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scripting where key names within braces are used to specify keystroke combinations and non-printing keystrokes.

Graphics

You may insert bitmapped graphics using the Text and Graphics commands. These graphics must be copied from other programs. Aside from placement, the graphics cannot be manipulated within the Text and Graphics command box. The graphic, a .bmp or .gif image, must be pasted into the Text and Graphics command. Multiple graphics can be used within one command.

Use such graphics cautiously. File sizes of documents using bit-mapped graphics can be quite large. A document that is normally 30KB may become 150KB with the addition of one bit-mapped signature. If you have 1000's of these documents, as can accumulate if you produce several documents per day, the additional storage space required can be significant.

Inserting Text Using Advanced Scripting

Advanced Scripting may be used in several ways to insert text. The "SendDragonKeys", "SendKeys", or "SendSystemKeys" (not recommended unless other techniques fail) statements can be used to directly produce text. We recommend use of "SendKeys" as it is more consistent with other programming languages, notably Visual Basic.

Advanced Scripting allows you to read files that contain the text you wish to insert. This means that you can change the text without changing the NaturallySpeaking Commands or even using NaturallySpeaking!

Advanced Scripting is also effective for inserting text that requires values to be inserted within the text. For example, the dermatologist doing the above mole removal might need to document the size of the mole.

To start, we will build a command that prints fixed text. We will use the same example. Say "Add New Command", add "mole removal surgery" as the Command name, put it into Group "test", and keep it as a global command. Unless you need this specific command, use the description field and document this as "a really dumb command for me" as a reminder to delete the command later. Scroll down the Command Type to show "Advanced Scripting" At this point the "Script" part of the screen will have the lines:

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Sub Main

End Sub

We put the command script between the “Sub Main” and “End Sub” statements. This will end up being:

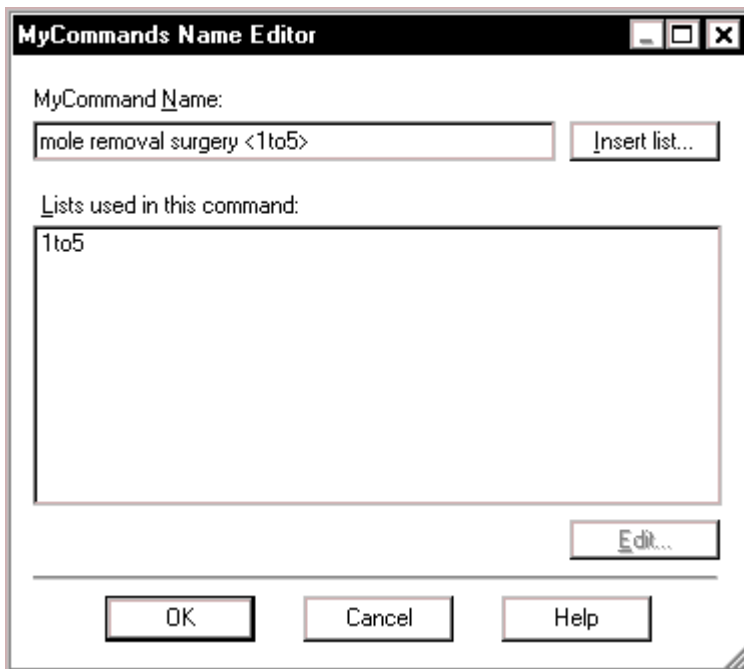
```
Sub Main
' Output of a single sentence, broken into three pieces
SendKeys "The mole was excised to a depth of "
SendKeys "2mm "
SendKeys "below the skin surface."
End Sub
```

After the line “Sub Main”, the next line is a comment line. All text on a line after a single-quote “'” is treated as a comment. Use comments to describe your intent in every command you create with Advanced Scripting..

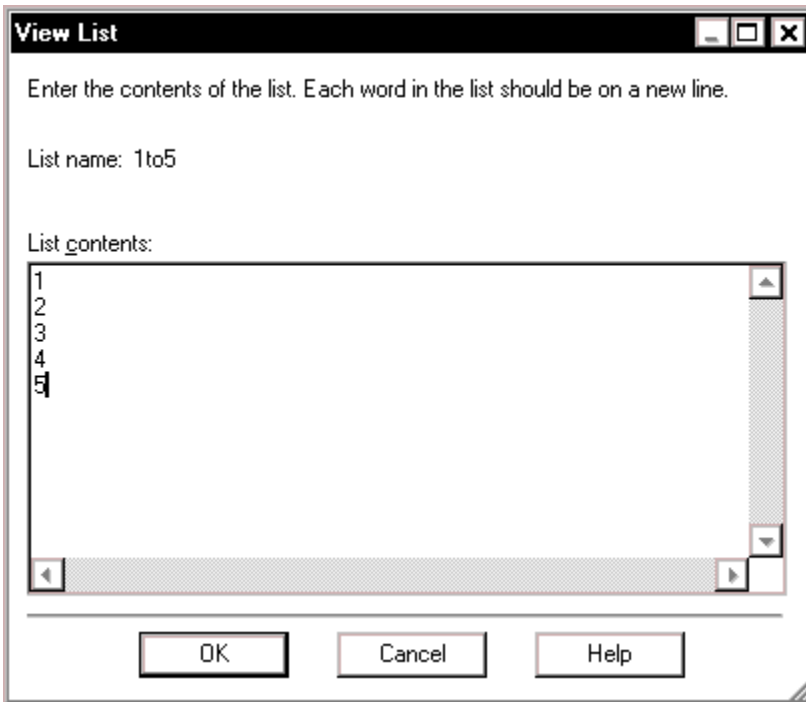
All of the three SendKeys statements above could go on one SendKeys line, though it will cause scrolling in the Script box. Note the use of trailing blanks within the quoted text. If you want spaces, tell the computer to produce spaces by including them in your command.

Click Save, open up DragonPad, Word, or some other program and try it. Then, go back to Command Browser, find this command (Custom tab, then use the Group drop list to find the "test" group, and find the command), and choose to Edit the command.

Next we modify the command to accept different sizes, ranging from 1mm-5 mm. Start by changing the command name with the Name Editor. Click on "Name Editor". Append to the command name by positioning the cursor at the end of the name, typing a space, then “<1to5>”.



At this point, you could also press the “Insert list...” button and scroll to see what lists are available. We will make a new short list with the values of one to five. It is named “<1to5>”. In the “Lists Used in this Command” box, highlight the “1to5” entry. Click the “Edit” button so that you can enter the list. Enter the five numbers, one number per line (no need to do it in order), so that you have a list like:



A list can consist of numbers, words, phrases, file names, or more complex elements. Click “OK”, which closes the View List box, click “OK” in the Name Editor, and return to editing the main script.

Next, we introduce two important techniques. First, the use of an “argument” or list element is shown. Second, the “&” operator, used with strings (of characters) to denote appending (also known as concatenating), is introduced.

Replace the 2nd statement:

```
SendKeys "2mm "
```

With the statement:

```
SendKeys ListVar1 & "mm "
```