



NV Access

Empowering lives through non-visual
access to technology

NVDA

The Open Source
software that levels the
playing field for the blind



An introduction to

choosing and using NVDA, the free screen reader.



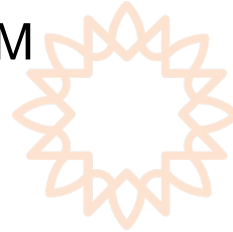
CSUN 2018

Wednesday 21st March, 3:20PM
AB

Hillcrest



NV Access



NV Access Who Are we?

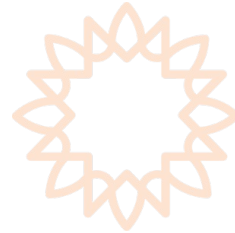
- Michael Curran: Executive Director and founder.
- Reef Turner: Developer
- Quentin Christensen: Training and Support Manager
- www.nvaccess.org
- Registered charity, with board of directors formed in 2007







What is NVDA?

- NonVisual Desktop Access
- A free and open source screen reader which allows the user to "read the screen" via synthetic speech or Braille output
- Written by users, for users
- Over 80,000 users in more than 150 countries and 50 languages





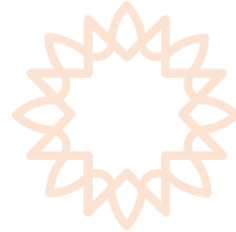
Advantages of NVDA

- Completely free to use
 - No hassles with licenses expiring, transferring or updating.
 - Regular updates: 4x per year
 - Open source. This means:
 - Anyone with skills can contribute
 - Users won't get abandoned.
 - Dedicated community
 - Portable. Can be used on any computer without installation.
- 
- 



Completely free? How do you make your money?

- Our goal is to ensure that every blind person can access computers, regardless of their financial situation.
- Our income comes from three main sources:
 - Donations from individuals
 - Corporate sponsorships and contracts
 - Sales of training material and support





How NVDA works

- Reports text displayed on screen:
 - As you navigate with the keyboard (eg with arrows or tab)
 - Under the mouse (Hover over text to read)
 - Automatically (when web pages load or you open an e-mail)
 - Echoes characters and / or words as you type anywhere
- Reads information audibly via speakers or headphones
- (Optionally) displays on a connected Braille display.

Download from <https://www.nvaccess.org>



NV Access

Empowering lives through non-visual
access to technology

HOME

ABOUT

DOWNLOAD

GET HELP

SERVICES

SUPPORT US

SHOP



Download



NV Access

NVDA Version: 2018.1

Before you Download NVDA

The NVDA screen reader can be downloaded free of charge by anyone. This allows some of the world's poorest blind people

Thank you

NV Access is a registered
donation you generous
our organisation and e

We really appreciate y

Optional Donation

- Scroll down the download page
- Select “Skip donation this time” if you do not wish to make a donation.
- Enter an e-mail address and whether to be kept up to date (if unchecked, we won't email you but address still needed).
- Activate “Download” button.



SHOW CURRENCY CONVERTER

I'd like to donate:

One-off Donation:

☒ \$30 ☐ \$50 ☐ \$100 ☐ \$250 ☐ Other

Monthly Donation:

☐ \$5 ☐ \$10 ☐ \$20 ☐ \$50 ☐ Other

☐ Skip donation this time



Email

An email address is now required when downloading. Please note that we will never provide this to a third party. Refer to our [Privacy Statement](#) for more information on how we use your data.

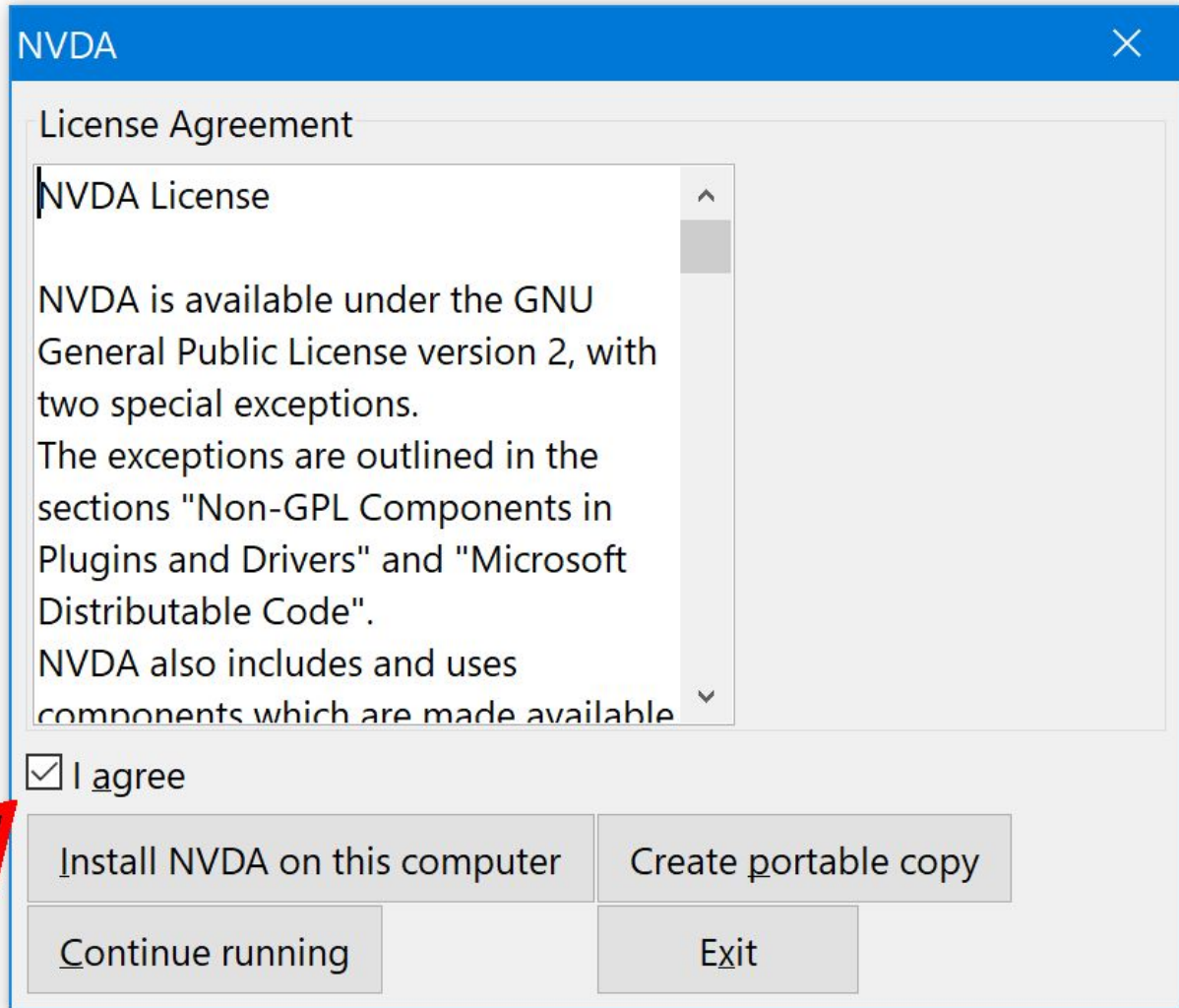
Email address:

☒ Keep me up to date with the latest news from NV Access

DOWNLOAD

License

- Check "I agree" then choose an option




Portable / Temporary copy of NVDA

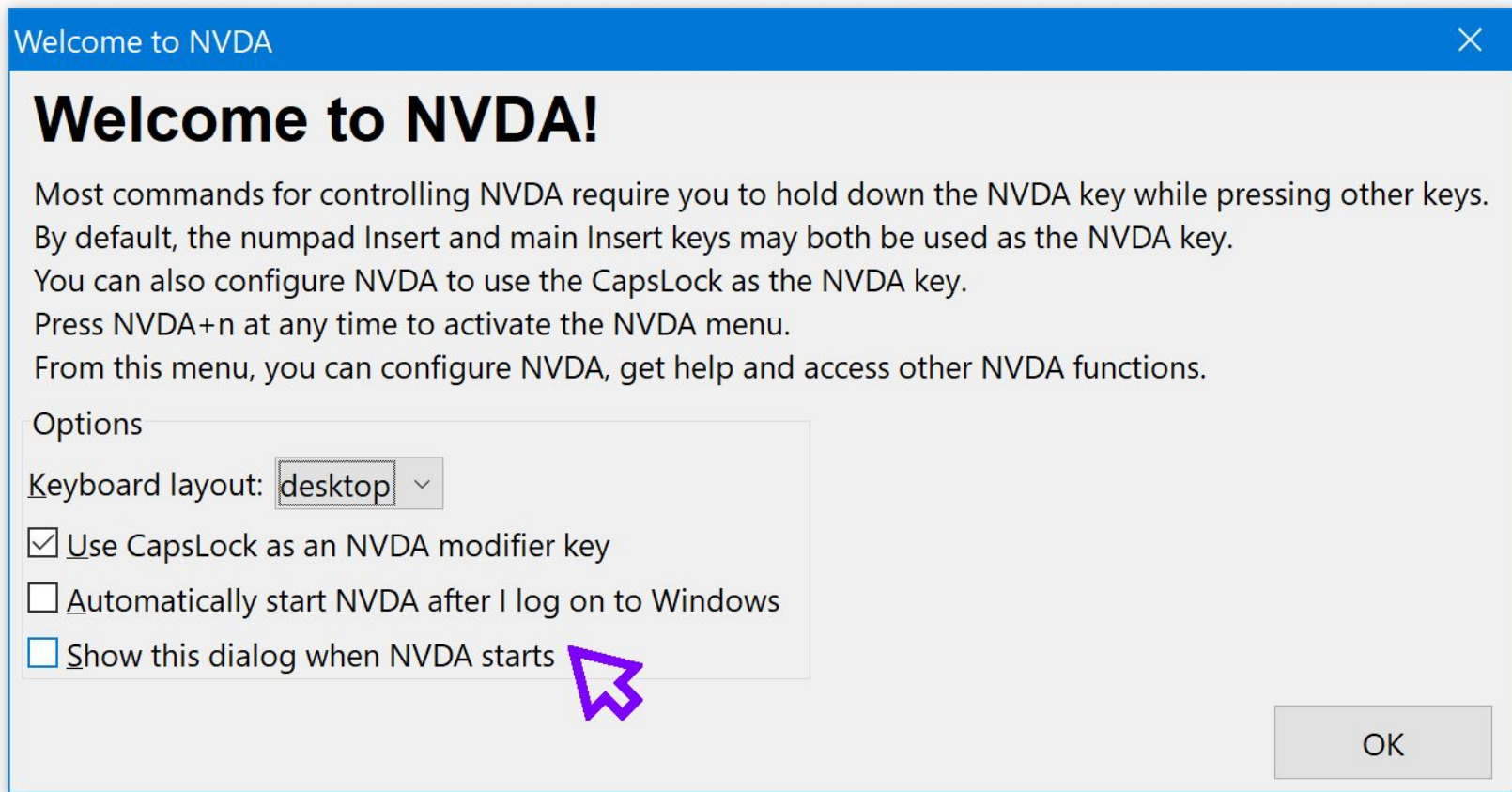
- Temporary copy run from installer (Select “Continue”)
- Portable copy can be customised and run from memory stick
- Can't run on Windows login or other secure screens (eg UAC)
- No touch screen input (Windows 8 or later)
- Limited access (e.g. no browse mode) in Windows Store apps
- Cannot use audio ducking
- Can't access programs with admin privileges



Installation options

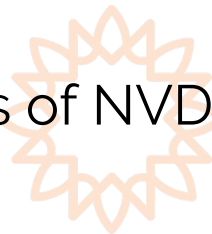
- 
- Set whether to use NVDA on logon screen independently of whether NVDA starts once user logged in.
 - Keyboard Layout:
 - Desktop: uses number pad for object navigation / review cursor
 - Laptop: assumes no number pad, as a result other keys are also different .
 - INSERT and / or CAPS LOCK as NVDA key.
 - Can use either or both. Press key twice to access original function.

The Welcome Dialog



The NVDA Menu

- NVDA has an icon in the system tray when running:
- The NVDA modifier key is either **insert** or **caps lock**.
- Press NVDA+n to open the NVDA menu
- The NVDA key is used for many functions of NVDA





Choosing a Synthesizer

NVDA+CONTROL+S



- eSpeak NG is the default synthesizer
 - Not the most human sounding voice
 - Can work at very high speeds and has very little lag
- Windows OneCore Voices
 - Built-in to Windows 10
 - Arguably most natural sounding “free” voices
- Microsoft Speech API Version 5 (SAPI 5) voices
 - Built-in to Windows (e.g. Microsoft Anna on Windows 7)
- Paid synthesizers (see “Extra Voices” link on download page)

File Edit Format View Help

You are currently hearing NVDA's default synthesizer, eSpeak. To change the synthesizer, press NVDA + control + S, then select the synthesizer of your choice and press enter.

NVDA Speech Viewer

Espeak.txt - Notepad
Text Editor edit multi line
your choice and press enter.
You are currently hearing NVDA's default
synthesizer, eSpeak. To change the synthesizer,
press NVDA + control + S, then select the
synthesizer of
One Core Voice.txt - Notepad row 1 column 2
One Core Voice.txt - Notepad
Text Editor edit multi line
NVDA is now using an Australian Windows One
Core voice, Microsoft Catherine. Available on
Windows 10.
Espeak.txt - Notepad row 1 column 2
Espeak.txt - Notepad
Text Editor edit multi line
You are currently hearing NVDA's default
synthesizer, eSpeak. To change the synthesizer,
press NVDA + control + S, then select the
synthesizer of

☒ Show Speech Viewer on Startup



Voice options

NVDA+CONTROL+V



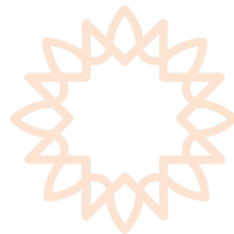
- Use Voice and Variant (where available) options to customise the chosen synthesizer (accent, male / female, etc).
- Slower rate may be suitable for newer users.
- Increase pitch when slowing rate to maintain natural sound
- Lower pitch may be easier to hear for some users.
- “Synth settings ring” can be used to adjust voice “on the fly”:
 - Desktop: Press NVDA+CONTROL+← or → to choose setting and NVDA+CONTROL+↑ or ↓ to adjust current setting.
 - Laptop: Add shift to desktop Synth settings ring commands.



NV Access

Using a Braille display

- Connect your display.
- Install any drivers required by your display manufacturer.
- Open NVDA Braille settings:
 - Press **NVDA+n** to open NVDA menu
 - Press **p** for Preferences
 - Press **r** for Braille (b was already taken for Browse mode)
- Select your Braille display from the list
- Set any other options and press **enter**.



Family Sharing

- In General Settings (NVDA+CONTROL+G):
 - Use NVDA on the Windows logon screen
 - Automatically start NVDA after I log on to Windows
- Start NVDA: CONTROL+ALT+N
- Sleep NVDA: NVDA+SHIFT+S
- Quit NVDA: NVDA+Q then ENTER





Corporate and government users

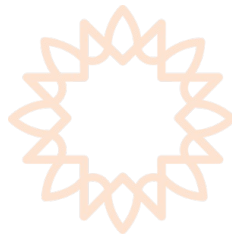
- Licence agreement in Help menu or website
 - VPAT 2.0 and other regulatory documentation available
 - Registered NDIS provider in Australia
-
- Install flags / silent install
 - No internet connection required
 - Training material & support





Low vision users


- NVDA works with Windows Magnifier, Glassbrick and others
 - Glassbrick: <http://www.glassbrick.org/>
- Works with Windows Aero, Classic, High Contrast modes and other options such as high DPI.
- Focus highlight add-on can be useful





Add-Ons

<https://addons.nvda-project.org>

- Can improve support in specific applications:
 - Station Playlist Studio, Lambda, mIRC, VLC Media Player etc
 - Can provide additional functionality:
 - BrailleExtender, Focus Highlight, Golden Cursor
 - Can change functionality:
 - Clipspeak, Speak Passwords, Review Cursor Copier
 - Press NVDA+n then T for tools then A for “manage Add-ons”
 - More powerful than scripts for other screen readers, however, requires more programming knowledge to write.
- 




Using the mouse

- Press **NVDA+m** to toggle
- Press **NVDA+control+m** for mouse settings
- There are keys for left and right click and lock, to move the focus to the mouse and the mouse to the focus.
- There are also touch gestures for touch screens.
- New gestures and keystrokes can be added.




Keyboard

- NVDA can be set to “desktop” or “laptop” keyboard layout. This affects the keys used for some commands.
 - Keyboard layout can be set independently to NVDA key.
 - Toggle input help: **NVDA+1** (these on the number row)
 - Toggle speak typed characters: **NVDA+2**
 - Toggle speak typed words: **NVDA+3**
 - Toggle speak command keys (control, shift etc): **NVDA+4**
- 


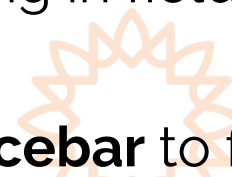


Reading

- 
- Read current line: **NVDA+↑** (Laptop: **NVDA+L**)
 - Read from current point onwards: **NVDA+↓** (Laptop: **NVDA+A**)
 - Change symbol / punctuation level: **NVDA+p**
 - Read window title: **NVDA+t**
 - Report current focus: **NVDA+tab**
 - Read formatting: **NVDA+f**
 - Report time: **NVDA+f12** (press twice for date)



Browsing the web

- Browse mode = reading
 - Can press single letters to jump to elements, eg **H** for headings, **2** for heading level 2, **D** for landmark, **T** for table.
 - Press **F7** for elements list dialog
 - Focus mode = entering information (typing in fields)
 - Press **ENTER** and **ESCAPE** or **NVDA+spacebar** to force toggle
- 
- 



OCR

- Can be used to read text in an image, eg memes.
- Built-in on Windows 10. Available as an add-on in earlier versions of Windows.
- Press **NVDA+r** to run OCR.
- Use regular navigation to read result in Windows 10
- Use review cursor to read results in Windows 7 or 8
- Doesn't replace a full OCR program for printed text.

Advanced features

- Configuration Profiles:
 - Allows you to completely change NVDA settings for a specific application, say all, or when manually set.
- Object Navigation and the Review Cursor:
 - Allows you to access text the regular text caret cannot get to – eg read only dialog boxes
- Speech dictionary and symbol dictionaries
 - Allows you to change how NVDA pronounces things



Training

- Basic Training for NVDA: <https://www.nvaccess.org/shop/>
 - Available in Electronic Text, MP3 Daisy Audio and Hardcopy Braille
- Microsoft Word with NVDA and Microsoft Excel with NVDA
- Switching from Jaws to NVDA guide:
 - <https://github.com/nvaccess/nvda-community/wiki/SwitchingFromJawsToNVDA>
- Switching from Window-Eyes:
 - <https://github.com/nvaccess/nvda-community/wiki/Switching-from-Window-Eyes-to-NVDA>



NV Access





Basic Training for NVDA

- 1 Introduction
- 2 Getting Started with NVDA
- 3 Getting Started with Windows
- 4 Basic NVDA Configuration
- 5 Writing Text and Saving Files
- 6 Editing Documents
- 7 Document Formatting
- 8 Basic File Management
- 9 Multi-Access Tasking
- 10 Browsing the Web



Activity: Copying text with the review cursor:

1. Make sure the "soar" document is open from the previous activity.
2. Use the review cursor to move to the start of the third line ("Gliders and birds").
3. Press **NVDA+f9** to start marking text.
4. Press **shift+numpad 3** (laptop: **NVDA+end**) to move to the end of the current line.
5. Press **numpad 1** (laptop: **NVDA+left arrow**) to unselect the last character.
6. Press **NVDA+f10** twice quickly to finish selecting text and copy the text to the clipboard.
7. Move the caret to the first line and select the text "five words".
8. Press **control+v** to paste the copied text, making the first line read "This line has gliders and birds".
9. Close the document without saving.

Certification

<https://certification.nvaccess.org>



- Online multiple choice question based assessment
- Upon completion, purchase certificate (\$100 AUD)
- Listing with optional contact details as an NVDA Certified Expert





Help

- NVDA User Guide in help menu, press: **NVDA+n, h**, then **enter**
- User E-mail list: nvda.groups.io
- NVDACon: nvdacon.org
- Telephone support: <http://www.nvaccess.org/shop/>



Thank You!

Contact: info@nvaccess.org

Website: <https://www.nvaccess.org/>

“In-Process” NV Access’ fortnightly blog
<https://www.nvaccess.org/category/in-process/>

Thank you for coming. We hope you got something
from the session.



NV Access

