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Rochester Institute of Technology

A thesis submitted to the Faculty of the College
of Imaging Arts and Sciences in candidacy for
the degree of master of Fine Arts

Title : Egyptian Art

By : Ekrem Cetin Bigat

October 13, 1998

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“Explore the wonders of ancient times”

Introduction

The main purpose of this thesis is to create an interactive CD to show Egyptian art with text, graphics, music and 3D animation. This project is designed for the people who are interested in Egyptian art, symbols, gods, time periods, hieroglyphs. This report will touch upon the subject and significance of the project, the areas covered in the research, and the procedure as well as the outcome of the project.

Multimedia is a class of computer-driven interactive communication systems which create, store, transmit, and retrieve visual and auditory networks of information. One of the most important claims of multimedia is that, because it combines the technology of video, audio and computers, it offers a unique environment for interactivity, learner control and student interest and motivation.

Multimedia packages should be kept simple, clear, concise and consistent. All information should be provided on the screen. Colors, graphics, animation, and sound maintain student's interest without being distractive.

Multimedia makes learning fun. People who use this technology love it since they can see the things and learn from it easily because of its game-like quality. Using this technology is more interesting and fun than using a book when it comes to getting all this information across.

This thesis provides general information about Egyptian Art. The animation, graphics, images, illustrations, and text needed advanced computer skills to create this interactive project. The final work is in the form of a CD-ROM. The target users will be anyone above the age of 7 to up.

The program provides students with the material and its presentation is interesting enough for them to be willing to become mentally and emotionally involved. The program's use of basic graphic design as well as a variety of stimuli such as color, sound, and animation in both its presentation and feedback screens greatly enhances its effectiveness.

RESEARCH AND ANALYSIS DATA

I started my research by searching the internet. I found many sites which provide information about Egyptian time periods, gods, hieroglyphics, symbols, Egyptian art and Egyptian Museum. Also, from the public library and Wallace Library I continued my search on Egyptian art. After reviewing all the information, I tried to arrange data into groups which I first considered be fitting to my thesis.

Although this project had been defined into five parts, I was concerned about how to arrange the action of each item for the right portion, but I also considered how to assemble them together. I came up with the scope of containing data for each portion (see flow chart 1).

The first section was a time line, which consists of the Early Dynastic Period, The Old Kingdom, The Middle Kingdom, The New Kingdom, The Late Period, and The Greco Roman Period.

The second section was Egyptian Gods, which are Amun, Anubis, Hathor, Isis, Khnum, Osiris, Ptah, and Ra.

The third section was the Egyptian Museum. It consisted of a 3D animation movie depicting the inside of the museum and one could see all art works as if one was walking inside the museum in real life.

The fourth section was Egyptian Hieroglyphics which is divided into three parts: Phonetic signs, determinative signs, and monoliteral signs.

The fifth section was Egyptian Symbols which are Tree, Djed, Shen, Udjat Eye, Shenu, Primordial Hill, Maat, Pet, and Ankh.

I also needed to consider an effective medium to catch the user's eye. The Macintosh computer had the most potential for my work. It supported all necessary software for creating my work.

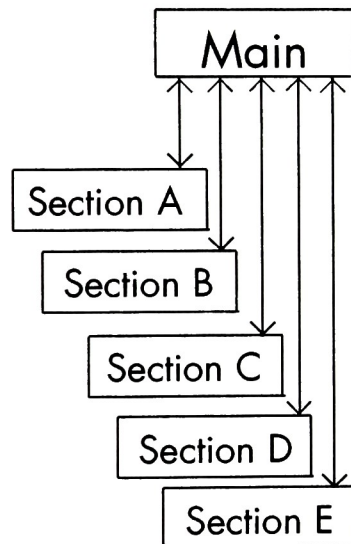
I used the following applications: Adobe Illustrator 7, Adobe Photoshop 4 for editing text, graphics, and images. I picked Strata Studio Pro 1.5.2 and Multimedia Director 6 to produce 2D and 3D animation. Also, I edited all sound and background music using SoundEdit 16. And I created the

background music on a synthesizer. Finally, authoring in Lingo with Macromedia Director 6 for designing interactivity and the user interface, and for assembling a variety of media into a single, compact piece.

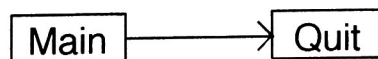
DESIGN SYSTEMS OF SCREEN LAYOUT

This multimedia project provides several ways in which a user can access, learn, and interact with information about Egyptian Art. Not only did I need to arrange text, graphics, and QuickTime movies, but also had to consider how to compose these elements and make it unique, shaped by the project's goal and the subject it contained.

I divided the content into five main topics which became the main options in this project. It was important to give users the sense that they were always free to jump to various menus, main function. In next level, I made a back link on the lower right corner of the screen if users wanted to return to the main menu.



I also have a quit link on the main menu in the bottom right corner of the screen to quit from the project.



Interface Design

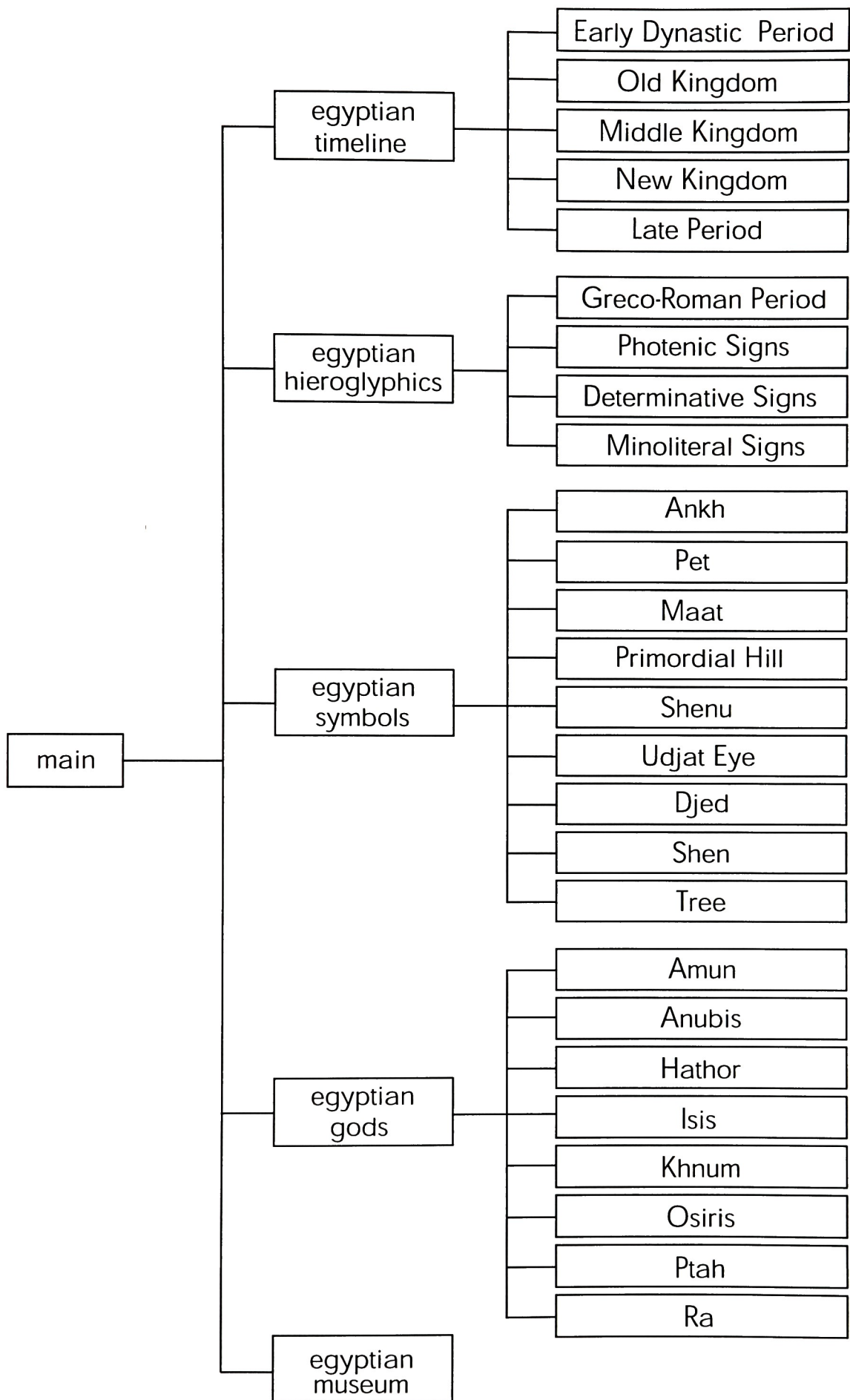
Multimedia such as CD-ROM presentations, and training programs should provide good information and help users learn, and navigate through the content. Interface design is the most important part of any software program. A graphical user interface requires a good basic graphic design sense: an awareness of layout, color, texture, imagery, signs, icons, symbols and animation.

Additionally, interactive content presents two design challenges: making the material interesting and making it easy to locate. The more familiar an interface becomes, the easier it will be to learn and use. This applies to the design of controls, typography, symbols, icons, charts, maps, diagrams, illustrations, photos, videos, any underlying grid structure, and color relationship.

All data and functions should be appropriately organized and presented in a way that users can easily navigate through the contents.

The tools for navigation-such as menus, dialog boxes, and control panels-should make data and functions appear simple. Appropriate organization of content and layout help users to navigate and interact in an effective way. The appearance, the caption, and the size of the buttons are all aspects that tell users how to control movement within the project.

Planning process for an interactive project is very important and very different than the traditional model. Planning these typical relationships can be done using several methods, such as building a flow chart, creating an outline, using an alphabetical index to make topics more accessible. The appropriate method should both match the ability to organize and complement the complexity of the content.



EGYPTIAN TIMELINE

Civilization in Egypt started around 3000 BC. The dynasties are now grouped into large periods. The three major pharaonic periods being : the Old Kingdom, Middle Kingdom and New Kingdom.

These three eras all eventually ended in periods of decline known respectively as the First, Second and Third Intermediate Periods. The last two periods are The Late Period and Greco-Roman Period.

Early Dynastic Period : First united kingdom of ancient Egypt. The earliest known hieroglyphic writing dates from here. This period began with a 0 Dynasty, which had as many as 13 rulers, ending with Narmer about 3100 BC followed by the 1st and 2nd dynasties about 3100-2755 BC, with at least 17 kings. Some of the earliest massive mortuary structures were built at Saqqara, Abydos, and elsewhere during the 1st and 2nd dynasties.

Old Kingdom : The Old Kingdom spanned five centuries of rule by the 3rd through the 6th dynasties. The 3rd Dynasty marked the beginning of a golden age of cultural freshness and vigor. Egyptian civilization reached a peak in its development, and this high level was generally maintained in the 5th and 6th dynasties. The 7th Dynasty marked the beginning of the First Intermediate Period. The period from Dynasties 7 to 10, is also known as the Heracleopolitan Period.

Middle Kingdom : The Middle Kingdom began with the eleventh Dynasty. Great irrigation projects were undertaken during the twelfth Dynasty. Attempts were made to irrigate the Fayum, and reservoirs and canals were constructed under King Sesostri 2nd, and Amenemhat 3rd. The Second Intermediate Period includes Dynasties 14-17.

New Kingdom : The Empire Period. Dynasties 18-20, and is considered by many to be the golden age of Egyptian civilization. The Third Intermediate Period includes Dynasties 21-24.

Late Period : The 25th through the 31st dynasties ruled Egypt during the time that has come to be known as the Late Period. The 26th or Saite, Dynasty achieved a renaissance of Egyptian civilization. Art, language and many other aspects of traditional Egyptian culture were resurrected from bygone classical ages. During Dynasties 27-30, Egypt remained under Persian rule, occasionally succeeding in placing native Egyptian rulers on the throne.

Greco Roman Period : The Romans controlled Egypt around 332 BC. Roman Egypt was governed by a prefect, whose duties as commander of the army and official judge were similar to those of the pharaohs of the past. Egypt in the Roman period was relatively peaceful. Egypt became an economic mainstay of the Roman Empire not only because of its annual harvest of grain but also for its glass, metal, and other manufactured products. Egypt was also an important center of early Christendom and the first one of Christian manasticism. Its Coptic or Monophysite church separated from mainstream Christianity in the 5th century.

B.GODS



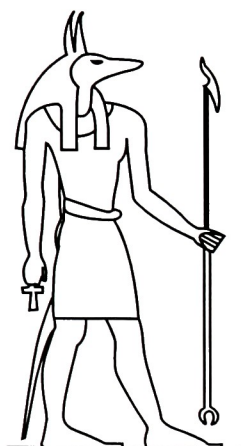
AMUN

Cult Center: Thebes, the temples of Luxor and Karnak.

Attributes: Early, a god of calm and wind. Later, a fertility god. The creator of all things. During the New Kingdom he became "The king of the gods".

Representation: A bearded Man wearing a cap surmounted by two tall plumes. A ram, headed man, or a ram-headed sphinx.

Relations: Self created at the beginning of time. Believed to be the physical father of all Pharaohs.



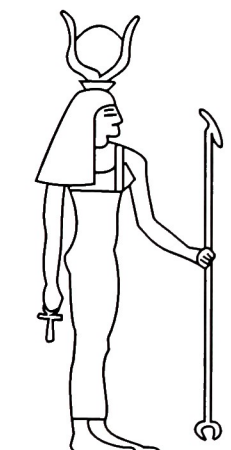
ANUBIS

Cult Center: Thinis, Lycopolis, quickly spreading throughout Egypt.

Attributes: Guardian of the Necropolis. He was the guide of the dead as they made their way through the darkness of the underworld. As a patron of magic, it was believed he could foresee a person's destiny. In this role he was the announcer of death. Anubis was the patron of embalming. He was also the keeper of poisons and medicine. He provided unguents and rare herbs to help Isis and Nephthys with the embalming of Osiris.

Representation: A man with the head of a jackal. A dog or a jackal.

Relations: Son of Nephthys and Osiris, some believe him to be the son of Seth.



HATHOR

Cult Center: Dendera and throughout Egypt.

Attributes: Because her workshop stretches back to pre-dynastic times, we find Hathor identified with many local goddesses, and it can be said that all the goddesses were forms of Hathor. At times we find her playing the role of a sky-goddess, a goddess of the west, a goddess of moisture, a goddess of fertility, an agricultural goddess, and a goddess of the underworld. Hathor was the goddess of joy, motherhood, and love. She was considered the protectress of pregnant women and a midwife. She was the patron of all women, no matter their station in life. In the Late Period, dead women identified themselves with Hathor, as men identified with Osiris.

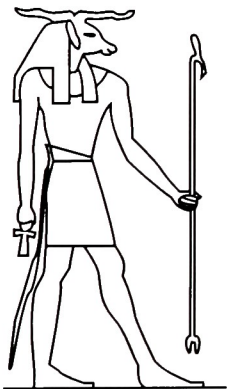


ISIS

Cult Center: A temple is dedicated to her on the Island of Philae, near the first cataract. She is revered throughout Egypt.

Attributes: Isis is one of the earliest and most important goddess in ancient Egypt. She was regarded as the feminine counterport to Osiris, a role she probably occupied before the dawn of dynastic Egypt. She was revered by the Egyptian people as the great mother-goddess and represents the maternal spirit in its most intimate form.

Representation: A woman wearing on her head the hieroglyphic symbol of her name, which represents a throne or seat. Often seen wearing horns and a solar disk on her head.



KHUM

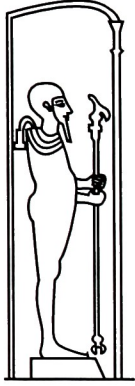
Cult Center: Philae, Elephantine and Esna.

Attributes: A very ancient deity. As a water god he was closely associated with the annual flooding of the Nile. His name means to create. He was the creator of all things that are and all things that shall be. He created the gods and he fashioned mankind on a potters wheel.

Representation: A ram headed man.

Relations: Self created.

Other Names: Khnenu



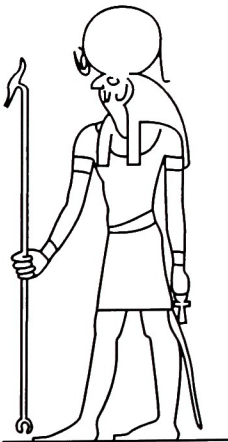
PTAH

Cult Center: Memphis.

Attributes: Ptah represents the sun at the time when it begins to rise above the horizon and or right after it has risen. As early as the Second Dynasty, he is regarded as a creator god. The patron of architects, artist and sculptors. He was a master architect, and responsible for building the framework of the universe.

Representations: A man wrapped as a mummy with a shaved head and beard. Hanging from the back of his neck is the Menat, a symbol of happiness. Holding a staff that is a combination of three symbols. An ankh, a djed, and a was scepter. This staff represents life, stability, and longevity.

Relations: Husband of Sekhmet, father of Neferetem.

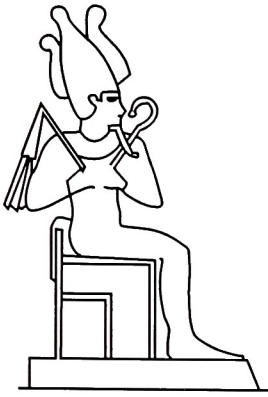


RA

Cult Center: Heliopolis and throughout Egypt.

Attributes: From very early times Ra was a sun god. He took on many of the attributes and even the names of other gods as Egyptian myths evolved. Ra was born and began a journey across the sky. Ra was believed to travel in the Manjet-boat and would sail through the twelve provinces, representing the twelve hours of daylight. At the end of each day Ra was thought to die and embarked on his night voyage.

Representations: He is often pictured as a hawk or as a hawk headed man with a solar disk.



OSIRIS

Cult Center: Busiris, later Abydos.

Attributes: Supreme god and judge of the dead. The symbol of resurrection and eternal life. Provider of fertility and prosperity to the living.

Representation: a bearded man wearing white mummy wrappings. Wearing the atef crown and holding the symbols of supreme power, the flail and crook. His skin is green to represent vegetation or red to represent the earth.

Relations: Son of Geb and Nut. Brother of Isis, Nephthys, and Seth and in some myths he is brother of Horus. Husband of Isis and father of Horus. Father of Anubis by Nephthys.

C.SYMBOLS

For the Ancient Egyptians the whole world, as they saw it, was represented symbolically. From the sun and the Nile, which gave them food and sustenance, to the animal kingdom, wild and domestic, everything was imbued with hidden meaning. At its deepest level, symbolism was the means by which the Egyptians expressed their speculations about the nature of life itself; the creation, the after-life and the struggle between good and evil.



Ankh: Symbol of eternal life. The gods are often seen holding an ankh to someone's lips. This is considered to be an offering of "The Breath of Life". The breath you will need in the afterlife.

PET



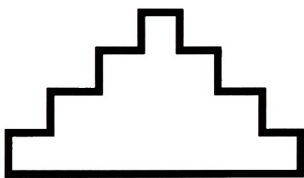
This symbol depicts the sky as a ceiling which drops at the ends, the same way the real sky seems to reach for the horizon. This sign was often used in architectural motifs; the top of walls, and door frames. It symbolizes the heavens.

MAAT



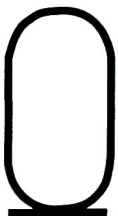
Represents truth, justice, morality and balance. It was pharaoh's job to uphold Maat. When a pharaoh died, Maat was lost and the world was flung into chaos. Only the coronation of a new pharaoh could restore Maat.

PRIMORDIAL HILL

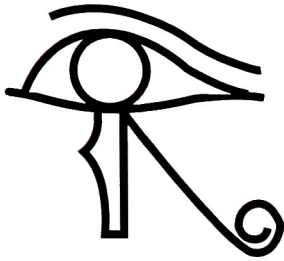


The Egyptians believed that during creation this hill rose out of the sea of chaos to create dry land. The idea of this rising had a profound effect on the Egyptians, being used as every thing from temple layouts to the possible inspiration behind the pyramids.

SHENU

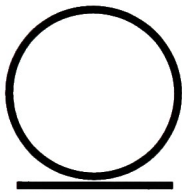


More commonly know as a cartouche. The shape represents a loop of rope in which a name is written. A protector of that name.



UDJAT EYE

The sound eye of Horus. Symbolizes healing and protection.



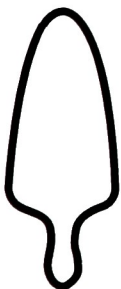
SHEN

The perfection of the shen ring a mullet, without beginning or end, made it a very obvious symbol of eternity. Its a round form also associated it with the disc of the sun and it was often depicted being held by animals and birds, such as the falcon, with strong solar connections. "Magic" rings were very popular and were believed to give protection from various illnesses.



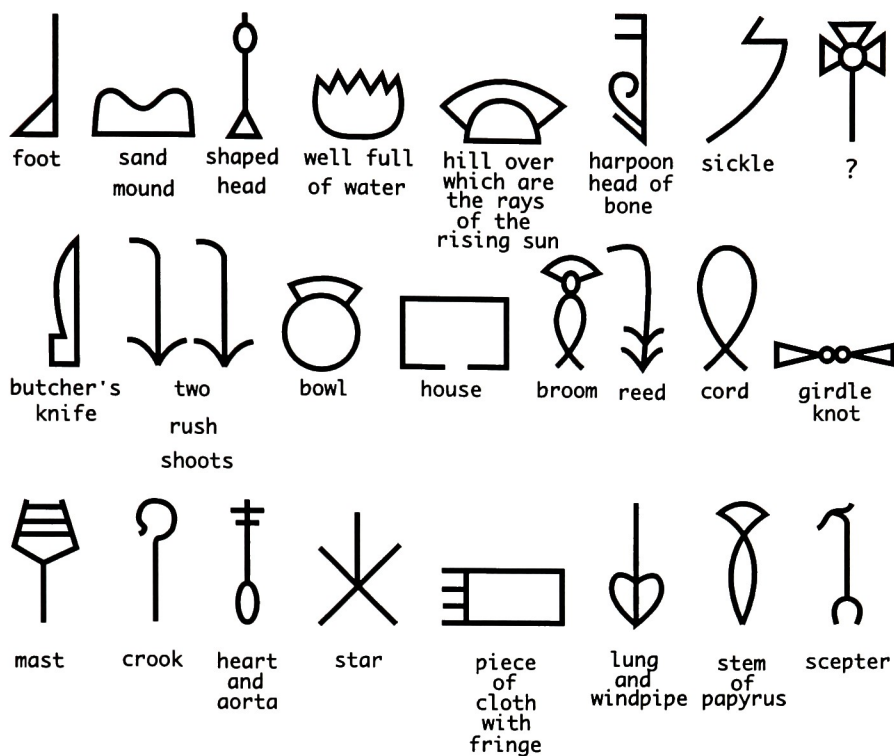
DJED

It is believed that the Djed is a rendering of a human backbone. It represents stability and strength. It also acts as a sign of stability for the deceased journey into the afterlife.

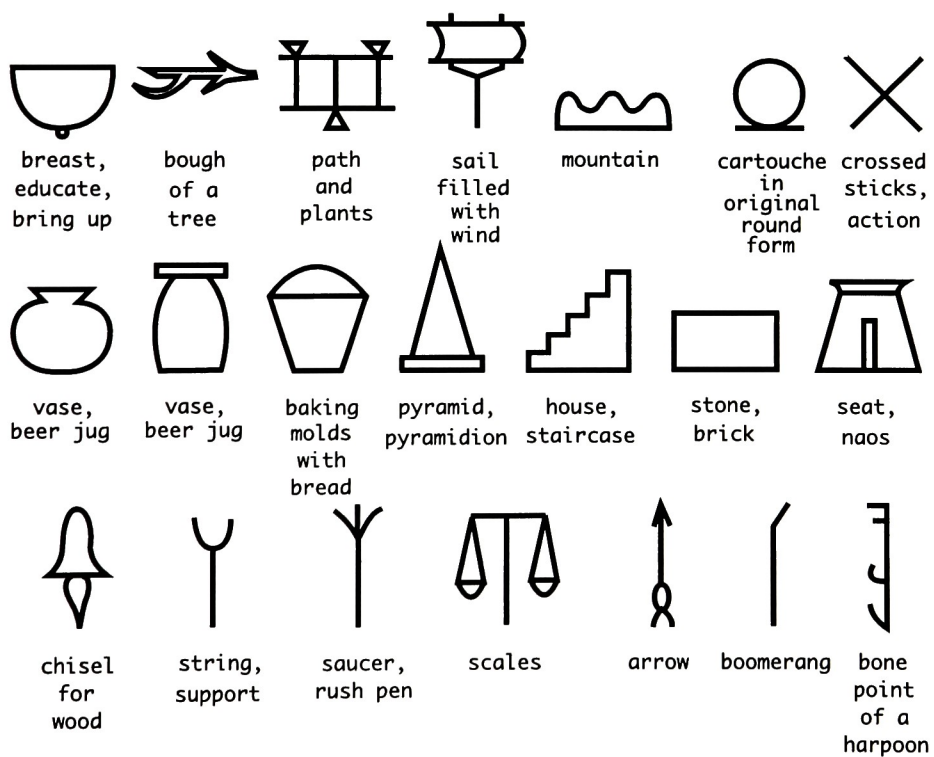


TREE

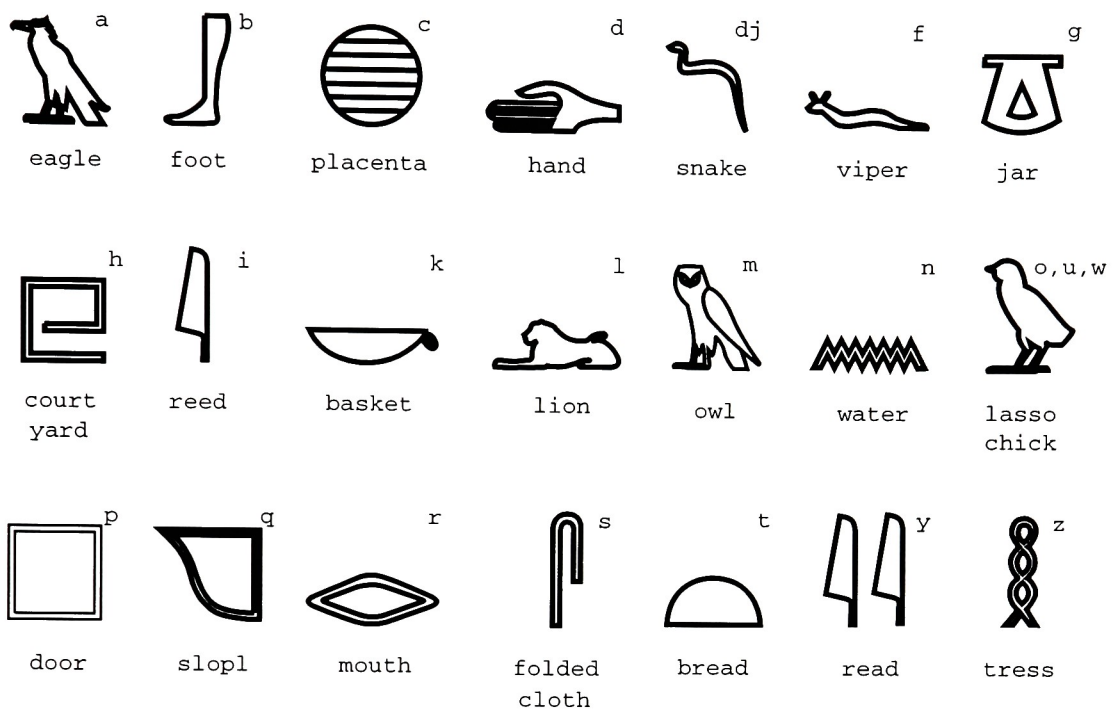
The tree, especially the date palm and sycamore, was indeed the symbol of life for the Ancient Egyptians, since it grew where there was life-giving water.



Phonetic Signs



Determinative Signs



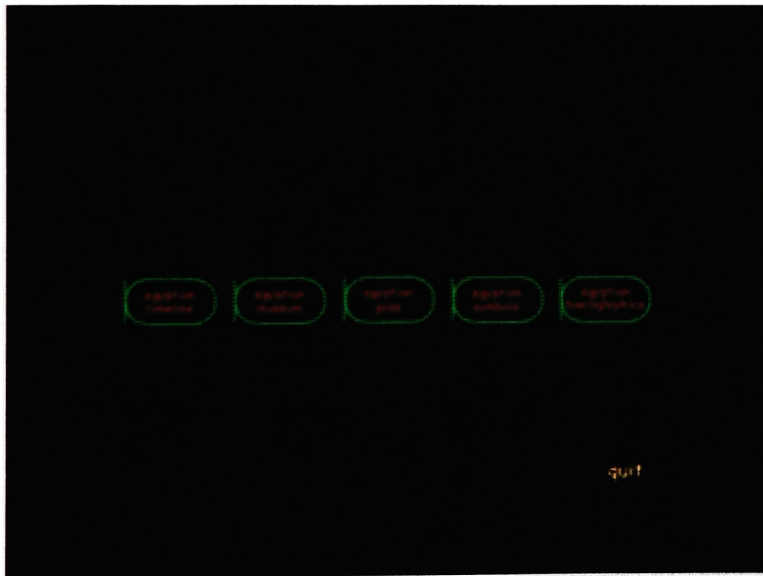
Monoliteral Signs

PROCEDURE

The entire interactive educational project was created on a Power Macintosh with a keyboard, a mouse and a number of software packages. The programs used were Macromedia Director, Adobe Photoshop, Adobe Illustrator, Strata Studio Pro, and Macromedia SoundEdit 16. Other equipment used were a scanner and synthesizer. All graphics, text, animation, sound and music were put together using Macromedia Director.

Opening

The project starts off with a blank screen showing different sections which is the Egyptian Timeline, Egyptian Museum, Egyptian Symbols, Egyptian Gods, and Egyptian Hieroglyphics.

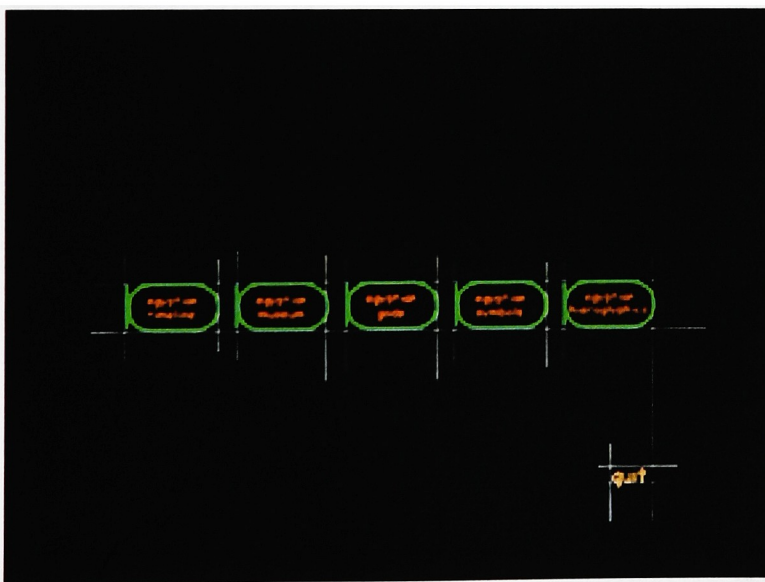


Main Menu

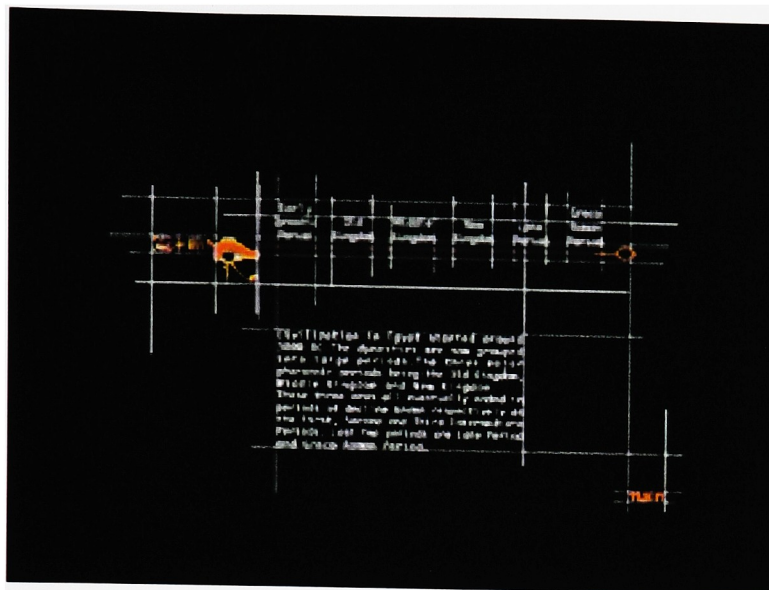
The screen design of the menu is extremely simple and not busy. The background is black and there are no other elements except five red color buttons and a quit button . The navigation buttons, which directly access the five sections, and the main button look blurry. A button has a sharp outline and text. Will appear whenever the mouse cursor is on it. The narration of the names of four sections will not play until the user clicks on it.

Layout and Grid

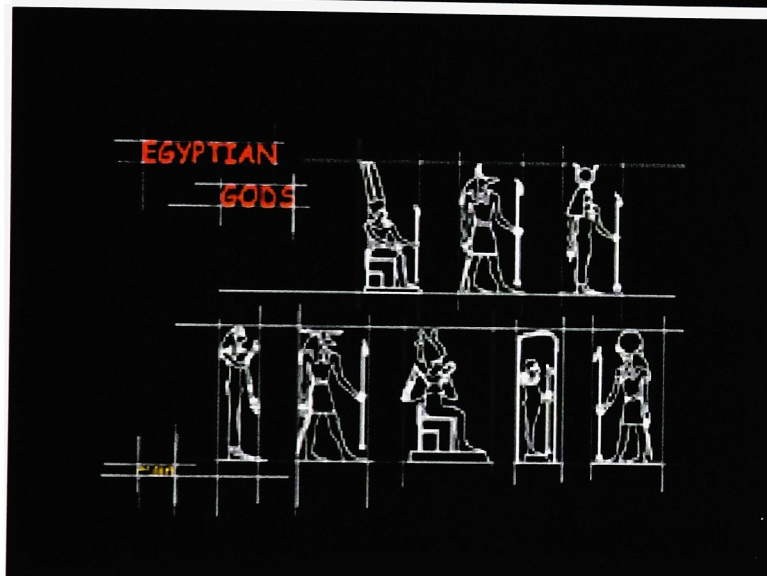
A standard layout was used for all the sections to maintain a sense of consistency and avoid confusion. Different background images were used behind the text on the time period section to make it more interesting. Background images were manipulated using Photoshop to provide a sense of three dimensional space. Transparency was given to the images to let the black background show through.



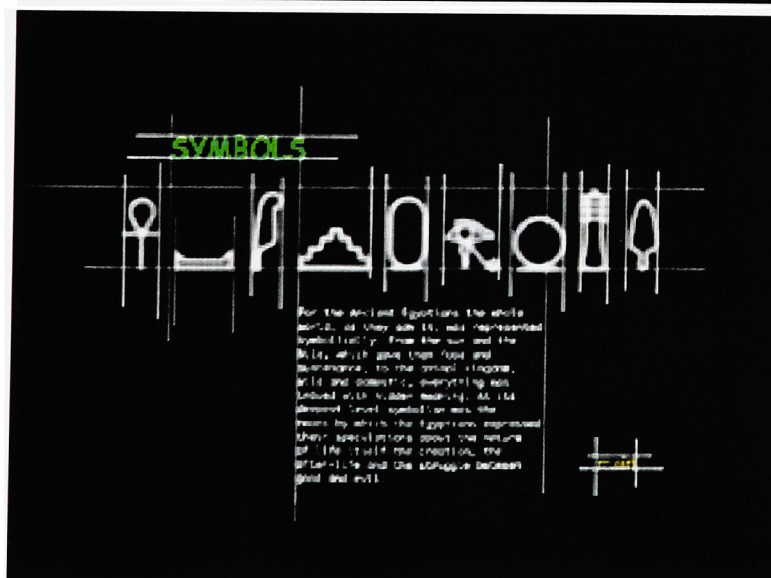
Main menu



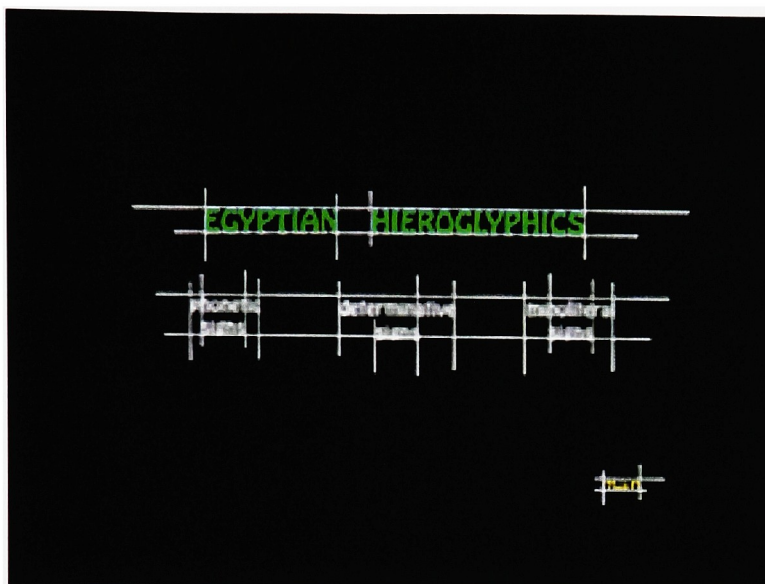
Egyptian time line



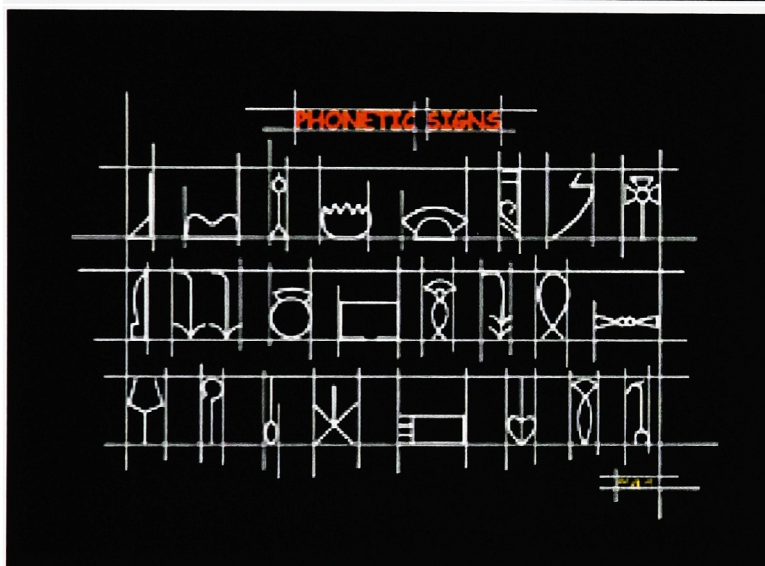
Egyptian Gods



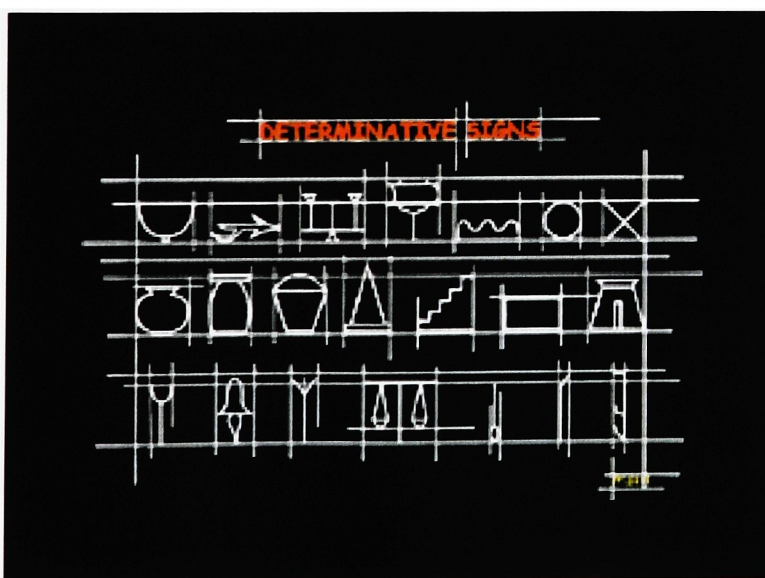
Egyptian Symbols



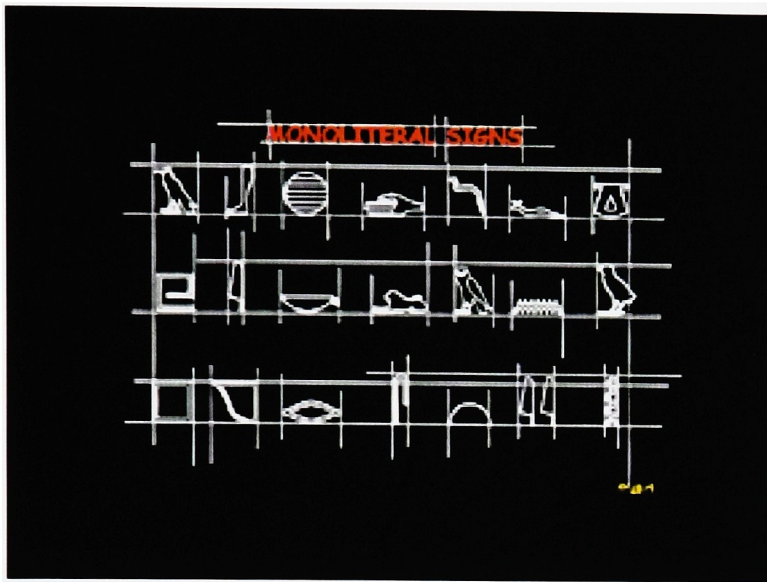
Egyptian Hieroglyphics



Phonetic Signs



Determinative Signs



Monoliteral Signs

Navigation

In terms of navigation , all choices are displayed clearly. The main menu items, graphics, illustrations were designed and arranged on the screen. Users can access sections only from the menu, even though users can go back to the main menu screen from all the section screens. When players finish a section or want to leave the section, they can return to the main menu by clicking on the main button. Every section has a main button, so users can leave the section whenever they want. The flowchart of Egyptian Art presents the clear path of navigation.

Animation

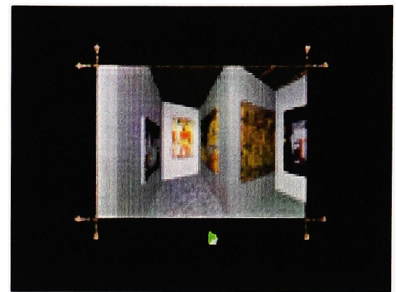
Animation is a common element in many multimedia programs. Animation in color was created and rendered in Strata Studio program to make QuickTime movies of a 640 by 480 pixel screen size. After that I brought them into the Director project.



1



2



3



4



5



6



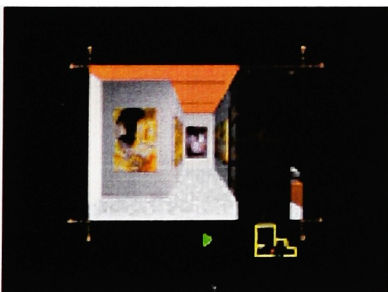
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8



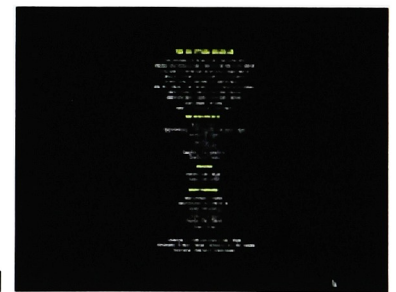
9



10



11



12

(Egyptian Museum Figure 1-12)

Conclusion

I tried to make the project as complete as possible. Multimedia not only offers the ability to integrate this same audio-visual experience directly with text, but adds the power of interactivity.

Furthermore, it was a worthy opportunity to research, design, manage, edit and create the whole project possible.

I asked viewers for feedback after they finished my program. Some liked the icons represented for each section. Some shared their ideas and comments. For all feedback, I am deeply appreciative.

I was able to provide the overall idea about this project for visitors to this interactive tour.

I truly enjoyed this learning and creative experience because it helped me in my professional and personal growth.

Appendix

Adobe Photoshop 4.0

Photoshop is the leading tool for creating digital imagery. Version 4.0 provides users with greater creative support such as actions, adjustment layers, free transform and custom gradients among others. Adobe Photoshop continues to be the leading software package in image editing and manipulation.

Macromedia SoundEdit 16 2.0

SoundEdit 16 enables a person to record, edit, enhance, mix, play back and store multitrack highest quality, which is 16-bit, 44kHz soundtracks. Its features include the ability of multi-track mixing and editing in a QuickTime format for better synchronization. SoundEdit 16 has the capability of converting these sound files into different file formats to be compatible with other multimedia applications.

Adobe Illustrator 7.0

Adobe Illustrator combines the finest illustration tools with extensive typographic control and image support. Illustrator provides the tools you need to create inspired packaging, ad and editorial spreads, brochures, video artwork, Web pages, and more.

Macromedia Director 6.0

Multimedia Director Studio includes tools for creating and editing interactivity, animations, sounds, and graphics, so you can develop product demonstrations, informational kiosks, tutorials, entertainment applications and more.

Strata Studio Pro 1.5.2

Strata Studio Pro is a most powerful 3D modeling, rendering, and animation package for creative professionals.

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