HyperCard Path Facility

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The following description has been directly taken from the appendices of my thesis on Using Paths for Navigating Hypermedia. So I'm sorry if it's not directly appropriate for your purposes - it may be missing some explanations that would be helpful in understanding the potential of paths in HyperCard. Good luck in using it.

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So feel free to contact me with bug reports, or features that you would like added (or that you have added yourself!). My email address currently is

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Working Details — How to use it

The paths facility provides different functions for two groups of users which are termed Authors and Students, based on the dichotomy between a path-maker (author) and a path-follower (student). Of course, there will not always be this separation but in a learning situation there often is. So in the next sections the functions available to each group of users will be described.

Authors
Authoring requires a number of main functions. The primary ones are the ability to create and edit a path, and the ability to add meta-information. These functions are provided on the author's palette and so are just a mouse-click away.
To get into Authoring mode a user should type *Author* into the HyperCard message box and press return. This will result in the Author palette appearing. From there all the Author functions that are described next can be accessed.
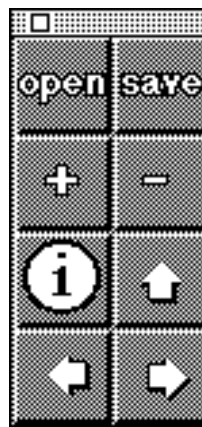
Figure 4.3 *Author Palette*

Creating a New Path
In order to create a new path, the author clicks on the open button on the author's palette. This will bring up the dialog in figure 4.4. To create a new path, the author should click on the New button. After doing this, figure 4.5 will appear. Here the author enters the name of the new path and then clicks on the Ok button. If the author decides not to create a new path now, then they can stop the path being created by clicking on the Cancel button.
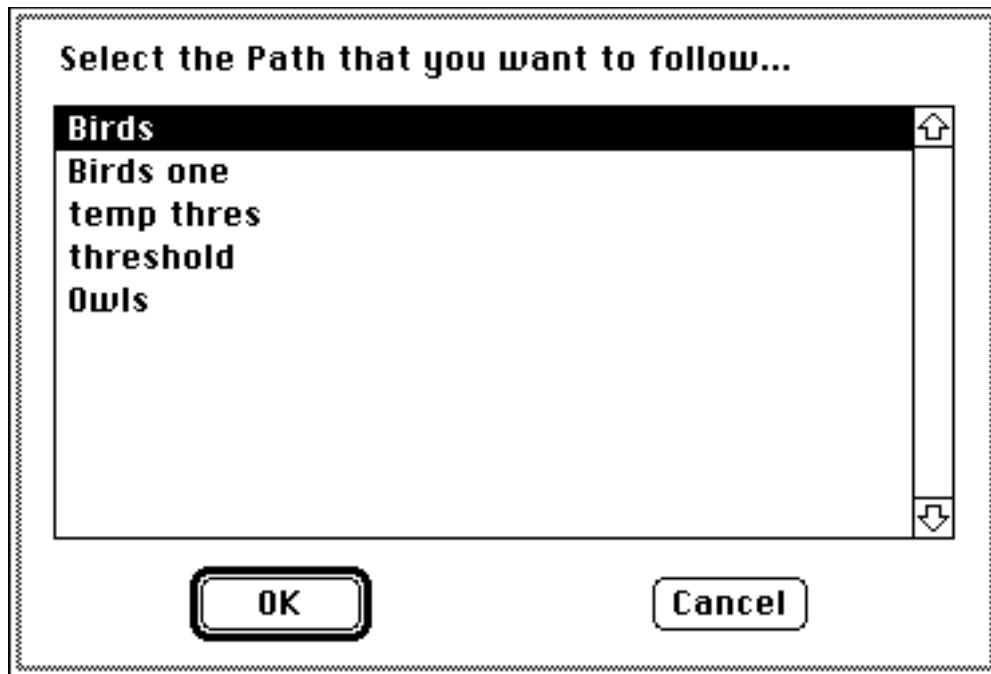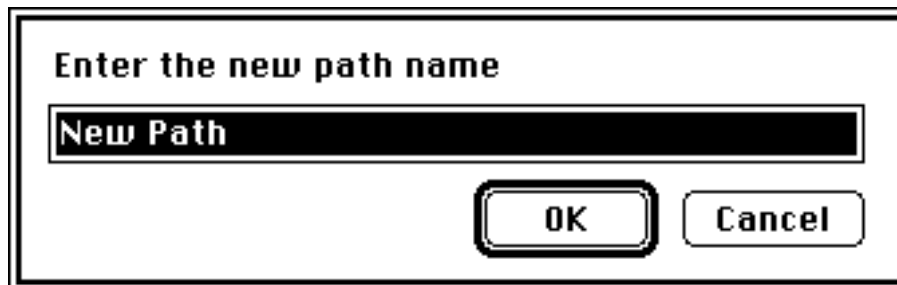
Figure 4.4 *Open Path Dialog*

Figure 4.5 *Name Path*

When a new path is created, new structures are created to provide storage for this path and its associated information. These structures are:

- the Path
- the Meta-information
- the History

At the moment, these structures are provided as fields on one card of a Hypercard stack. One card in the paths stack serves each path that is created. When a new path is created, a new card is created with fields called "*Path*", "*Metainformation*", and "*History*". The name of the path that the user entered is set as the name of the card.

3.2 Opening an Existing Path

To open an existing path, the author should click on the open button on the palette. This will bring up figure 4.4 which shows a list of the existing paths. To open one of these, the author should select one of the paths, either by clicking on it with the mouse or by using the cursor control keys to move up and down the list. Then the author should click on the Ok button to open the selected path. When a path is opened, the appropriate structures will be loaded into memory from the card corresponding to the selected path. The author will then be taken

to the first node in the path.

3.3 Adding to the Path
To add to a path the user should click on the **+** button on the palette. This will add the current node to the path. The current card's details are inserted after the current node in the path structure and the current node is set to the newly added node. Space is also provided in the meta-information structure for the author to add meta-information about this node.

3.4 Deleting from the Path
To delete the current node from the path a user should click on the **–** button on the palette. Before deletion, the user will be asked to confirm their intention as in figure 4.6. If Cancel is selected, then they will be returned to where they were. If Ok is selected then the current node will be deleted from the path as well as the meta-information associated with this node. The current node will then be set to the next node in the path. If the node at the end of the path is deleted then the current node will be the one prior to the node that was deleted, and it will be the new end of the path.

```
┌─────────────────────────────────────────────┐
│  Are you sure you want to delete the current  │
│  node?                                        │
│                                               │
│           ┌──────────────┐  ┌──────────────┐  │
│           │    Cancel     │  │    Delete    │  │
│           └──────────────┘  └──────────────┘  │
└─────────────────────────────────────────────┘
```

Figure 4.6 *Confirm node deletion dialog*
A special case exists if the embedded navigation facilities in the Hypercard stacks are used to navigate to a node that is not on the path and is therefore not the current node. If the **–** button is then selected the current node will be returned to and the user will be asked to confirm that this is the node they want to delete, as in figure 4.6.

3.5 Saving the Path
As all operations on a path occur in memory and do not occur on the actual path fields, then a save operation must be carried out to explicitly save the path.
To save the current path the user should click on the save button on the palette. This will bring up figure 4.7. Three options are available: Cancel, Overwrite, or New.

Figure 4.7 *Save Path dialog*

Selecting Cancel will not save the path and will leave the user at the same position that they were before selecting the Save button. No action will be performed.

Selecting Overwrite will overwrite the existing path with the path that is currently stored in memory — that is, it will save any changes that have been made to the current path. For example, if an existing path was originally opened and some nodes added and deleted from it, then selecting Overwrite will save the changes made to that path, with the old path no longer being accessible. If a new path was originally created, then selecting Overwrite will save the path that was created into the new structures that were created.

Selecting New will create a new path into which the current structures will be saved. The user will be asked to name the new path as in figure 4.5. After naming the new path, the current path will be saved to this new path. This enables a user to open up an existing path, make changes to it, and then to save the altered path to a new path. This means that the original path can be saved as well as the new path.

Whenever a path is saved, not only the path information is saved, but also the meta-information associated with the path is saved.

3.6 Meta-information

When an author clicks on the Meta-information button on the palette, two things may happen. If there is already information for the current node then that information will be displayed. If there is no information for the current node, then meta-information can be added for the current node. The small meta-information window will appear and the user may then insert the cursor and start typing in their information. The information window is a small external window that can be moved, re-sized, scrolled and closed.
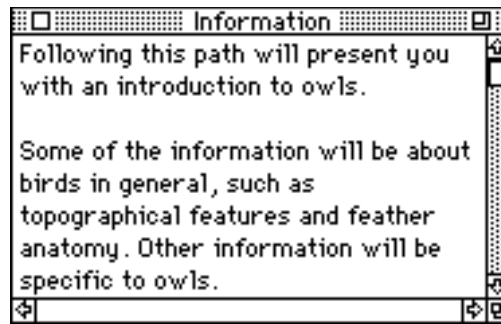
Figure 4.8 *Meta-information Window*

When the author goes to another node the window will be updated to show the information for the new node. If no meta-information exists for the new node, then the window will be cleared ready to accept new meta-information.

3.7 Jumping to the Current Node

When the author has been exploring the system and wishes to return to the current node they can choose the "Jump Back" button on the palette. This will return them to the point in the path that they left it from.

3.8 Going to the Previous Node

To go to the previous node in the path, the author selects the "Previous Node" button on the palette. If the author is at the first node in the path, then a message will be displayed and they will remain where they are. Otherwise, they will go to the previous node in the path and it will become the current node.

3.9 Going to the Next Node

To go to the next node in the path, the author selects the "Next Node" button on the palette. If the author is at the last node in the path, then a message will be displayed and they will remain where they are. Otherwise, they will go to the next node in the path and it will become the current node.

4. Students.

Students have a limited subset of the commands available to Authors. This is to reduce their attentional demands so that they only need to concentrate on the path contents rather than on manipulation of the path contents. All their processing power should be directed towards understanding the path contents and the meta-information.

The commands available to Students are: Meta-information, Jump back, Previous Node, and Next Node. There are only minor differences in operation and these are explained below.
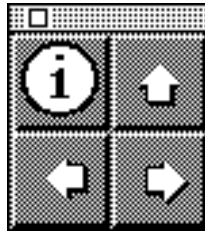

Figure 4.9 *Path palette for students*

4.1 Meta-information
A student does not have the ability to add or edit the meta-information. They may display, move, re-size and close it only.
The other functions work as previously described in the Author's section.