Automating your Word indexes

Microsoft® Word has powerful tools for indexing. **Mike Unwalla** guides you through the process of creating and modifying an index using fields.

Have you ever tried to create an index in Word? Were you dissatisfied with the options available in the dialogs? There are other features available that can provide you with a higher level of control over the structure of the index. This article gives you an overview of advanced indexing techniques; see Word's online help for details. The menu sequences are for Word 2000; there are slight differences in Word 2002.

How indexing works

An indexer puts a *marker* (also known as a *code* or a *tag*) in the body of a document. Software then generates the index using the entries, as shown in Figure 1.

In Word's terminology, the term *index entry* can refer to:
- A code in the text (the most common meaning), implemented as an XE field
- A heading or subheading in the index (for example, 'animals' or 'cats')
- A heading and its locators in the index (for example, 'animals, 1-3')

In Word's online help the context should make the terminology clear, and you should not have any problems understanding what is meant. Since an index entry (marker) is technically a Word field, an index entry is also known as an *index entry field.*

Overview of techniques

To create an index entry (XE field) you can use:
- The **Mark Index Entry** dialog. This is the elementary method. It's got lots of help, but it's laborious and doesn't give all options. We won't be looking at this.
- The **Field** dialog. This enables you to use all the options.
- A concordance file. Word inserts index entries for the words contained in the concordance file. This is useful sometimes, but a concordance and an index are not
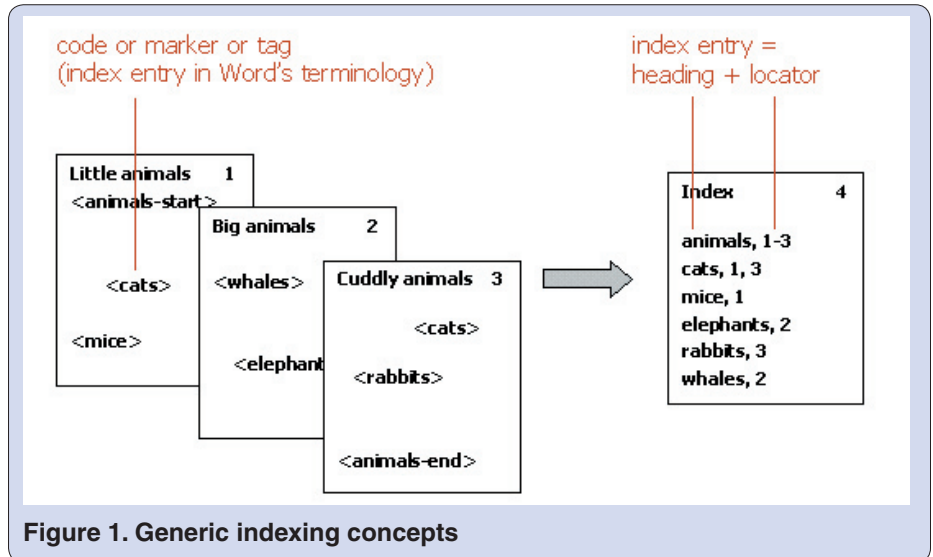

Figure 1. Generic indexing concepts

the same. You'll probably spend more time reworking the index entries than you would if you just entered them manually. We won't be looking at this.

Word uses the index entries to build the index (an INDEX field). To create an index you can use:
- The **Index and Tables** dialog. This does not give you access to all the options. We won't be looking at this.
- The **Field** dialog. This enables you to use all the options.

After you add, delete or modify index entries, or add or remove text in the document, you must update the index to reflect the changes. To do this, put the cursor anywhere in the index and press **F9**.

To work with Word's fields, you need to see what's going on behind the scenes by viewing hidden text. To do this, choose **Tools>Options**. The **Options** dialog appears. On the **View** tab, select (as a minimum) bookmarks, field shading and all formatting marks. Select OK.

Inserting an index entry

To insert an index entry, put the cursor where you want the index entry to appear. Choose **Insert>Field**. The **Field** dialog appears. In the Categories list, select Index and Tables. The Field names list appears.

Select XE. Type the text for the index entry in the box at the bottom of the dialog (if the text contains more than one word, you must enclose it in double quote marks). Figure 2 shows an example.
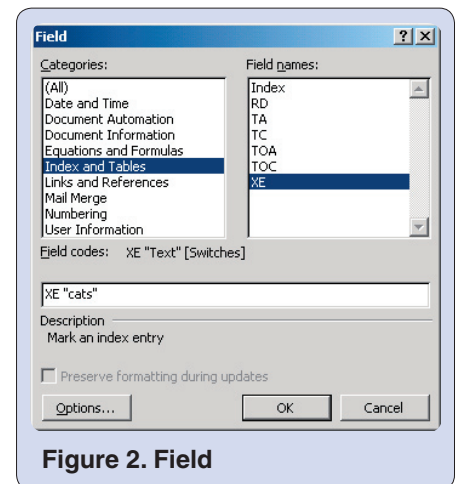

Figure 2. Field

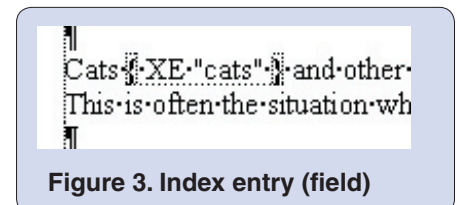Choose **OK**. The index entry appears in the document, as shown in Figure 3.

Figure 3. Index entry (field)

In a typical index, a single heading has many locators. A quick way of inserting an index entry is to copy and paste it.

Editing an index entry

At some stage, you will need to edit an index entry. You can change any of the text that is between the field markers { and }. If you accidentally remove a quote mark, don't worry, just re-type it.

An index entry can be more complex than that shown in Figure 3, and can incorporate field switches that control various options. To edit index entries, you need to know what the field switches mean. Table 1 explains the most common options. Figure 4 shows an example index based on the entries in Table 1.

You can combine some switches. For example, { XE "rabbits" \i \b } would result in a bold italicised locator.

Beware that although Word lets you put an index entry in a text box, the index entry won't be used to build the index.

Creating an index

To create an index, put the cursor where you want the index to appear. Choose **Insert>Field**. The **Field** dialog appears. In the Categories list select Index and Tables. The Field names list appears and the Index field is automatically selected (it's first in the list). Choose **Options**. The **Field Options** dialog appears.

Add the switches that control the index structure. For example, the default separator for a page range is an n-dash, so headings in the index would be of the form 'animals 1–10'. You can specify another separator, for example, you might want the form 'animals 1 to 10' (see Figure 5). Choose **OK>OK**.
The index structure shown in Figure 4 is based on the field:
{ INDEX \h "A" \c "2" \g " to " }.
This creates an index with heading

Table 1. Index structure and switches

Element of index	Controlled by style
Word or phrase as a heading	{ XE "cats" } A basic entry consists of one or more words enclosed in quote marks. A single word does not need quote marks.
Subheading	{ XE "animals:cuddly" } Use a colon to create a subheading. You can have up to six subheading levels.
Cross-reference	{ XE "mammals" \t "*See* animals" } Use the **\t** switch to create a cross-reference (no locator is displayed in the index). The text can be anything, and need not be italicised, though by convention, it is.
Bold locator	{ XE "cats" \b } Use the **\b** switch to format the locator as a bold character.
Italic locator	{ XE "camel (picture)" \i } Use the **\i** switch to format the locator as an italic character.
Page range	{ XE "animals" \r "animals_chapter" } Use the **\r** switch to define a page range. The text following the switch must be the name of a bookmark.

letters (display letters), two columns and a page range that is indicated using the word 'to'.

To modify the structure of an existing index, change the switches and the text in the INDEX field.

The appearance of the items of text in the index, such as point size, colour and spacing between lines is defined by the styles used **(Format>Style)**. Table 2 shows the

Table 2. Word styles for index formatting

| Element of index	Controlled by style
heading	Index 1
subheading	Index 2
display letter (heading letter)	Index Heading

most common ones.

It is not practical to modify the text or formatting in an index directly, because changes are lost when you update the index. However, you can apply text formatting to an index entry itself (for example, font colour or highlight), and this will appear in the final index.

Sometimes you need to see the INDEX field, and sometimes you need to see the resultant index. You can right-click in the field (or index)

and click **Toggle Field Codes**, but a quicker method is to use **Shift + F9**.

Indexing multiple documents

You can create a single index for two or more Word documents using the RD field (Referenced Document field). The index itself could be in an entirely separate document (this is often the simplest approach), or it could be in one of the existing documents. The documents need not be in the same folder. Ensure that page numbering starts correctly in each document (it is not necessary to display the page number), otherwise the numbering in the index will be wrong.

To create an index that combines entries from more than one document, close all the documents except the one in which you want the index
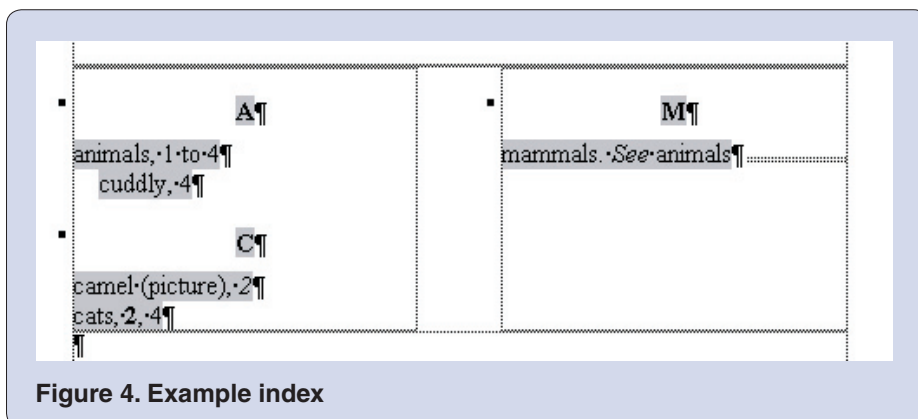
Figure 4. Example index
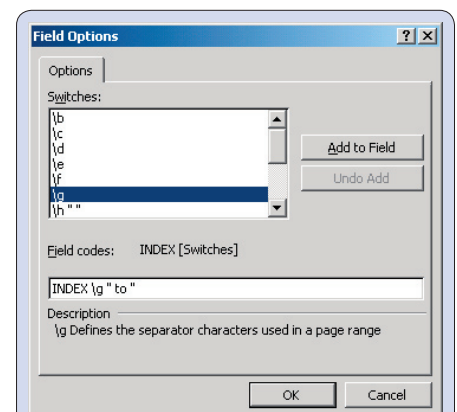
Figure 5. Field options

(you shouldn't have to do this, but sometimes Word doesn't generate the index correctly if you don't).

Open the **Field** dialog **(Insert>Field)**. In the Categories list select Index and Tables. The Field names box appears. Select RD. The field appears in the box at the bottom. The switch that indicates a referenced file is **\f**, so type this (or choose **Options** to add the switch) followed by the file name of the first document you want to include. If the filename contains spaces, enclose the name in double quote marks. Do not include the document that contains the index in the list of referenced documents.

Choose **OK>OK**. Word creates the RD field. Rather than repeating this process for each of the documents that you want to reference, copy and paste the field and then edit it. The RD fields must physically be in the same sequence as the documents themselves, otherwise the order of the locators will be wrong. For example, you might have an entry 'cats 3, 17, 5'.

Insert the index. If all you want is a basic index, copy and paste the RD field and then edit it. When you edit your RD field to INDEX, it changes colour to grey. You might see something like the example shown in Figure 6.

Right-click on the INDEX field and click **Update Field**. The combined index appears.

RD fields can sometimes go awry. You can usually solve the problem by shutting down Word and then restarting. If this doesn't help, delete and re-insert the RD fields.

Modifying the sort order

The default sort order (alphabetisation) in a Word index is word by word. Occasionally, we want letter-by-letter sorting, as shown in Table 3.
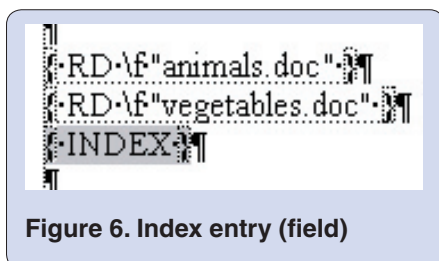

Figure 6. Index entry (field)

To force letter-by-letter alphabetisation, if a heading (or subheading) contains a space, insert a semi-colon at the end of the text for a heading, and follow it by the text with all the spaces omitted. For example:
{ XE "data records;datarecords" }.

Capitalisation affects the sort order, as does white space.

Multiple indexes

Occasionally, it's useful to have more than one index (in indexing terminology, this is known as having multiple sequences). For example, in a software manual you may want a separate index for screen names. You can do this using the **\f** switch (this has nothing to do with the **\f** switch in RD fields).

Table 3. Sort order	
Word by word	**Letter by letter**
data	data
data records	database
database	data records
dates	dates

To create another index, first choose a convenient identifier. Create or modify each index entry so that it contains the **\f** switch followed by the identifier. For example, an index entry might look like this: { XE "Mark Index Entry" \f "screens" }. To create the index, ensure that the INDEX field uses the same identifier, for example:
{ INDEX \f "screens" }.

There is no limit to the number of indexes; each index can be located anywhere in the document and you can use all the other INDEX switches.

Location of cross-references

Where should cross-reference index entries be located in a document?

One option is to put a cross-reference index entry near the first occurrence of the related index entry, but this can become confusing.

A better option is to put them all together at some convenient location in the document. If you put each index entry in a separate paragraph you can sort them alphabetically (which simplifies editing). However, from a purist's perspective, it's poor practice to have empty paragraphs that don't contain printable text. Also, if there isn't enough white space in the document, the pagination becomes upset (you could put all the entries in a single paragraph, but it gets cluttered, and you can't sort the entries).

Another option is to put the index entries in a separate document and use the RD field to use the entries for building the index. You can put each entry in a separate paragraph, so you can sort them alphabetically. Since the document is separate from the main text, you can put your own notes and comments in it. A disadvantage is that you have an extra document with which to deal. ■

Dr Mike Unwalla MISTC has been documenting software products since 1994. He has been a freelance writer since 1999. He is a member of the Society of Indexers.
E-mail: mike@techscribe.co.uk
Website: www.techscribe.co.uk