to scan text with ABBYY

# Resources Available from Apple

1. VoiceOver is activated by entering CMD-F5. The first step when learning to use VoiceOver is to go through the tutorial when VoiceOver is first turned on. The CMD-F5 keystroke is a toggle to turn VoiceOver on/off. Option-CMD-F5 brings up a short list of accessibility options.
2. Next go to the Apple Accessibility site: [www.apple.com/accessibility](http://www.apple.com/accessibility) Go to the Special Education and Vision links.
3. Go to the following site and explore it:
<https://help.apple.com/voiceover/mac/10.15/>
4. Go to the following web site: <http://www.apple.com/support/switch101/> Apple maintains this web site. It is intended for users moving from a Windows computer to the Macintosh and the terminology that it introduces is very useful.
5. The following link provides information on Macintosh keyboard shortcuts:
<http://support.apple.com/kb/ht1343>
6. Apple Accessibility Toll-Free Number: (877) 204-3930

## Other Resources

The Mac for the Blind web site is excellent. This site contains many excellent resources and links to many of the other resources available on the web.

<http://macfortheblind.com/>

Many excellent guides are produced by AppleVis, for vision impaired Macintosh users:

[www.applevis.com/guides](http://www.applevis.com/guides)

Tech Ease: <http://etc.usf.edu/techease/?s=voiceover>

## Touch Bar

Effective mid-2019 Apple stopped selling any laptops which do not have the touch bar. Apple now has VoiceOver support to tell the user what is on the Touch Bar. VoiceOver can be turned off and on by holding down the Command key and pressing the Touch ID button three times.

Apple has Zoom support for the Touch Bar.

Describing the Macintosh Computer

Finder: The file manager system used on the Macintosh

Dock: The Dock is a prominent feature in Macintosh operating systems.

It is used to launch applications, access folders and folders, and switch between running applications. The Trash is located in the Dock.

Sidebar: The sidebar displays items for activities that you use frequently.

Desktop: Applications, folders, and files are stored here

Menu Extra: Contains Sound, Airport, Battery, Time, and optional Items

Spotlight: Spotlight is a system wide search of the Macintosh

## Macintosh Commands

CMD-A: Select all

CMD-C: Copies the highlighted item

CMD-H: Hides the application

CMD-M: Minimizes the active window

CMD-O: Opens an existing document

CMD-P: Prints

CMD-Q: Quits current application

CMD-T: Fonts

CMD-V: Pastes the contents of the clipboard

CMD-X: Cuts the highlighted item to the clipboard

CMD-?: Displays the help system

## Activity 1

Go through the VoiceOver tutorial. Enter CTRL-OPT-CMD-F8 to start the VoiceOver Quick Start tutorial.

## Activity 2

Turn on Keyboard Help with a VO-K. Practice using the VoiceOver commands in iA Writer/Pages and Safari.

Teaching the Keyboard: Accessible keyboarding programs

* Talking Typer
* Talking Typer Teacher
* Typio
* Typeability
* TypingClub

TypingClub and Typio are the only current online keyboarding programs for the Macintosh. APH is currently working on an online keyboarding program.

## Laptop or Desktop Commands

It does not make any difference in the Macintosh environment. There are no different keystrokes to learn. The keys, especially the VO keys are in slightly different places on the laptop and on the desktop. The VO keys (Control-Option) are only available on the left side on a laptop.

## VoiceOver Speech Settings: Voice/Rate/Pitch/Volume/Intonation/Voice

Enter CTR-OPT-CMD: Left or Right Arrow to select the desired options

Enter CTR-OPT-CMD: Up or Down Arrow to change the value

## Verbosity Options

VO-V

Then VO-Left, Right, Up or Down Arrow to change the values

# VoiceOver Basics

VO stands for using the Control-Option keys together with some other key combination. Use the VO keys together with the arrow keys to navigate the screen. These keys are on slightly different locations depending whether you are on a laptop or desktop. There are **no** separate laptop/desktop commands in VoiceOver.

To access the Macintosh with VoiceOver the user needs to know something about the layout of the screen. The visually impaired user moves around the screen and then chooses to interact or not interact with items as appropriate.

VO-Arrow Keys: Left, Right, Up, & Down

VO-Space Bar: Selects Item

“It is critical to interact and uninteract with items, including text. For example, there may be a toolbar that you wish to change something on. To change something on this toolbar you need to interact with it first before you can make the change. When you have finished with this change and wish to do something else or move somewhere else it is necessary to stop interacting.”

VO-Shift-Down Arrow: Starts interacting with items

VO-Shift-Up Arrow: Stops interacting with items

## VoiceOver Utility

The VoiceOver Utility controls how VoiceOver functions. Open the VoiceOver Utility with a VO-F8. This utility can be closed with a CMD-Q. Move around this utility using the VO-Arrow Keys. Notice that you cannot *always* move around this utility using just the arrow keys alone. After practice, you will notice that it is sometimes necessary to use the VO to navigate and sometimes it is just quicker to just use the arrow keys.

## Activity 3

1. Go to the General item in VoiceOver, this item is in a Table
2. Interact with this Table
3. Move to Verbosity, then stop interacting with it
4. Move to Hints and select it with VO-Space
5. Set the desired length of time for Hints, from Short-Long as desired
6. Next go into Web option and check “Automatically speak the webpage,” if this setting is not already checked.

## Activity 4

After you have explored all the settings in the VoiceOver utility, you may have made some changes that are not working well for you!

Practice setting all the preferences back to default, this may become a very useful skill. To do this:

1. Go to File with VO-M
2. Select “Reset All VoiceOver Preferences.”

The only two settings that I would always suggest keeping at the beginning are “Having the hints set to short” and selecting “Automatically speak the webpage.” As the user gets better you may want to increase the delay on Hints.

Braille Display

1. Go to Braille and then go to Displays, remember to Interact and Uninteract as needed
2. Go to Displays and enter a VO-Spacebar
3. You will need to enter the code 1234 and then select Pair the Braille display very quickly. I have only seen two codes for Braille displays; 1234 and 0000.

Next go to Layout, you may want to select:

* Braille Translation English (US)
* Contracted Braille
* Use automatic Braille translation, if the student is a fast Brailler
* Use dots 7 and 8 to indicate VoiceOver cursor

# Navigating the Finder

CMD-Shift-H will make the contents of the computer visible. At this point enter a VO-M, navigate to View and set the View to List, if it is not already set at List. VO-M will take you to the Menu. The other three Views, Icons, Columns, and Cover Flow are not very accessible.

Next go to the Doc and make sure that your applications are in List View. If they are not then use the Right Click keystroke VO-Shift-M. Change the applications View to List.

At this point navigate the computer using the VO-Left, Right, Up, or Down Arrows. You will hear the following three terms, Sidebar, Vertical Splitter, Table, and Toolbar.

CMD-Q will usually close any open application. If it does not, then it is necessary to navigate to the Close button. Use VO-Left Arrow until you are on the Close Button, then enter VO-Space Bar.

You may want to review the following site from Apple, it is called *Mac Basics*: <http://www.apple.com/support/switch101/>. This site compares the Mac OS X Desktop and Finder and their Windows equivalents. It really helps with using the correct terminology.

## Cursor Tracking

In some situations, it may be effective to have cursor tracking turned off. Experiment with this.

Try navigating through your computer with Cursor Tracking Off, it may be easier in specific situations, but you will need to note when to turn Cursor Tracking On or Off. The command for turning Cursor Tracking On and Off is VO-Shift-F3.

# Macintosh Settings

By default, in the Macintosh the Function keys activate the Media functions. Since VoiceOver frequently uses the Function Keys for its commands this feature needs to be changed. Note that when you want to use the Media keys it is necessary to hold down the Function key. New Windows laptops are starting to copy this feature and it is much harder to turn this off on a Windows computer.

1. Go to the Doc with VO-D and then go to Settings.
2. Navigate to Keyboard
3. Press VO-Spacebar to open the Keyboard
4. Select use Function Keys as Standard Keys

## List View

All Views need to be set up in List View.

1. Open the Finder and enter CMD-Shift-H. Make sure that the View is set to List View.
2. Go to the Dock with a VO-D. Go to Applications and make sure that it is set to List View. If it is not enter a VO-Shift-M and select List View.
3. Go to the Dock with a VO-D. Go to Documents and make sure that it is set to List View. If it is not enter a VO-Shift-M and select List View.

## Dock

You may want to move the applications that you use most frequently to the far left side of the Doc, or just use Spotlight. Large icons can be selected in the Dock for a low vision user. Sometimes the large icons in the Dock get in the way of a dialog box that the student is trying to select, so I recommend that “Automatically hide and show the dock” is selected.

# VoiceOver Essential Commands

The following VoiceOver commands are essential for developing an orientation to the Macintosh environment. The VO keys are the Control-Options keys pressed together. They are only on the left side on a laptop; they are on the left and right side on desktop keyboards. The Control key will silence speech.

**VO-F1**

This command will say the title of the current Macintosh application or file. It should be introduced early in instruction. Pressing this command twice will go to the Application Chooser.

**VO-F2**

This command will give information on the current Window. Pressing this command twice will go to the Windows Chooser

**VO-H**

This command will bring up the VoiceOver Help Menu.

**VO-Right/Left/Up/Down Keys**

These key combinations are used to move around the screen.

**VO-Space Bar**

This Option is used to select an item. Use **VO-Shift-Space Bar** for a mouse click. Select twice for a double click.

**VO-Shift-Down Arrow**

This item is used to begin interaction. Once the user is interacting with an element such as a toolbar the user is restricted to that element.

**VO-Shift-Up Arrow**

Ends interactions

**VO-D**

Moves the user to the Dock.

**VO-M**

Moves the user to the Menu Bar.

**VO-M M**

Moves the user to the Menu Extra. This Menu, among other items contains the battery status, power, volume, and Airport. (Wireless settings)

**Command-Spacebar**

Spotlight searches for any applications, folders, or files on the Macintosh.

**VO-W**

Reads the text contained in the VoiceOver cursor

**Command-Tab**

Switches among open applications, very useful command.

# Using VoiceOver with Pages or iA Writer

## iA Writer for the Mac

iA Writer for the Mac enables the user to format *directly from the keyboard*, which is an alternative to using the Ribbon in Microsoft Word with speech/Braille access. Headings, lists, and emphasis; including bold, italics, and strikethrough are all accessible with Markdown, all keyboard driven.

iA Writer uses # signs for heading levels, and supports heading levels 1-9. Nested lists can also be easily formatted in iA Writer. Bold, italic, and strikethrough text are also very easy to do. Format commands are visible in the text and are easy to monitor with VoiceOver. To give a few examples; for bold text two stars are placed in front and behind of the text, for italic text an underline character is placed before and behind the text. The formatting commands do not print.

There is only one setting that needs to be changed for VoiceOver, the user should enter a VO-V, go to Text Attributes and select “Do Nothing.”

Files can be exported from iA Writer to Microsoft Word .docx files. Microsoft Word .docx files can also be imported into iA Writer for the Mac.

## Pages

Pages is word processing program developed by Apple. Excellent large fonts are available in this program, up to 400%, by selecting the Zoom option. Go to Preferences in Pages to make this the default. Pages can be used on either the Macintosh or the iPad. Pages can easily open and save Microsoft Word files. Some students prefer black on white text in Pages and turn on Invert Colors, use the OPT-CMD-F5 command to do this.

The accessibility of Pages with VoiceOver has improved significantly. One recent improvement is how much better VoiceOver works with the Export feature in Pages. Pages also has a Share option, files can be emailed in Pages, PDF, Word, or ePub format directly from Pages. Another improvement is the ability in Pages to add keyboard shortcuts to Styles using the Function keys. Use VO-T to check Text Attributes to make sure that you have selected the correct style.

Pages can easily open and save Microsoft Word files, among other formats. Pages does not have Ribbons, unlike Microsoft Word.

## Spelling Checker

Before using the spelling checker the user needs to interact with Edit Text: VO-Shift-Down Arrow. The keystroke for starting the spelling checker is CMD-Shift-: but the instant spelling checker is also accessible. When a word is misspelled the user hears a sound telling him/her that spelling options are available. The user then presses VO-Shift-J to Jump to the pop up/panel. The word choices can be spelled out and selected with a VO-Space. The user can also navigate to a specific incorrect word; the cursor needs to be on the word, navigation by letter is required to do this. To navigate by letter use VO-Shift-Left or Right Arrow with Quick Nav on and just the left or right arrow keys with Quick Nav off. The user can then use the Shortcut Menu to access the list of misspelled words with VO-Shift-M.

## Activity 5

Go to the Finder and practice moving through the Menu structure. Menus are accessed with a VO-M. Go to file and create a new folder on the Desktop. Call this folder Class Work. We will be saving all our work here. You will notice later that we could have easily created a New Folder while we were in Pages.

Enter the following information using either Pages or IA Writer; practice the screen review commands listed below. Save this work in the Class Work folder as Pat1, close Pages or IA Writer and open this work again.

Dear Pat,

It was good to hear from you again. Perhaps we could meet at the Drake Relays and then after that visit the Amana Colonies. Fall is the best time for a visit to Iowa. I hope we do not have a tough winter this year. I should go now. I need to start working on my English report.

Sincerely,

Your Name

**Top of Document & Bottom of Document**

Laptop keyboards do not have a PageUp or PageDn command. To enter PageUp or PageDn use CMD-Up Arrow or CMD-Down Arrow. Enter a CMD-Up Arrow or CMD-Down Arrow twice to hear “Beginning of Text” or “End of Text.”

## Keyboarding Verbosity

**VO-V:** Options are Nothing, Characters and Words, Words, and Characters

**Control:** Silence key and stops the cursor

## Screen Review Commands

**VO-A:** Read all from VO cursor

**VO-B:** Read from top to VO cursor

**VO-P:** Read paragraph

**VO-S:** Read sentence

**VO-L:** Read line

**VO-W:** Read word, press twice to spell the word

**VO-C:** Read character

Practice all the screen review commands listed above with the text that you have just entered.

## Formatting with Pages

Pages can add keyboard shortcuts to Styles using the Function keys. We have selected the following styles for students at the WA State School for the Blind.

Save this file as a template. Then go to File, then Preferences and select the file you created to load when Pages opens so that this happens automatically.

F1: Heading

F2: Heading 2

F3: Heading 3

F4: Body Style

F5: Bullet list

F6: Number list

F7: None (clear list style)

F8: Header & Footer

The student is instructed on the text attributes of the above styles, the student then uses VO-T to check Text Attributes and verify the active style.

## Formatting with iA Writer

iA Writer formats directly from the keyboard. See the following link for documentation:

<https://ia.net/writer>

# Inserting and Deleting

Keyboard the following information using either Pages or iA Writer. Make many spelling errors as you enter this text, as we will be spelling checking this information later.

## Navigation Commands with VoiceOver On

Top of Document: CMD-Up Arrow

Bottom of Document: CMD-Down Arrow

Moving by Words: Left or right arrow

Moving by characters: VO-Shift-Left or Right Arrow

Moving by characters: Left or right arrow when Quick Nav is turned off

Beginning of line: OPT-Up Arrow

End of line: OPT-Down Arrow

## Selection Commands

Select All: CMD-A

Selecting a line: Shift-Up Arrow or Down Arrow

Selecting by words: OPT-Shift-Left or Right Arrow

Selecting by characters: Shift-Left or Right Arrow

Notice the location of the cursor on the Braille display. Enter a VO-C to hear the character spoken. Check the location of the cursor if you have a Braille display.

## Activity 6

Dear Pat,

1. Well, I am finally at Bull Run.
2. I am aware that you are interested in Pickett’s Charge, but that happened on the fourth day.
3. I am most interested in what happened on the first, second, and fifth day.
4. For example, there is the story of the First Minnesota brigade.
5. They were ordered by General Hancock to charge a Confederate regiment under General Wilcox just as it was about to break through Seminary Ridge.
6. The First Minnesota delayed the Confederate advance long enough for reinforcements to be brought up. They suffered 82% casualties, the highest of any Union brigade in the Civil War.

Sincerely,

Your Name

Make the following corrections to the document that you just created.

1. Change “Bull Run” to “Gettysburg.”
2. Change “fourth” to “third.”
3. Delete both commas in this sentence. Delete the words “second and fifth.”
4. Change the word “brigade” to “regiment.”
5. Change the word “regiment” to “brigade” and change “Seminary” to “Cemetery.”
6. Change “brigade” to “regiment.”

## Spelling Checker: Activity 7

Open a new file in either iA Writer or Pages and enter the following text. Make several spelling errors. The spelling checker is selected with CMD-Shift-: or just use the instant spelling checker!

Navigate through the choices with a VO-Left or Right Arrow. When you are on the choice that you want enter a VO-Space Bar. Remember to interact with the list of suggested words.

Dear Pat,

Well, I am still talkinng about the Amana Colonies. The Amana Colonnies have a furrniture shop and a woolen mill. But I must admit that my main reason for going to the Amana Colonies is the food. My favorites are the sauerrbraten, wienerschnitzel, and bratwurst. I shouldn’t, but I also really love the pasttries. I think I am going to visit Gettysburg next. Talk to you later.

Sincerely,

Your Name

## Formatting: Activity 8

Open a new document and call it Little Round Top. Save this file in the Class Work folder.

Dear Pat,

1. I am glad that you are finally interested in the second day.
2. Many individuals have been fascinated with the actions on Little Round Top and Colonel Joshua Chamberlain.
3. For his actions on Little Round Top Joshua Chamberlain would earn the Medal of Honor.
4. His regiment, the 20th Maine, held the absolute left of the Union line.
5. Confederate forces attacked his regiment at least four times.
6. When the last attack started, the 20th Maine was out of ammunition.
7. Joshua Chamberlain ordered his troops to fix bayonets and charge.

Talk to you later.

Sincerely,

Your Name

## Basic Formatting Commands

CMD-B Boldface

CMD-U: Underline

CMD-I: Italic

CMD-P: Print

CMT-T: Show Fonts

**Make the Following Changes to the Above Document**

1. Boldface “**second day”**
2. Underline “Little Round Top”
3. Italicize “*Medal of Honor”*
4. Boldface “**absolute left of the Union line.**”
5. Italicize “*at least four times*”
6. Underline “was out of ammunition.”
7. Boldface “**to fix bayonets and charge.**”

**Changing a Document to DoubleSpace in Pages**

1. Enter a CMD-A to select the entire text.
2. Enter CMT-T to Show Fonts
3. Enter VO-Right Arrow key until you are on the Text Underline button
4. Enter VO-Spacebar to select this button
5. VO-Down Arrow to the DoubleSpace selection

## Dictionary

Go to Spotlight and practice using the dictionary with some of the words in the previous documents.

## Calculator

1. Go to Spotlight and open the Calculator
2. Go to Speech on the Menu Bar with a VO-M
3. Check Speak Button Pressed
4. Check Speak Result
5. Calculations can now be entered from the keyboard
6. CMD-1: Basic Calculator, CMD-2: Scientific, CMD-3: Programmer
7. Use the Item Chooser, VO-I to quickly go to a specific function, then press VO-Spacebar to select it

# Screen Magnification

Screen enlargement options are in System Preferences/Accessibility. Screen enlargement options can be used together with VoiceOver. Check “Show Universal Access status in the menu bar” so that this option is easily accessible.

## Display

* Invert colors
* Use grayscale
* Differentiate without color
* Increase contrast
* Reduce transparency
* Display contrast (slider)
* Cursor size (slider) Enlarges the mouse pointer

## Zoom

* Use keyboard shortcuts to zoom
Zoom in: OPT-CMD =
Zoom out: OPT-CMD –
* Scroll gesture with modifier keys to zoom
* Smooth images
* Zoom follows the keyboard focus
* Zoom Style: Fullscreen & Picture-in-picture (magnifier)

Next select the Options button and set a Maximum and Minimum Zoom size for the user. It is possible to go past the Maximum and Minimum zoom size by holding down the OPT-CMD= or OPT-CMD- keystrokes.

Select the preview triangle if desired.

The following three options relate to the screen image.

1. Continuously with pointer
2. Only when the pointer reaches an edge, there is no movement on the screen until the pointer is at an edge and less chance of motion sickness.
3. When the pointer is at or near the center of the image is selected, the mouse will always stay in the center of the screen. This works well for individuals with a restricted visual field.

## Additional Low Vision Options

1. Zoom sizes, up to 400%, can be set in Pages. Open Pages, go to Preferences and set the Default Zoom here. Use the Zoom in Accessibility to enlarge the font further if needed: OPT-CMD=
*The font in Pages will be less bit-mapped when this strategy is used.*
2. Large icon sizes can be set in the Dock. The large icons in the Dock can sometimes get in the way of a dialog box that the student is trying to select, so I recommend that “Automatically hide and show the dock” is selected.
3. Safari has keyboard shortcuts for Zooming In and Out.
4. Safari\Preferences\Advanced. Under the Accessibility option Safari can be set to never use font sizes smaller than specified: 9 point – 24 point range.
5. Some low vision users may prefer a specific “Desktop Solid Color”

## Invert Colors

Some low vision students want Invert Colors on in specific situations and off in others. One situation where some low vision students may want Invert Colors on is in a Pages document, the keystroke to do this is OPT-CMD-F5; then select the Invert Colors option. This will give the student a Pages document with a black background and white text.

## Zoom and VoiceOver

Zoom and VoiceOver can be used at the same time. Some low vision users prefer to have everything spoken when the mouse is moved over an item. To do this:

1. With VoiceOver on enter VO-F8
2. Go to Navigation, then Mouse Pointer
3. Select “Mouse Pointer Moves VoiceOver Cursor”

Some low vision users do not want VoiceOver on but sometimes want text spoken. To do this:

1. Go to Preferences, then Dictation and Speech
2. Go to Dictation and Speech
3. Accept the default keystroke or set one of your own.
4. Practice selecting text in an application, and then use the keystroke that you selected to listen to it.

# Using Safari with VoiceOver

Safari is a web browser developed by Apple computer. It is included as a part of the Macintosh operating system.

Enter VO-U to go to the Web Item Rotor. You will be presented with the following choices, use VO-Right or Left Arrow to move through the choices. Use VO-Up or Down Arrow to select the choices.

CMD-L: Takes the user to the web address

* Headers
* Links
* Auto Web Spots
* Form Controls
* Web Spots
* Visited Links
* Non-Visited Links
* Tables
* Frames
* Images

Some of the above items require explanation; Frames allow several pages to appear in a single browser window. Frames can include both static and changing content.

Another important new feature is Web Spots, interprets the page and takes the visually impaired user to the most important information on that web page.

One of the best ways to browse the web is to use the Trackpad Commander. Practice using the Rotor on the trackpad and navigating through various web sites.

## Preferences

The user will probably want to use the Tab key to navigate through web sites. While in Safari enter a CMD-, then go to Advanced and select the Tab key.

Bookmarks Bar

The Bookmarks Bar can be annoying to navigate through. Many users prefer it hidden: CMD-Shift-B

## Reader

Check to see if the Reader is available for the article that you are currently viewing.

CMD-Shift-R. If the Reader is available for the article that you are currently using, use it!

## Selecting Text on the Web

* Have iA Writer or Pages open before selecting text
* Select text using the shift key, you may wish to use the Option key or the down arrow key in combination with the shift key
* Enter CMD-C
* Go to IA Writer or Pages with a CMD-Tab
* Enter CMD-V to paste the text that you have just selected

## Activity 9

Open [www.npr.org](http://www.npr.org/)

Practice using the following commands in NPR. When you are on content that is of interest to you use: VO-Left Arrow, Right Arrow, Up Arrow, Down Arrow

Next try other news sites such as USA Today, CNN, etc.

Try BookShare after you have tried these sites.

CTRL-OPT-CMD-[ Find previous web spot

CTRL-OPT-CMD-] Find next web spot

CTRL-OPT-CMD-G: Find next graphic

CTRL-OPT-CMD-H: Move to heading

CTRL-OPT-CMD-L: Move to next link

CTRL-OPT-CMD-N: Find next auto web spot

CTRL-OPT-CMD-V: Move to next visited link

CTRL-OPT-CMD-X: Find next list

# Braille VoiceOver Commands

Dot1-Dot3-Dot4-Dot5-Space: Announcement history

Dot1-Dot3-Dot4-Dot6-Space: Escape

Dot1-Dot4-Dot5-Space: Dock

Dot2-Dot5-Dot6-Space: Desktop

Dot-1: Move to previous item

Dot-4: Move to next item

Dots-1-2-3-Space: Move to the first element

Dots-4-5-6-Space: Move to the last element

Dots-1-3-5-Space: Scroll right one page

Dots-2-4-5-Space: Scroll left one page

Dots-2-3-4-Space: Goes to the status bar

Dots-1-2-5-Space: Activates the home button

Dots-1-2-4-5-Space: Switches between contracted and uncontracted Braille

Dots-1-2-3-5-Space: Read page starting at selected item

Dots-2-4-5-6-Space: Read page starting at the top

Dots-1-2-3-4-Space: Pause or continue speech

Dots-1-2-Space: Activates the back button if present

Dots-1-5-Space: Activates the return key

Dot-7-Space: Activates the delete key

Dot-8-Space: Activates the return key

Dots-3-5-6-Space: Select text

Dots-1-2-3-4-5-6-Space: Screen curtain (toggle)

## Suggested Braille Commands to Learn First

Dot-1: Move to previous item

Dot-4: Move to next item

Dots-1-2-3-Space: Move to the first element

Dots-4-5-6-Space: Move to the last element

Dot-7-Space: Activates the delete key

Dots-1-2-4-5-Space: Turns Braille translator off and on

# VoiceOver Gestures

The following is only a partial list of VoiceOver gestures for the Trackpad. You may wish to learn these commands first. For a complete list of VoiceOver gestures go to the Apple site.

Flick Right: Move to next item

Flick Left: Move to previous item

Touch: Select item under your finger (it is possible to “hover”)

Double Tap: Activates the selected item

Two Finger Double Tap: Start and stops the current action

Flick Up: Move to previous item using rotor setting

Flick Down: Move to next item using rotor setting

Three Finger Flick Right: Scroll right one page

Three Finger Flick Left: Scroll left one page

Three Finger Flick Down: Scroll up one page

Three Finger Flick Up: Scroll down one page

Rotate clockwise: Select next rotor setting

Two Finger Flick Up: Read all from the top of the screen

Two Finger Flick Down: Read all from the current location

# ABBYY Fine Reader 15

ABBYY Fine Reader 15 works very well with VoiceOver.

ABBYY Fine Reader 15is able to scan multiple pages if desired. ABBYY Fine Reader 15 is an excellent option used with Duxbury.

A new dialog box will open, the “Scan” and “Finish Import” buttons are at the bottom of this dialog box. It would be possible to use VO-Right Arrow to navigate to these buttons, but that would-be time consuming.

## Better Options to Navigate to the Scan and Finish Import Buttons

* If a Braille display is connected enter a Space+4-5-6, this option will take the user to the bottom of the window, and then enter a Space+1 to move back to the Scan button.
* If a Braille display is not connected then set a Hot Spot on the Scan Button with a VO+Shift+2 command. Then use VO+2 to navigate directly to the Scan Button once this Hot Spot has been set.
* Hot Spots can be monitored with a VO+CMD+Shift keystroke, to tell the button status

**Preview Scanning Option**

When ABBYY Fine Reader 15 first begins scanning a Preview Option is run, this option is not useful for blind students, set a Hot Spot on the Preview Option with VO+Shift+1 to cancel this action, and then move to the Preview Option button in ABBYY with VO+1.

**Preview**

There are five Quick Conversion options; I prefer “Convert to PDF Document.” When this option is selected, the scanned file will open in Preview, which is a very accessible Mac OS X application with VoiceOver for displaying PDF documents.Using Dictation in the Mac

Dictation in the Mac is not a hands-free option, but is incredibly useful for visually impaired students with severe learning disabilities.

* Install the current Mac OS
* Go to System Preferences\Dictation and Speech and turn Dictation on
* Use an excellent USB microphone, make sure to go to Sound in System Settings and change the Input and Output tabs so that the USB microphone is used.

There is almost no training involved with this option. Turn on VoiceOver to review the text as it is spoken. Press the Function key twice to start dictation and once to finish. This option is very effective for visually impaired students who have dyslexia; it may not be an appropriate option for visually impaired, severely physically handicapped students.

You will want to experiment with using either “Use Enhanced Dictation.” When enhanced dictation is not used an Internet connection is required. Dictation learns how you speak, the more dictation is used the better it gets. When training I find it useful to have the Output come through the computer’s internal speakers, so that I know what is going on. When the student is using the equipment by him or herself I change this back.

The following Apple web site provides information on Macintosh dictation commands: <http://support.apple.com/kb/HT5449> An extensive list of speakable commands is available with Yosemite and later. Go to Accessibility/Dictation and select Dictation commands for a list. I have found the “new line,” “new paragraph,” and “tab key” commands to be very useful, among others.

## Structuring the Classroom Environment

It is critical that all information visually impaired students with severe learning disabilities access is electronic. All textbooks should be accessed through the iPad, using Voice Dream, Dolphin Easy Reader, Read2Go, Learning Ally, or Bard. All handouts given to the student should be electronic, so that the student can read these in either Pages or iA Writer using VoiceOver. Or the student could always scan inkprint material if they are given it…

All classroom notes should be taken with an iPad voice note taking app or a different operating system if the student prefers.

# Braille Translation

## Duxbury Systems

Duxbury Systems has released Braille translation software for the Macintosh computer. This program works like the Windows program and files are compatible with Windows. See the Duxbury download.

## Index-direct-Braille

Current Index V5 embossers and Romeo and Juliet embossers sold by HumanWare can emboss direct.