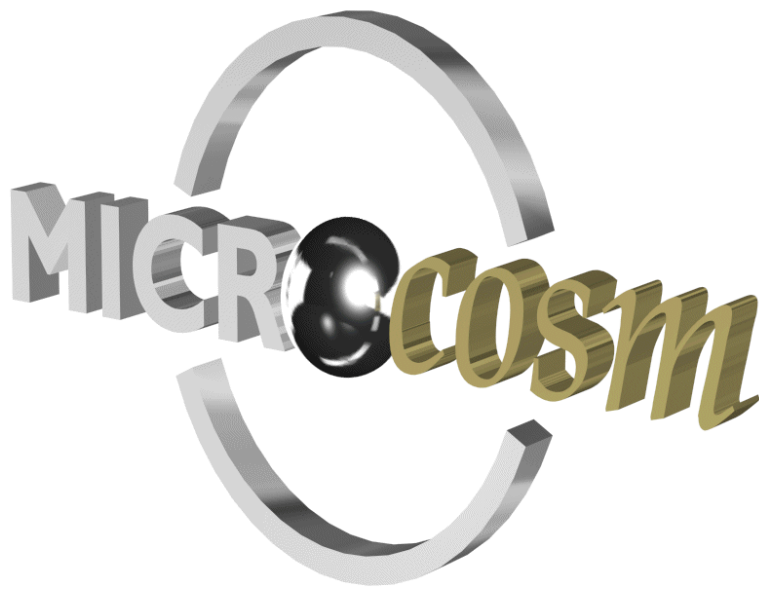


# Microcosm Pro

for Windows

A Tutorial





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December 1998

Additional information about Microcosm is available on our World Wide Web site:

<http://www.multicosm.com/>

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# Contents

<b>1 Conventions</b>	<b>7</b>
1.1 Typographical Conventions	7
1.2 Window Systems	7
1.3 Microcosm Pro Pre-Release Documentation	7
<b>2 Using Microcosm</b>	<b>9</b>
2.1 Starting Microcosm	9
2.2 Leaving Microcosm	12
<b>3 Finding and Viewing Documents</b>	<b>15</b>
3.1 Finding Documents	15
3.2 Viewing Documents	18
<b>4 Finding and Following Links</b>	<b>23</b>
4.1 Following Visible Links (Buttons)	23
4.2 Finding Single Invisible Links: Follow Links	27
4.3 Finding All Invisible Links: Show Links	29
4.4 Finding Similar Documents: Compute Links	30
4.5 Finding Links from Outside a Document	31
4.6 Results	33
4.7 Information Search - an Exercise	36
4.8 Summary: Finding and Following Links	37
<b>5 Creating Links</b>	<b>39</b>
5.1 Linkbases	39
5.2 Link Anchors	39
5.3 Link Types	39
5.4 Creating a Button	40
5.5 Creating a Generic Link	43

6 Adding and Removing Documents	47
6.1 Adding Documents to an Application	47
6.2 Moving and Copying Documents	50
6.3 Removing Documents	52
7 Advanced Microcosm Features	54
8 Index	55

# 1 Conventions

This material provides an introduction to Microcosm. By working through a number of step-by-step exercises you will learn how to use Microcosm. In addition, you will be introduced to some of the features of Microcosm that makes it unique among hypertext and hypermedia systems.

Before you start using Microcosm, it is important to understand the conventions used in the documentation.

## 1.1 Typographical Conventions

Formatting convention	Type of information
→	Step-by-step procedure.
<i>italic</i>	The word is being used as a Microcosm technical term, e.g. <i>generic link</i> .
<b>Bold</b> type	A reference to a Microcosm function or process.
<b><i>Bold Italic</i></b> type	A reference to another part of the documentation.
Monospaced font	Used for examples of data such as Microcosm application names, Windows File System directory names, or files names.

## 1.2 Window Systems

Microcosm Pro runs on Windows 95, Windows 98 and Windows NT. On all these systems the interface described by this documentation is identical.

## 1.3 Microcosm Pro Pre-Release Documentation

This documentation is intended to help people get started with using applications written using Microcosm Pro. This pre-release version of the documentation has been converted from previous documentation intended for use with Microcosm Plus. While every care has been taken to ensure that the content is correct, we ask our readers to understand any small differences that may appear in screenshots etc, due to changes in the latest version that have not yet been corrected.





## 2 Using Microcosm

In order to learn about Microcosm you will be using an application called *Caerdroia*, which is concerned with mazes and labyrinths. The information for this application is taken from the 25th issue of the Journal of the Caerdroia Maze and Labyrinth Research Group.

### 2.1 Starting Microcosm

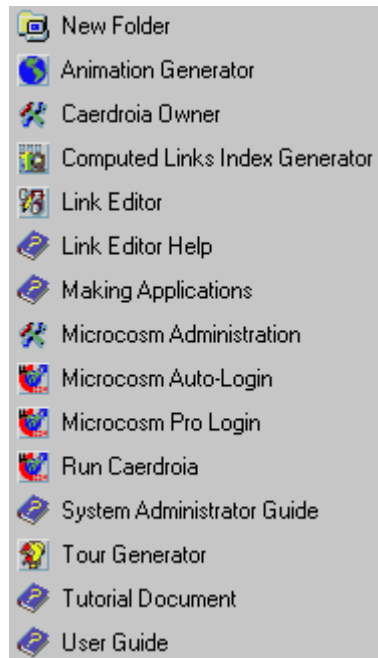
After you have installed Microcosm Pro:

- ➔ Switch on your computer and make sure you are in Microsoft Windows
- ➔ Single click on the Start button in the Task Bar and move the pointer to Programs and then to Microcosm Pro.

The menu of all Microcosm Pro components will pop-up.

- ➔ Single click on Microcosm Pro.

*The list of  
MicrocosmPro  
components*

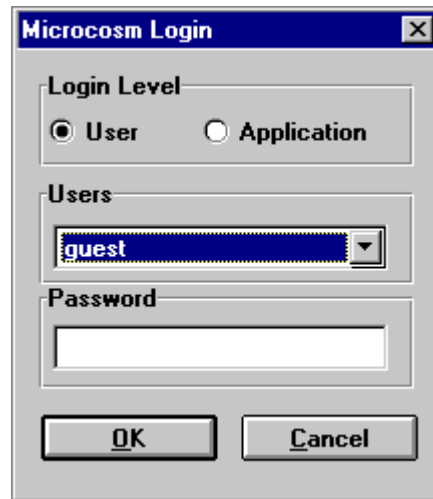


From this list of components

- ➔ Click on the **Microcosm Pro Login**  entry.

The Microcosm logo will appear followed by the Microcosm login window.

*Microcosm login window*



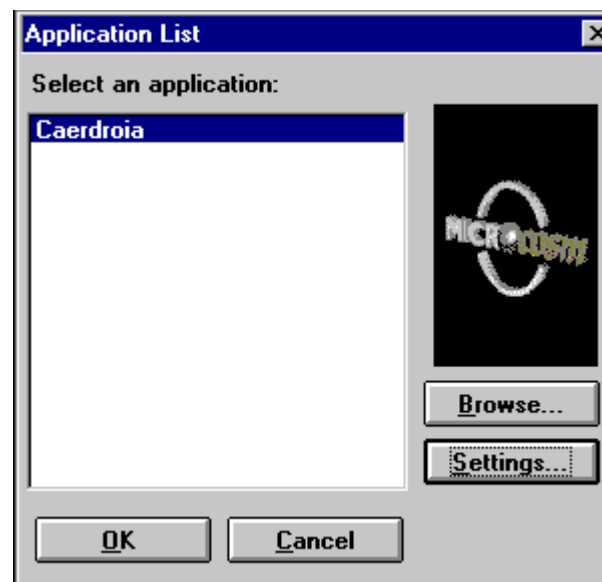
- **1** First you have to sign on as a specific user. When Microcosm is first installed there is only one user, *guest*, which is already selected.
- **2** You now have to enter your *password*. Click in the **Password** field (or use the **Tab** key on the keyboard) and enter your password. Make sure you have the correct mix of lower and upper case as the text must be in the correct (upper or lower) case. The default password for the user *guest* is *guest* (all lower case).

**NOTE** If you get an error message after typing in your password, click on the Password field again and retype the password.

- **3** Click **OK**.

The dialogue box will change to enable you to select the application you want. In general you select the application you wish to see. If you have just installed Microcosm there will be only one application in the list, *Caerdroia*, which is already selected.

*Microcosm login window showing list of applications*



→ Double click on Caerdroia.

Or

→ Click on the application (in this case Caerdroia) to select it

→ Click on **OK**

There will be considerable screen activity while the Microcosm application is loaded. There are three things to notice:

◆ **Start-up Shortcuts**

Microcosm Pro allows authors to provide shortcuts to avoid the login process if you wish. The list of Microcosm Components accessed from the Start Menu included a shortcut entitled **Run Caerdroia**. You could use this shortcut to start the Caerdroia application as user *guest* while bypassing the login procedure described above.

◆ **Gas Gauges**

If you are using the *Caerdroia* application for the first time, a Microcosm *gas gauge* will appear several times while internal files are built. After their first appearance, the gas gauge will only appear if significant changes are made to the application.

◆ **Icons**

Three icons will appear in the Task Bar. These represent Microcosm software components and their functions will be described in detail in other sections.

*The Microcosm icon*



→ Click this icon to show the **Select a Document** window which is used to choose those documents that you wish to see.

Or

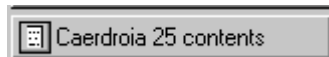
→ Right click will produce a menu which contains a number of useful items which are described in other sections. The most important is **Close**, which will terminate Microcosm.

*The Filter Manager icon*



This icon gives access to the **Filter Manager** which is described in other sections.

The third icon represents the Caerdroia Start-up page:

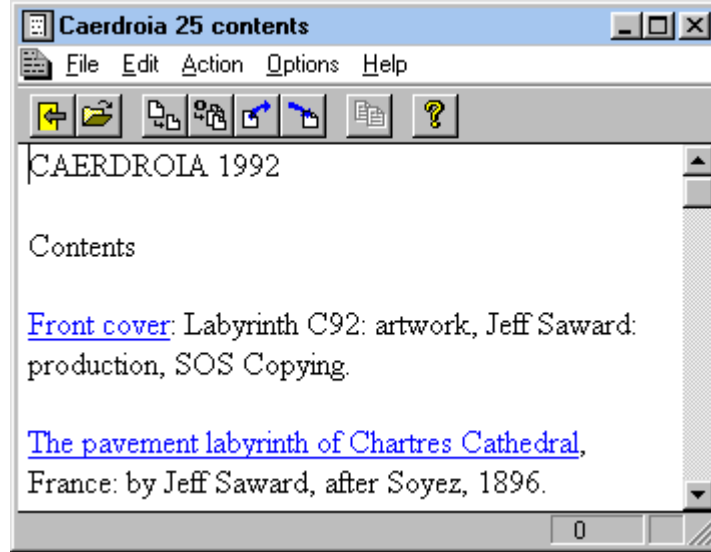


◆

## Startup Document

If you have chosen the Caerdroia application, a document Caerdroia 25 contents will appear. This is a **Startup document**

*The Caerdroia  
Startup document*




This document has *buttons* which allow you to see other documents in the Caerdroia application. In this example the buttons are shown in blue and underlined. The appearance of the buttons can be changed using the Option menu. If the system you are using does not have the buttons underlined

→ Click on **Options** in the menu bar.

→ Click on **Underline Buttons** in the drop down menu.

If you are following this Tutorial, it is best to close this document at this time.

→ Click on the Quit button .

Microcosm can be set to open any number of Startup documents. See **Startup Documents** in the *System Administration Guide* for more information

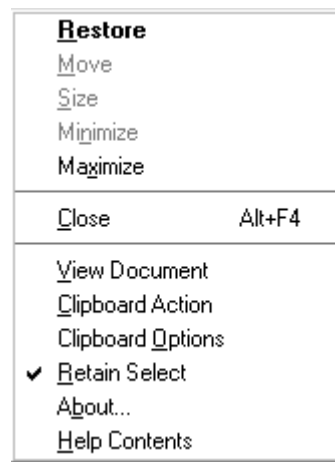
## 2.2 Leaving Microcosm

When you wish to leave Microcosm, right click on the Microcosm icon



in the Task bar. A pop up menu will appear

*Leaving  
Microcosm*



➔ Click on **Close**

This will end your current Microcosm session.




## 3 Finding and Viewing Documents

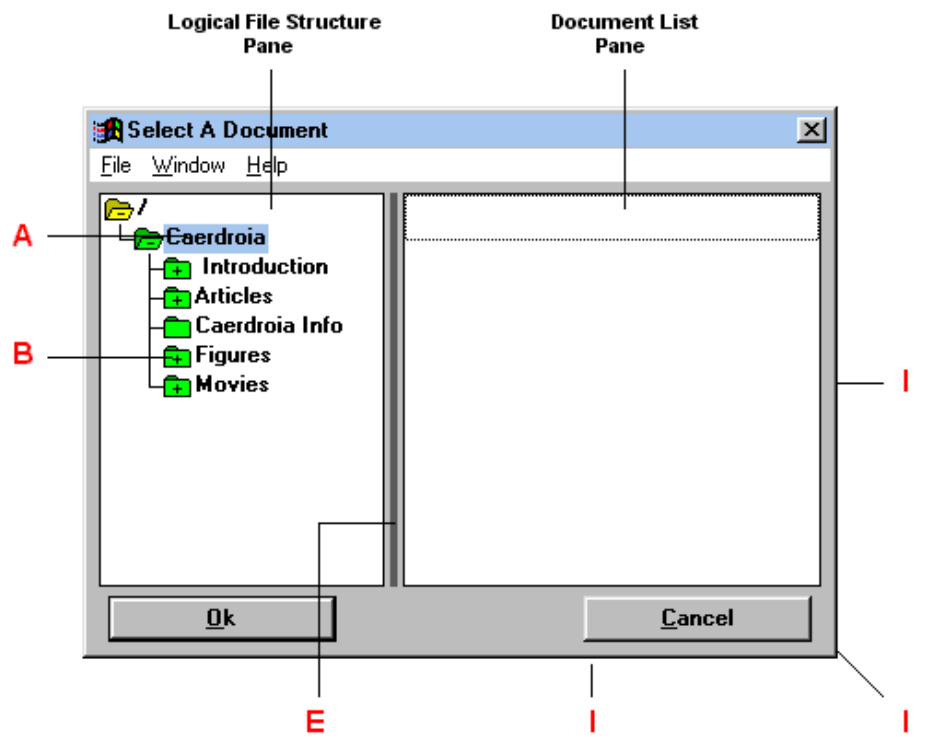
An application is made up of a number of documents that have been collected together by the *author* of the application. You can find the complete list of documents in an application using the **Select a Document** dialogue. From this dialogue, you can *view* (look at) any of the document you wish.

### 3.1 Finding Documents

To see the documents in the application

→ Click on the Microcosm icon  in the Task bar. The **Select a Document** dialogue box will appear.

*Select a Document:  
Window Structure*



- A** double-click on branches with a minus sign to collapse that branch.
- C** double-click on branches with a plus sign to expand that branch.
- E** The widths of the folder structure pane and the document list pane can be adjusted by dragging the dividing bar.
- I** The Windows Resizing handles.

The documents in an Microcosm application (e.g. Caerdroia) are organised into Folders. The Folders are organised into a hierarchy of branches. The **Select a Document** window shows the Folder hierarchy in the left hand pane and the

documents associated with that branch in the hierarchy in the right hand pane. Each branch can be seen as a folder holding a set of documents.

You can see every document in the application by clicking on the branches and documents in the *Select a Document* Window.

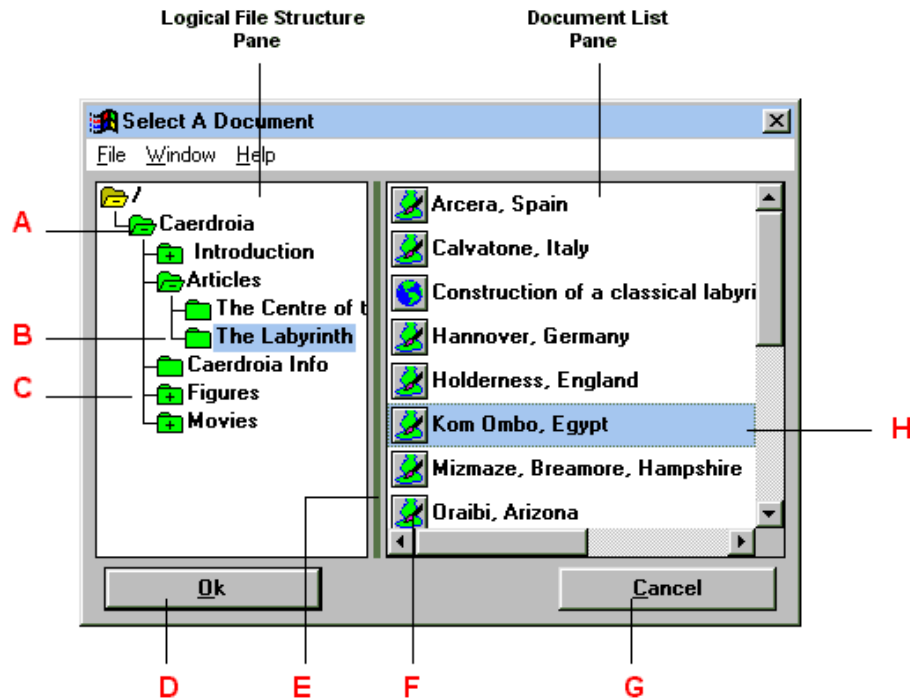
When you first start the Caerdroia application, the *Select a Document* window will appear as above.

→ Double Click on Articles in the Folder Structure pane.

→ Single click on The Labyrinth.

The *Select a Document* will now look like this.

*Select a Document*  
*The Folder*  
*Hierarchy*



**A** double-click on branches with a minus sign to collapse that branch.

**B** the current branch is highlighted.

**C** double-click on branches with a plus sign to expand that branch.

**D** click here to view the currently selected document.

**E** drag bar to adjust the width of the folder structure pane.

**F** icons show document types.

**G** click on **Cancel** to close the window.

**H** the selected document is highlighted. Click on a document to select it, then click on **OK** to view it, or double-click on the document to select and view it.

Branches that have lower levels in the hierarchy are represented by (a folder with a + sign) if the folder is closed and by (a folder with a - sign) if the folder is open. Branches with no lower levels are represented with a blank folder .



The list of documents in a particular branch can be seen by selecting (with a single click) the branch in the Folder Structure. If the Document List in the right hand pane is empty there are no documents in that branch.

The root of the hierarchy is a branch with the name `/`.

Microcosm can have several applications. The branches of the application you chose when you signed on are coloured green. All other branches are yellow. In this case there is only one application, `Caerdroia`, so all the branches except the root are coloured green.

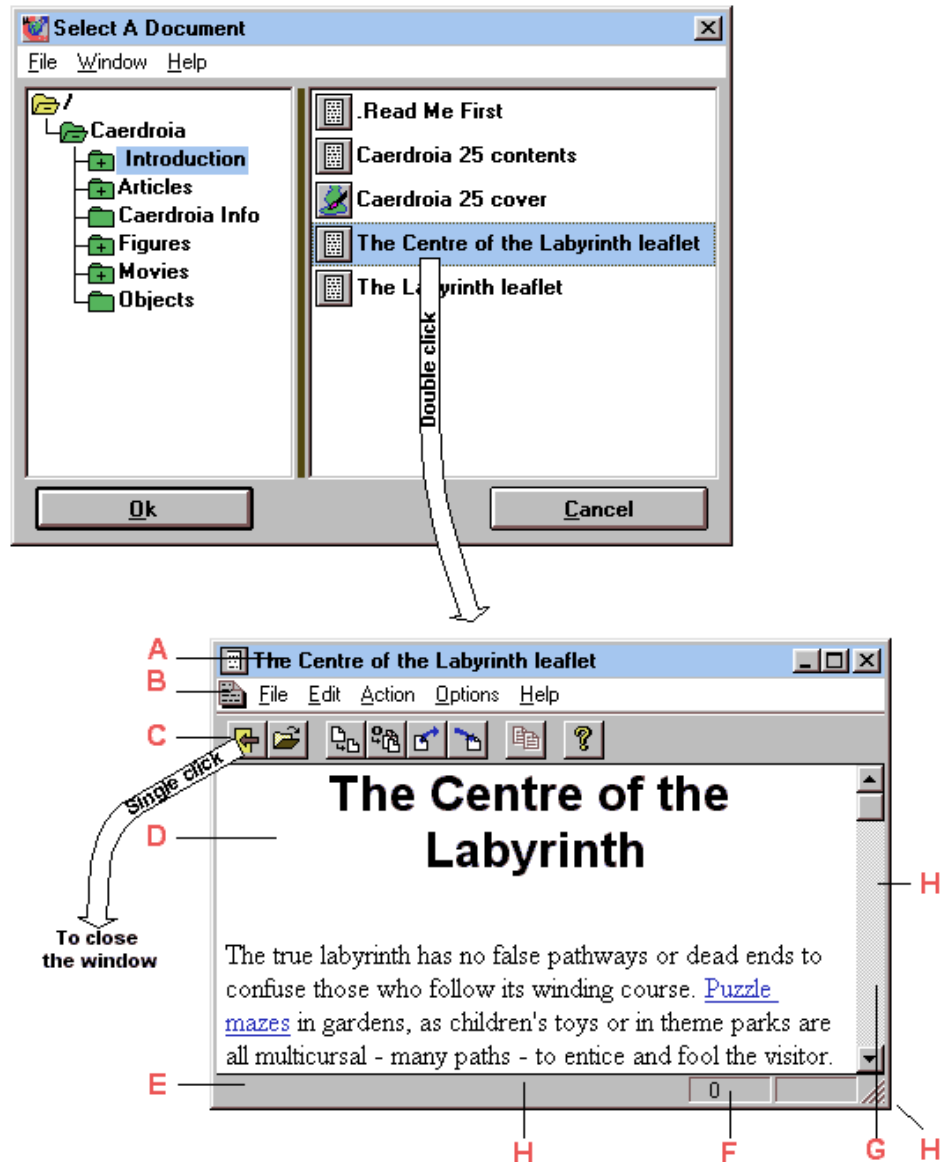
## 3.2 Viewing Documents

When you have used the **Select a Document** dialogue to identify a document you wish to view you can look at it.

### 3.2.1 Viewing Text Documents


In the example below, the document The Centre of the Labyrinth leaflet in the Caerdroia/Introduction branch is being displayed by the **Text Viewer**.

*Using the Text Viewer*



**A** The name of the document. This will be the name that appears in the Select a Document dialogue.

**B** The Text Viewer menus. Later in this tutorial there is a description of the Action Menu. The other items in the menus are described in the *User Guide*.

**C** The Text Viewer toolbar. The buttons on the toolbar are shortcuts to items in the menus. In this Tutorial the most important button is . If you click on this button, the Text Viewer will remove this document from the screen. The other items in the toolbar are described in the *User Guide*. If you place the mouse pointer over a button in the toolbar, a *Tool Tip* will appear reminding you of the function of the button.

**D** The document display area. The size of this area can be modified by dragging the resizing handles **H**.


**E** The Status Bar. When the mouse pointer is over a button, information about the link will appear here.

**F** Information about the cursor's position within the document.

**G** The Scroll Bar used to move through the document. If the document fits into the current size of the window, the scroll bar disappears.

**H** Handles for resizing the Window.

**NOTE** If you are following the Tutorial, it is best if you close The Centre of the Labyrinth leaflet now.

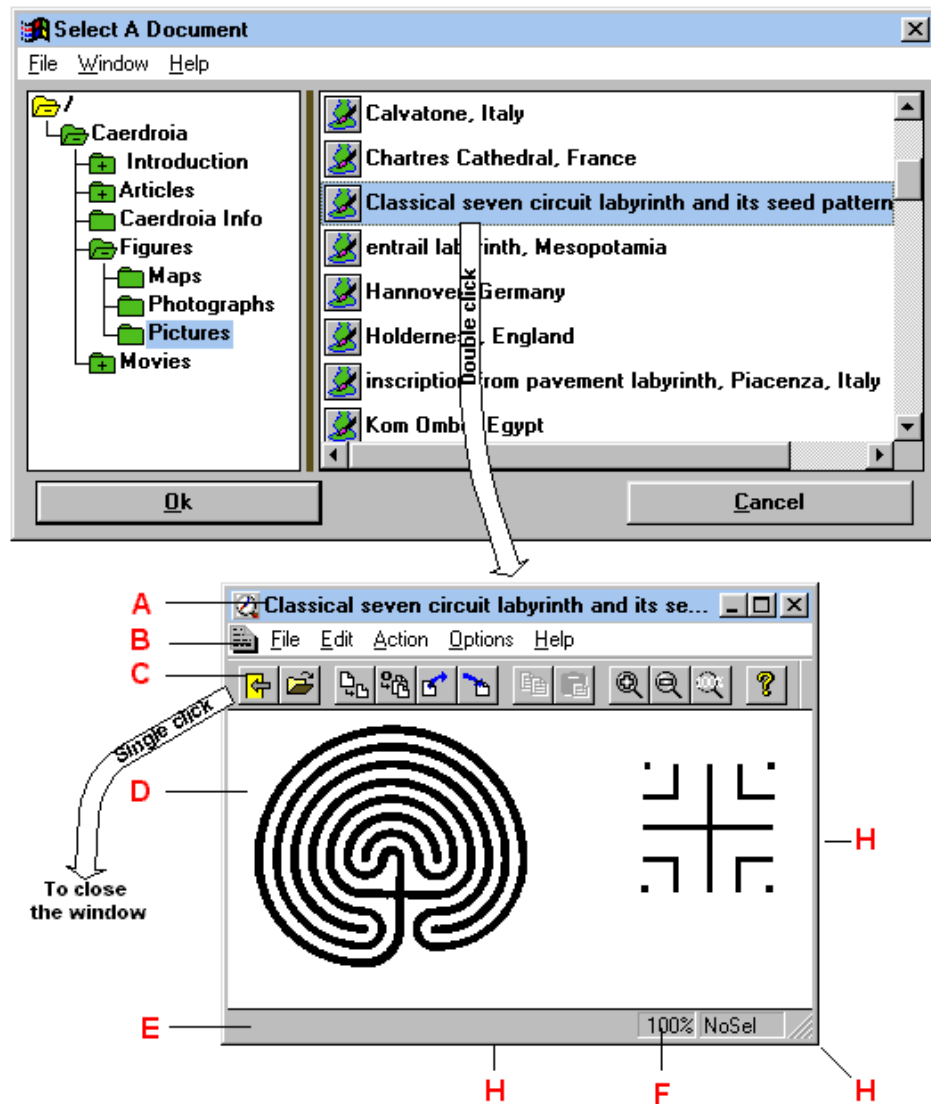
→ Click on the button  in the toolbar to close the window.

### 3.2.2 Viewing Graphics Documents

Graphics documents include pictures, *video* and *Microcosm Animations*.


In the example below, the document *Classical seven circuit labyrinth and its seed pattern* in the *Caerdroia/Figures/Pictures* branch is being displayed by the **Graphics Viewer**.

*Using the  
Graphics Viewer*



**A** The name of the document. This will be the name that appears in the Select a Document dialogue.

**B** The Graphics Viewer menus. The items in the menus are described in the *User Guide*.

**C** The Text Viewer toolbar. The buttons on the toolbar are shortcuts to items in the menus. In this Tutorial the most important button is . If you click on this button, the Text Viewer will remove this document from the screen. The other items in the toolbar are described in the *User Guide*. If you place the mouse pointer

over a button in the toolbar, a *Tool Tip* will appear reminding you of the function of the button.


**D** The document display area. The size of this area can be modified by dragging the resizing handles **H**. If the document will not fit the current size of the window scroll bars will appear.

**E** The Status Bar. When the mouse pointer is over a button in the document, information about the link will appear here.

**F** Information about the current zoom size of the document.

**H** Handles for resizing the Window.

**NOTE** If you are following the Tutorial, it is best if you close Classical seven circuit labyrinth and its seed pattern now.

→ Click on the button  in the toolbar to close the window.




## 4 Finding and Following Links

In order to browse and read a hypermedia application you need to read, look at or listen to documents in the application. Moving from one document to another is known as *navigating the documents*.

Essentially there are two starting points for navigating the documents in an application – either from *outside* of a document or from *within* a document.

You have already seen how to look at documents, essentially navigating from *outside* the documents by using the **Select a Document** window.

- ➔ Click on the Microcosm icon  in the Task bar. The **Select a Document** dialogue box will appear.
- ➔ Single and/or double click on the branch (in the left hand pane) you wish to see and double click on documents (in the right hand pane) to display them.

This process is described fully in *Application Documents*.

You can use **Select a Document** to look at all the documents in an application. The Folder Structure of application is often organised to reflect some characteristic of the documents which does not reflect the content of the documents. For instance, in Caerdroia documents have been organised by their type (Maps, Photographs, Pictures) and it is not clear what the relationships exist between the documents. These relationships, or *links*, are contained within the documents.

You can start to find and see related documents from *inside* the document you are currently reading. In this case, you are effectively following a trail of relationships (*links*) defined by the author (this process is known as *following links*).

### 4.1 Following Visible Links (Buttons)

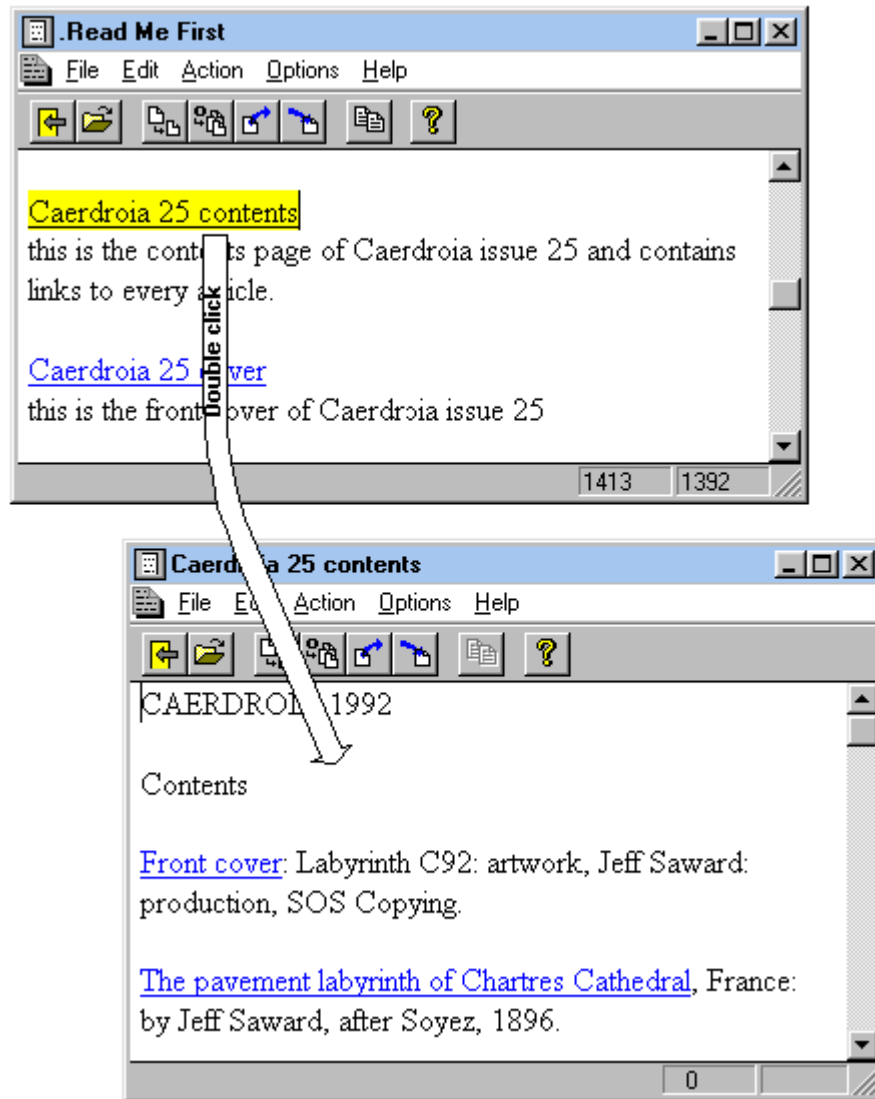
Visible links are called *buttons* and indicate the start point of a link. Microcosm's **Text Viewer** displays buttons in a different colour from the main body of the text.

#### 4.1.1 Following Buttons In Text Documents

In order to follow a button you first have to have a text document on the screen.

- ➔ From the **Select a Document** dialogue box click on the Introduction branch in the Folder Structure (left hand) pane and the documents in that branch will appear in the Document List (right hand) Pane.
- ➔ Display the document .Read Me First by double clicking on that line in the document list.
- ➔ Scroll through the document (using the scroll bar on the side of the window) until you see the phrase Caerdroia 25 Contents which will be highlighted in blue to show the presence of a button.
- ➔ Use the mouse to move the pointer over the coloured text. You will notice that the pointer turns into a hand to indicate the presence of a button.
- ➔ Double click on the coloured text (the button) to follow the link. This opens the Caerdroia 25 Contents document.

Text Documents:  
Following a  
Button Link



NOTE. If the double click is successful (some mice are difficult to use!) the button will be turned a yellow/green colour. There will be a short delay while the link is followed.

If you are following this tutorial, you will now see A **Result** window saying *You Have Seen This Document Before.*

The 'Seen Before'  
window



Every time you view a document that is in the History, this message will appear. In this case it has been produced because Caerdroia 25 Contents was shown as a Startup Document when the Caerdroia application was started.

➔ Click on **OK** (or click anywhere on the screen) to remove the message.



If you find the message tedious, and do not wish to see it again.

➔ Click on **Stay Away**.

To continue following links:

➔ Find the phrase `The Pavement Labyrinth of Chartres Cathedral`, again coloured blue to show it is a button, and double click on it to follow the link.

➔ Click on the `Contents` document window and continue following button links to other documents.

### 4.1.2 Following Buttons In Pictures

From the **Select a Document** dialogue box

➔ Double click on the `Figures` branch to reveal the lower level branches.

➔ Single click on the `Maps` branch.

A list of documents for the `Maps` branch will appear in the Document List Pane.

➔ Double click on the document `Distribution of Stone Labyrinths in Fennoscandia`.

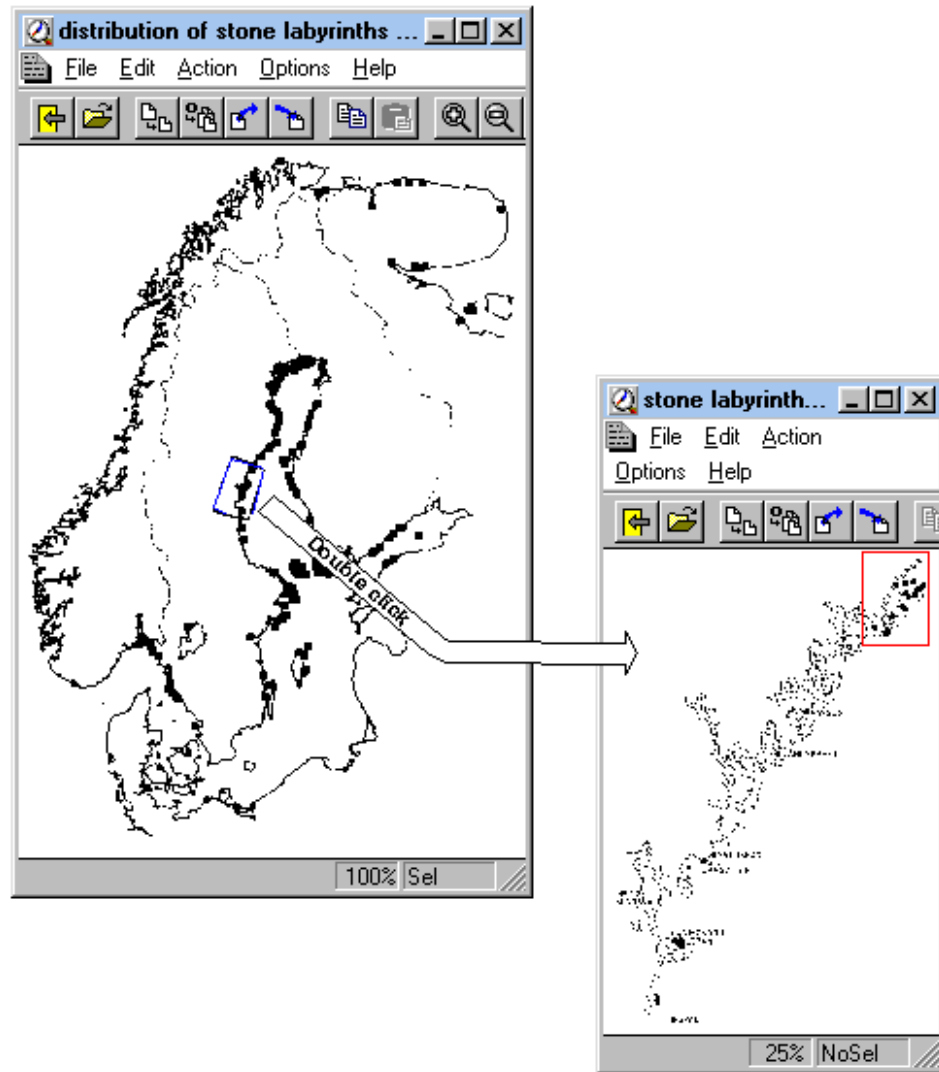
**NOTE.** You will have to adjust the width of the `Select a Document` window to see the full document name.

You will see a map of Norway and Sweden with a red rectangle. The rectangle is a button.


➔ Move the mouse pointer over the rectangle and note how the pointer turns to a hand to indicate the presence of a button.

➔ Double click within the rectangle. You will follow the link to a larger scale map. In the top right hand corner there is another button which you can follow if you wish.


*Graphics  
Document:  
Following a  
Button Link*



If you are following this tutorial using Caerdroia application you will see that the document `stone labyrinth sites in ...` on your screen is much larger than in the diagram above. In order to make the diagram small, the document has to be *zoomed* to 25% of its original size.

NOTE. You are in charge of the windows on the screen. No windows are closed automatically. When you have finished reading a document you should use the  button to close (not minimise) the window. If too many documents are left open (or minimised) the system will grind to a stop.

If you are following the Tutorial, it is best if you close all the open windows except **Select a Document** now.

➔ For each window you wish to close, click on the button  in the toolbar for that window.

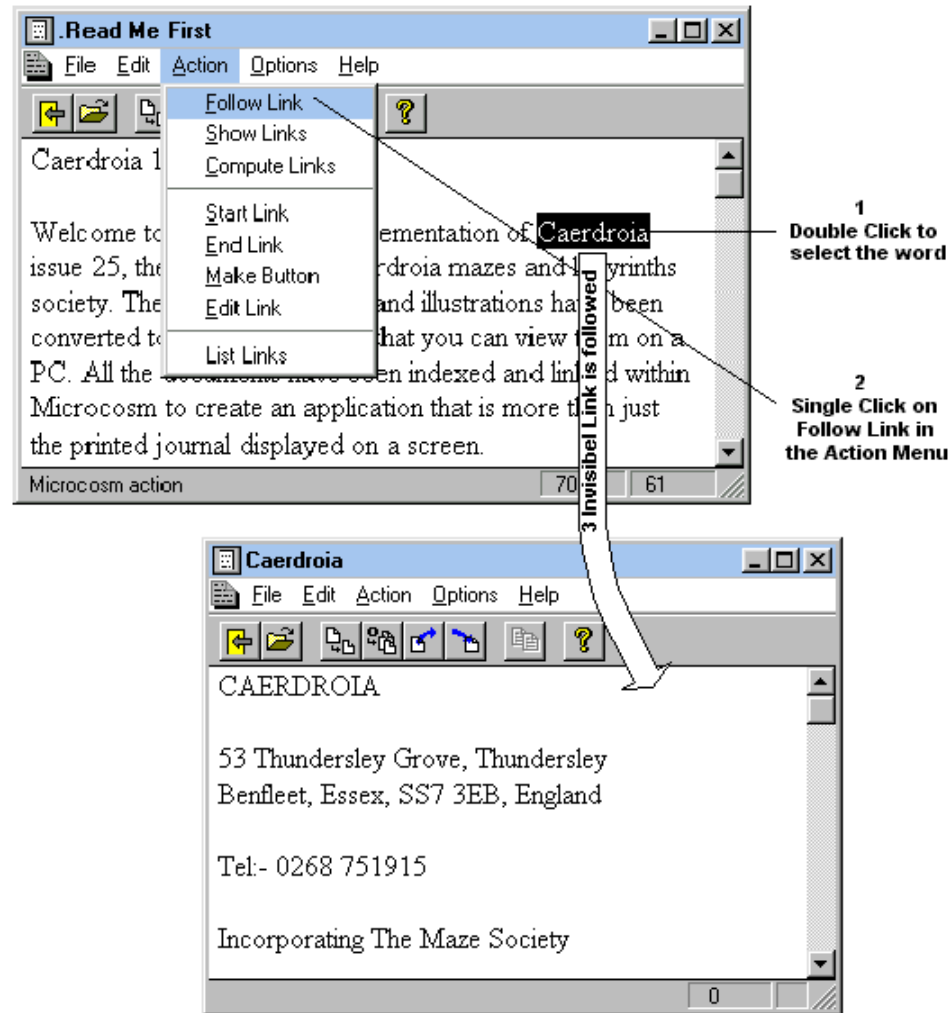
## 4.2 Finding Single Invisible Links: Follow Links

Links in test documents may have been made so that they are *invisible*. To find these links, you select a word or group of words and check if there is an invisible link in that selection. If only one invisible link is present, the document to which it has been linked will appear (i.e. the link will be *followed*). If more than one invisible link is found you will be given a list of all identified links in the **Results** dialogue box. If the author has not made a link relevant to the particular selection, a dialogue box will appear saying *No Links Found*.

**Follow Link** can be used to find *invisible* links.

➔ From the text document *.Read Me First* select any occurrence of the word *Caerdroia* and choose **Follow Link** from the **Action** menu.

*Finding invisible links on a single word*



(Actually there may be more links offered in the results box, in which case you will need to choose which link to follow)

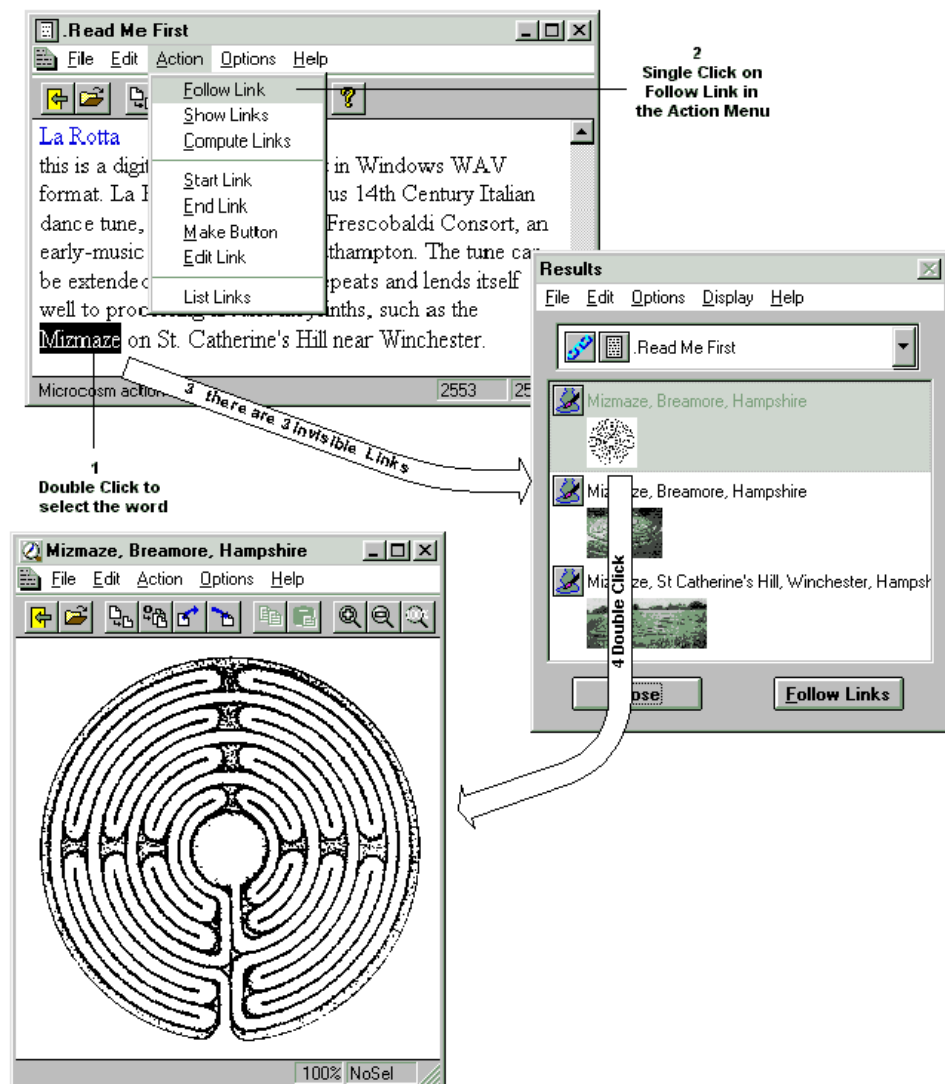
**NOTE** To highlight a word you can double click on it or drag the pointer across the word(s).

- ➔ Highlight other occurrences of *Caerdroia* and choose **Follow Link** from the **Action** menu. You will see that wherever the word occurs the same link is followed. This is because the author has made a *generic* link on that word. A *generic link* is a link that is made once but allows any occurrence of that word throughout the application to follow the same link.

Some words and phrases have more than one link attached to them. If that is the case, you will be given the choice of which link to follow via the **Results** dialogue box which will automatically appear.

- ➔ From the .Read Me First document find the word Mizmaze in the section headed La Rotta.
- ➔ Select the word Mizmaze by double clicking on it (or by dragging the mouse pointer) and choose **Follow Link** from the **Action** menu.

*Finding invisible links on a single word. There are three choices*




The **Results** box will appear showing a list of links to three documents. In this example there are three possible choices.

- ➔ From the list double-click on the documents to display them.

In this example, the Mizmaze, Braemore, Hampshire has been chosen.

**NOTE** If you are following the Tutorial, it is best if you close all the open windows except **Select a Document**.

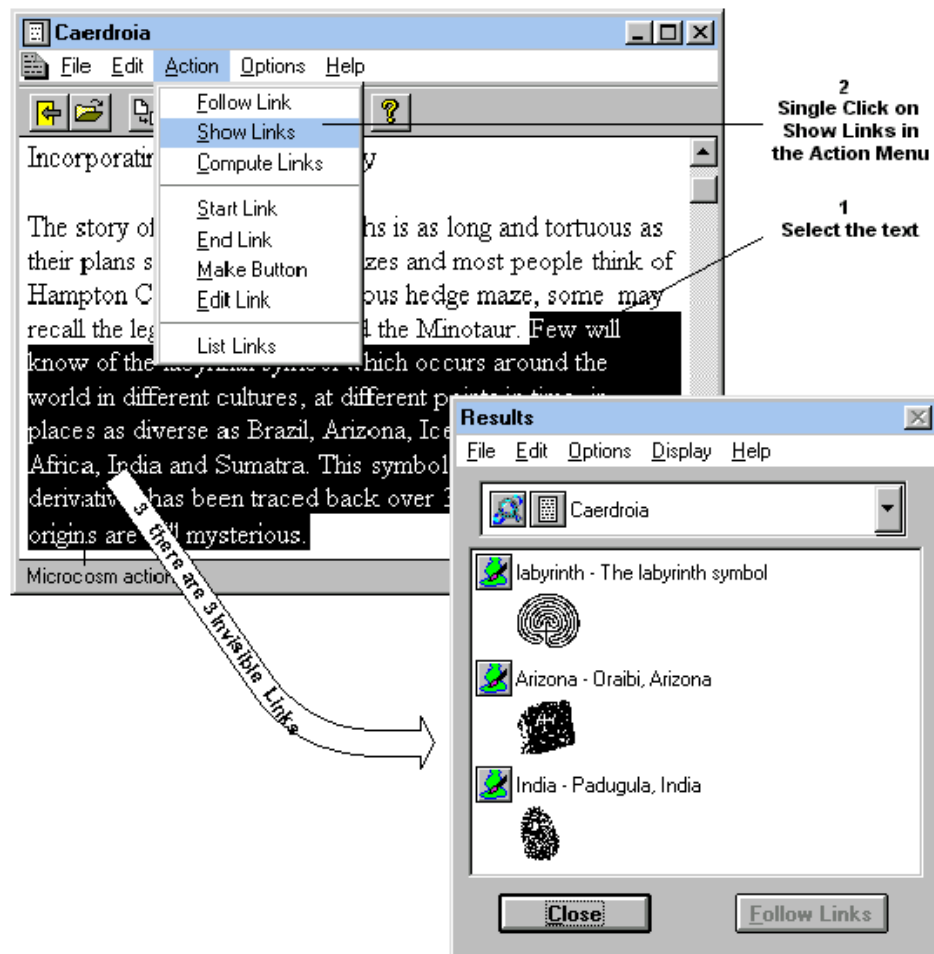
→ Click on the button  in the toolbar to close the window.

### 4.3 Finding All Invisible Links: Show Links

Since many of the links in Microcosm can be invisible links, you may want to find if a piece of text (rather than an individual word) contains any links.

- Use the **Select a Document** dialogue box to open the document Caerdroia (in the Caerdroia Info branch)
- Highlight the sentence which starts Few will know of the labyrinth symbol... in the first paragraph and choose **Show Links** from the **Action** menu.

*Using Show Links*



The **Results** box will appear with a list of links to documents.

**NOTE** Show Links is a powerful tool for finding links in a piece of text. There may be a delay before the **Results** box appears, especially if you select a significant amount of text, as in the example above.

➔ Double click on a link in the list to see the document.

## 4.4 Finding Similar Documents: Compute Links

**Compute Links** works by comparing the words and phrases in a piece of selected text with the words and phrases in all the text documents in the application (it does this using indexes which are generated earlier by the author). In so doing, **Compute Links** is suggesting other documents which are likely to be related to the document in question. However, because the links have not been specifically authored and have been generated using information retrieval techniques, these relationships will not be completely reliable and will only produce links to text based documents..

When text is passed to **Compute Links**, each of the words in the selection is *stemmed*. For example, if the selection contains the word 'fields', **Compute Links** will remove the 's' and search for the occurrence of 'field'. The stemming process removes all common prefixes and suffixes. In addition to stemming, common words like 'the' and 'and' are removed from the selection.

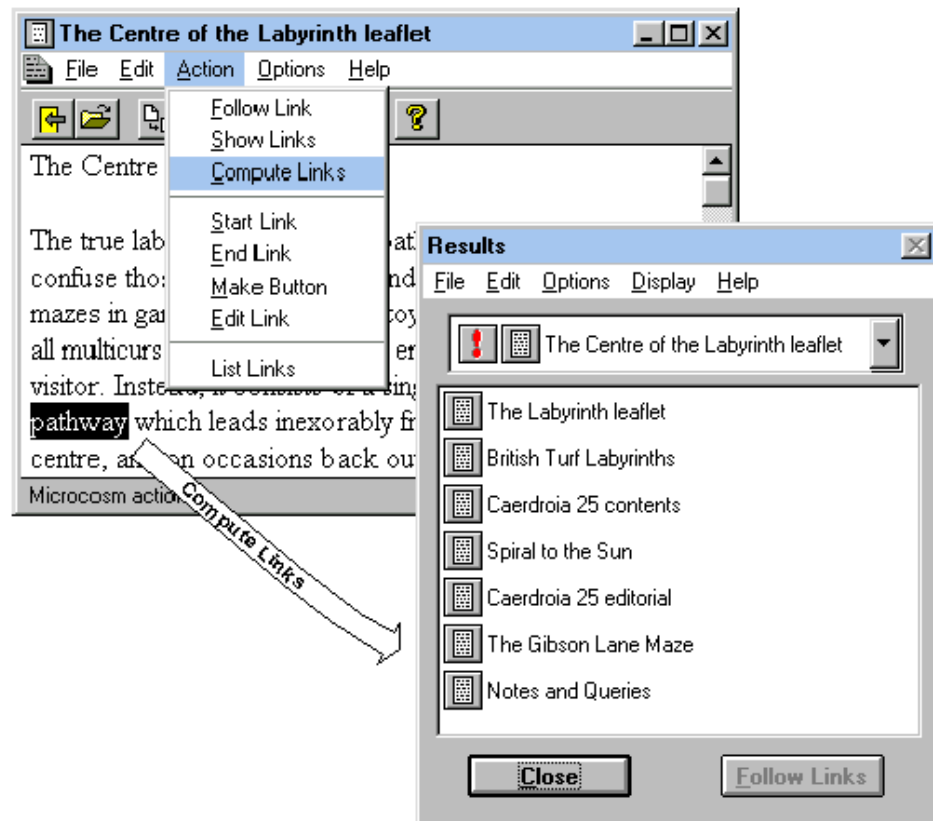
The **Compute Links** process uses the sequence of stemmed words to search for occurrences of those words in the text documents in the application. If the words are found, Microcosm produces a list of links to those documents in the **Results** box. The documents are ordered, with the most useful at the top of the list.

If you select a group of words it will search for occurrences of those words as phrases as well as giving you occurrences of the individual words.

➔ Use the **Select a Document** dialogue to open The Centre of the Labyrinth leaflet document in the Introduction branch


➔ Select pathways in the first paragraph and choose **Compute Links** from the **Action** menu.

The **Results** box will appear.



If you follow the first link in the list to The Labyrinth leaflet, you will be able to see references to paths and pathways in the first paragraph.

**NOTE** If you are following the Tutorial, it is best if you close all the open windows except **Select a Document**.

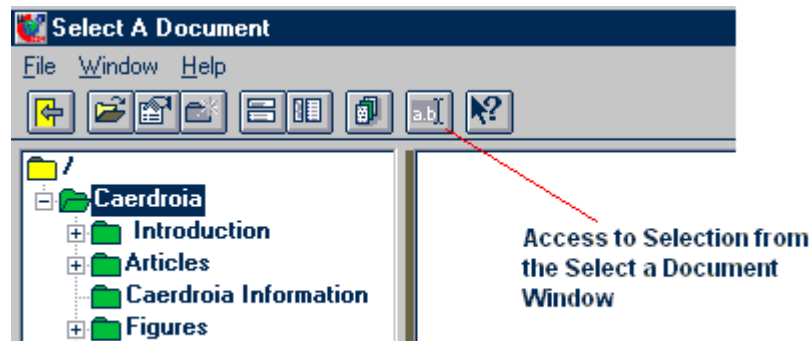
→ Click on the button  in the toolbar to close the window.

## 4.5 Finding Links from Outside a Document

You have already used the **Select a Document** dialogue box to see documents. Microcosm has other ways of identifying documents of interest.

You can use the **Selection Filter** to search for links without having a document open on the screen.

Access to the Selection Filter is from the button on the Select a Document Window as shown below.

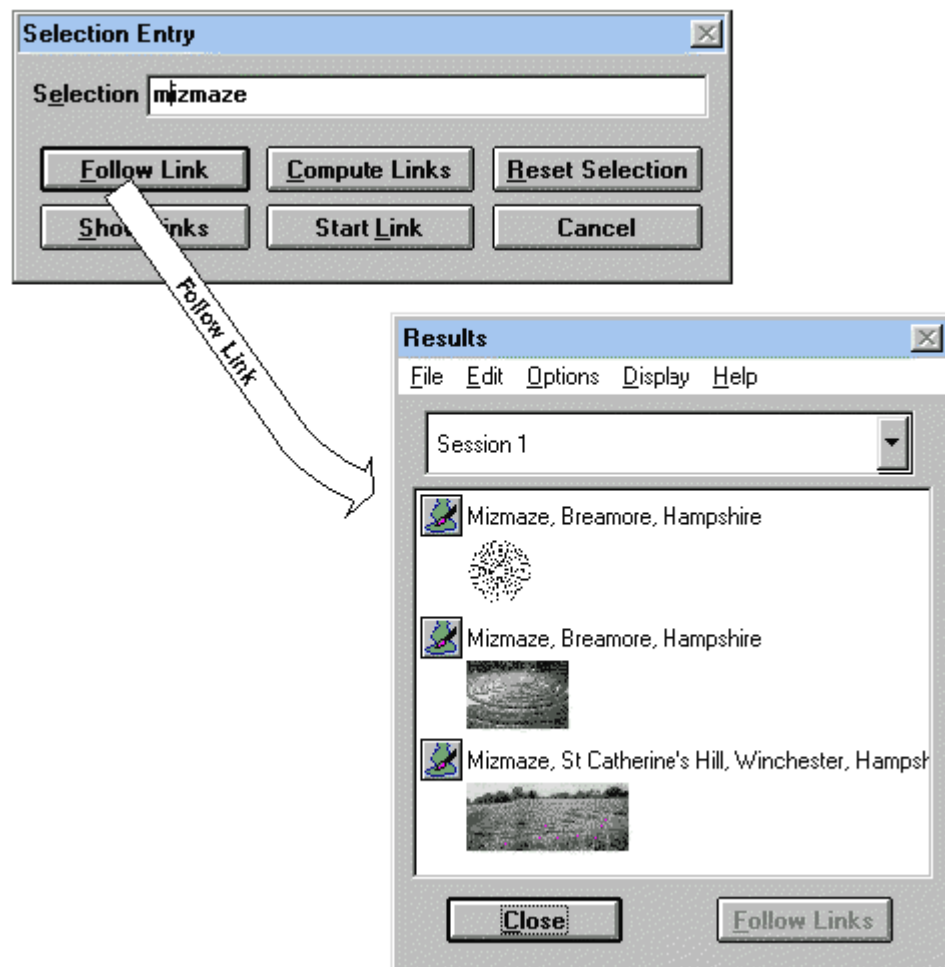


The Selection Entry dialogue box will pop up.

→ Type mizmaze in the Selection field

→ Click on **Follow Link**

*Selection Filter:  
using Follow Link*

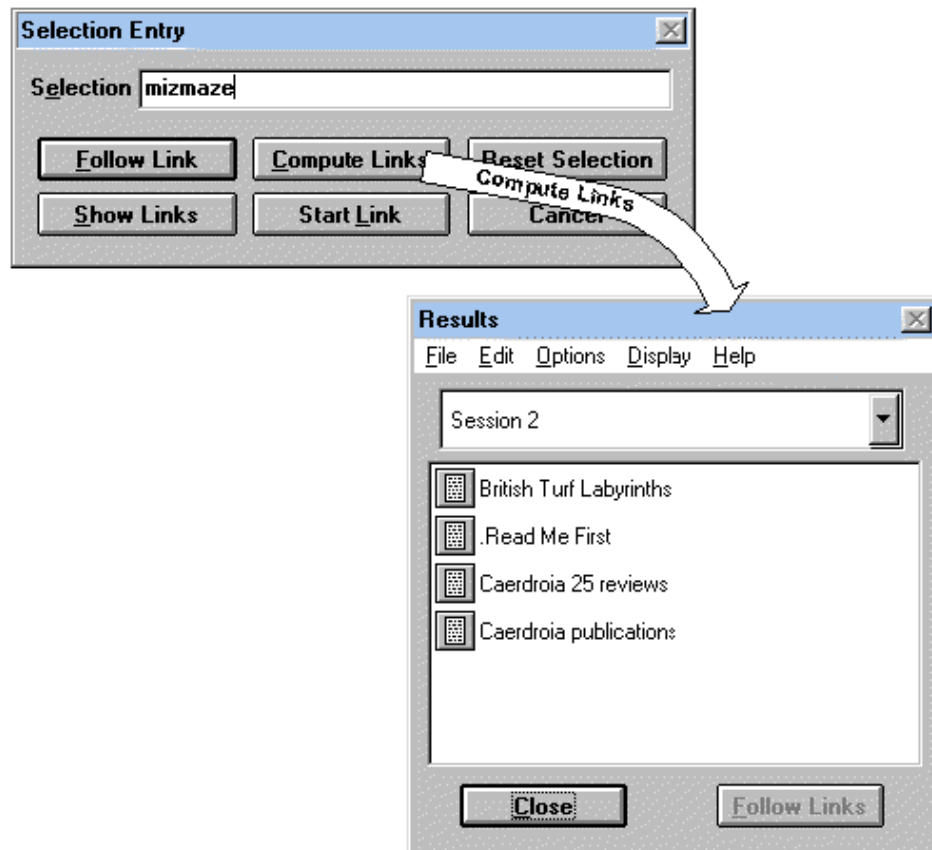


and make a note of the documents presented in the **Results** box.

→ Click on **Compute Links** in the **Selection** window




*Selection Filter:  
using Compute  
Links*



Compare the documents presented in the **Results** box with those obtained when you chose **Follow Link**.

As you can see, by entering the same text, but selecting different functions you can get a different list of documents.

**NOTE** If you are following the Tutorial, it is best if you close all the open except **Select a Document** and **Results**.

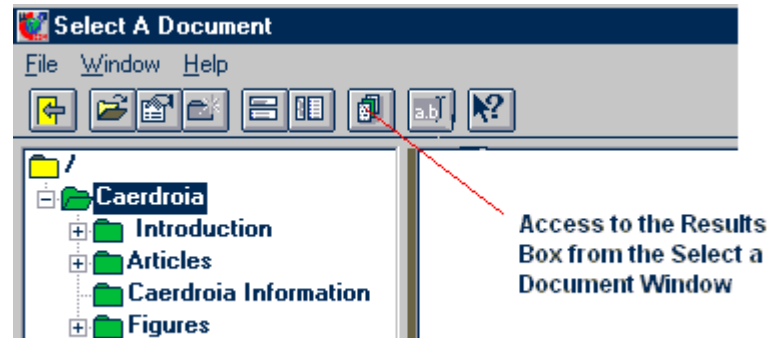
→ Click on the button  in the toolbar to close the windows.

## 4.6 Results

As you proceed through this tutorial you will notice that if a link following action such as **Follow Link** identifies only one link, the link is followed automatically and the target document is displayed. However, if more than one link is found, all the identified links are presented to you in a **Results** window and you can choose which link to follow. **Results** is a powerful tool and contains lots of information to enable you to identify documents of interest and to remember how you got to a particular document.

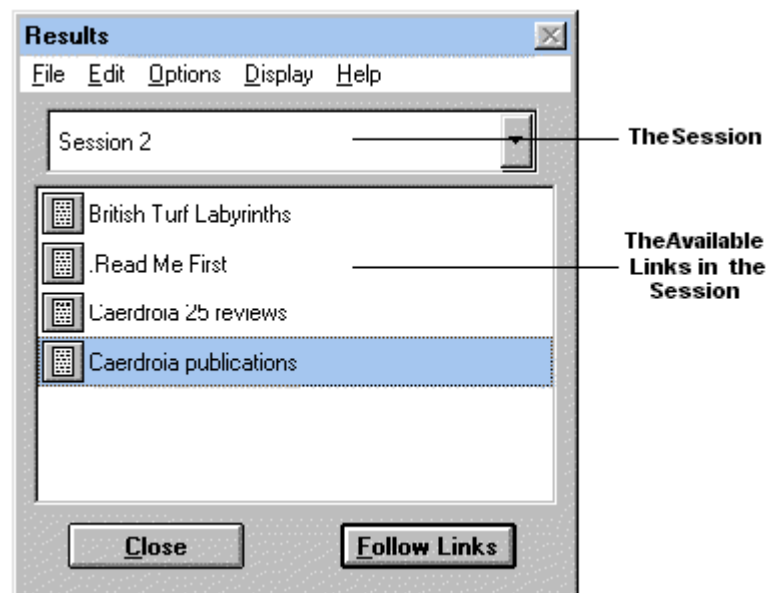
Each **Follow Link**, **Show Links** or **Compute Links** is called a link following *Session*. For each *Session* **Results** builds a list of *Available Links*. The sequence of *Sessions* is remembered in a *Session Record*. There is a special *History Session* which is used to record every link that is followed.

If you do not have a **Results** window on your screen, you can access it from the toolbar on the Select a Document Dialog Window as follows.




If you have been following the suggestions in the tutorial you should have a **Results** window that looks something like this:

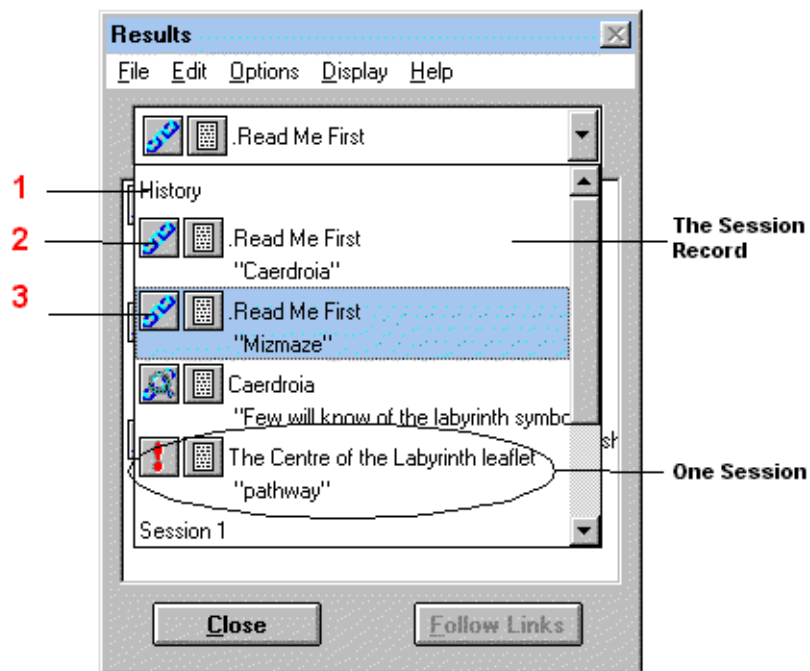
*Results:  
Available Links*



To see any of the documents in the list of *Available Links* you can double click on the link in the list. In this example, the document Caerdroia Publications has been selected.

If you click on the down arrow  next to the Session, you will see the *Session Record* which will look something like this:

*Results:  
Session Record*



The Session Record contains a record of all the link following actions that you have taken, together with a *History Session*.

**1** This is the *History Session* which contains a record of all the links that have been followed. There is more information on the History Session below.

**2** This is a record of the first link following action. The *Session Record* shows that a selection Caerdroia was used for a **Follow Link** action in the .Read Me First text document.

**3** This is a record of the second link following action. The *Session Record* shows that a button in the .Read Me First document was used for a **Follow Link** action.

If you click on a record in the Session Record you will see all the links that were identified during that session. You can then follow those links either to review documents you have seen before or to see new ones.

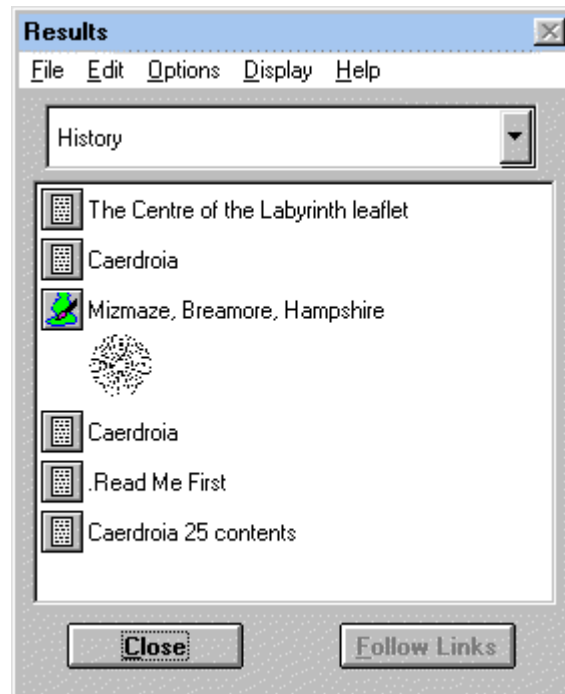
The *History Session* is a list of all the documents that you have seen. Every time you open a new document, a note of the document is made to the end of the *History Session*.

You can use the *History Session* to:

- re-trace your steps to see again documents you have seen earlier.
- save a record of the list of documents you have opened, returning to that list at a later date.

Click on *History* in the *Session Record*. If you have been following the Tutorial, the Results window may look something like this:

*Results:  
History Session*



The most recently seen documents are at the end of the list. You can scroll up and down the history to review all the documents you have seen. If you wish to see the document again, double click on the document in the list.

The **File Menu** of the **Results** window has **Save History** and **Load History** items which allow you to save the current state of the *History Session* and reload it at a later time.

## 4.7 Information Search - an Exercise

Browse around the application in order to find out the following:

Where have mazes been used to help handicapped children?

Which beer is associated with mazes?

Where are the mazes in South America and how were they constructed?

Where can you find copies of the Chartres pavement labyrinth?

Try and find out something you want to know about mazes.

## 4.8 Summary: Finding and Following Links

Links can be found from *Outside* or from *Inside* a document.

### 4.8.1 From Outside a Document

#### ◆ Select a Document

➔ From the **Select a Document** dialogue, select the document you want to display.

#### ◆ Selection

➔ Type in the text for a search.

➔ Select the search type (action) to perform, e.g. Follow Link.

If no links exist, a message saying *No Links Found* will be displayed.

#### ◆ Results

➔ From the **Results** window, select the document you want to display.

### 4.8.2 From Inside a Document

#### ◆ Visible Links

A button is a visible link and is shown in a different colour to surrounding text, or by outlining in a picture.

➔ Double click on a button.

A list of Available Links will be displayed in the **Results** box

#### ◆ Invisible Links

You must actively search them out.

➔ Highlight text within a document.

➔ then take a link following **Action:**

##### Follow Link

If links exist for the selection, they will be presented in the Results window.

If no links exist, a message saying *No Links Found* will be displayed.

##### Show Links

If links exist within the selection, they will be presented in the Results box. If no links exist, a message saying *No Links Found* will be displayed.

##### Compute Links

A list of documents with a similar vocabulary to the selection will be displayed in the Results box.



# 5 Creating Links

In this section you will be given the chance to make your own links in the application. The links you make will go into your own linkbase; a linkbase that is set up when you start Microcosm.

**NOTE** You can only create your own links if the system you are using has full authoring or reader-interactive capabilities. Check with your system administrator if you are unsure.

## 5.1 Linkbases

All links are held in special files called *linkbases*. The linkbases that are used depend upon the user that has signed on and the application that the user has chosen. It is usual to have at least one linkbase for a user, and one linkbase for the application and for the links created by the author of the application to be placed in the application (Caerdroida) Linkbase and links created by a user (User1) to be placed in the User's Linkbase.

As you progress through this tutorial, the links you create will go into the User's Linkbase.

Linkbases are controlled by the **Filter Manager**. A full discussion of linkbases and the Filter Manager can be found in the *User Guide*.

## 5.2 Link Anchors

The start location of a link is referred to as the *source anchor* and the end point of a link is referred to as the *destination anchor*. The first part of creating a link involves defining the source and destination anchors of the link.

A source anchor can be either a particular place in a document or pieces of text not related to any particular document. For instance, a source anchor can be a particular word or phrase in a text document, or a special area in a picture.

A destination anchor is nearly always a particular place in a document. Most frequently, the destination is the beginning of a document but it is possible to place a destination anchor half way through a text document, or in the middle of a picture.

A source anchor is defined by using the **Start Link** process and destination anchors are defined by using the **End Link** process. As you work through the examples below you will see how to use these processes.

## 5.3 Link Types

There are four type of link: *button*, *specific*, *local* and *generic*. Button and specific links are closely related, as are local and generic links. In this tutorial you will create button and generic links. Refer to sections 1.2 and 1.3 of the **Microcosm User Guide** for further discussion of link types.

## ◆ Button Links

A button link has a visible source anchor. The anchor is made visible by either colouring the text of the anchor or drawing round the anchor if it is in a picture. If you use **Select a Document** to view the `Caerdroia 25 contents` document in the `Introduction` branch, you will see a number of buttons, shown as coloured text.

If you view the distribution of the stone labyrinths in `Fennscandia` document in the `Figures/Maps` branch you will see a button as a red rectangle.

Buttons are often created by authors who wish to guide a user through a set of documents and indicate that the author has made the judgement that the destination document holds useful information, if the user wishes to look at it.

Because buttons are visible, they are often perceived as ‘urgent’ or ‘directive’ and should be used with care. If you create too many buttons in a short piece of text, the user may become confused - is it important to follow the links to all the destination documents, or should one stick to the current document and follow the links later? An exception to this is a document that is essentially a Table of Contents in which case every line could be a button (for example, the `Caerdroia 25 contents` document).

## ◆ Generic Links

A generic link has an invisible anchor which is always text.

Generic links are created in order to allow the user to explore the information in the application without being specifically urged to do so by the author. Rather than create a button on every word that could have a link to some useful information, it is possible to create a generic link on that word - the link is invisible and does not distract the user. However, the link is there if the user wishes to explore for further information.

Perhaps the biggest difference between button and generic links is that a generic link for a particular word in **many** documents need only be created **once**. After the link has been completed, the link is available from anywhere within the application and can be followed at any time.

By creating an extensive set of generic links the user is empowered to explore the information in any way the user may wish.

## 5.4 Creating a Button


A button is a visible link - in text documents this is done by colouring the text, in graphics by outlining the relevant region of the image.

### 5.4.1 Creating a Button in Text

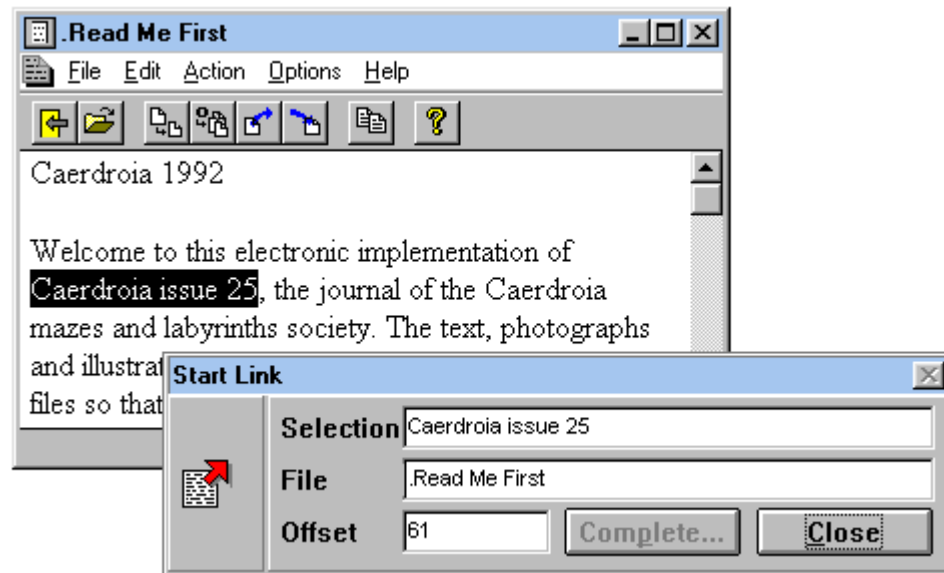
To create a button in a text document you must first have the document on the screen.

➔ Open the document `.Read Me First` from the `Introduction` branch of the **Select a Document** window.




- ➔ Create the source link anchor by selecting the phrase **Caerdroia issue 25** and choosing **Start Link** from the **Action** menu or by clicking on the Start Link button  button

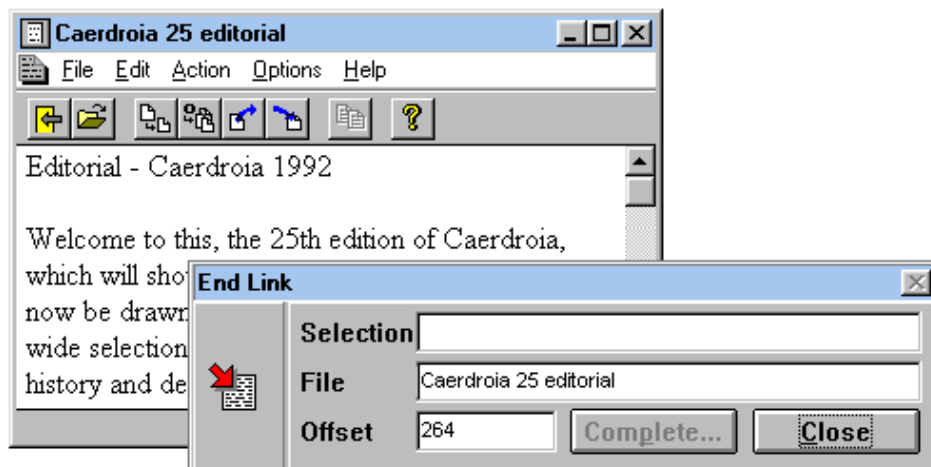
*Creating a Button:  
Start Link*



The **Start Link** box allows you to check that you have selected the correct place for the button in the right document. You cannot modify the data in the **Start Link** box. If the source anchor is not where you wish it to be, then click on **Close** and start again.

- ➔ Open the document **Caerdroia 25 Editorial** from the **Caerdroia Info** branch of the **Select a Document** dialogue
- ➔ Create a destination link anchor by choosing **End Link** from the **Action** menu or by clicking on the End Link button  in the toolbar

*Creating a Button:  
End Link*

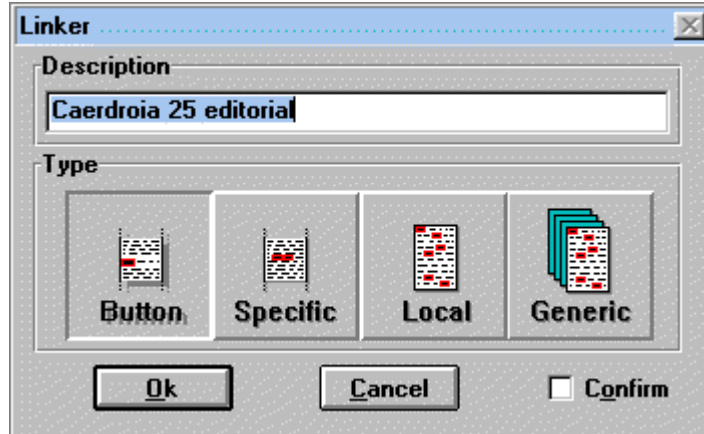


Notice that, in this instance, you did not make a selection in the **Caerdroia 25 Editorial** document before choosing **End Link**. This means that the destination anchor is the start of the document - Offset 0 in the **End Link** box. You

cannot modify the data in the **End Link** box. If the destination anchor is not where you wish it to be, then click on **Close** and start again.

➔ Click on the **Complete...** button in either the **Start Link** or **End Link** box

*Creating a Button:  
Completing the  
Link*



The **Linker** box allows you to choose which link type you are creating this time.

➔ Click on **Button** within the **Linker** dialogue box, then click on **OK** to create the link

The **Linker** box will now close. Although it is not strictly necessary, it may help to clear the screen by closing the **Start Link** and **End Link** boxes.

You will see that the phrase *Caerdroia issue 25* is now a different colour from the rest of the text and when you move the mouse pointer over the coloured text it changes to a hand. This acts as added feedback to indicate the presence of a button

➔ Double click on the phrase to follow the link you have created.

**NOTE** You will now have two copies of on the screen, one opened from the **Select a Document** dialogue and the second from following the link you have just created.

### 5.4.2 Creating a Button in Pictures

The process is essentially the same as buttons in text. The only difference is how you select the location of the button in the picture.

➔ Open the document *Athens labyrinth* and *seed pattern* from the **Figures/Pictures** branch of the **Select a Document** dialogue

➔ Create a source link anchor by selecting the area of the image containing the pattern on the left of the picture and choosing **Start Link** from the **Action** menu

**NOTE** You select an area in a picture by positioning the mouse pointer at the top left hand corner of the area you wish to select and drag the pointer to the bottom right hand corner of the area. Defining more elaborate shapes is described in the *Microcosm User Guide*

- ➔ Open the document Classical Seven Circuit Labyrinth and its Seed Pattern from the Figures/Pictures branch of the **Select a Document** dialogue
- ➔ Create a link destination by choosing **End Link** from the **Action** menu
- ➔ Click on the **Complete...** button on the **Start Link** dialogue box
- ➔ Click on **Button** within the **Linker** dialogue box, then click on **OK** to create the link

Again, it may be useful if you close the **Start Link** and **End Link** boxes. You will see that the region of the image in the document Cretan Coin with Labyrinth is outlined in red, and when you move the pointer over the region the pointer changes to a hand to indicate the presence of a button.

- ➔ Double click on the region to follow the link you have created.

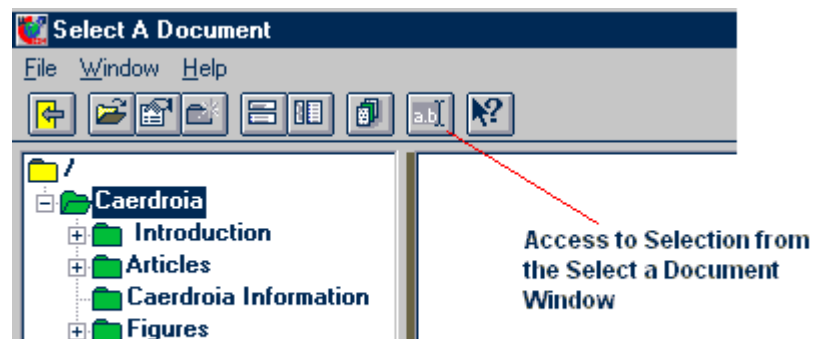
## 5.5 Creating a Generic Link

Generic links are invisible and always based upon text. Generic links are created to allow the user to explore the information in the application. In this example, you will use the **Selection** filter to define the text of the source link anchor.

**NOTE** You could also define the text by selecting it from any convenient document.

Access the selection filter from the Select a Document Window.

*Displaying the Selection Filter*



The **Selection Entry** dialogue box will pop up.

- ➔ Type Denmark in the Selection field.

*Creating a Generic Link:  
The Selection*



The idea is to create a generic link with the source anchor Denmark. Obviously the link should point to documents that refer to Denmark. To find such documents, you can use **Compute Links**.

**NOTE** There are several ways of identifying the relevant documents. Using **Compute Links** is just one example of how this could be done


➔ Click on the **Compute Links** button on the **Selection Entry** dialogue box.

This will result in a list of documents containing the word Denmark (or similar words based on its stem) being displayed in the **Results** box. We will assume that the most useful document is *Mazes and Labyrinths in Denmark II*.

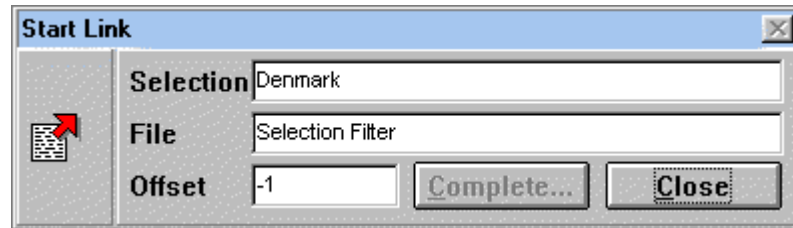
➔ Open the *Mazes and Labyrinths in Denmark II* document from the **Results** box

Having identified a suitable document, you must now go through the familiar **Start Link/End Link/Complete Link** process.


➔ Leave this document open and return to the **Selection** filter. It will still contain the word Denmark in the text entry field.

➔ Click on the **Start Link** button  in the toolbar. The **Start Link** box will appear containing information about your link anchor:

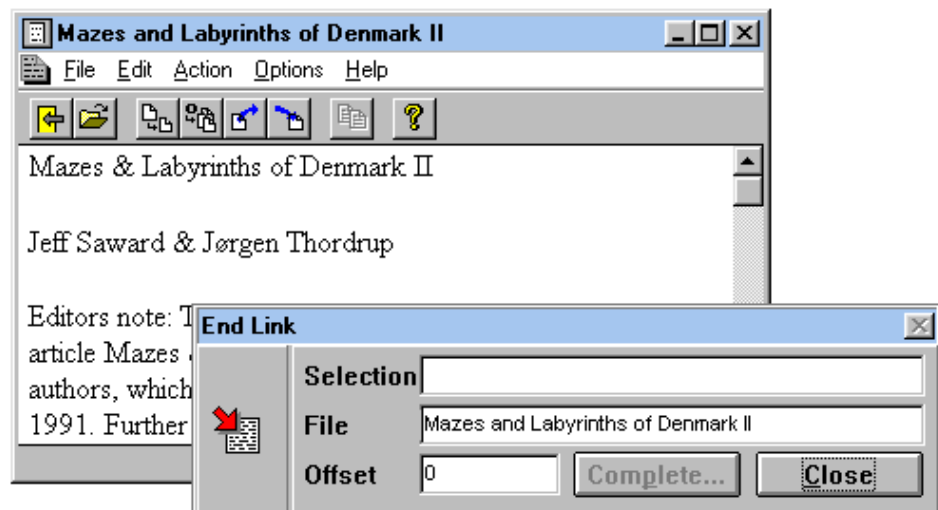
*Creating a  
Generic Link:  
Start Link*



➔ Return to the *Mazes and Labyrinths in Denmark II* document

➔ Click on the End Link button  in the Toolbar or choose **End Link** from the **Action** menu. A dialogue box will appear containing information about the link destination:

*Creating a  
Generic Link:  
End Link*

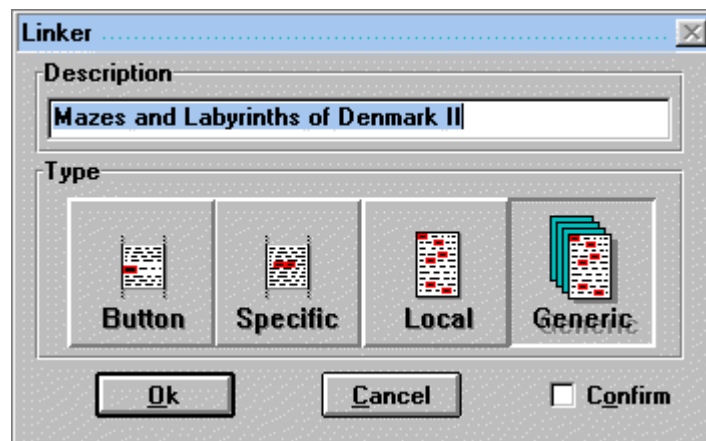


You have now defined the two anchors of the link and can now join them together.

➔ Click on the **Complete...** button in either the **Start Link** or the **End Link** box.  
The **Linker** dialogue box will appear:

➔ Click on the button labeled **Generic** in the dialogue box

*Creating a  
Generic Link:  
Completing the  
Link*



➔ Click on **OK**. This will cause the link to be created. The dialogue box will close.

The **Linker** window will now close. Although it is not strictly necessary, it may help to clear the screen by closing the **Start Link** and **End Link** boxes.

You have now created a generic link, which will be available wherever the word Denmark occurs within the application.

➔ Open the document A New Völundarhús in Jutland from the Articles branch of the **Select a Document** dialogue

➔ Select the word Denmark in the first paragraph and choose **Follow Link** from the **Action** menu. The Mazes and Labyrinths in Denmark II document will appear.

**NOTE** When Microcosm is first installed there are no links with the source anchor of Denmark so that, at this stage in the tutorial, there is only one Denmark link in the linkbases. **Results** has been set so that if only one link is found, the document is shown automatically without the **Results** window appearing

➔ Find other occurrences of the word Denmark in other documents. Wherever the word appears, you will be able to follow the link you created to the Mazes and Labyrinths in Denmark II document

**NOTE** This is the power of the generic link—once created it is available everywhere, resulting in a greatly reduced authoring effort.



# 6 Adding and Removing Documents

One of the key features of Microcosm is that it does not require your data to be changed into any special format. Instead, when you incorporate documents into a Microcosm application, all you are doing is effectively telling Microcosm about those documents. The original data is unchanged.

## 6.1 Adding Documents to an Application

You can add documents to an application by dragging them from the File Manager (or Windows Explorer in Windows 95) and dropping them on the required branch in the Folder Hierarchy.


→ Open the **Select a Document** window by a click on the **Microcosm** icon




→ Click on the Caerdroia branch of the folder structure

→ Open the Windows File Manager or Explorer, and locate the file which you wish to import. (A readme.txt file would be ideal)

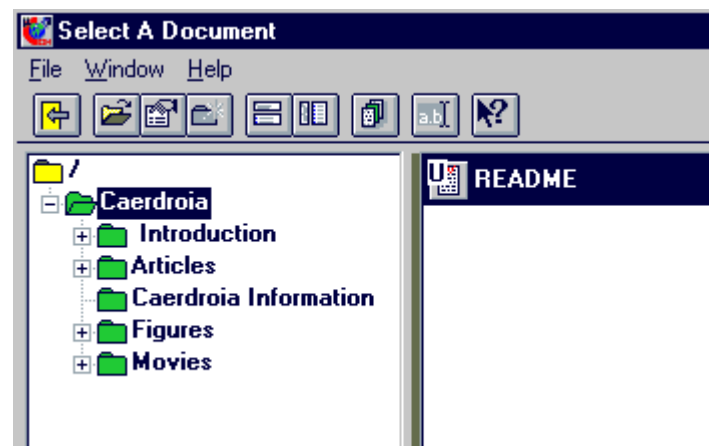
→ Drag the file from the File Manager into the right hand pane of the **Select a Document** window

You will notice that the cursor changes to  while you are performing this operation, indicating that you are copying a reference to the file, not the file itself.

**NOTE** If you get the  symbol when the pointer is in the right hand pane of the **Select a Document** window, you do not have authoring capabilities. Check with you System Administrator

→ Release the mouse button. At this point, you have registered (or *imported*) the file with Microcosm, and the new document will appear in the right hand list of documents

*Select a Document  
window after  
importingReadme.  
Doct*



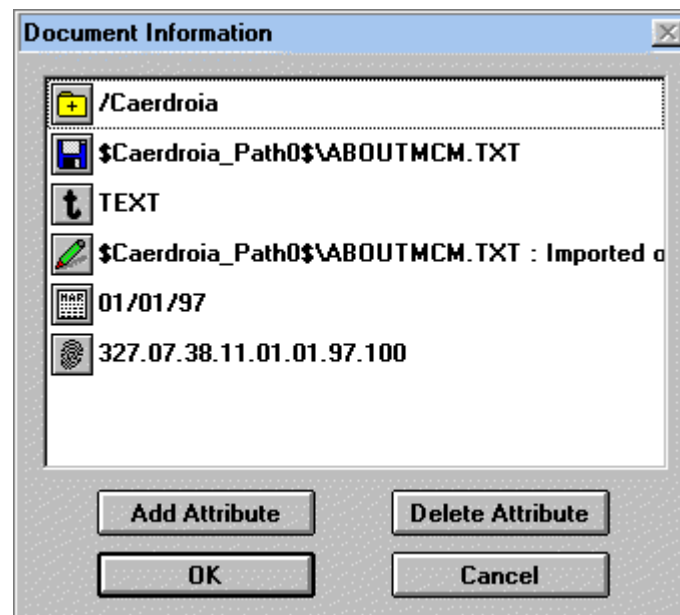
**NOTE** The document (which is a reference to the file) has been imported into the current branch in the folder hierarchy, in this case the **Caerdroia** branch. The original file has not been modified in any way.

**NOTE2** As you can see the document has a small “U” imposed on it. This document belongs to the current user. Other users will not see this document;.

As you can see, the document name has been allocated by default from the filename. You might wish to change this. It is usually a good idea to change the document name and add other information at the same time.


- ➔ Click once on the document in the right hand pane of the **Select a Document** window to select it
- ➔ Choose **Edit Document Information...** from the **File** menu. The **Document Information** dialogue box will appear containing various pieces of information concerning the new document:

*Importing Documents:  
Document Information Window*

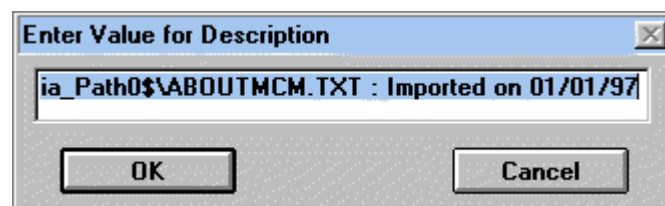


You can now change any of these attributes by double-clicking on the entries, and changing the text.

First change the name of the newly imported document to something sensible

- ➔ Double-click on the Description entry . A dialogue box allowing you to change the Description will appear.

*Importing Documents:  
Changing the Description*



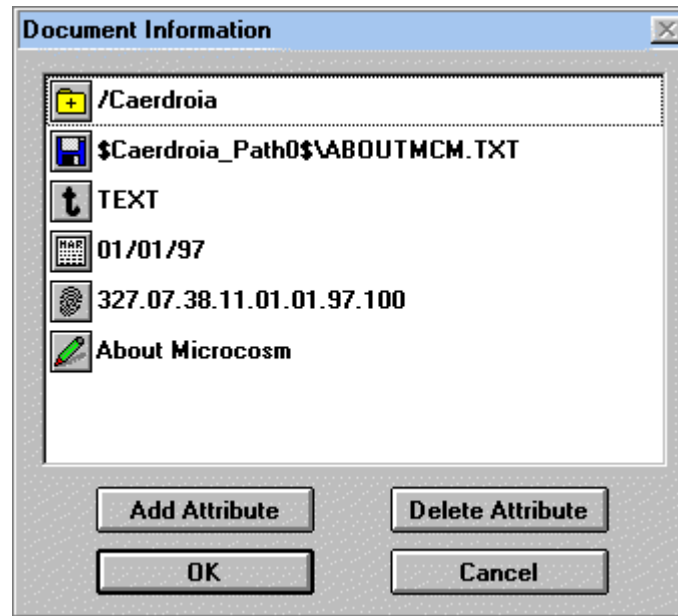


➔ Type About Microcosm.


➔ Click **OK** to complete the change

You will see the new name appear in the **Document Information** box

*Document  
Information:  
Document  
Description has  
been changed*



You can also add a new attribute to those already describing the document. For instance, if you wish to claim ownership of the document you can add the **Author** attribute.

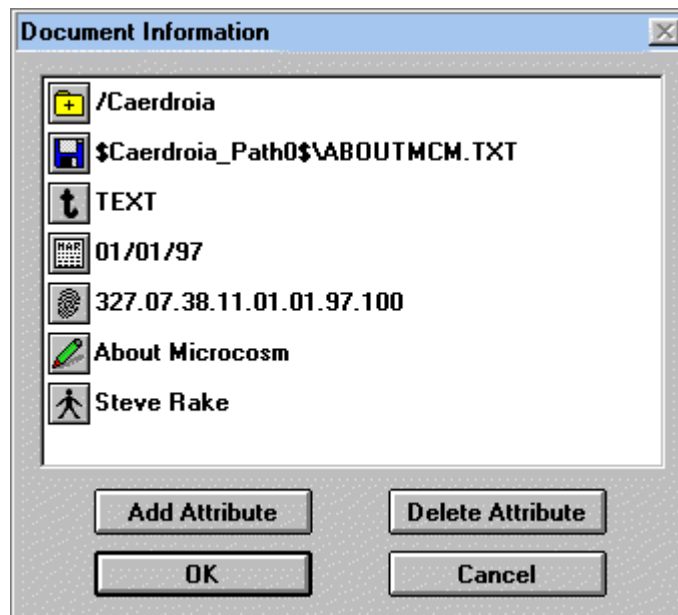
➔ Click on the **Add Attribute** button, and choose **Author**  from the list which is presented.

The Document Information box will now contain the **Author** icon but will have no name for the author.

➔ Double click on the icon and type your name in the **Enter Value for Author** box. Click on **OK**.




The **Document Information** dialogue will now contain the authors name

*Document  
Information:  
Author has been  
added*



➔ Click on **OK** to close the **Document Information** dialogue.

You will now see that the description in the right hand pane of the **Select a Document** window has changed to the description you have just given to the document.

**NOTE** Although all the attributes are editable, you must not change the UniqueID entry  as Microcosm uses this attribute to identify the document. Similarly, unless you change the file's position in the file system (i.e. change directory or name), do not change the File Name entry . Do not be change the Type  entry.

## 6.2 Moving and Copying Documents

After a document has been imported into Microcosm it is possible to move or copy that document from one branch to another in the folder hierarchy.

**NOTE** It is only the reference in the Document Management System that is being moved or copied. The location of the file in the Windows File System is unchanged.

If you copy a document to another branch, the folder hierarchy will have two references to the document.

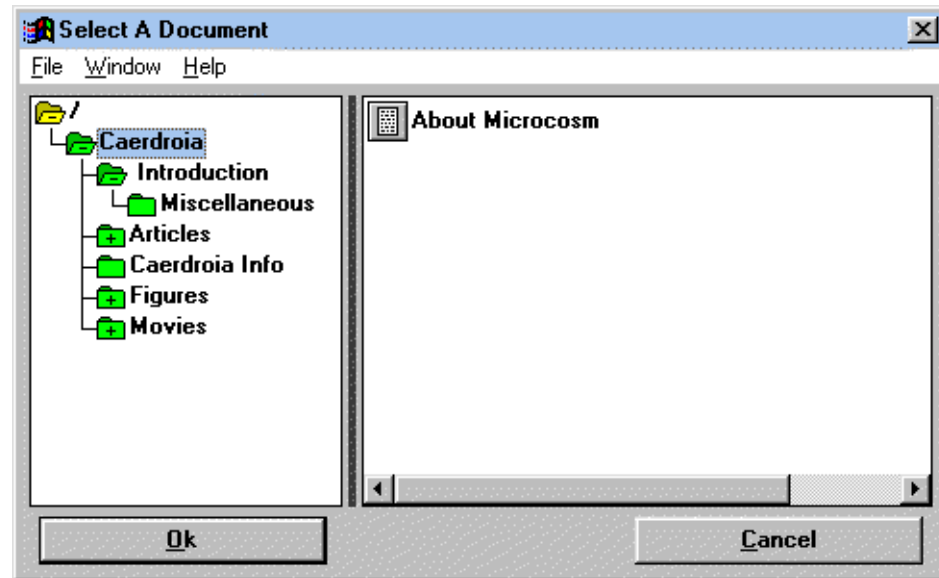
In this example, you will copy the About Microcosm document that you have just imported to the Caerdroia/Introduction/Miscellaneous branch.

In the **Select a Document** dialogue


- ➔ Double click on the Introduction branch so that you can see the Miscellaneous branch
- ➔ single click on the Caerdroia branch so that you can see the About Microcosm document in the right hand pane.

In order to complete the copy process, the **Select a Document** box should look like this:


*Copying Documents:  
Selecting the Document to Copy*




→ single click the About Microcosm document in the right hand pane to select it and, holding down the mouse button, drag the pointer over the

Miscellaneous branch. The pointer will change to  which shows that you are moving the document.

→ Without releasing the mouse button hold down the Ctrl key on the keyboard.

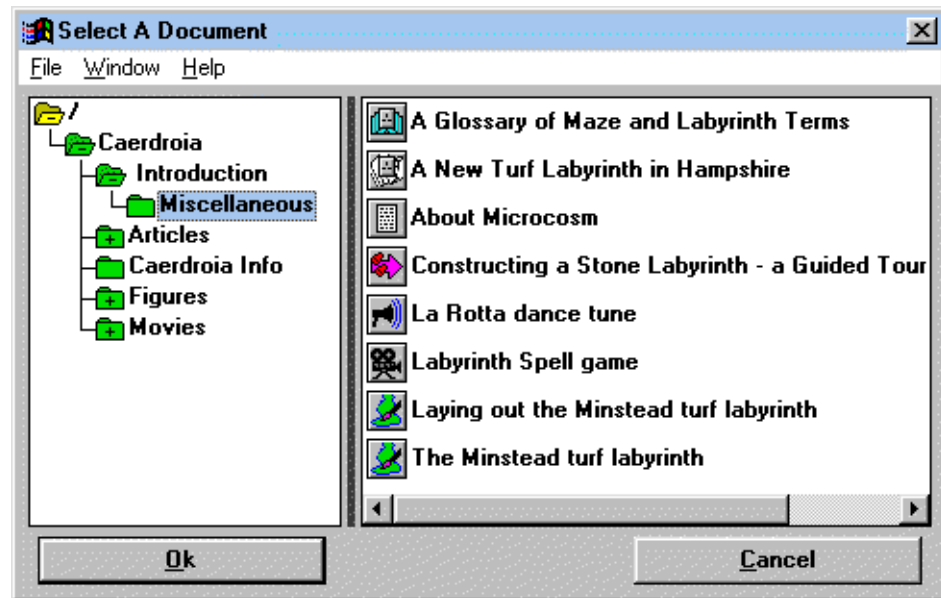
The mouse pointer will change to  to show you are now copying the document

→ when the pointer  is over the Miscellaneous branch, release the mouse button.

The document has now been copied to the Miscellaneous branch.

→ click on the Miscellaneous branch to see the copied document.

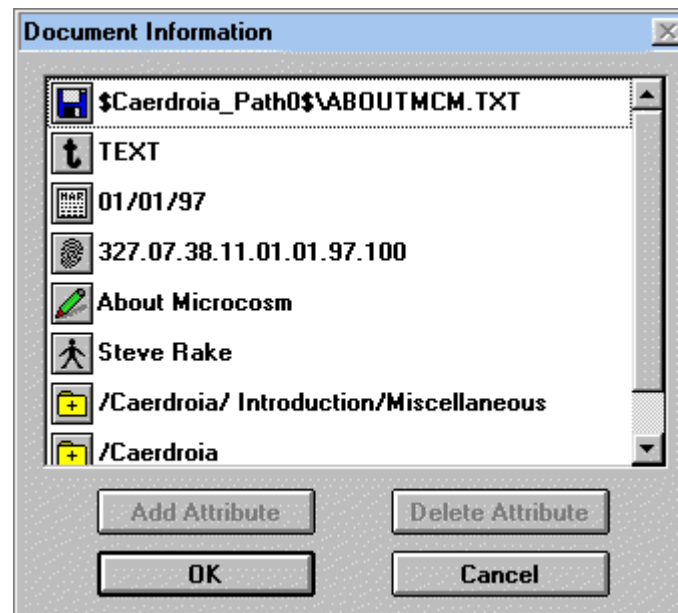
*Copying Documents:  
Reference in the  
new branch*




The Document Management System holds all the information about the document, including the fact that it is now referenced in two branches.

- ➔ select the About Microcosm document in the right hand pane
- ➔ choose **View Document Information** from the **File** menu

*Copying Documents:  
Two references in  
the Document  
Information*



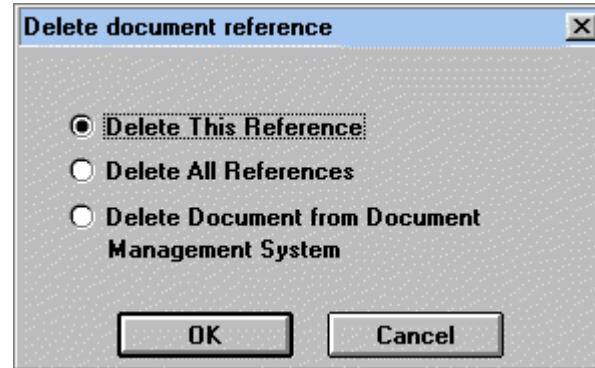
There are two entries with the  icon. These entries show where in the folder hierarchy the document is referenced.

## 6.3 Removing Documents

Since the Document Management System can have many references to a single document, removing a document from the Microcosm Document Management System is not quite as simple as deleting a file from the Windows File System.

- ➔ Select the document *About Microcosm* from the *Caerdroia* branch of the **Select a Document** dialogue.
- ➔ Choose **Delete Document...** from the **File** menu. A dialogue box will appear:

*Deleting a Document*



The choices here dictate what happens to other references to this document in other parts of the folder structure.

**Delete This Reference:** Only the reference in the folder hierarchy to the selected document is deleted. If this is the only reference, the action is the same as **Delete All References**.

**Delete All References:** All the references in the folder hierarchy to the selected document are removed. The document is effectively moved to the root branch of the folder hierarchy and can be seen there. The document is not removed from the Document Management System.

**Delete Document from the Document Management System:** All references to the selected document are deleted and the document is removed from the Document Management System. The file in the Windows File System is unchanged.

- ➔ Click on **Delete This Reference**, then click on **OK**

The **Are You Sure?** box will ask you to confirm the deletion

- ➔ Click on **OK**

The document *About Microcosm* will no longer appear in the document list under the *Caerdroia* branch, as you have removed that reference. However, if you click on the *Miscellaneous* branch, the document will still be in that branch.

- ➔ Select the document *About Microcosm* from the *Miscellaneous* branch of the **Select a Document** dialogue and choose **Delete Document...** from the **File** menu

- ➔ This time, choose **Delete All References** from the dialogue, then **OK**

Again, the **Are You Sure?** box will appear asking you to confirm this action.

- ➔ Click on **OK**.

All references to the document *About Microcosm* will be removed from the folder hierarchy. However, the document is not removed completely from the Document Management System. Instead it is moved to the very top of the structure.

- ➔ Click on the root branch of the folder structure (/), and you will see the document `About Microcosm`. The document has been moved to the root of the structure in order to provide a safety mechanism when removing documents.

**NOTE** If you were to remove the document completely from the Document Management System, it would be possible for links to be left dangling (i.e. pointing to documents that Microcosm no longer knows about). It is not a disaster to have dangling links - if you follow a link with no destination document, you will be told that the destination document cannot be found.

If you are sure no dangling links remain, you can safely remove the document completely from the **Document Management System**.

- ➔ Select the document `About Microcosm` in the root branch of the folder structure
- ➔ Choose **Delete Document...** from the **File** menu
- ➔ Click on **Delete Document from Document Management System**, then click on **OK**

The box will ask you to confirm the deletion.

- ➔ Click on **OK**

The document will now be removed completely from the **DMS**, and if you want to include it in your application, you will need to re-register it with Microcosm.

**NOTE** You can remove a document from the **Document Management System** in one go - you do not have to take each of the three steps described above.

## 7 Advanced Microcosm Features

If you have worked through all of the sections of this tutorial, you should now be able to carry out all the basic operations necessary to use Microcosm successfully. However, it is not possible to include every feature of a system as complex as Microcosm in a single tutorial such as this. In order to discover all that Microcosm has to offer, refer to the ***Microcosm User Guide*** which contains a comprehensive description of all the features available to you.

# 8 Index

## —A—

- A—
- Anchors, 39
- Application
  - Adding Documents, 47–50
  - Choosing an Application, 9–12
  - Documents, 15
  - Startup Document, 9–12
- Available Links, 33–36

## —B—

- B—
- Branches
  - Logical Hierarchy, 15–17
- Buttons, 23
  - Creating, 40
  - Creating in Pictures, 42–43
  - Creating in Text, 40–42
  - in Picture Documents, 25–26
  - in Text Documents, 23–25

## —C—

- C—
- Compute Links, 30–31
- Conventions
  - Typographical, 7
  - Windows 3.x, 7
  - Windows 95, 7
  - Windows NT, 7
- Creating Buttons, 40
- Creating Links, 39

## —D—

- D—
- Documents
  - Adding, 47–50
  - Adding and Removing, 47
  - Application, 15
  - Buttons in Pictures, 25–26
  - Buttons in Text, 23–25
  - Finding, 15–17
  - Finding Links from Outside, 31–33
  - Finding Similar Documents, 30–31
  - Links Inside, 23
  - Links Outside, 23
  - Moving and Copying, 50–52
  - Removing Documents, 52–54
  - Viewing, 18
  - Viewing Graphics Documents, 20–21
  - Viewing Text Documents, 18–19

## —F—

- F—
- Finding and Following Links, 23
- Finding Documents, 15–17
- Folders

- Green, 15–17
- Yellow, 15–17

## —G—

- G—
- Gas Gauge, 9–12
- Generic Link
  - Creating, 43–45
- Guest, 9–12

## —H—

- H—
- Hierarchy
  - Branches, 15–17
  - Root, 15–17
- History, 33–36
  - Saving and Loading, 33–36

## —L—

- L—
- Leaving Microcosm, 12–13
- Link Anchors, 39
- Linkbases, 39
- Links
  - Available Links, 33–36
  - Compute Links, 30–31
  - Creating, 39
  - Creating a Generic Link, 43–45
  - Creating Buttons in Pictures, 42–43
  - Creating Buttons in Text, 40–42
  - Finding and Following, 23
  - Finding and Following Summary, 37
  - Finding Invisible Links, 29–30
  - Finding Links from Outside Documents, 31–33
  - Following Invisible Links, 27–29
  - Following Visible Links, 23
  - Link Anchors, 39
  - Link Types, 39–40
  - Linkbases, 39
  - Multiple Targets, 33–36
  - Show Links, 29–30
  - Using Selection, 31–33
- Logical File Structure, 15–17

## —M—

- M—
- Microcosm, 9
  - Advanced Features, 54
  - Logging In, 9–12
  - Logging Out, 12–13

## —R—

- R—
- Results, 33–36

## —S—

- Search
  - Exercise, 36
- Select a Document, 15–17
- Selection, 31–33
- Session
  - History, 33–36
  - Record, 33–36
- Show Links, 29–30
- Starting Microcosm, 9–12
- Startup Document, 9–12
- Summary
  - Finding and Following Links, 37

## —T—

- Tutorial
  - Exercise, 36
- Typographical Conventions, 7

## —U—

- User
  - Guest, 9–12
  - Name, 9–12
  - Password, 9–12
- Using Microcosm, 9

## —V—

- Viewing
  - Graphics Documents, 20–21
  - Text Documents, 18–19
- Viewing Documents, 18
- Visible Links, 23

## —W—

- Windows 3.x, 7
- Windows 95, 7
- Windows NT, 7