

# ROCHESTER INSTITUTE OF TECHNOLOGY

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MASTER OF FINE ARTS

Cybernautical Journey

by

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I, Barbara Ann Perry, \_\_\_\_\_

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and excellent Communications Theory class.  
Thankyou also to Jim VerHague and Bob Keough  
for two rigorous and exciting years of computer graphics.  
Thankyou Mom, Dad, and sister Fran.

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## Dedication

I dedicate this book to my brother  
Richard E. Perry Jr.  
who taught me  
how precious every day is and  
how fragile life really is.

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# Chapter One

## Introduction

The Internet has changed the way we interact with technology. Netscape and its plug-ins increase interactivity. This interactivity will allow users of varying cognitive, social, and physical capabilities to interact with the computer world. Cybernautical Journey attempts to increase interactivity for users of all capabilities through the utilization of interactive sound, graphics, movies, and text. Cybernautical Journey will create a highly interactive environment for a non-linear story/poem to create an exciting and beautiful cybernet adventure for all users. This project will allow for continued growth of its content with the hope that it will be used by other developers to improve the interactivity of their sites for all users also.

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## Influences

One very big influence on me, which caused me to choose this particular project, is a close relative who happens to be illiterate and whom I've often seen very happily and comfortably sitting back in his reclining chair with his television channel switcher confidently clicking away and smiling. If the Internet could be made that easy for everybody and the stream of information be made faster, it would be a wonderful experience for all.

Unfortunately, right now Internet designers are thinking only of one type of audience. This audience is typically the same audience that is designing it; young, educated, computer familiar people that do not have problems with vision, reading, not able to grasp the mouse, etc. Many of these problems may be solved by adding a text size choice, a choice of letting the computer read and/or more choices of graphic links, and speech recognition.

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## Research

Computers are changing our lives. There are visionaries that believe an information revolution is in our midst, whereby new opportunities, enabled by emerging technologies, such as hypermedia, artificial intelligence and virtual reality, will allow people to create and develop intellectually in innovative and exciting new ways. Everyone of all capabilities should have access to this wonderful, new and ever-growing source of information.

Computers free the minds of men/women to be useful in other ways. Rather than worrying about things like grammar, mathematics, and language, more conceptual ideas and theories can be created. New ideas and untapped creativity can be brought out of people more freely. For some people, there are fewer barriers. One example can be artists that have developed allergies to the chemicals emitted from their paints, turpentine, markers, now do not need to worry about becoming sick when they want to create, and dangerous chemicals that could build up in the body only to later develop into some sort of cancer can be avoided. Development of variations on a theme is tremendously faster by computer use rather than painting by hand a series of several canvases. On the computer variations may be made within minutes by using software like Kai's Power Tools, Adobe Photoshop filters, or Fractal Design Painter.

The faster flow of ideas can be achieved by many people that earlier may have found language, grammar, and/or vision to be their barriers. Voice



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recognition software and software that is programmed to translate one language to another could be very helpful to many of these people. The less interference within one's thought processes, the better the environment for free flowing ideas and creativity, and also one will achieve greater individual productivity, which will add to the productivity of the masses. Another contributor to the faster flow of ideas is the Internet, which expands our community to around the world, therefore expanding our debates or exposure to new ideas.

“The general relegation of trivial tasks to the mechanical periphery is perhaps the most explosive phenomenon of computerization. First, the computer increases the gradient of intensification, accelerating history as history was accelerated in Athens surge from obscurity in 520 B.C. Second, the computer can intensify the rigorous, formalized disciplines that are at the heart of intellectual life. Third, and most important, the computer can enhance the sense of possibility, giving us a sense that there are no fundamentally unconquerable categories.”<sup>1</sup> People used to have to concentrate mostly on remembering all their data, but once information became documented and more easily retrievable, people could explore more insight and concepts. Data can now be easily stored in multiple volumes of computer space or books. “The computer permits discourse to be more concentrated yet more planetary, more varied yet with more depth of knowledge, more convenient yet more swiftly recorded (if not yet more original) even than it was in Athens.”<sup>2</sup> We will have an exponentially increasing amount of knowledge available to us due to the Internet. Kai Krause put this in a very interesting way when he stated that "I think we're all

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underestimating what's about to happen here," he said. "My definition of the highway is that every person on earth will have access to the entire sum of human knowledge."3 With this access to all human knowledge, people will be more inspired than ever, and more inspiration will bring about more exploration of theories and facts, which will again increase the sum of human knowledge. Knowledge will continue to grow ever faster with each completion of this cycle.

Many dancers, athletes, and other performers are finding the computer to be helpful in that it can store the best and most proper movements of previous experts or totally computer simulated interpretations of how to move to attain the most grace and/or safety. Their own movement can be taped and digitized into the program to be compared to what is best. Perhaps this would be useful in the area of Physical Therapy. One may not even need to leave their house or need a nurse if the software is easy enough to use. Due to JavaScript and the Internet, most people will be able to access whatever software they need over the net; they will not need to buy it and go through the (for some people) complex procedure of installation and troubleshooting of the software.

Many musicians are also utilizing this great new resource and tool. One person can now create music with multiple sounds or instruments playing at one time. "We have shown that computers can exhibit real-time musical behavior similar to that of skilled human performers. This research uses real-time digital audio processors to explore the music-cognitive issues that arise when a computer is put in the position of real-time, highly sensitive human interaction."4

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This opens the creative door to composers who before the computer was introduced to mankind, may have not been able to compose because of lack of monetary resources. Science is also exploring the area of sound. Professor Barry Vercoe states that "Using real-time software sound synthesis and analysis, we are investigating how humans perceive and quantify music and audio information in cultural contexts. This involves computer-assisted identification of source type, intonation, rhythmic and tonal structure, and emotional content, within Western and non-Western traditions."<sup>5</sup> This experiment is called cognitive audio processing. This could also be very helpful with speech therapy, a mother teaching her child to speak English properly, or a person trying to learn another language.

Soon, computers may be a functioning component within the wiring in the walls of our homes. This will greatly lower barriers for the old and/or disabled. People may have "smart houses" where the house can be programmed to be a watch dog, appliance controller, intelligent temperature regulator having the ability to recognize if the house is occupied, and if so in what rooms. You may be able to talk to your computer anywhere in the house. This house computer may be part of the Internet and could alarm the proper authority if there is any danger. It could call the fire department if there is a fire, and let them know who is in the house and their condition; if they are elderly, in a wheel chair, bed ridden, young baby, etc, and in what area of the house they are in. It could call the police if there is a break in or a violent situation, And it could even call the ambulance if needed.

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The computer will never measure up to the total abilities or understandings of human beings. Much of who we are is due to our shared and separate life experiences and our different interpretations of these experiences. One major experience a computer will definitely not ever encounter is the lost paradise that all humans go through but may not be aware of. "For a time the infant demands and is granted gratification of his every need, but is asked for nothing in return. Then, often after the infant has developed teeth and has bitten the breast that has fed him, the unity between him and his mother is broken. Thus begins the individual human's imaginative reconstruction of the world. And this world is the repository of his subjectivity, the stimulator of his consciousness, and ultimately the constructor of the apparently external forces he is to confront all his life."<sup>6</sup> The computer will never have a true understanding of the abstract; it will never have a soul. The computer is part of a universal paradise we seek where it will eventually grant most of our needs.

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# Chapter Two

## Tools: Hardware

The hardware used in this project included my own Power Macintosh 7100 with forty megabytes of RAM, a video card installed, a Pentium 28.8 modem, and a seventeen inch Machintosh monitor.

## Tools: Software

My computer has System 7.5.3 on it. Netscape 2.0 is the browser I designed the interface on and for, and Shockwave and Talker are two plug-ins for Netscape 2.0 that I used. The user needs these three software programs to view this project properly. In order for Talker to work, the user also needs the Speech Manager Extension and the Voices folder which can be installed from the system disk. FreeHand 5.0 was used to create black and white, editable versions of the icons, before bringing them into Photoshop. SimpleText was used to create the phonetically spelled text files for Talker to read. Adobe Premiere and Sound Edit 16 were used to create the sound files for the background noise.

Adobe Photoshop 3.05 is another software program I used. It is an extremely pivotal program to many multimedia designers. Photoshop allows for one to manipulate and combine scanned in photo images and images created in another software program like Illustrator and Freehand, which are two other

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programs I used. The anti-aliasing feature of Photoshop allows the graphic creator to avoid any graphic to have a pixellated look to it. Due to anti-aliasing, a soft edge is easily attained. This is not possible to do in Director 4.0. The Adobe Photoshop 3.05 allows you to work in layers, which makes it a lot easier to manipulate graphics. If there is a mistake or a change, only the one layer needs to be altered, as long as the original file is saved. Photoshop also allows for easy color manipulation, and if you have Kai's Power Tools plug-ins, Photoshop allows for the creation of multiple textures, gradients, and other wonderful effects when combining all these available filters.

I also used Macromedia Director, which is the type of software that one can bring into it highly graphical content and be able to program this content to react the way the programmer wants in order to interact with the user. For example, one could turn graphics into buttons, sliders, it could be linear and everflowing graphics, they could be timed, they could react to certain buttons pushed, and many other events could be programmed to occur.

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## Procedure

After deciding what I wanted my Thesis project to be based on, I needed to choose my color scheme and overall look and feel. Also, I needed to write my poetic, nonlinear story:

### Cybernautical Journey

#### BEGIN:

A soft breeze playfully taunts  
The billowing white sails of  
Our mighty ship, the Cybernaute,  
As our faithful crew wait to cast off  
All eyes patiently watch Sir Captain Hue.  
Will we glide through the <link>Auroran Zephyr<link>  
Or explore the enchanted <link>Cyberian Sea<link>?

#### Auroran Zephyr:

As we peacefully float through  
The cool Auroran breeze,  
The golden sun begins to cool  
Her scorched rays in the sea's  
Distant faded edge where a soothing  
Lavender mist slowly rises.

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Dark crouching clouds roll in  
From behind. A sharp, bitter gust rips  
And snaps the sails around sending  
The Cybernaute to her fatal ending  
"Alas! Captain Hue, Sir! Shall we take her  
Toward the black rock Isle of [Obsidia](#)  
Or the sea of lost ships, [Sea Incognita](#)?

### **Cyberian Sea:**

Crystal crescent waves lap lightly  
Against our Cybernaute as white  
Winged dolphins dodge playfully about  
Our full breasted sun lit sails.  
The golden winged [dolphin](#) wails  
With waving wings and head  
For us to follow while ahead  
We hear a sullen soaring [song](#).

### **DisappearsBelow:**

The Cybernaute wildly rocks about  
As the mighty waves rock the boat.  
The Sea Wolf emerges from below  
And climbs upon the burdened bow  
Where the crying crew become his chow.



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Where the heck did the dolphins go?

<link>THE END!</link>

### **Dolphins**

The dolphins push with delight  
As we follow the golden winged flight  
Of their laughing and singing king.  
A mighty whistling whale soars  
Up from the murky sea floor  
Over our masts and sails almost  
Touching his white wondrous torso  
As he thunders back down through  
The waves where he <link>returns to  
Follow</link>disappears below</link>.

### **DolphinsAgain:**

Our broken bow begins inviting  
Sea waves into our sinking ship.  
Alas! Captain Hue, Sir! We have a sighting  
Of land ahead ! The dolphins nip  
Excitedly at us to ride their soft silver  
Backs. So we freely fly to love and live there  
On our new found fertile island forever.  
<link>THE END!</link>

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### **Left:**

The Cybernaute grinds and crashes  
Against black glass that lashes  
Out as wretched faces of horror are mirrored  
In an evil shadowy obsidian Hades core.  
A few of the crew quickly make  
A [wooden raft](#)/[small balloon](#)  
To escape the Cybernaute's fate.

### **Obsidia:**

As we plummet toward the Isle of Obsidia,  
Sharp black boulders emerge from dark  
Cold shadows; our brave crew fights  
The ripping wind to take us [left](#)/[right](#)  
Of the unforgiving spiked shore.

### **OtherEnd:**

The Sea Wolf slips on the ship's wet deck  
And tumbles into the sea's deep depths.  
Winged [dolphins](#) return and lift  
Up the shivering slippery ship  
And fly us forcefully away  
Then set us down in the softest way.

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### **Returns:**

The Sea Wolf emerges from below  
And climbs upon the burdened bow  
Where the mighty whale dives through  
The air scraping his slippery, smooth  
Stomach over the bow bringing the Sea  
Wolf down into the endless foamy deep.  
We <link>wait patiently for our giant friend</link>/  
<link>Decide to follow the dolphins again</link>.

### **Right:**

The screaming Cybernaut scrapes past massive  
Black-mirrored walls causing our crew to pass out.  
Warm morning rays waken us as white satin steam  
Rises from our drenched deck and sails; we  
Drift with delight in the cool <link>Cyberian Sea</link>.

### **SmallBalloon:**

As we rose high above the wicked waves,  
A flock of Auroran Heron passed our way.  
We lassoed them with old ship ropes  
And hoped that they would take us home.  
<link>THE END!</link>

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### **Song:**

Mysterious melodic music flows  
Through soft salt scented growing.  
Wind as our Cybernaute lunges forth  
Following a magical magnetic force  
Some crew's souls are spooked  
And they call and cry to drop [anchor](#)  
Others stand in awe of the haunting echo  
Emulating from the [Isle's](#) wall.

### **Anchor:**

The Cybernaute halts with a soft jerk;  
As mesmerized mortals moan and lurk  
About in loss with wanton moans.  
A sea wolf emerges from hidden shadows  
And lunges for the ship's dampened deck  
Crew quickly [cut the anchor's rope](#)  
[run to the ship's other end](#).

### **WoodenRaft:**

The rickety raft rocked about  
For several severely dry days  
As sadistically scorching rays  
Beat the creaking desolate boat.

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<link>THE END!</link>

### **SeaIncognita:**

As we encounter the damp, gray mist  
Of Sea Incognita, the wild, gusting wind  
Dies abruptly and tattered sails drop breathless.

The mangled masts moan and sway as  
Our Cybernaute knocks rhythmically against  
A sea of forgotten rotting ghost ships.

<link>THE END!</link>

### **GiantFriend:**

The downcast-eyed dolphins sadly soar  
away and make a final dive where the sea  
ends. Bubbles emerge from beneath our  
sagging stern as we wantonly wait to see  
if it is a sea beast or our mighty friend.

The ravaging sea wolf rips away  
the Cybernaute's wooden walls to take  
us to a dark and dreary end.

<link>THE END!</link>

### **GoodEnd:**

Your ending was OK.

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You survived the ordeal,  
but did not gain any riches  
besides your experiences.  
Nothing wrong with that!

### **BestEnd**

Congratulations!  
This island will be your new home.  
You will profit greatly from its riches  
and enjoy its beautiful landscapes and people.

### **BadEnd**

Sorry!  
Your voyage had a  
fatal ending.  
Better luck next time!

My undergraduate background does have some creative writing poetry classes, but I did not want this story to be too poetic because my experiences at trying to get people to read my poetry for their opinion often seemed to leave me with a little dust cloud left by the person running away. Most people run from poetry, so I concentrated on just writing a story with a poetic feel to it instead. As far as the color scheme goes, I chose to go for a mysterious look and feel to go along with the poetic content. The colors chosen were a hot, fushia pink, a dark

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reddish purple, and a dark forest green. I also chose the background of the Netscape pages to be black to add to the feeling of mystery and act as a black mat would around a work of art.

The project title and story is what helped to determine my project metaphor. Since the story is about ships, water, anchors, dolphins, whales, etc, I used these as icon links and general navigation links. The opening title with its wavy water and the flowing liquid feeling of the shockwave movies also go along with the metaphor. All the background sounds are part of the metaphor too. My attempt was to bring the user as much as possible into the environment of the ship, the Cybernaute, and the rest of the story. Please refer to the images on page 32 and 33.

I chose to work with shockwave movies because of their ability to help provide a highly interactive environment. I used the Macromedia Director software to create the movie. Then when the movie was complete, I dropped it onto the After Burner icon which creates a copy that can work with html and has a .dcr added onto its name. By using the various filters and layers Photoshop offers, I created a series of liquidy, flowing shockwave movies after bringing these files into Director 4.0.

My plan was to give the user as much control as possible and to push Netscape as far as I could. Using the shockwave movies, I allow the user to choose the type size that is suitable to him/her, and the volume that is most

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comfortable. Please refer to page 31 to view images depicting this. Below are the scripts I used in the text size and volume control shockwave movie:

### Movie Script:

On startmovie

Global T

set the locV of sprite 10 = 60

set the immediate of sprite 10 to true

end

On TypeSizeUp

global T

set T = T + 1

if T < 3 then

set T = 3

if T > 6 then

set T = 6

end if

end if

end

On TypeSizeDown

global T

set T = T - 1

if T < 3 then

set T = 3

else

if T > 6 then

set T = 6



---

```
    end if
  end if
end
```

### On TypeCast

```
global T, throwthis
if T = 3 then
  set the castnum of sprite 4 = 3
  -- put "http://www.frontiernet.html" into throwthis
  put "large.begin.html" into throwthis
else
  if T = 4 then
    set the castnum of sprite 4 = 4
    -- put "http://www.frontiernet.net.html" into throwthis
    put "medium.begin.html" into throwthis
  else
    if T = 5 then
      set the castnum of sprite 4 = 5
      -- put "http://www.frontiernet.html" into throwthis
      put "small.begin.html" into throwthis
    else
      if T = 6 then
        set the castnum of sprite 4 = 6
        -- put "http://www.front.html" into throwthis
        put "tiny.begin.html" into throwthis
      end if
    end if
  end if
end if
end if
end if
end
```

---

on SoundLevel

Set n = the loch of sprite 10

if n = 231 then

set the soundLevel = 0

else

if n < 242 and n > 237 then

set the soundLevel = 1

else

if n < 247 and n > 242 then

set the soundLevel = 2

else

if n < 257 and n > 252 then

set the soundLevel = 3

else

if n < 262 and n > 257 then

set the soundLevel = 4

else

if n < 267 and n > 262 then

set the soundLevel = 5

else

if n < 272 and n > 267 then

set the soundLevel = 6

else

if n < 274 and n > 272 then

set the soundLevel = 7

end if

end if

end if

end if

end if

end if

end if

---

```
end if
upDatestage
beep
end SoundLevel
```

### **Down Arrow Button:**

```
on mouseDown
  global t
  typeSizeDown
  typeCast
  updatestage
end
```

### **Up Arrow Button:**

```
on mouseUp
  global t
  typeSizeUp
  typeCast
  updatestage
end
```

### **Setting Yellow HighLights to Invisible:**

```
on enterframe
  puppetsprite 4 true
  puppetsprite 10 true
  set the visible of sprite (6) to false
  set the visible of sprite (7) to false
  set the visible of sprite (11) to false
  if rollover(6) then
    set the visible of sprite (6) to true
```

---

```
else
  if rollover(7) then
    set the visible of sprite (7) to true
  else
    if rollover(11) then
      set the visible of sprite (11) to true
    end if
  end if
end if
updatestage
end
on exitFrame
  go to the frame
end
```

### **Volume Button Control:**

```
on mouseDown
  puppetSprite 10, true
  repeat while the stillDown
    set Xloc = The MouseH
    if Xloc > 273 then set Xloc = 273
    if Xloc < 231 then set Xloc = 231
    Set the locH of Sprite 10 = Xloc
  upDateStage
  end repeat
  SoundLevel
end
```

### **Script Used to Set Text Size When "Begin" is Clicked On:**

```
on mousedown
```

---

```
global throwthis
gotoNetPage throwthis
end
```

Also, the text is read by Talker, which is a Netscape plug-in that lets the computer read the text I program it to read. The html page text Talker uses to read from does not look anything like the text the user sees. The Talker text file had to be typed phonetically. This was done best by using SimpleText, which has the ability to automatically read your text to you when typing Command H. Below is an example of the text the user sees and the text Talker reads:

### **What the User Sees:**

A soft breeze playfully taunts  
The billowing white sails of  
Our mighty ship, the Cybernaut,  
As our faithful crew wait to cast off  
All eyes patiently watch Sir Captain Hue.  
Will we glide through the Auroran Zephyr  
Or explore the enchanted Cyberian Sea?

### **Talker's Text File:**

```
[[cmnt talkervoice=Fred ]]  
"Ay softe breaze, playfullee taughtnts,  
Thuh billowwing wite sales of,
```

---

---

hour mitee sship, thuh Cighbernaute,  
As hour Faitheful krhoow, whaite too cast auffe,  
All eyes, Patiently wahhch Sir Captan Hiew.  
Will wee glide through, thuh Aroaran Zeffur?  
Oar xXplore, thuh nNchanted Cighbearian C "

This is the html mark-up used to make Talker read this file:

```
<Center>  
<EMBED SRC="myspeach5.talk" WIDTH=10 HEIGHT=10  
PLUGINSOURCE="http://www.mvpsolutions.com/PlugInSite/Talker.html">  
</Center>
```

If the user does not want the text read to him/her, then all one has to do is press the escape key on the computer key board. Because Talker starts reading right away, I set the background sound to play only if the user clicks on the sound icon for it to play. Otherwise, Talker is drowned out by the sounds of seagulls, waves lapping, dolphins, whales, etc.. I used Adobe Premiere 4.0 and Sound Edit 16 to create the sound files.

After choosing the text size and volume, the user then presses the "Begin" button, and the adventure starts. Below is an example of html mark-up calling a particular shockwave movie:

---

```
<Center>
<script language="LiveScript">
<!-- hide this script tag's contents from old browsers
    document.write('<embed WIDTH=400 HEIGHT=100
SRC="shockone.dcr">');
<!-- done hiding from old browsers -->
</script>
<noembed>

</noembed>
</Center>
```

In order for the user to see the shockwave movies, Netscape 2.0 and the shockwave plug-in must be installed on the user's computer, and all the html files are created in Word Perfect 5.0 (Word Perfect 6.0 acts too strange). Shockwave takes the user to the set of html documents that are scripted to show that text size, and the volume chosen changes the volume preference on the user's computer. At the top of each page are the general navigation icons, which should be saved in the gif format. Below is an example of html mark-up used to call a gif and also create a link:

```
<Center>

```

---

```
<a href="search.html">  </a>
<a href="help.html"> 
</a>
<a href="index.html"> 
</a>
<a href="about.html"> 
</a> </Center>
```

Remember to always state the actual size for a gif and shockwave movie or events and images will not work right or look right. "About" takes the user to a page where the project abstract is shown, and Talker reads it. "Search" takes the user to a search engine, and describes how to use it along with the assistance of Talker. "Help" takes the user to the Help page where it is explained how to use the Internet and how to navigate this story, also with Talker's assistance. Finally, "Home" takes the user to the page where he/she chooses the text size and volume, and the adventure starts all over again. Refer to the top of page 31 to view image.

Each story page contains both text and graphic links. The shockwave movie at the top of the page has a flowing, watery movement filled with color and rhythm. As the user rolls the mouse arrow over the shockwave movie, the moving, fluid texture disappears, and one or two icons appear. Refer to page 32 to view image. These icons represent choices in the story, and they are graphic



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depictions of the text links that are also available. There are three possible outcomes to this non-linear story, they are: Fatal ending, you survived, and you end up rich and prosperous; in other words a bad, good, and best ending.

When writing the mark-up for the text size, I first just worked with one text set. I made all my graphics, shockwave movies, etc, and placed them in the mark-up. When all was set and working, I then went and copied the whole text size set and made minor adjustments to each set. The original set was called medium.pagetitle.html, and all the links were medium.pagetitle.html. When I made the new text size sets, all I had to change was the first word in each link. The word "medium" was changed to "large" in all the larger text size set links. The same was done with "small" and "tiny" So the four sets were medium.pagetitle.html, large.pagetitle.html, small.pagetitle.html, and tiny.pagetitle.html.

As with the text, the story's icon links were made all at once and brought into the shockwave movies which were also made all at the same time. All related elements were created in their own groups at the same time. Because I took the time to plan ahead and create the various elements in this manner, I saved a tremendous amount of time. After the different groups were finished, all I had to do was place them together in one folder and create the html mark-up. Minor changes were needed due to the offsetting of some of the graphics from changing text sizes. Netscape is what visually brings them together.

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## Future Plans

Future plans on this project will include adding speech recognition, as one of my user's indirectly pointed out; there are people who cannot use their hands to roll the mouse around. Also, I will add graphic links that are smaller and situated next to the text links so it is more direct. The Home page will also allow the user to choose ahead of time if they want Talker to read to them, and if they choose not to have Talker read, then the background sound will play automatically. Also, speech recognition will be a choice. Talker will ask them for a reply at the beginning. I have even been considering offering a choice to have Talker read in Spanish. I also plan on integrating this project into interactive TV. This is a project I truly care about and plan to expand on as much as possible.

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# Chapter Three

## Conclusion

Overall, I think my project progressed well and in the right direction given the time I had to complete it. I learned a lot and have many new ideas which have been discussed in the chapter on future plans. Two of the main obstacles, which I had no control over were bandwidth, which hopefully will be resolved when cable comes out with their Internet facilities, and Netscape's memory limitations and bugs, which I'm sure they will fix.

If we do not take into consideration all the different capabilities people have then as the Information SuperHighway grows, we will leave various groups of people who have their own intelligence and talents to offer behind in isolation. If this happens, then we all lose. Someday we will be older with vision problems, or get in an accident and lose certain abilities, and I know I will always have and want to offer something to my society, and I do not want to be isolated. We all deserve to enjoy the freedom the Internet offers.

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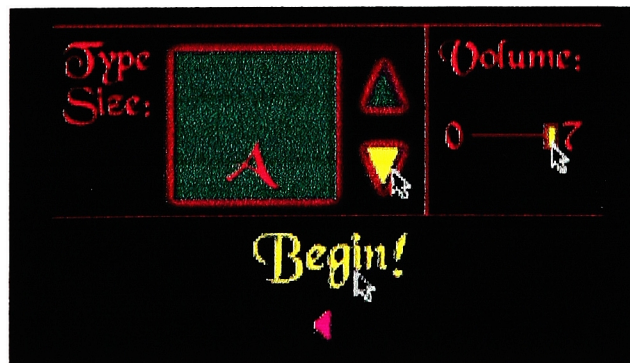
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## Images

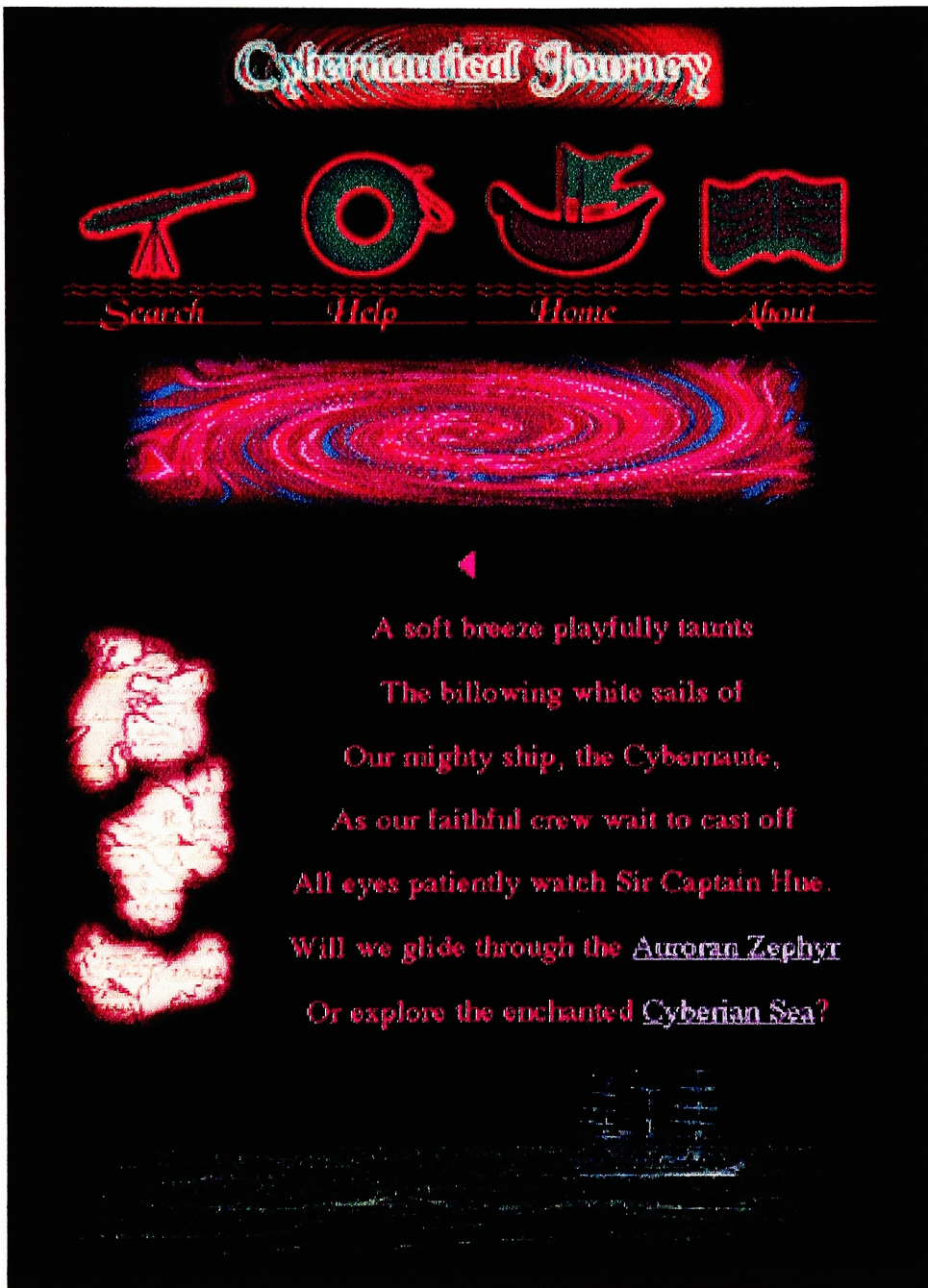
Below is the Home page where the user chooses the volume and text size.



This next image shows how the buttons light up when the mouse rolls over them.



This image displays the first page of the story after the user has clicked on the "Begin" button. Beneath the general icons, you can see a swirling shockwave movie, and there is a non-interactive shockwave movie at the bottom of the page.



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The image on the previous page also shows the text links as a light purple color. The image below reveals the hidden, mysterious icons that appear when the user rolls his/her mouse over the swirling shockwave movie. These icons are linked to the same pages as the text links.



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## Works Cited

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