WORKSHOP: VOICE-RECOGNITION SOFTWARE

Voice recognition is not a new concept, but the software that makes it accessible to PC users has only come into its own in the past few years. Processor-intensive system requirements were beyond the capabilities of most desktop PCs, but today even budget PCs can effectively run voice-recognition tools.

Getting to grips with voice-recognition software can sometimes prove frustrating. However, the software used in this workshop – Dragon NaturallySpeaking 5.0 Preferred – will have you up and talking after just five minutes basic training. Persevere, and voice-recognition software should prove an extremely useful tool.

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WHY USE VOICE-RECOGNITION SOFTWARE?

Many people have difficulty – or simply dislike – using a keyboard and mouse. In particular, those with a visual or motor disability and people prone to RSI (repetitive strain injury) can benefit from voice-recognition software as it makes data entry quick and easy.

Such software is also ideal for mobile users. Handheld computers now come with applications that import voice memos and change them into a written format, so you can dictate letters and emails and automatically convert them to text later on. Voice-recognition software can also be used to navigate screens of information, such as software menus and web pages.

POWER STRUGGLE

Voice-recognition software turns the spoken word into editable text, so it needs plenty of megahertz and RAM. By analysing what you say, it can work out where one word ends and another begins. It can also follow formatting commands such as 'new line' and punctuation.

In order to create meaningful text the software must understand how language hangs together (its syntax). That way, it can distinguish between words that sound the same but are spelt differently and more complex phrases like 'pizza delivery boy' and 'Pete's a delivery boy'.

SOFTWARE CHOICES

There isn't a huge range of voice-recognition software available, which is perhaps no surprise given the complexity of the software and the large development budgets involved in producing them. Details of the main contenders are listed in our ⊳ features comparison chart.

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Package	General description and notable features	Price inc VAT	Telephone	Website
Dragon NaturallySpeaking Essentials	Basic; can be used with most Windows applications including email clients. New words can be added by scanning straight from documents	£29.99	020 7221 4600	www.naturallyspeaking.com
Dragon NaturallySpeaking Preferred	Powerful and flexible; supports shortcuts so you can quickly insert common phrases. Links to digital memo recorders for direct transcription	£99.99	020 7221 4600	www.naturallyspeaking.com
Dragon NaturallySpeaking Mobile	Same as Preferred, but comes with its own voice recorder	£179.99	020 7221 4600	www.naturallyspeaking.com
L&H Voice Commands	Lets you navigate your desktop and the web without the need for keyboard strokes or mouse movement	£14.99	020 7221 4600	www.lhsl.com/uk
L&H Voice Xpress Standard 5.0	Lets you dictate to a wide variety of Windows packages, including spreadsheets and email	£39.99	020 7221 4600	www.lhsl.com/uk
L&H Voice Xpress Advance 5.0	Builds on the Standard version, with the option of having your documents read back to you	£79.99	020 7221 4600	www.lhsl.com/uk
L&H Voice Xpress Professional 5.0	Advanced features let you search the internet and schedule appointments	£119.99	020 7221 4600	www.lhsl.com/uk
L&H Voice Xpress Mobile Professional 5.0	Adds a voice recorder that will log up to 75 minutes of chat	£179.99	020 7221 4600	www.lhsl.com/uk
IBM ViaVoice Standard 8.0	Good Windows and web integration, but a more limited vocabulary	£39.99	0800 169 1458	www.viavoice.com
IBM ViaVoice Professional 8.0	Adds support for specialised vocabularies (additional units such as Healthcare sold separately)	£99.99	0800 169 1458	www.viavoice.com

HARDWARE CHECKLIST

☐ A well-specified desktop PC is best, as notebook hardware can cause interference with the microphone input. You will need at least a 266MHz processor, 64MB of RAM and 150MB of hard disk space. Check the software box for the minimum system requirements.

☐ Good-quality microphone headset. Most packages come with a headset, which you should use if at all possible.

☐ Sound card. Ensure it meets the standards specified by your chosen application.

☐ Digital voice recorder (optional). The poorer the recording quality, the more errors will creep into your copy.

Once you have installed the software you will need to complete some basic training before you can get talking. This isn't a complete training regime, but it does give the software enough information about your individual voice and speech patterns to get started. The more training and help you give your voice-recognition software along the way, the more accurate and useful it will become.

We've used Dragon NaturallySpeaking 5.0 Preferred in this workshop, but the general procedures will be similar for any voice-recognition software.

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CORRECTING MISTAKES
CUSTOMISING VOCABULARY
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    • multiple additions to the volcabulary
COMMANDS
    • opening applications
    • navigating the desktop
   • navigating the web
    • composing an email

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☐ STEP ONE

First, tell the software how your microphone will be connected to the PC. You'll also need to make some initial language settings, but don't worry about Advanced settings at this stage – you can make finetuning adjustments later on.

☐ STEP TWO
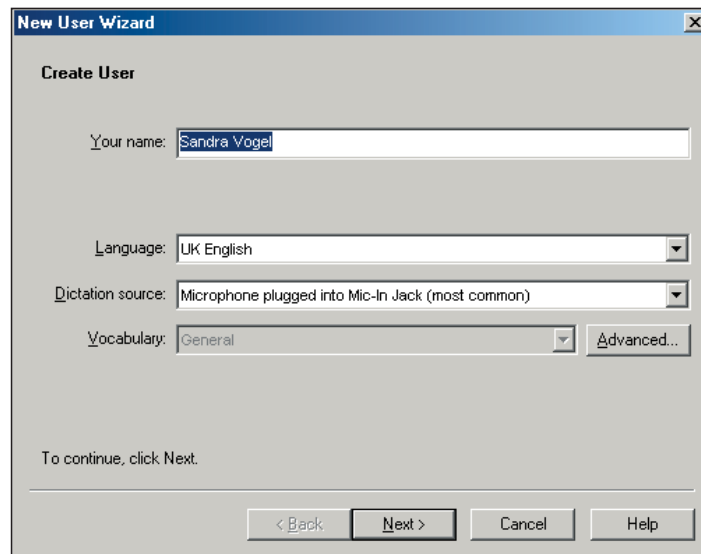
You now need to provide some information about your sound device. Depending on your PC's hardware setup the software may identify several audio input options and let you select from them. Dragon NaturallySpeaking 5.0 Preferred allows you to make the setting manually or have it do the job automatically.

back   forward   exit
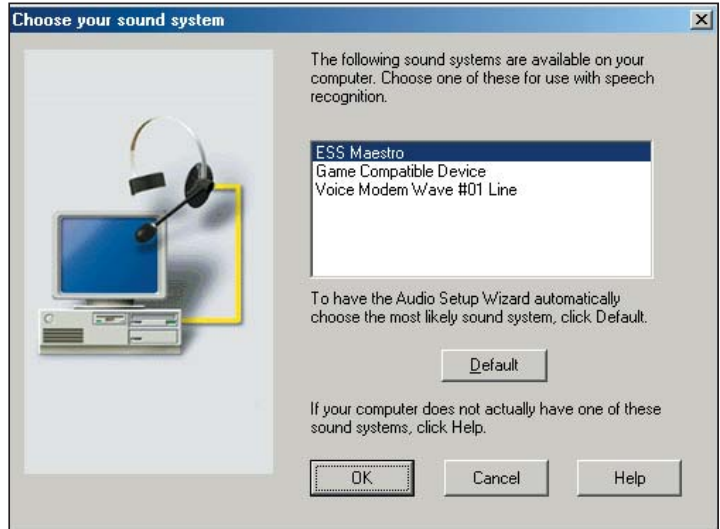
☐ STEP THREE

You may have to perform a sound check. The software can assess the performance of both your microphone and your sound card and make adjustments to ensure optimum performance.
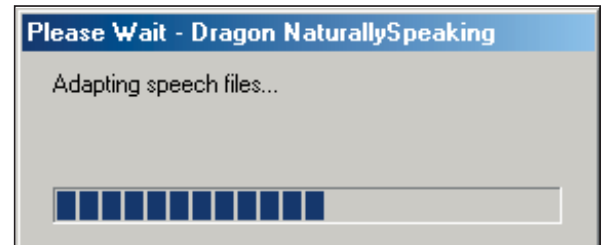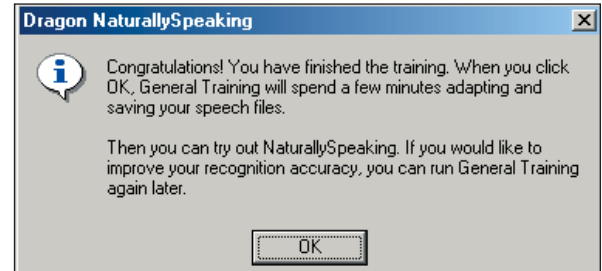
☐ STEP FOUR
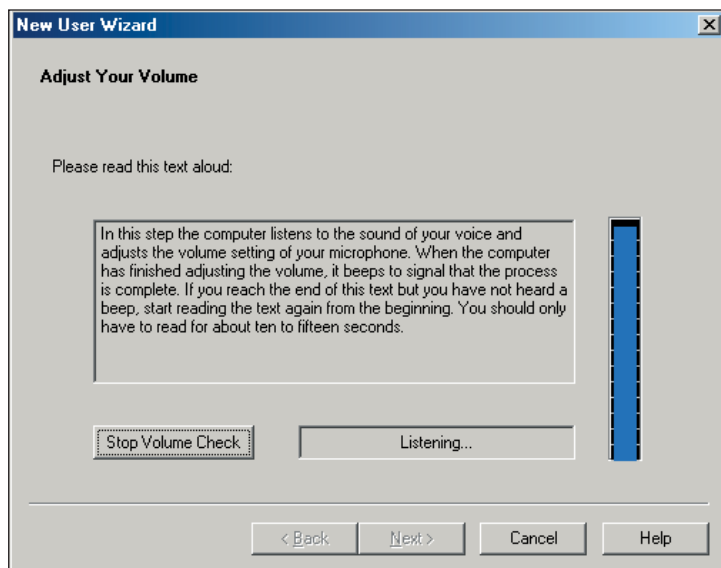
Once the sound check has completed, you can start training the software to recognise your voice. This involves reading passages of text into the microphone. After an initial sentence or two, you may be able to choose other passages to read. This makes the process less tedious, but in any case this initial training exercise should not take very long to complete. With our software it took five minutes.

New User Wizard ⊠

Train Dragon NaturallySpeaking

You will be asked to read a sentence aloud.
When you're ready, click Go.

Welcome to the world of continuous speech recognition

Start | | Finish

Go   Demo

< Back   Next >   Cancel   Help

Select Text ⊠

Please select the text that you would like to read.

Alice's Adventures in Wonderland (Fantasy)
Charlie and the Chocolate Factory (Adventure)
Dave Barry in Cyberspace (Humor)
Dogbert's Top Secret Management Handbook (Humor)
Talking to your Computer (Instructional)

OK

☐ STEP FIVE

As you read out the texts, the voice-recognition software will analyse your speech and compare it with what it expects to hear. During and after this process the software will adjust its systems accordingly so that when you say words not listed in its vocabulary, it can recognise them to the best of its ability.

Dragon NaturallySpeaking ☒

ℹ Congratulations! You have finished the training. When you click OK, General Training will spend a few minutes adapting and saving your speech files.

Then you can try out NaturallySpeaking. If you would like to improve your recognition accuracy, you can run General Training again later.

OK

Please Wait - Dragon NaturallySpeaking

Adapting speech files...

With the basic training completed you are ready to start working with your voice-recognition software. In the early stages you may find you need to spend a fair amount of time correcting the software's mistakes by editing the document. This may seem tedious, but it is important as the corrections help the program to improve its accuracy in the long term.

You can either correct as you are going along or wait until you've finished a document and correct it at the end.

STEP ONE

As you spot a mistake in a dictation, say 'Select' and then the word you see which has been wrongly recognised. The word will be highlighted and a menu – the Quick Correct List – appears.

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☐ STEP TWO
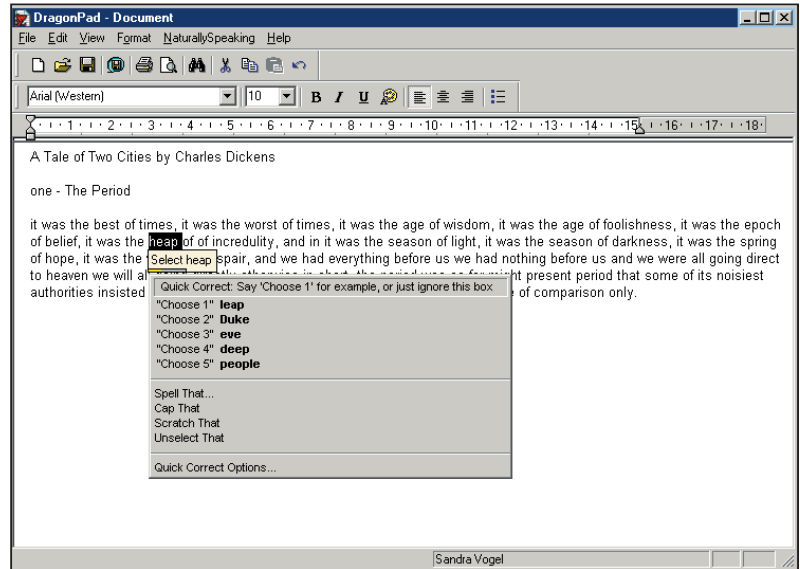
Dragon NaturallySpeaking makes some guesses as to the correct word. If the word you want is visible say 'Choose' and its number. If the word you want is not present, say 'Spell that' and the Correction box opens.

back   forward   exit

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☐ STEP THREE

Spell the word you want out loud, or type it into the Correction box. When you've finished, say 'Okay', or click ok and the new word will be inserted into your text.

**TIP** to open the Correction dialog box at any time press the minus key on the keyboard.
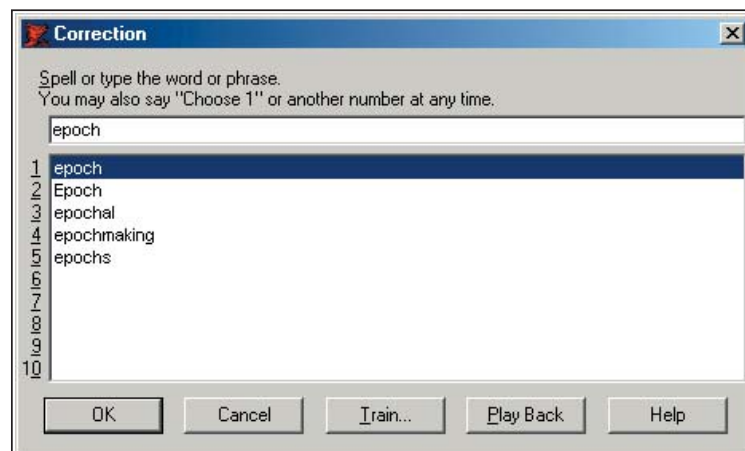
If your voice-recognition software fails to recognise a word correctly, it may be because that word is not in its vocabulary. All applications come with a standard vocabulary, but you may want to use words it does not contain.

You can add to the vocabulary in several ways. Two typical methods of expanding the vocabulary are adding words one by one and highlighting all the new words in a document and adding them in a single session.

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INTRODUCING NEW WORDS

Go to the NaturallySpeaking menu and choose Words, then Add Individual Word. Type the word you want to add to the vocabulary and make sure 'I want to train the pronunciation of this word' is checked.

Click on or say 'Record' to begin recording the new word. Speak it as you normally would and then click on or say 'Done' when you've finished.

back   forward   exit
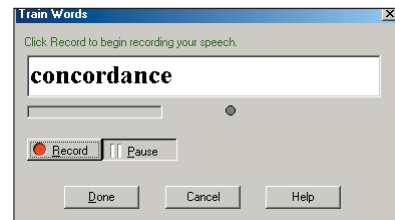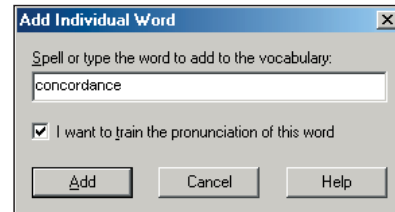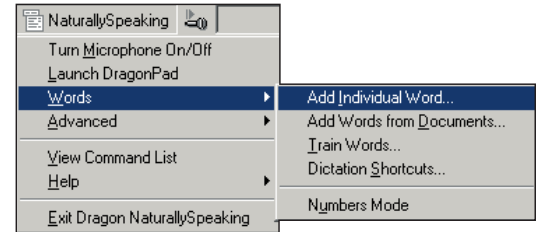
MULTIPLE ADDITIONS TO THE VOCABULARY

If you have an address book or document containing specialist or uncommon words such as people's names your voice-recognition software may be able to pick them out. Choose Words, then Add Words from Document from the NaturallySpeaking menu and select the document(s) you want to scan.

TIP If you don't have any documents with specialised words in them, create one and then add words from the document. This is faster than adding words one by one.

OPENING APPLICATIONS

As well as turning speech into editable text, voice-recognition packages can be used to open and control applications.

• To run a program or open a document from the Start Menu say 'Click start', then 'click' followed by the item you want.

• When in an application say 'Click' then the menu name you want. To make choices from a menu always precede your selection with 'Click'.

• To switch between open applications say 'Switch to' then the name of the application you want to work with.

• To make selections between tabs or options in a dialog box say 'Click' then a tab, checkbox or radio button name.

NAVIGATING YOUR DESKTOP

Dragon NaturallySpeaking offers two methods of positioning the cursor onscreen:

1. Say 'Mouse grid' and a nine-celled grid will be placed over the screen. Say the number of the cell you want and that cell is itself divided into nine smaller cells. Repeat this until the cursor is where you want it, then say 'Mouse double-click' or 'Mouse click' and the number of the cell you want.

2. For finer cursor control you can simply say 'Mouse' then 'up', 'down', 'right' or 'left' and specify an amount of space to move.

back   forward   exit
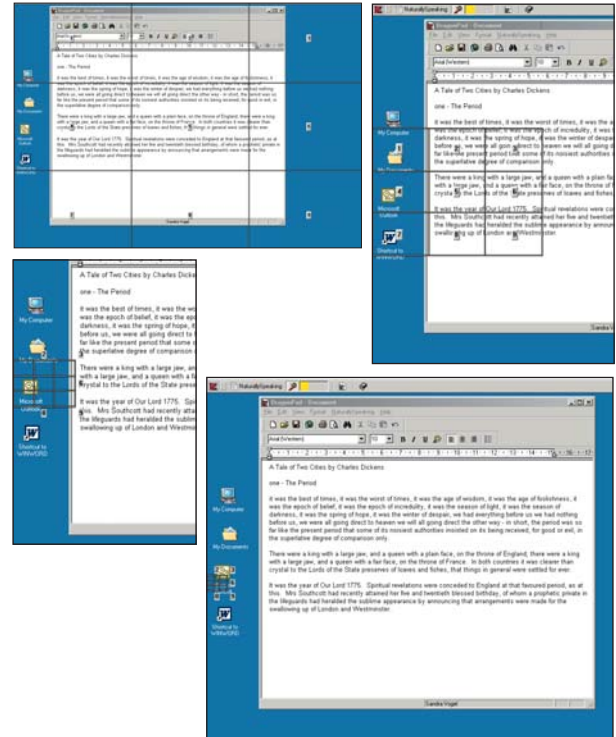
NAVIGATING THE WEB

There are many commands for web page navigation. Here are some examples for use with Internet Explorer:

• 'Go to Favourites' opens the Favourites list. Say Favourite site names exactly as they appear in the list.
• 'Click Favourites', then 'Add to Favourites' adds a new page.
• 'Go to address' takes you to the address bar; 'www dot PC Advisor dot co dot uk' takes you to our home page.
• To click a text link just say the name of the link.
• To click a graphic link say 'Image, choose' and the number of the image you want to select.

COMPOSING AN EMAIL

Dictating the main body of an email using voice-recognition software is no different to dictating any other text. But getting the address data and subject lines in place requires some extra commands. The following are for Outlook Express:

• Say 'New mail' to start composing a new message.

• Say 'Go to field' and then dictate the addressee name, for example, 'Sandra at freeserve dot co dot uk'.

• Say 'Go to body field' and start to dictate the message.

• When your message is complete say 'Send mail' and the mail will be sent to the Outbox.

back   exit