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MASTER OF FINE ARTS

**The Interactive Orientation Module
for the Electronic Archive Resource of the
National Graphic Design Archive.**

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The National Graphic Design Archive is an electronic interactive hyper/multimedia resource about graphic design history. Hypermedia combines the use of numbers, text, drawings, photographs, animation, video and sound in an interactive, nonlinear structure. Multimedia "handles information, more or less, based on a pre-constructed pathway stressing "synchronization" and harmony" of various types of media.¹ As a hyper/multimedia resource it functions as a presentation-like information program.

In an interactive hyper/multimedia environment the information structure is often complex. Relationships between various units of information are often difficult to make. This module is designed to function as an overview of the basic structure of the electronic archive and the important information units in different sections of the program. Design strategies sharpen information to make it interesting and understandable. "To envision information - and what bright and splendid visions can result - is to work at the intersection of image, word, number and art."² In this module the information is represented by a city and is composed of four parts or buildings. The information units are arranged in a graphical map to provide visual guidance. Creative organization of information in patterns or relationships lead to a better understanding of content, and "encourages an awareness of connections."³

Since the Interactive Orientation Module involves an overview of the archive, a brief explanation of the history of the Graphic Design Archive will provide some background.

The RIT Graphic Design Archive began in 1980 directed by Professor R. Roger Remington involving work in three areas:

1. An electronic desk-top archive of graphic design history which has been under development since 1986.
2. Archival collections of the personal papers and business records of important design pioneers active between 1930 and 1960.
3. An audio/video history of interviews, lectures and demonstrations by and about many graphic design pioneers.

The National Graphic Design Archive is a national expansion of the RIT GDA coordinating archival documentation and interpretation of artifacts of graphic design history in America. The goals of the NGDA are:

1. To coordinate the collection and preservation of significant images and text data about the history of graphic design.
2. To use the database for educational and informative interpretative programs as demonstrations.
3. To apply appropriate technology for the development of pilot programs, networking and the sharing of information.
4. To disseminate information about the organization, its activities, products and goals.
5. To seek ongoing development resources to sustain the organization and its activities.
6. To develop a functional organization structure that will enhance the project operations and activities.
7. To regularly evaluate the organization and modify if necessary.

Hyper/multimedia projects or prototypes have been developed by graduate students in Graphic Design and Computer Graphics Design at RIT for the NGDA electronic resource. The topics are based on material and information that is part of the RIT archive collection of graphic design history and are used in conjunction with the images on the GDA laserdisc. The following prototypes have been completed:

Prototype 2.0: "A Guide to Interactive Interface Design." 1989

Prototype 3.0: "Graphic Design Archive: Lester Beall Collection." 1990.

Prototype 3.1: "The Corporate Identity Module." 1991.

Prototype 3.2: "The PresentationMaker Module." 1992.

Prototype 3.3: "The Interactive Orientation Module." 1992.

Identifying Need/Function

The need for a project which would give a first time viewer an overview of the RIT Graphic Design electronic resource of the National Graphic Design Archive. The following criteria were established by Professor Roger Remington and members of the RIT Graphic Design Archive Committee:

1. Provide a **browse tool**.
2. Get a total **overview** of contents.
3. Get a sense of **parts**.
4. Provide **guided tours**.
5. Be able to **move around quickly**.
6. Get background on **GDA - why, who, where, and goals**.
7. Provide basic working operations information about the **Macintosh and GDA interface**.
8. **Ease viewer** into GDA environment.
9. Provide instructions on how to **navigate**.
10. Provide information on **equipment set-up**.
11. Establish **passive vs. active interaction**.

Goals and Objectives

1. Project Title: Orientation or Overview Module
2. Project Description: Development of an Interactive Module for the GDA
The module would be used by the following persons for research or informational purposes:
 - students
 - professors
 - researchers
 - librarians
 - archivists
3. Situation Analysis:
 - A. Before or during the use of this hyper/interactive multimedia system, the viewer needs to overview the basic structure of the NGDA and the the important information units in different sections of the program. A pictorial map representing the relationship of information arranged in a map provides visual guidance for the first time viewer to determine the structure and content of the archive.
 - B. Importance of the study to the Designer, to the discipline, and to the society:
 - The opportunity to use skills and techniques acquired in the Computer Graphics Design program to organize, augment, and facilitate the collection of images in the Graphic Design Archive.
 - The opportunity to investigate and develop new skills and techniques.
 - The opportunity to organize the contents of the GDA for educational and research purposes.
4. Goal: The purpose of this thesis project is to develop a tool that would accomplish the following:
 - Orient a first time viewer to the National Graphic Design Archive.

- Allow the viewer to select a topic of interest and view corresponding imagery from the GDA videodisc collection.

5. Objectives and Considerations:

A. To orient the user to the GDA by presenting a series of images available to the user in an effective manner.

- The orientation would be viewed on a Macintosh screen in conjunction with Prototype 2.0, 3.0, 3.1.
- The tool would be developed as a series and organized in a module.
- The orientation would be an informational presentation that the viewer would have the option to view if unfamiliar with the GDA.
- The imagery used would highlight the contents of the GDA.
- Design considerations would include: Consistency with the design elements currently being developed in Prototype 4.0.

B. To combine the information and imagery in an effective and visually aesthetic manner.

C. To construct a module that is functional, interactive and straightforward.

- Functional: The program does what it is designed to do.
- Interactive: The user can decide what direction or path is most appropriate.
- Straightforward: The user would be able to understand the features and would use them efficiently.

D. To establish an area of interest for research or study.

- Establish a Table of Contents to arrange the contents of the GDA and facilitate the selection of specific areas of interest.

E. To allow the user to obtain brief biographical information and or appropriate imagery, using the reference cards in Prototype 2.0, 3.1, and the Reference Stack.

- F. To use the multimedia features of the GDA.
- G. To apply some of the principles of Human Interface Design according to Apple's HyperCard Stack Design Guidelines where appropriate.
- H. To apply some of the principles according to Doris Mitsch and Hugh Dubberly's "Defining Hypermedia" where appropriate.
- I. To evaluate the module as it is developed: Review, refine, revise.
- J. To provide a passive rather than active interaction to ease the viewer into the environment.

6. Processes and Strategies:

- A. Collect Information
 - 1. Research topic
 - 2. Interview users and GDA committee members.
- B. Identify Need/Function.
- C. Write data sheet; goals, objectives...
- D. Review, Refine, Revise.
- E. Develop a flow chart.
- F. Review, Refine, Revise.
- G. Create Prototype
 - 1. Build and Design Module.
 - 2. Distribute.
 - 3. Evaluate.
- H. Review, Refine, Revise.
- I. Finalize and Document.
- J. Duplication, distribution, and maintenance.

Glossary

A glossary was developed for the purpose of identifying functionality and to get ideas for a title. The definitions were taken from Webster's New World Dictionary Third College Edition.

1. Browse - To examine in a casual way; skim. To glance through a book, library, reading passages here and there.
2. Explore - To look into closely; examine carefully; investigate. To learn about its natural features, inhabitants. To travel in (a region previously unknown or little known) in order to learn about its natural features, inhabitants.
3. Find - To happen on; come upon; meet with; discover by chance. To get by searching or by making an effort.
4. Navigate - To walk or make one's way on or through.
5. Orientation - Familiarization with and adaptation to a situation or environment; a period or process of introduction and adjustment.
6. Overview - A general review or survey.

Content

The content of the Interactive Orientation Module was determined by the content of the prototypes making up the Graphic Design Archive, as well as additional information being compiled in a biography of Herb Lubalin and datacards on Russian Constructivist Typography. During weekly meetings with Professor Remington and meetings with the GDA archive committee, we turned to the diagram (Appendix A) as a source for content and for a possible location or starting point for the Interactive Orientation Module. Based on Apple Computer Interface Design Principles the GDA had incorporated a metaphor of rooms in a building. The metaphor served as a way for the viewer to relate to the information in the archive, much in the same way as one would enter a room and relate to the surroundings.

The content and function of each room is outlined in the following chart:

Library	<i>Function:</i> Reference supports Find your way to images and text through different pathways Place to find tools for information gathering	<i>Contents:</i> Database Timelines Classification tree Reference Bibliography
---------	--	---

Theatre

Function:

See a slide show
View programs that others have
done using GDA resources

Contents:

Fortune Magazine
Lubalin
Constructivist Typography
Roots of American Design
Polish Posters
On a Designer

Screening Room

Function:

Discover what you want by
looking through images and
text. There are tools to help with
your search. "High-end
browse."

Curator

Function:

Where archivists do their work.
Limited access.

Contents:

Archival record Keeper
Donor information
Conservation and
preservation records
Loan records
Publication documents

Orientation

Revisions

To integrate the functionality of the Interactive Orientation Module with the existing interface of the electronic archive it was necessary to consider the metaphor of the rooms that had been established by the GDA (Appendix A). However, we felt that there were some areas of confusion (Appendix A and B). For the purpose of creating a more effective interface we decided to make some revisions. Professor Remington and I met with Dr. John Ciampa, Director of the American Video Institute, for input and suggestions on revising the interface. The following changes were made (Appendix C):

1. The rooms were transformed into buildings.
2. The content of each building was simplified and labeled according to its content:
 - The Library contains textual information,
 - Resource Center contains **indexical** information,
 - Theatre contains **interpretive** information,
 - Visitor/Information Center contains **orientation** information.
3. The user profile was eliminated.

Metaphor or Structure

"Defining Hypermedia,"⁴ by Doris Mitsch and Hugh Dubberly outlines some important features of hypermedia which I wanted to incorporate into my project:

1. The attempt to base interfaces on metaphors is really an attempt to define a structure.
2. Seven basic structures which serve as tools for designing hypermedia systems are the following:
 - a. Series - linear - like pages in a book.
 - b. Spatial Zooms - move between distant and closer views of the same information.
 - c. Parallel Texts - variations on the same document.
 - d. Overlays - make comparisons by looking at different views of the same information.
 - e. Hierarchies - main menu branching out to a number of different paths.
 - f. Matrices - multi-dimensional grid in which several linear paths intersect at one point.

- g. Webs - or network structure connected by the relationships of information.

A network structure (Appendix E) was developed in the early stages of this project, but rejected in favor of a hierarchical structure. This structure seemed to work more effectively with what had already been established in the electronic archive.

The City Map

After defining the structure of the project, we decided to represent the structure in a pictorial map. Informational units arranged in a pictorial map provide visual guidance.

According to Richard Saul Wurman:

Understanding is a path, not a point. It's a path of connections between thought; patterns over patterns. It is relationships. . .

. . . encouraging awareness of connections leads to recognition of the patterns that are the core of understanding.⁵

We also wanted to enhance the information displayed in the Interactive Orientation Module. Edward Tufte maintains that:

Escaping flatland is the essential task of envisioning information - for all the interesting worlds (physical, biological, imaginary, human) that we seek to understand are inevitably and happily multivariant in nature. Not flatlands.⁶

Design strategies that sharpen the information resolution - work to increase:

1. The dimensions that can be represented on plane surfaces.
2. Data density (amount of information per unit area.)

The representation of the information in the GDA as buildings in a city (Appendix D) were inspired by Tufte and Wurman's ideas about information graphics.

Software Application

In order to provide the features outlined for this project in an information-like program, a software application needed to be used that had interactive multimedia capabilities, color capabilities, and offered an opportunity for refinement and revision. I selected MacroMind Director for these reasons.

Access to the videodisc was accomplished through use of the "language" in MacroMind Director called Lingo (Appendix E).

Equipment

The hardware required for operating The Interactive Orientation Module:

- A Macintosh II or above with system 6.05 or above.
- 480 x 640 color monitor
- At least 4 mb of RAM
- A hard disc
- 8-bit videocard
- Videodisc player
- GDA laserdisc
- Any NTSC video monitor for viewing laserdisc images

Graphics

The design of Prototype 4.0 is currently in progress to serve as the "umbrella" for the information units in the GDA. The graphic elements in 4.0 (Appendix F) are incorporated into the Interactive Orientation Module (Appendix G)

1. The 12" Macintosh screen is used.
2. Helvetica type is used for titles and instructions.
3. The title is located in a horizontal bar along the top of the screen.
4. Thin vertical and horizontal lines form an "L", and divide the screen into three sections.

The computer screen is divided into the following three sections:

1. Along the left side of the vertical bar there are instructions or information pertaining to imagery and/or interaction.
2. Below the horizontal bar at the lower edge of the screen are buttons for interactivity.
3. The visual components appear within the "L" shape.

The buildings in the city map are also an interactive feature. By "Clicking" on a building the topics within each building are displayed. The viewer can participate in a tour of a particular prototype by selecting a topic:

The tours begin with a brief written explanation about the topic along with imagery relating to the topic.

Theatre:

1. The biography of Herb Lubalin is a biographical module about this important graphic designer. Images of his design work are shown with accompanying datacards. Materials were provided by the Herb Lubalin Study Center of Design and Typography at The Cooper Union.
2. The Russian Typography program is a collection of avant-garde images of graphic design works that are accompanied by datacards.

Resource Center:

1. The Corporate Identity module is an educational support program for undergraduate graphic design students. It provides a comprehensive library of image and text resources about the topic of corporate identity.
2. The NGDA 2.0 Prototype is an introductory module about 24 graphic designers and their work. On this tour Herbert Matter is featured.
3. The Lester Beall module is an extensive biographical resource which provides images and data.

Information Center :

1. Information about the NGDA, RIT Graphic Design Archive and equipment set-up is available.

Library:

1. The Classification Tree is an interactive branching chart which organizes graphic design by type. It can be used to locate images and text in the electronic archive through the type of work (i.e. symbol, poster, initial).
2. The Glossary is an interactive prototype format for presenting the words used in talking about graphic design. It functions like a specialized electronic dictionary.

The development of this project involved many aspects of graphic design, including computer graphics and information graphics. Incorporating information into multimedia presentations brings a new challenges for designers as technology changes. The opportunities provided by the computer with complex interactive programs does not override the necessity for concise, meaningful organization. Multimedia is an exciting and stimulating method of showing relationships; however, communication in any form needs to be understood. Information technology combines the elements of good design with the appropriate components of technology to produce an effective, informative and exciting presentation.

- ¹ M. Shan Yeung, The Beauty of Multimedia (Thesis Report, 1991), 2.
- ² Edward Tufte, Envisioning Information (Connecticut: Graphics Press, 1990), 9.
- ³ Richard Saul Wurman, "Hats (hat rack as a model for the understanding of relationships and the finding of information.)," Design Quarterly 145 (1989): 4.
- ⁴ Doris Mitsch, and Hugh Dubberly. "Defining Hypermedia." Print November/December (1990): 134.
- ⁵ Wurman, "Hats...": 4.
- ⁶ Tufte, Envisioning Information, 9.

Mitsch, Doris and Dubberly, Hugh. "Defining Hypermedia." Print
November/December (1990): 134-135.

Tufte, Edward. Envisioning Information. Connecticut: Graphics Press.
1990.

Wurman, Richard Saul . "Hats (hat rack as a model for the understanding
of relationships and the finding of information.)," Design Quarterly
145 (1989): 1-32.

Yeung, M. Shan. "The Beauty of Multimedia." Thesis Report (1991).

GDA diagram

Select a
User Profile

Beginner

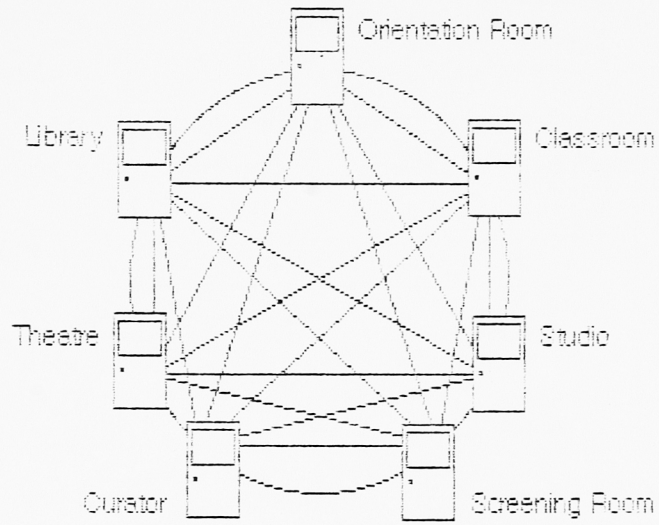
Browser

Student

Teacher

Researcher

Curator



Helps

Navigator

Help

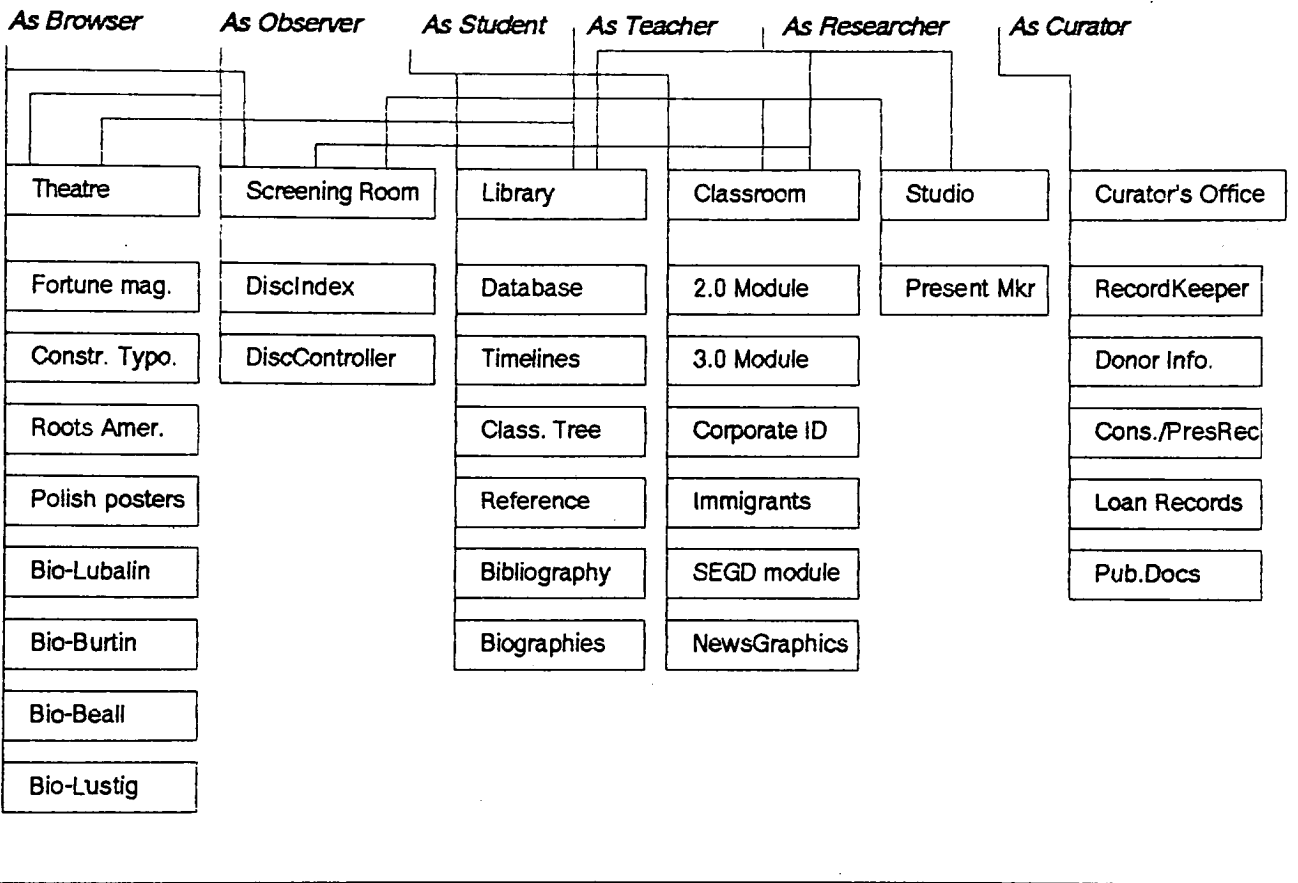
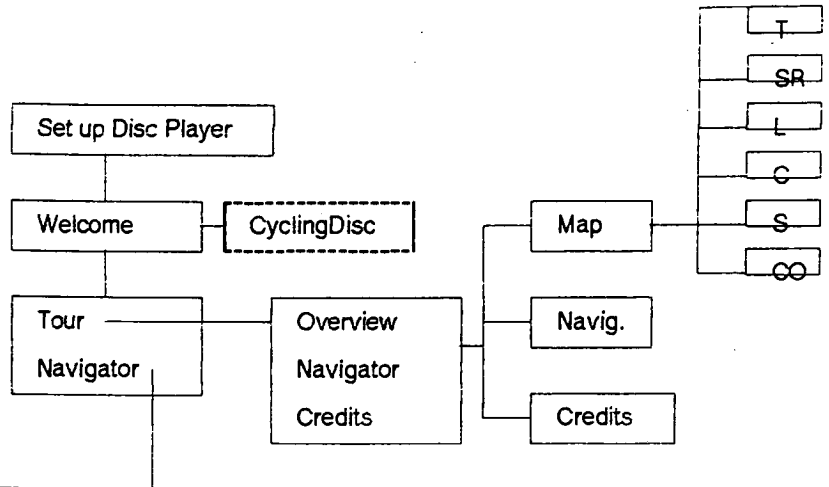
Glossary

Quit

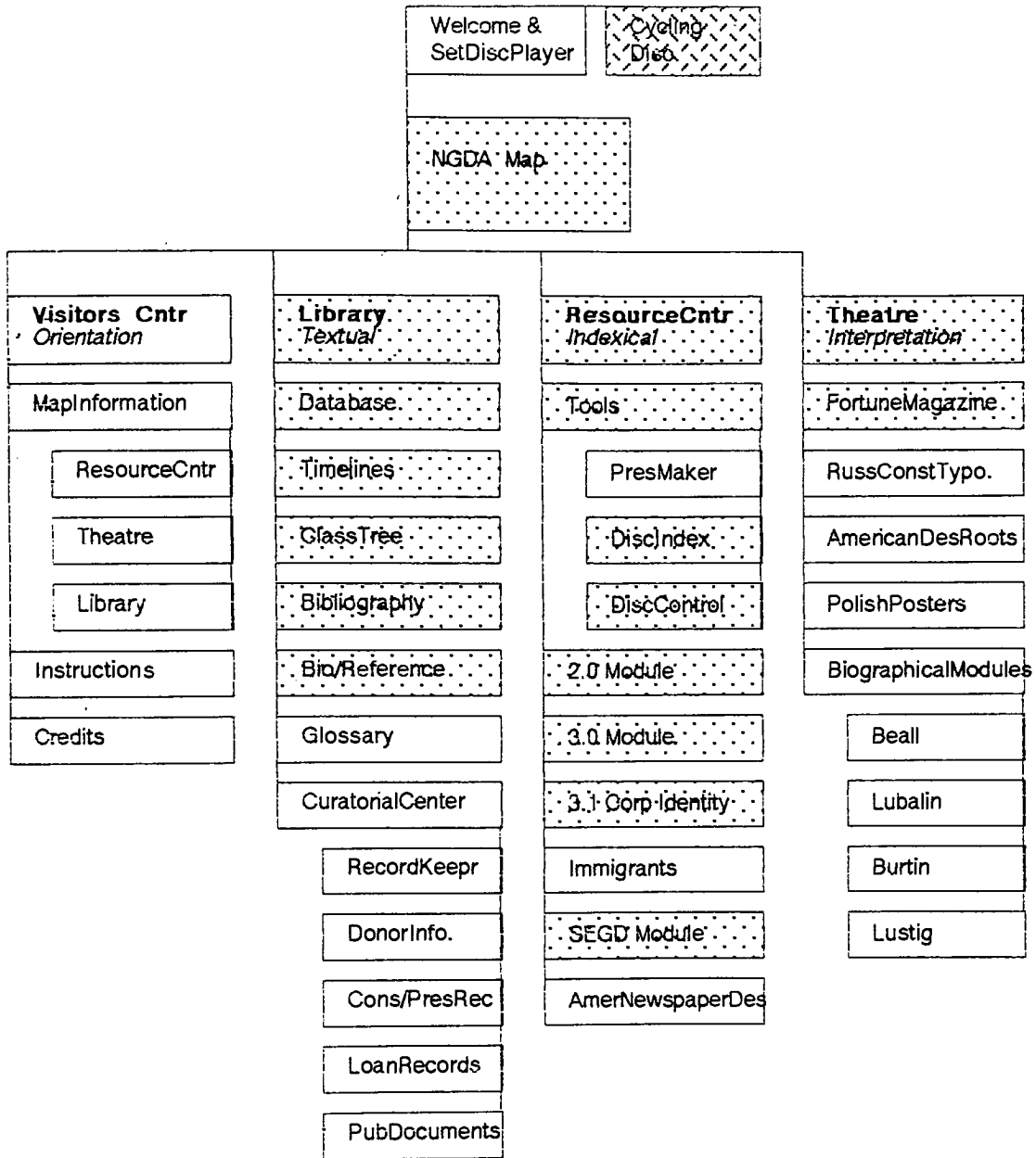
Video

Return

GDA Navigator

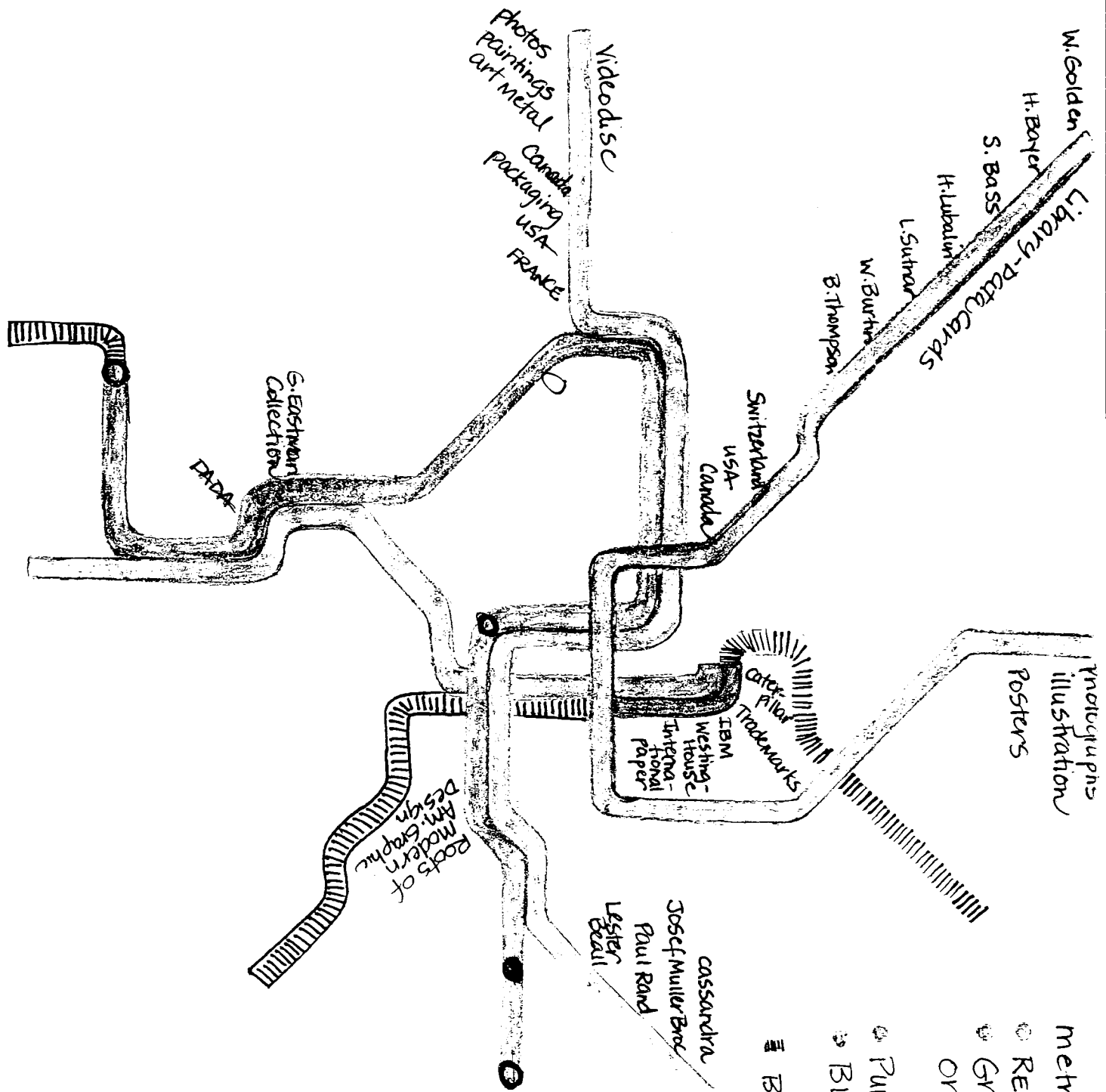


Flowchart 2/20/92



 Module operational

Network structure



- metro SYSTEM MAP
- RED LINE - Library
 - Green Line - University
 - Orange Line - Auditorium
 - Purple Line - Museum (curator only)
 - BLUE LINE - Historic side trips
 - ▬ Black/white - Future Stations

City map

National Graphic Design Archive

The Graphic

Design Archive
is a complex
of many parts
not unlike a city.

THEATRE

- Bio Lubalin
- Russian Constructivist Typography

RESOURCE CENTER

- Corporate ID
- NGDA Prototype 2.0
- Lester Beall

INFORMATION CENTER

- National Graphic Design Archive
- RIT Graphic Design Archive
- Equipment Information

LIBRARY

- Classification Tree
- Glossary

Lingo script for accessing the videodisc


```

--
macro InitVideoDiscPlayer
  openXLib "Videodisc XObj"
  if InitPort(0) then InitVideoDisc

macro doneVideoDiscPlayer
  global VideoDisc, port
  if objectP(VideoDisc) then
    if VideoDisc(mClear) = "OK" then VideoDisc(mStop)
    VideoDisc(mDispose)
  end if
  if objectp(port) then port(mDispose)
  go to frame "D" of movie "open sequence ngda"

macro InitPort portNumber
  global port
  if port <> 0 then port(mDispose)

  set port = SerialPort(mNew, 0) -- modem port
  if objectp(port) then
    return (TRUE)
  else
    alert "Error, Serial Port " & port & " is not available."
    return (FALSE)
  end if

macro InitVideoDisc
  global VideoDisc,port
  --installMenu A14

  -- dispose of previous instances, if any
  if objectP(VideoDisc) then VideoDisc(mDispose)

  -- to modify the following script to work for other videodisc players
  -- Pioneer 8000 — set VideoDisc = LaserDisc(mNew, port, 9600, 0)
  -- Sony 2000 — set VideoDisc = LaserDisc(mNew, port, 4800, 1)
  set VideoDisc = LaserDisc(mNew, port, 4800, 1)

  -- The LaserDisc XObject will not create and assign an object to the variable VideoDisc if:
  -- • the baud rate is other than 1200, 2400, 4800, or 9600
  -- • there is insufficient memory
  -- • the serial port object, <port>, is not available.
  if not objectP( VideoDisc ) then
    go to frame "error"
    if VideoDisc = -1 then alert "LaserDisc XObject was not created." & return & return & --
      "BaudRate argument must be 9600, 4800, 2400, or 1200."
    else if VideoDisc = -2 then alert "LaserDisc XObject was not created." & return & return & --
      "There is insufficient memory."
    else if VideoDisc = -3 then alert "LaserDisc XObject was not created." & return & return & --
      "Serial port selected would not open. Quit and then rebooting machine."
    else alert "LaserDisc XObject was not created." & return & return & "Check your macros and setup and try :
  exit
end if

-- After creating a LaserDisc instance, check the communication between the player and the serial port.
-- The quickest way to check is to send an mClear method, since it only requires the player to be on; not playing
-- If mClear returns "OK", then communication is fine.
-- Otherwise, if mClear returns "No Response", then there is a problem:
-- • the player and the mNew method of LaserDisc XObject may be set to different baud rates
-- • an improper cable connection may exist between the Macintosh serial port and the player

```

```

-- • an improper cable type may be in use
if VideoDisc(mClear) <> "OK" then
  go to frame "error"
  alert "There is a problem communicating with the laserdisc player. Check for:" & return &←
  "• an improper cable connection " & return &←
  "• an improper cable type " & return &←
  "• an improper baud rate"
  exit
end if

-- If all is OK then
go to frame 2

macro update
  global VideoDisc
  readCurrentFrame
  go to the frame

```

A12 Search for frame:

```

A13 --
-- Basic controls
macro playVideo
  global VideoDisc
  VideoDisc(mPlay)

macro stopVideo
  global VideoDisc
  VideoDisc(mStop)

macro pauseVideo
  global VideoDisc
  VideoDisc(mPause)

--macro ejectDisc
--global VideoDisc
--VideoDisc(mEject)

-- Search to a frame
macro search n
  global VideoDisc
  VideoDisc(mSearchWait,n)

-- get the current frame
macro readCurrentFrame
  global VideoDisc
  set the text of cast A16 to string(VideoDisc(mReadPos))
  set the text of cast A18 to string(VideoDisc(mStatus))

-- Forward and backward controls
macro fastReverse
  global VideoDisc
  VideoDisc(mFastRev)

macro stepReverse
  global VideoDisc
  VideoDisc(mStepRev)

macro fastForward
  global VideoDisc
  VideoDisc(mFastFwd)

```

```
macro stepForward
global VideoDisc
VideoDisc(mStepFwd)
```

A14 --menu: @
--About Basic Videodisc /I ≈ go to frame "About"
--menu: File
--Done /D ≈ doneVideoDiscPlayer

A15 10000

A16 1

A17 -

A18 Stop

A21 Start...

A22 This document requires a videodisc player.

- This is set up to play a Pioneer 2200, 4200, or 8000 set to 4800 baud. (To use other players, change the mNew in the initVideoDisc macro.)
- Connect the player to the Modem port.
- If applicable, set Shiva Configuration from Modem/Printer to Neither.
- Make sure there is a disc in the player.
- Click Start.

Technical support for Pioneer videodisc players is available from Pioneer Laserdisc Technical Support at (201)327-6400.

Technical support for Sony videodisc players is available from Sony Intelligent Systems Technical Support at (201)930-6034

A25 Basic Videodisc: controlling a videodisc player with Lingo.

This example uses the LaserDisc and SerialPort XObjects to control a Pioneer 2200 or 4200 videodisc player.

Dirty or damaged discs will affect the performance of this XObject and the player. Check and clean video video discs before inserting into players.

The LaserDisc XObject works with the following players:

- Pioneer 2200 (limited operation for CLV discs),
- Pioneer 4200 (limited operation for CLV discs),
- Pioneer 8000 series players
- Sony 1200, 1500, and 2000 series players.

continued...

126 Basic Videodisc: continued.

The LaserDisc XObject uses the following methods:

mNew, portObject, baudRate, playerType creates a new instance and returns error code
portObject is an instance from SerialPort
XObject.

baudRate should be the same as machine setting.

9600(default for Pioneer 8000),
4800(preferred for Pioneer 2200, 4200),
2400, and 1200.

playerType:

0 for Pioneer 2200, 4200 and 8000

1 for Sony Laser Max 1200, 1500, and 2000

Error codes:

-1 : incorrect BaudRate.

-2 : memory error.

-3 : SerialPort Drivers would not open.

continued...

127 Basic Videodisc: continued.

mDispose frees this instance from memory.

mName returns my name.

mPlayer returns the player.

Note: all of the following methods will return either "OK" or an error message. Possible error messages include:

"No Response" -- bad connection or wrong baud rate.

"Not Ready" -- disc ejected or motor stopped.

mPlay normal playback mode in the forward direction.

mPlayRev playback mode in the reverse direction.

mFastFwd fast forward playback mode.

3 times normal speed.

mFastRev fast reverse playback mode.

3 times normal speed.

continued...

A28 Basic Videodisc: continued.

mSlowFwd slow forward playback mode.

1/5 times normal speed.

mSlowRev slow reverse playback mode

1/5 times normal speed.

mStepFwd step forward a single frame.

mStepRev step reverse a single frame.

mPlayJog, nFrame step multiple frames either forward

or reverse

mPlaySpeed, rate play at slower than normal speed.

rate can be any of the following:

30 is 1x; 15 is 1/2x; 10 is 1/3x; 5 is 1/6x

Example: -10 is one third normal speed, backwards.

continued...

A31 Basic Videodisc: continued.

mPlaySegment, start, end play a segment of video disc.

Start and end are frame numbers.

mPause set player to display freeze picture (STILL)

When this method is called a second time, this will

continue the mode prior to first call.

mStop halts playback of videodisc.

mEject opens disc compartment and ejects disc.

mStopAtFrame, frameNum set to stop at frameNum

mSearchWait, frameNum search for frameNum and returns "OK" when search is completed.

continued...

A32 Basic Videodisc: continued.

mReadPos return the current frame position

mShowDisplay, flag enable/disable frame display

mClear clear all modes of player. Remove Stop markers

mVideoControl, videoState control squelch condition of video image.

mAudioControl, audioState

audioState is one of the following

0 : Turn off both audio channels.

1 : Turn on channel 1 only.

2 : Turn on channel 2 only.

3 : Turn on both audio channels.

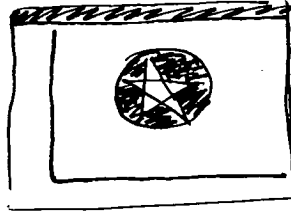
mStatus return either "OK" or error message
See the mDescribe for a full list of errors.

Sketch of flow chart

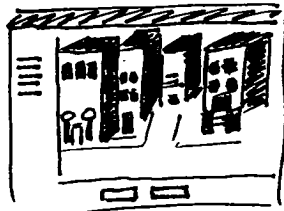
FLOWCHART OF
Interactive Orientation
Module



presented in Macromind Director



opening sequence
Welcome....



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National Graphic Design Archive

The Resource

Center is a place
in the electronic
archive where
the user can
interact with
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modules on a
series of thematic
topics.

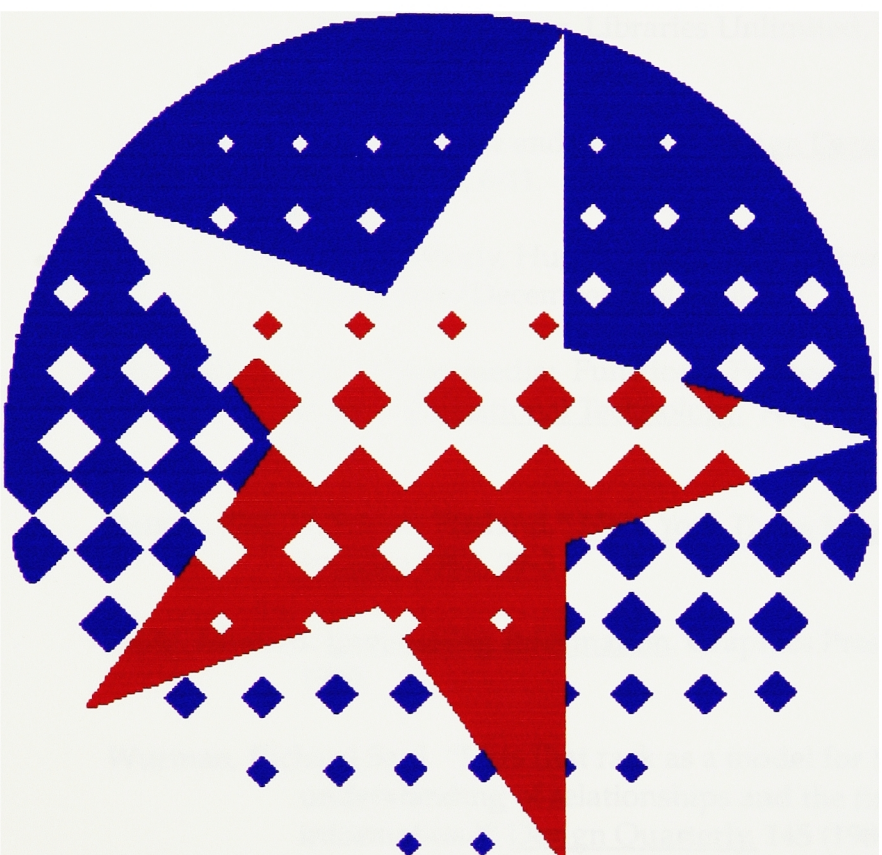
RESOURCE CENTER

- Corporate ID
- NGDA Prototype 2.0
- Lester Beall

CITY MAP

QUIT

Logo



Bibliography

Apple Computer, Inc. HyperCard User's Guide.

———, Your Apple Tour of the Macintosh Plus.

———, HyperCard Stack Design Guidelines. Addison-Wesley Publishing Co. 1989.

Bolt, Richard A. The Human Interface Where People and Computers Meet. Lifetime Learning Publications. Belmont, California. 1984.

Gluck, Myke. HyperCard, HyperText and HyperMedia for Libraries and Media Centers. Libraries Unlimited, Inc. Englewood, Colorado. 1989.

Malin, Stuart. "Hypermedia and Design." Design Department. 14 March 1990, 6-11.

Mitsch, Doris and Dubberly, Hugh. "Defining Hypermedia." Print. November/December 1990, 134-135.

Park, Ok-choon. "Hypermedia: Functional Features and Research Issues." Educational Technology. August 1991, 24-31.

Patton, Phil. "Up from Flatland." New York Times Magazine. 19 January 1992, 29-3.

Tufte, Edward. Envisioning Information. Graphics Press. Connecticut. 1990.

Wurman, Richard Saul. "Hats (hat rack as a model for the understanding of relationships and the finding of information.)" Design Quarterly. 145 (1989), 1-32.

Software:

Adobe Illustrator 3.0

Exposure Pro 1.0

HyperCard

MacroMind Director 2.0

PhotoShop 2.0