



## Speech Recognition Software

### What is Speech Recognition (SR) Software?

SR or voice recognition software lets you type by talking to the computer. You can also use it to do most other tasks such as format text, insert images, open and close programs and use the internet.

### How does it work?

You train the software to recognise your speech patterns by speaking into a microphone connected to the computer. Training involves reading passages of text to the computer. The time needed to make it work well depends on the SR program and your skills. Newer versions of SR software learn best if you talk in a natural style and speed. Extra 'training' helps improve accuracy. For instance, when the SR software types the wrong word, it is important that you follow the process to correct any errors so that the software works better in the future.

### Potential benefits and features

- Create a document more quickly, particularly if you type slowly.
- SR can be useful for people with physical impairments. It allows typing and mouse functions without using your hands.
- People with learning difficulties may find it useful to write with their voice. Successful training comes through the right support to read passages and help to correct errors (spelling skills).
- You can check that a word or sentence was correctly recognised by playing back what was said and comparing it to the text-to-speech read-out.
- With adequate training, the software can learn to predict words based on what you write about.
- SR improves the more you use it. It recognises the words you are saying by checking the context of the sentence or phrase e.g. 'ice-cream' or 'I scream'.

### Things to think about when using SR

The list below highlights some preparation, skills and environmental consideration needed to use SR well. You may need to get more advice about using SR.

### What do you want to do with the software?

- Do you need to do a lot of typing or just a little? If you only dictate a small amount, the effort of training the software might not be worth it.
- Do you do a lot of data entry? While SR works in spreadsheets, the process of clicking each cell by voice can be tedious. If possible, a combination of voice and mouse use might be easier. There are mouse alternatives to suit a range of needs.

## Computer considerations

- Check the software minimum specifications – will it work on your computer? We recommend you consider a computer with more than the minimum specifications for processor speed and RAM.
- Will the software work with the programs you use most (e.g. Firefox, Excel, email)?
- Check the software will work well with your accent. For example, software that only has a UK or US accent model may not work well with a *broad* Australian accent but may be OK with a *general* Australian accent.
- Check the software has the vocabulary range you need or the option to add more words to its vocabulary (e.g. medical and legal terms).
- Use a high quality microphone. Good microphones should filter normal levels of background noise.

## Personal considerations

- SR works best with a headset microphone. Consider how you will put the headset on, position it and take it off. If a headset is not comfortable or practical, consider a high quality desktop microphone but be aware that it might pick up more background noise.
- You need adequate spelling skills to recognise and correct errors, or support and training to help you. Claims of 99% accuracy by manufacturers still depend on the person having significant skills and discipline to make sure it works well.
- You need to concentrate for periods of time when you train and use SR.
- Speaking to a computer is different to everyday speech. You need to think more and plan ahead before speaking when using SR.
- Does your speech volume or clarity change throughout the day or within a sentence? It is important your voice and breath support is consistent.
- Do you want to use the computer only by voice? If so, take care of your voice. Avoid voice strain by taking regular breaks and by drinking water when you are using SR. You may need to see a speech pathologist if you have voice problems.

## Environmental considerations

- SR accuracy may be affected by background noise.
- If you need to use it in more than one place, check that the software will manage changes in surrounding noise quality. You may need to have different user profiles trained in different places. Also consider if you can record your speech with a digital recorder and transcribe it later.
- Will other people be working around you? Talking to the computer can be distracting for other students or workers near you. Can you use a different room?

## Products

Nuance Dragon NaturallySpeaking (DNS) and MacSpeech Dictate are the current market leaders in SR software. DNS is generally reported to have the greatest speech accuracy and range of features. MacSpeech is specifically designed for use on Macs.



## Other options

Windows XP or above, and Mac OS X also have some inbuilt SR features. Trial these options before buying additional software. There are other SR software brands, including freeware, which might suit people who need basic features or need to speak in short phrases or one word at a time.

## Portable options

- Dragon Dictate is a free app for iPhones and iPads. It can insert text directly into sms, emails or social media. You still need to be able to touch buttons on the touchscreen. There is a similar app for Android phones.
- There are SR apps standard with many smart phones, these vary in their accuracy and functions they perform.
- Some SR software will recognise voice files recorded on a digital voice recorder. This may be useful where it is not practical to have a computer available all the time, such as a student moving from class to class.