

Introduction to HyperText and HyperText Limited

In a traditional written document, such as a book, the contents are arranged in a linear fashion. A reference in one section of the document, or in an index, may tell the reader to read one or more sections of the document for additional information on a topic. For instance, an article in an encyclopedia may touch on a subject that is given greater attention in another section, possibly even another volume, of the document. In order for the reader to access this additional information, he must locate the other article, read it, then re-locate the original article and resume reading. This procedure can become quite tedious, especially if the section that was referenced originally contains still more references to other sections.

The concept of HyperText is an attempt to solve this problem. The sections of a HyperText document, or "HyperBook" are not arranged in a linearly. Instead, they are connected by a network of links. If the reader needs additional information from another section of the document, he can simply follow the link and return to the exact spot where he was in the original section. The user can continue to jump from one section of the document to another, and the path back through the links will be maintained.

HyperText Limited (HTL) is a viewing system for this type of HyperBook. It provides facilities for following links between sections, or "chapters," of a document and for returning to the sections that were originally being read. In addition, HTL allows a set of "notes" to be associated with each section of the HyperBook. These notes may be used to give the reader additional information, such as definitions of key terms, that is not contained elsewhere in the document.

HTL does not provide facilities for creating HyperBook documents. These can, however, be easily created using a standard text editor. See "HyperBook File Formats" in the Reference section for more information on creating HyperBooks.

Using HTL

Opening HTL

HTL, along with the HyperBook files you will be using, must first be installed on your machine. See the section on "Installing HTL" or consult your system operator if this has not been done.

To use HyperText Limited, change your working directory to the directory containing the HTL files. At the command line prompt, type:

htl

The system will load and display a title screen. When this clears, the screen will look like Figure 2.1 without the prompt line at the bottom and have the following:

- The program name on the top line,
- A menu bar with the HTL commands on the second line, and
- A twenty line display area, which will be used to display to the text of the document. It will remain empty until a book is loaded.

Accessing HTL Menu Commands

Most HTL commands are menu driven. The menu bar at the top of the screen contains these options. To access a menu item, press the TAB key. The first command on the menu (Open) will be highlighted. You can select a different menu item by pressing the right and left arrow keys. When the desired command is highlighted, you may choose it by pressing either the Space bar or the Return key. If you choose not to select a command from the menu bar, you may cancel it and return to viewing the HyperDocument by pressing the Delete key.

The menu bar commands may also be accessed by pressing the key corresponding to the first letter of the command name (either upper or lower case). To prevent you from accidentally invoking a command that would interrupt your reading, the Close and Exit commands (See below for further information) will ask for verification before they are actually invoked.

Three of the commands on the menu bar (Links, Notes, and Help—See below for descriptions of these) will bring up vertical, “pop-up” style menus when selected (See figure 2.2). The top item on the menu will be highlighted when the menu is displayed. You may select another item on the pop-up menu by pressing the up and down arrow keys to highlight it and the Space bar or Return key to choose it. Like the menu bar, these menus can also be canceled by pressing the Delete key.

One important group of commands, those that allow you to scroll through a chapter, are not accessed through the menu bar. These are discussed in the section on “Reading a Chapter” below.

Opening a HyperBook

After you have opened HTL, you will need to choose the Open command to read in the HyperBook which you wish to view. Upon selecting the Open command, you will be prompted for the name of the book you wish

to open. This file should be in the current directory, and its name should end with the suffix “.html”.

If HTL cannot find the book that you have specified, it will display an error message. Also, if HTL finds the file but cannot read it, it will display a message telling you that the book contains errors. In either case, check that you have installed the HyperBook files properly or consult your system operator. Also be sure that you have entered the name of the book and not the name of one of the HyperChapters.

If there were no problems opening the book, HTL will display the first chapter of the book in the display area. The name of the HyperBook will be displayed on the left side of the top line and the name of the current chapter will be displayed on the right side. (See figure 2.3)

NOTE: You may also open a HyperBook at the same time you start HTL by typing the name of the book on the command line after typing “htl”. For example, if you needed to access a book named “introToHyperText.html”, you could do so by typing:

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htl introToHyperText.html
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The book will load and the first chapter will be displayed, just as if you had loaded HTL then selected the Open command and typed the book name then.

Reading a Chapter

HTL provides commands for scrolling through a HyperBook chapter. These are as follows. Note that it does not matter whether commands are typed in upper or lower case.

- Scroll one line up or one line down: Press the up or down arrow keys
- Scroll one page up: Press “U” or “u”
- Scroll one page down: Press “D” or “d”
- Scroll to the top page of the chapter: Press “T” or “t”
- Scroll to the bottom page of the chapter: Press “B” or “b”

Any attempt to scroll beyond the beginning or end of a chapter will result in an error message.

Using Help

HTL provides an on-line help system which describes most of its features. At any time, the help system can be accessed by choosing Help from the menu bar. When the Help command is chosen, a menu of topics will appear. (See "Accessing HTL Menu Commands" above for help with using the menu bar and pop-up menu.)

After you have selected a topic from the pop-up menu, the display area will be cleared and the Help information will be displayed. Pressing any key will clear the display area and re-display the current HyperChapter.

Following a Link to Another Chapter

HyperBook Chapters are connected by links. To jump to another chapter in the book, choose the Links command from the menu bar. You will see a menu listing the names of chapters that are linked to the one you are currently reading. (See "Accessing HTL Menu Commands" above for help with using the menu bar and pop-up menu.) Once you make a selection, the text of the new chapter will be displayed and its name will appear in the upper right corner of the screen.

Returning from a Linked Chapter

The links between chapters are two-way. You can therefore easily return to the chapter that you have followed a link from. In fact, the path back to the first chapter is always preserved, regardless of how many links you have followed.

Choosing Return from the menu bar will take you back to the chapter that you were reading when you accessed the Links menu to jump the present chapter (unless you have chosen no links and are still on the first chapter). When the previous chapter is displayed, it will be at the exact position in the text where it was when you left it.

Reading Notes

If the Chapter you are reading contains any notes, you may read these by choosing Notes from the menu bar. You will either see a pop-up menu containing the names of the notes associated with the current chapter or a message telling you that there are no notes. If notes do exist, you may choose one from the pop-up menu and it will be displayed in a small window on the screen. After reading it, you can clear it by pressing the DELETE key.

Closing the Current Book

When you are finished reading the current HyperBook, you may close it by choosing Close from the menu bar. You will be asked to verify this

command to prevent you from closing the book accidentally. If you press “Y” or “y” when asked if you want to close the book, the display area will be cleared. At this point, you may access the Help command, use the Open command to open another book, or exit HTL (see below).

Exiting HTL

When you are finished using HTL, you may exit the system by choosing the Exit command from the menu bar. You will be asked to verify if you wish to quit the program. If you type “Y” or “y” to indicate an affirmative response, the screen will be cleared and you will be returned to the command line.

HTL Error Messages

Attempts to access commands that are not valid at a given time will result in an error message. Choosing the Open command when a book is already open or the Close command when there is not a book open are two such examples. Error messages are displayed in reverse at the bottom of the screen (See figure 2.4) and are cleared the next time a key is pressed. A full explanation of all HTL error messages appears in the Reference section of this manual.

Reference

HTL Command Quick-Reference

The following Commands are available in HTL:

- | | |
|-------|---|
| Open | Chosen from the menu bar or by pressing “O” or “o”.
Opens a new HyperBook and displays the first chapter. Will not work if a book is currently open. |
| Close | Chosen from the menu bar or by pressing “C” or “c”.
Closes the current HyperBook. The user will be asked to verify this command. Will not work if no book is open. |
| Links | Chosen from the menu bar or by pressing “L” or “l”.
Displays a pop-up menu which lists links to other chapters. Choosing a chapter name from this menu will open that chapter. See the Return command below. |
| Notes | Chosen from the menu bar or by pressing “N” or “n”.
If the chapter contains any notes, these will be listed in a pop-up menu. Choosing one of the menu items will cause HTL to display a small window on the screen with the text of the note. |

Pressing the Delete key will remove the note from the screen.
Will not work if the chapter contains no notes.

- Return Chosen from the menu bar or by pressing "R" or "r".
Returns to the chapter that was being viewed before the link to the current chapter was chosen. Will not work if no link has been chosen.
- Help Chosen from the menu bar or by pressing "H" or "h".
Displays a pop-up menu of help topics. If you select a topic, the display window will be cleared and the help information will be displayed. Pressing any key will clear the information and re-display the chapter (if one was open). This command is available at all times except when the user is being prompted to enter a book name or verify the Close or Exit command.
- Exit Chosen from the menu bar or by pressing "E" or "e". (Pressing "Q" or "q" will also invoke this command).
Shuts down HTL and returns the user to the command line. The user will be asked to verify this command.
- Line Up Chosen by pressing the up arrow key.
Scrolls the text of the chapter up one line if possible.
- Line Down Chosen by pressing the down arrow key.
Scrolls the text of the chapter down one line if possible.
- Page Up Chosen by pressing the "U" or "u" key.
Scrolls the text of the chapter up one page if possible.
- Page Down Chosen by pressing the "D" or "d" key.
Scrolls the text of the chapter down one page if possible.
- Top Page Chosen by pressing the "T" or "t" key.
Scrolls to the top page of the chapter.
- Bottom Page Chosen by pressing the "B" or "b" key.
Scrolls to the last page of the chapter.

HTL Error Messages

- At top of chapter. Cannot scroll up.
Occurs when an attempt is made to scroll beyond the start of the chapter.
- At bottom of chapter. Cannot scroll down.

Occurs when an attempt is made to scroll beyond the end of the chapter.

- HyperBook contains link errors. Cannot open book.
Occurs when HTL finds a file with the name specified by the user but cannot recognize it as a valid HyperBook.
- Invalid key pressed. Press <HELP> to view help menu.
Occurs when a key is pressed that does not correspond to a command.
- Link not found. Hyperdocuments may be corrupted.
Occurs when a reference to a non-existent link is found. See HTL File Formats section for more information.
- Out of storage space. Cannot open link.
Occurs when there is not enough memory to open another HyperChapter link.
- No previous chapter is open. Cannot return.
Occurs when the user gives the Return command while viewing the very first open chapter.
- Cannot open new book until current book is closed.
Occurs when the user gives the Open command while a book is already open.
- There is not a book open. Cannot close.
Occurs when the user gives the Close command when a book is not open.
- No book is open. Cannot open a link.
Occurs when the user gives the Links command when a book is not open.
- No book is open. Cannot open a note.
Occurs when the user gives the Notes command when a book is not open.
- No book is open. Cannot scroll.
Occurs when the user attempts a scroll commands when a book is not open.
- Chapter contains no notes.
Occurs when the user attempts to access the Notes command if the chapter contains no notes.
- Chapter contains no links.
Occurs when the user attempts to access the Links command if the chapter contains no links.

- Invalid book specified. Book must exist and end with .html
Occurs when HTL cannot find the HyperBook file specified by the user after giving the Open command.

HTL File Formats

Although HTL provides no facilities for creating HyperBooks, these can easily be created using a standard text editor. A HyperBook actually consists of two types of files: a single HyperBook file which serves as an index of links, and a chapter file for each HyperChapter.

The HyperBook file matches the names of links that will appear in the Links menu to the names of actual chapter files on disk. One pair of names goes on each line, with the link name in spaces 1–40 and the file name (which, as you will see below, must end with “.html”) in spaces 41–80. It is important to remember as you design the HyperBook and HyperChapter files that HTL is case sensitive.

The first few lines of a HyperBook file might look like this:

Intro to HTL	intro.html
Using the Menu Bar	menus.html
Using Help	help.html
HTL File Formats	formats.html
Commands	menus.html

Remember that the first chapter listed in the HyperBook file will be displayed when the book is first opened. Also note that a single HyperChapter (file name) can be associated with more than one link name.

The HyperChapter files consist of three sections. The first tells HTL what links to other chapters are present in the chapter. The first line of the file should contain only the (integer) number of links in the chapter. This number should be no greater than 20. The names of those links (link names, not file names) should then appear, one per line, after the number.

Remember that the names must match exactly in case and spelling to the names listed in the HyperBook file.

The second section of the file tells HTL what HyperNotes are present in the chapter. After the line containing the last link, the integer number of notes should be listed. This number should be no greater than 20. For each of these notes, the first line should contain the name of the note in spaces 1–40, followed by the integer number of lines in the note. There should be no more than 15 lines in the note. After the name and number of lines in the note, the actual text of the note should follow. The lines of this text should not be more than 60 characters long.

The third section of the file consists of the text of the chapter. After all the notes have been entered, the text can follow immediately. There can be any number of lines in the text, and it is not necessary to specify how many there will be.

The first few lines of a HyperChapter file might be as follows:

```
2
Using Help
Using the Menu Bar
1
History of HyperText                                2
The idea of a linked system for storing information was
given the name
HyperText by Ted Nelson in the mid-60's.
*****Introduction to HyperText and HyperText
Limited*****
In a traditional written document, such as a book, the
contents are arranged in a linear fashion. A reference in one
section of the document, or in an index, may tell the
reader to read one or more sections of the document for
additional information on a topic. For instance, an article
in an encyclopedia may touch on a subject that is given
greater attention in another section, possibly even another
volume, of the document. In order for the reader to access
this additional information, he must locate the other
article, read it, then re-locate the original article and
resume reading. This procedure can become quite tedious,
especially if the section that was referenced originally
contains still more references to other sections.
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Installing HTL

With the exception of the HyperDocument files that will be read, the only file that is necessary to use HTL is the executable file itself, which should be named "htl."

As a general rule, a HyperBook file should be stored in the same directory as the HyperChapter files that are associated with it. If only a single HyperDocument is to be viewed with HTL, it may also be a good idea to install the HTL program in the folder with the HyperDocument files. If there are multiple HyperBooks on a system, it may be preferable to create a hyperbooks directory in an easily accessible location and create a separate directory within this directory for each HyperBook. The executable file htl could then be put in a directory that is likely to be in the directory path of most users on the system, such as /usr/bin or /usr/local/bin on most UNIX machines.