



# Colors & Navigation

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[www.sccg.sk/~wega](http://www.sccg.sk/~wega)

# Creating Web Graphics



You and Andrej Ferko

Class and Individual Work

# Agenda

- Q/A, Hot News, Hot Olds
- WWW Design Issues contd.
- Color Perception & Use
- Navigation against Intentional Blindness

# **Do You believe?**

**There is a movie, about  
4 minutes...**

**... and the cameramen  
taped it ~10 times  
shorter, in 22 seconds.**



# **You should...**

**R. E. M.**

**Rapid Eye Movement**

**[www.remhq.com](http://www.remhq.com)**

**REVEAL videoclip**

# Web Page Life Cycle



- Logo, title, message
- Idea, project, preproduction, production, postproduction, publishing (promotion), remake
- Page maintenance
- Internet history archive

# CU Student Evaluation

- Two brief knowledge tests – midterm & final - AF
- 2D – XML and MathML – 2 pages  
[www.sccg.sk/~valentova](http://www.sccg.sk/~valentova)
- 3D – VRML (Blender, Collada, X3D...) – textured 3D object
- Webpage – technology festival or message

# XML & MathML

- A strong item in Your portfolio
- Project idea – Math Terminology
- Workflow – scan, OCR, edit, publish
- Tools – scanner, ABBYY or so, XMLeditor, publish/nopublish (legal issues) ~ 700 pages, [www.sccg.sk/~Valentova](http://www.sccg.sk/~Valentova)
- Your work until Oct-25-2006 – 2-3 pages



# XML & MathML

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- **Your work until Oct-23-2006 – 2-3 pages**

# Project by Zuzana Valentova

The background of the slide features a light blue, irregularly shaped graphic. In the center of this graphic is a stylized globe with green continents and a white background. Surrounding the globe are several white, five-pointed stars of varying sizes, scattered across the blue area.

- [www.sccg.sk/~Valentova](http://www.sccg.sk/~Valentova)

# Midterm Sources & Rules

- Glassner, Mitchell, FrontPage Help
- Logo, Design, Color, Navigation
- [www.sccg.sk/~WEGA](http://www.sccg.sk/~WEGA) → PPT
- NO REPEAT!!!
- 15 minutes = 15 points
- select 15 from 30, maybe bonus

# Q by Rastislav Halamicek

- Q. Can an author re-use his own creation (logo, picture, text, software, music...) when this was already sold?
- A. Yes. But it depends... Re-using logo obviously makes no sense. In general, an author has twofold rights – personality/identity and licencing. Licence contracts can be multiple. E.g. Water song by Raz/Urban was sold as a movie soundtrack, 4 radio broadcasting, lyrics was published elsewhere, and eventually, you can buy scores...

# Implication => reprographic rights

- Q. How the authors are protected against illegal copying of their works?
- A. By law No. 618, by security of their work (firewall), options with translation for given country, streaming, in EU reprographic rights...

SAVOL example (1% from producers prices of scanners, xeroxes, hard discs, empty CDs and DVDs -> authors & publishers)

# Logo by Jozef Martinka



# Logo by Jozef Martinka



**Bratislavské city = študuj knihu  + skoč do vody  + a buď hrad nad riekou... :-)**

# Logo by Jozef Martinka



**2. alternatívna verzia**



# Logo by Jozef Martinka

čierno-biele a šedotónové prevedenie:



verzie so slovenským textom:



# Logo by Jozef Martinka



**Logo môže poskytnúť svoju centrálnu časť pre prípadnú ikonu jeho špecifického použitia napr. pre zdravotníkov, ochrancov prírody, požiarnikov, vodárov, mestskú políciu a pod.**



# Logo by Jozef Martinka



čierno-biele a šedotónové prevedenie:



Logo môže poskytnúť svoju centrálnu časť pre prípadnú ikonu jeho špecifického použitia napr. pre zdravotníkov, ochrancov prírody, požiarnikov, vodárov, mestskú políciu a pod.



Bratislavské city = študuj knihu  + skoč do vody  + a buď hrad nad riekou... :-)

verzie so slovenským textom:



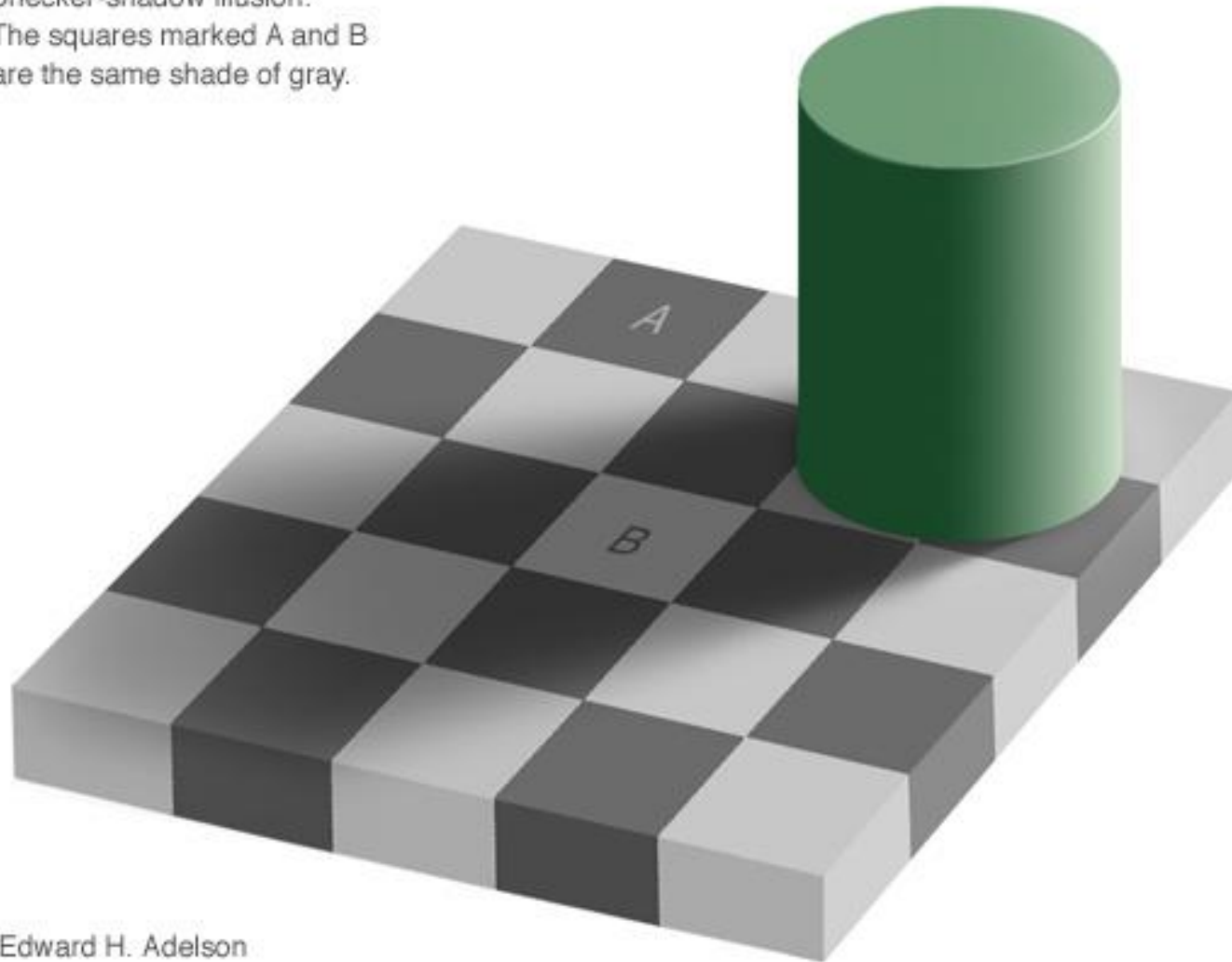
2. alternatívna verzia

# Logos by Jozef Martinka



# Color Perception

Checker-shadow illusion:  
The squares marked A and B  
are the same shade of gray.



Edward H. Adelson

# Color Perception 2 – E. Wenner

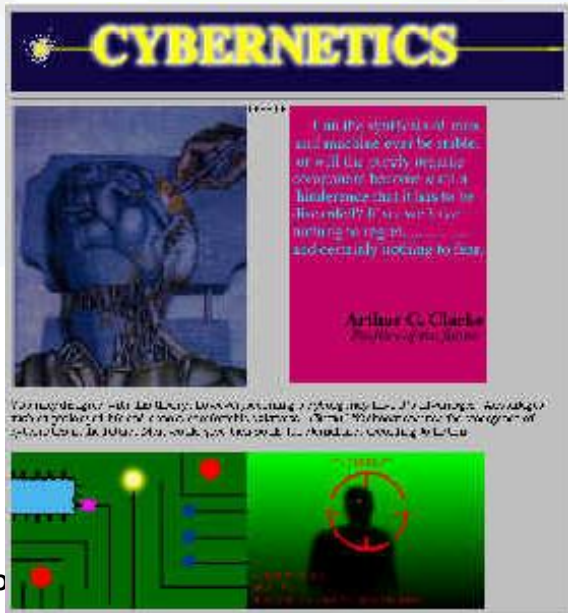


# Color Perception 3 – E. Wenner



# Creative Use of Color in Page Design

- By Bonnie Mitchell
- Color - an important help to support your intent
- Color - Too Much vs. Not Enough



Web Graphics – Colors & Navigation

figure 1-21 Colorful graphics used

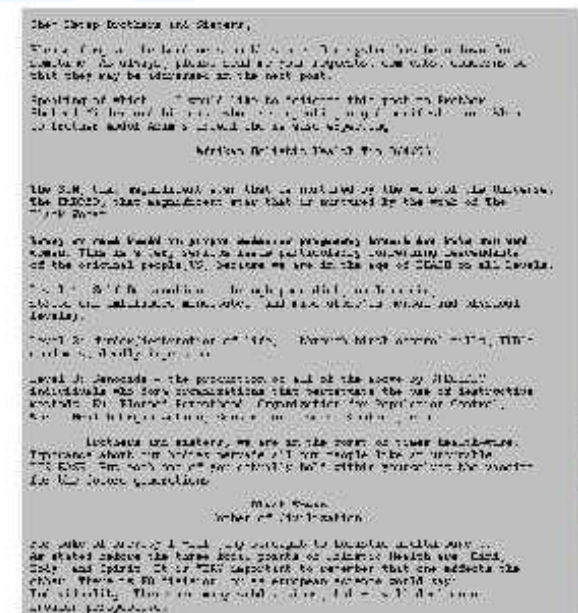


figure 1-22 No color or graphics used



# Key Source for Today

- WWW design issues by B. Mitchell, SIGGRAPH 96 Course Notes
- [http://www.siggraph.org/education/materials/graphics\\_design/mitchell\\_S96/chapter1.htm](http://www.siggraph.org/education/materials/graphics_design/mitchell_S96/chapter1.htm)
- **Easy access -> WEGA page, AF page**

# Art for Computer Graphicists

- Andrew Glassner, SIGGRAPH 1998 CN
- [http://www.siggraph.org/education/materials/siggraph\\_courses/S98/30/c30.pdf](http://www.siggraph.org/education/materials/siggraph_courses/S98/30/c30.pdf)
- Logo Design
- Color and Art Techniques
- What we could know more ?

# WWW Definitions by MS

- **World Wide Web**
  - The total set of interlinked hypertext documents residing on HTTP servers all over the world. Documents on the World Wide Web are called pages or Web pages, which are written in HTML (Hypertext Markup Language). Web pages are identified by URLs (Uniform Resource Locators) that specify the particular computer and path name by which a file can be accessed, and transmitted from node to node to the end user under HTTP (Hypertext Transfer Protocol). ...
  - **World Wide Web Consortium**
  - (W3C) A consortium of commercial and educational institutions that oversees research and promotes standards in all areas related to the World Wide Web.
- *FrontPage Help says:*

# WWW Definitions by MS

- **hypertext**
- Originally, any textual information on a computer containing jumps to other information. The hypertext jumps are called hyperlinks. On the World Wide Web, hypertext is the primary way to navigate between pages and among Web sites. Hypertext on Web pages has been expanded to include hyperlinks from text, from a picture or a graphic, and from image maps.
- *FrontPage Help says:*

# WWW Definitions by MS

- *FrontPage Help says:*
- **navigation bar**
- In FrontPage, a collection of graphical or textual buttons containing hyperlinks to pages that are part of the same web structure. See also *web structure*, *Navigation view*.
- **Navigation view**
- The view in FrontPage that is used to create, display, print, and change the navigation structure of a web. Navigation view includes a folder-like view, from which you can drag and drop pages into your site structure. Views in FrontPage provide different ways of looking at the information in your web, so that you can effectively manage your site.

# WWW Definitions by MS

- **web structure**
  - The set of relationships among the pages in a FrontPage-based web as defined in Navigation view. A well-defined structure gives a site visitor a sense of position in a web. When a navigation bar is inserted on a page that is part of a web's structure, FrontPage automatically creates hyperlinks to the pages that are below that page in the structure (child level), above that page in the structure (parent level) and equal to that page in the structure (same level). See also *navigation bar, Navigation view*.
- *FrontPage Help says:*

# WWW Definitions by MS

- *FrontPage Help says:*
- **HTTP**
- (Hypertext Transfer Protocol) The Internet protocol that enables Web browsers to retrieve information from World Wide Web servers.
- **hyperlink**
- A pointer from text, from a picture or a graphic, or from an image map to a page or file on the World Wide Web. On the World Wide Web, hyperlinks are the primary way to navigate between pages and among Web sites. Also called link.
- **navigation bar**
- In FrontPage, a collection of graphical or textual buttons

# Web Page Design Issues

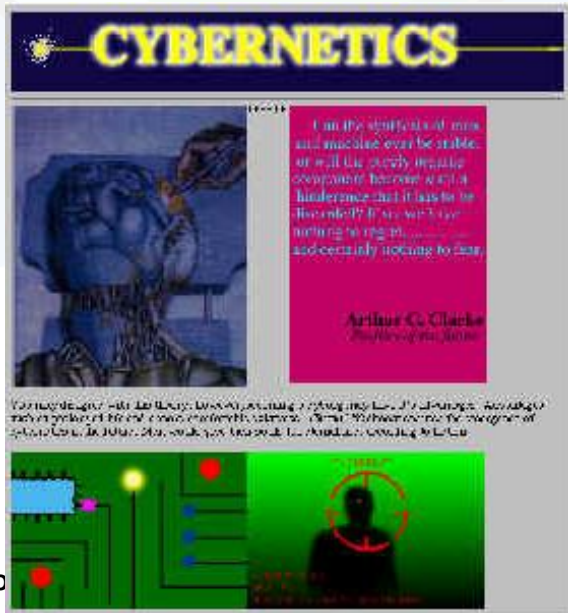
A decorative background graphic consisting of a light blue, irregular shape with several white stars scattered inside. In the center of this shape is a stylized globe with green continents and a light blue ocean, all enclosed within a thin, multi-colored circular border.

- Mitchell SIGGRAPH98 Course Notes
- Intent and Audience
- Type 1 of Site: information-based
- Type 2 of Site: offer experiences, emotion



# Creative Use of Color in Page Design

- By Bonnie Mitchell
- Color - an important help to support your intent
- Color - Too Much vs. Not Enough



Web Graphics – Colors & Navigation

figure 1-21 Colorful graphics used

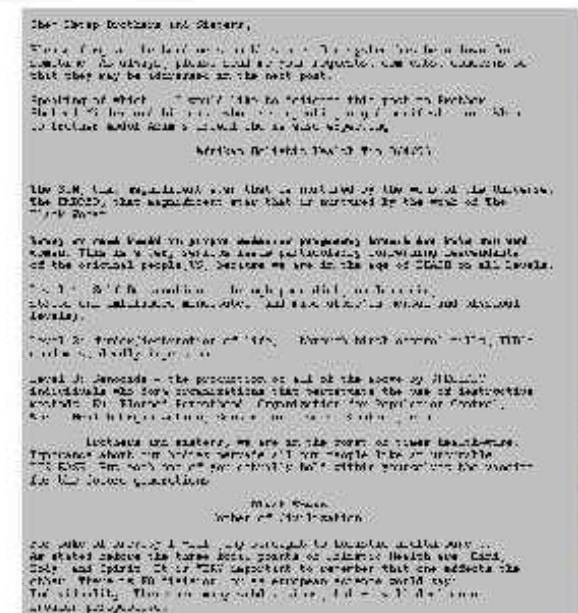


figure 1-22 No color or graphics used

# Use of Color 2

- By Bonnie Mitchell
- Limited Palette - Selected color scheme
- Complex Palette



figure 1-24 Limited use of color to create color unity on the page



figure 1-25 Page using lots of different colors but dominant colors help create color unity

# Use of Color 3

- By Bonnie Mitchell
- Color Contrast (Background Images)



fig.1-26



fig.1-27

# Use of Color 3

- By Bonnie Mitchell

- **Variation:** Newspapers ... varying the font size
- Graphics ... distinguish important images from supplementary ones

- **Page Hierarchy**
- "Back to the Home Page" error

Come on in and raid the fridge.



[The Top Shelf](#)

[The First Shelf](#)

[The Second Shelf](#)

[The Bottom Shelf](#)



last updated: April 25, 1996

*figure 1-6 Raid the Fridge.  
an interactive experience-based site*

# Creating Effective Graphics

• By Bonnie Mitchell

- **Aesthetics and Graphics** - a number of tricks
- **A Critical Eye** - recognize shortcomings
- **Technical Art Skills** – draw & study
- **Sharing Graphic Qualities** (Devising a Formula)

# Creating Effective Graphics 2

- By Bonnie Mitchell
- **Formulas (Shadows)** - an illusion of depth
- **Formulas (Sizes)** - very important to agree on a uniform size
- **Formulas (Alignment)** – look chaotic if the graphics are not aligned creatively, use grid => structure
- **Simulate other media** (Devising a Formula)

# Creating Effective Graphics 3

- By Bonnie Mitchell



Figure 1-14 Orange Source, an asymmetrically balanced page



Figure 1-42 Creating the illusion of 3D through use of shadows and overlapping

# Creating Effective Graphics 4

- List of tricks by Bonnie Mitchell
- Linear perspective/Foreshortening (converging lines - vanishing point)
- Overlapping of shapes (shape on top appears closer)
- Atmospheric perspective (less saturated color and detail in the distance)
- Size relationship (large objects appear closer)
- Modeling/Shading/Gradients (adding virtual 3d form to objects)
- Shadows/Directional lighting (emphasize the distance of object to surface)
- Placement in the picture plane (higher in picture is further away)
- Heavy lines (appear to come forward)
- Colors (bright/warm colors come forward -cool/dark colors recede)



# Creating Effective Graphics 5

- By Bonnie Mitchell
- Filters and Simulation – misuse & overuse
- Defying the frame – break out of the rectilinear frame
- Animating Graphics - slow download

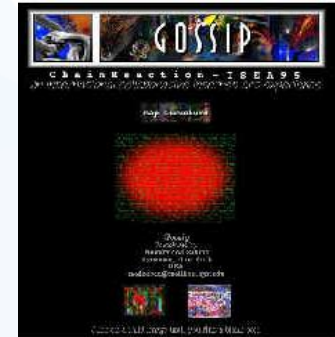


figure 1-17 Consistency from page to page – note that the layout has changed from the previous example but the header unites the two pages



figure 1-18 Consistency from page to page – note that the layout is similar to the previous example

# Color in Graphics

• By Bonnie Mitchell

• Color and Emotive Effects

• Color and Symbolism

• Color (Warm and Cold)

• Technical Issues Associated with Color:  
JPG, GIF, SVG, PNG, SWF...



figure 1-21 Colorful graphics used



figure 1-22 No color or graphics used

# Effective Graphics

- By Bonnie Mitchell
- Consider the whole WWW site – Gestalt
- No graphics?
- Graphics can be an effective way of conveying your concept

# Working with Text

- Another time

- By Bonnie Mitchell

# Designing Interaction & Exploration

- By Bonnie Mitchell
- Sublevels and Mapping the Structure

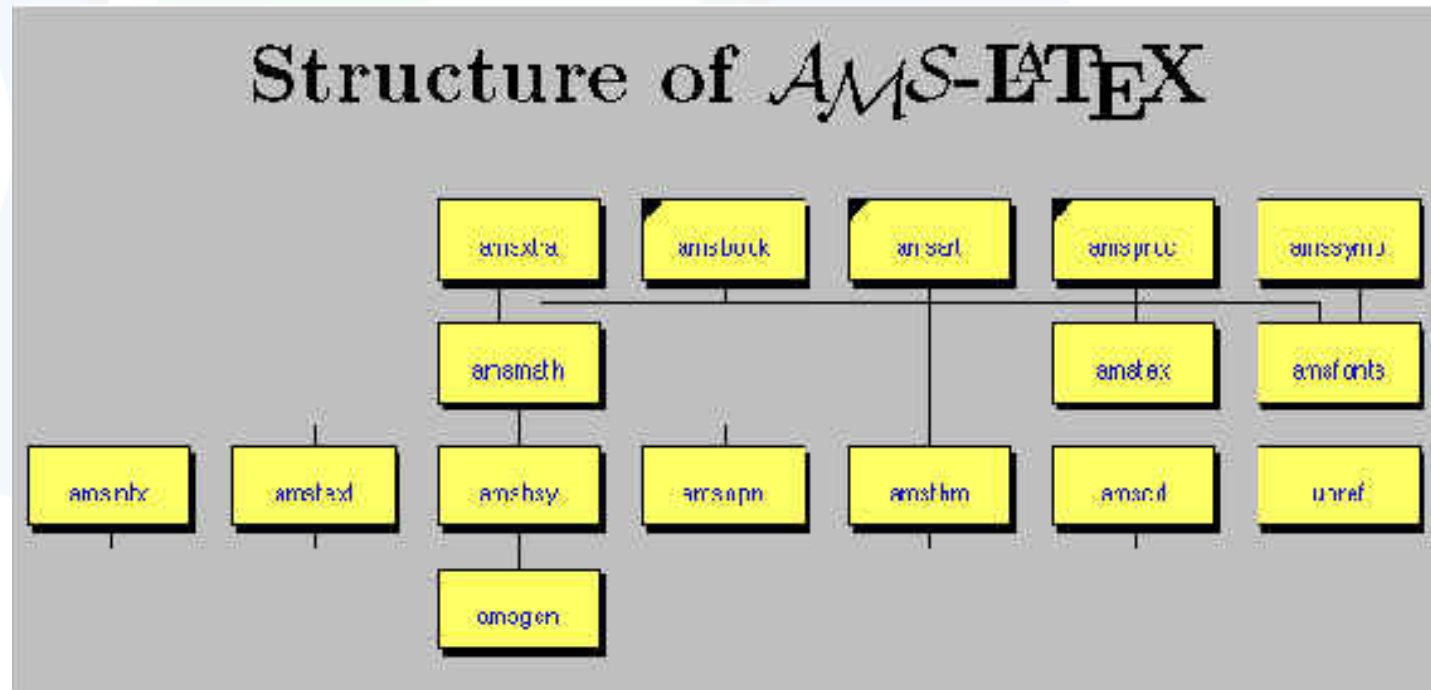


figure 3-1 AMS-Latex, diagram of the structure

# Designing Interaction & Exploration

- By Bonnie Mitchell
- Hierarchy charts or maps to assist with the navigation

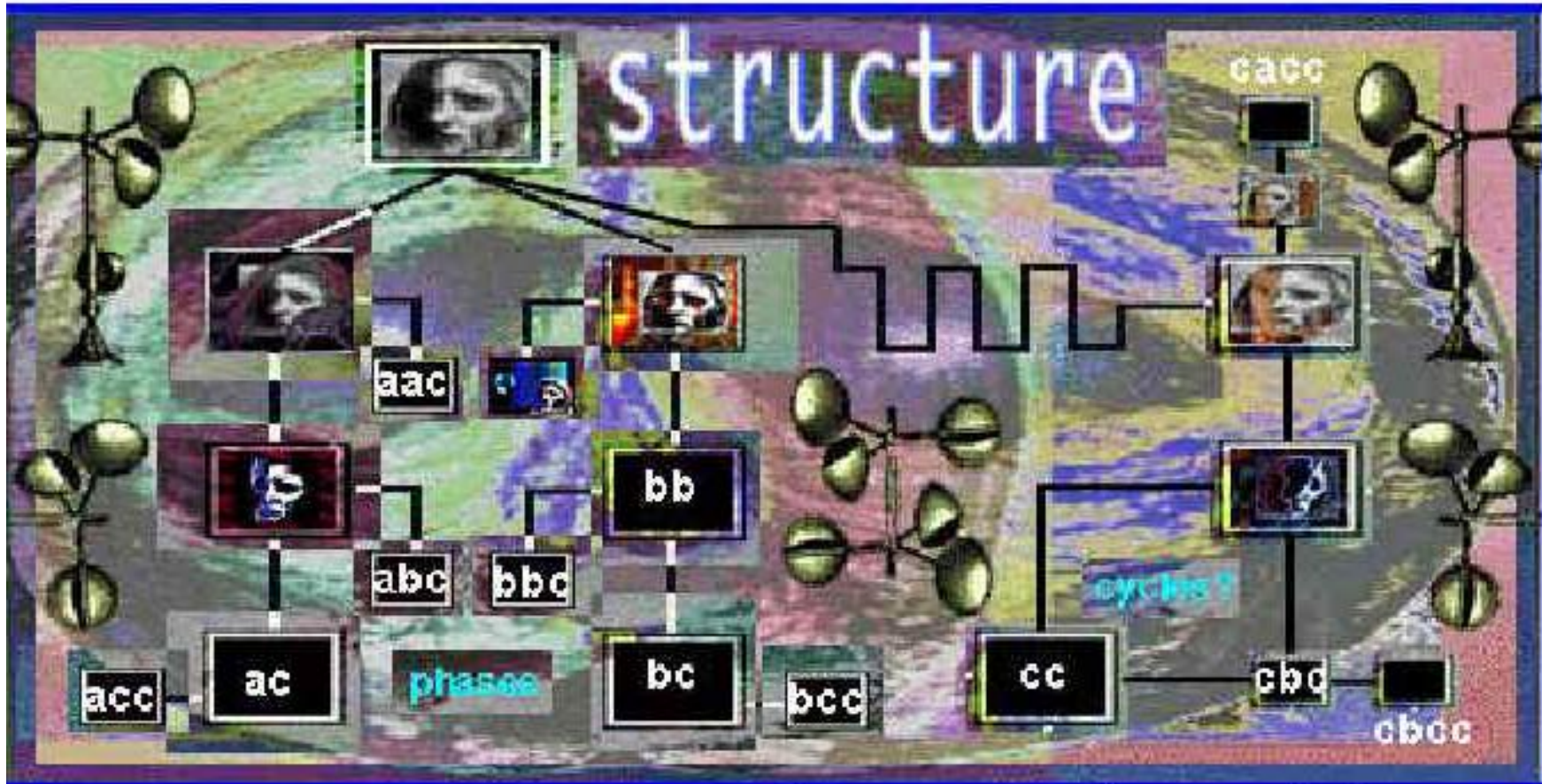


figure 3-2 Diverisive Paths, copasetic facial structure map

# Designing Interaction & Exploration

- By Bonnie Mitchell
- Hierarchy charts or maps to assist with the navigation



figure 3-3 ChainReaction structure map

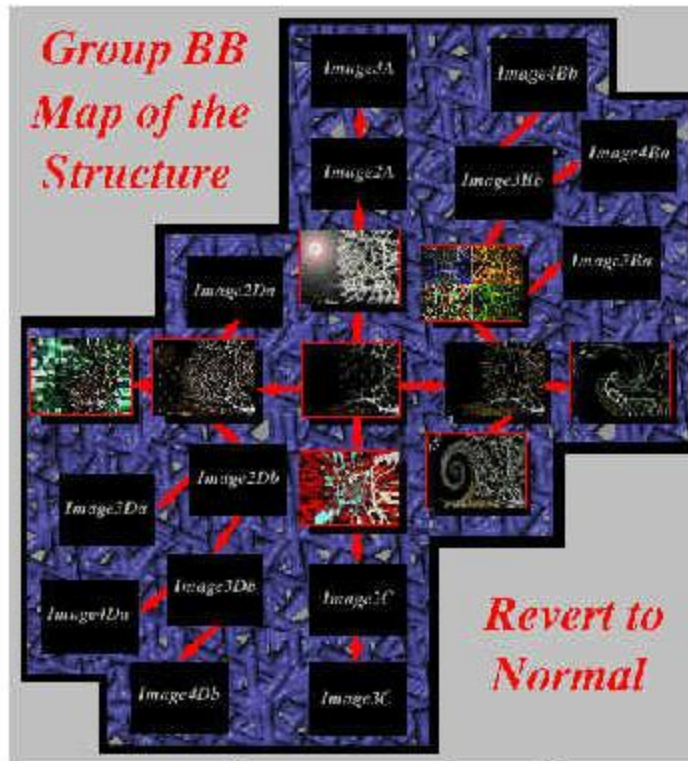


figure 3-4 Diverisive Paths, revert to normal map of the structure

- By Bonnie Mitchell

Contents

[Education](#) | [College Teaching](#) | [Statistical Research](#) | [Consulting](#) | [Presentations and Workshops](#) | [Publications and Manuscripts](#) | [Meetings and Conferences](#) | [Honors and Awards](#) | [Public Service](#) | [Committees](#) | [Affiliations](#) | [References](#)

Note: [a PDF reconstruction of this resume](#) is available.

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### Education

- M.S., *Computer and Information Science*, [University of Oregon](#), Eugene, Oregon, June 1969.
- M.S., *Mathematics*, [University of Wyoming](#), Laramie, Wyoming, May 1962.
- M.S., *Statistics*, [University of Wyoming](#), Laramie, Wyoming, December 1978.
- B.A., *Mathematics*, [St. Cloud State University](#), St. Cloud, Minnesota, May 1976.

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### College Teaching

- **Graduate Teaching Fellow**, *Computer and Information Science*, [University of Oregon](#), 1967-1969
  - responsible for undergraduate courses in introductory and advanced numerical computation (Fortran programming)
  - installed programming tools and compilers on a Janet network of PCs
  - conducted discussion sections supporting introductory computer science courses
- **Full-time Instructor**, *Computer Science*, [Central Wyoming College](#), 1968-1987
  - established computer science courses in Basic, Fortran, and Pascal programming, Business Data Processing, and Computer Mathematics
  - installed and configured NetWare 286 on a network of Zenith PCs
  - taught two-semester Statistics for the mathematics department each spring
- **Teaching Assistant**, *Education*, [University of Wyoming](#), 1979-1983
  - accepted total responsibility for 50-70 undergraduate math students per semester
  - taught seven distinct mathematics courses up to and including Calculus II
- **Teaching Assistant**, *Statistics*, [University of Wyoming](#), 1976 & 1978
  - lectured in undergraduate statistics courses; mentored students in the Statistics Laboratory

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figure 3-5 Note that there are Anchors (links) to all sections of the resume

# Designing Interaction & Exploration

- By Bonnie Mitchell
- Structuring Navigation (Anchors)
- Intuitive vs. Exploratory:
  - Links should be easy to identify (this includes graphics)
  - Graphic icons should use commonly understood metaphors
- There should be consistency in the placement of key navigational devices
  - Use color to indicate important navigation elements
  - Specify what the link connects to (label your icons)
- Exploratory Interfaces



# Complex or Confusing Interfaces

- By Bonnie Mitchell
- Too much information
- Not enough information
- Too many links
- Not enough links

# Navigational Graphics

- By Bonnie Mitchell
- Icons - typically small graphics that represent
- a concept,
- place,
- or thing

*figure 3-6 Icons that resemble the characters in a newspaper cartoon*



*figure 3-7 Icons that are intuitive based on the content of the site*



*figure 3-8 Icons that need text to clarify the meaning*



# Navigational Graphics 2

- Imagemaps
- Clickable
- Specific picture areas

- By Bonnie Mitchell

*figure 3-10 Imagemap of the ChainReaction starter images*



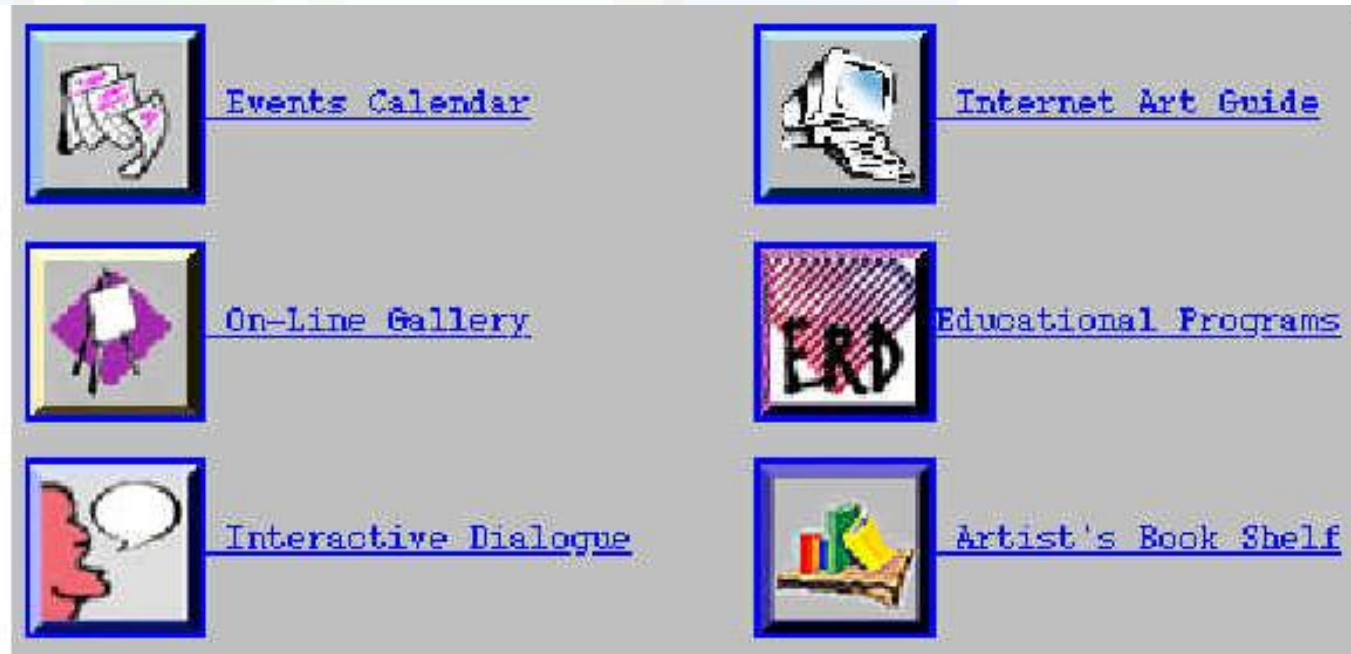
*figure 3-11 Imagemap used as a navigation bar*



*figure 3-12 Imagemap with text used for navigation inChainReaction*

# Navigational Graphics 3

- By Bonnie Mitchell
- Linked Graphics
- Beveled edge or a short text caption near it



*figure 3-13  
Clickable  
images with  
beveled edges*

# Navigational Graphics 4

• By Bonnie Mitchell

- Placement of Navigational Graphics
- - navigational devices should not overpower the content of the page
- Most important ones should be placed to the top of the page where they could be easily found
- Don't Forget the User
- E.g. on every page, the "go to next page,, should not be placed randomly

# Bad Design Examples

- [www.baddesigns.org](http://www.baddesigns.org)
- [www.sigchi.org](http://www.sigchi.org)

# Conclusions



- WWW Design Issues contd.
- Color Perception & Use as Local Navigation Inside – in the Rectangular Scene
- Navigation against Intentional Blindness

# Thank You



- **For**
- **Your**
- **Attention**
-





# Design Issues

Andrej Ferko

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[www.sccg.sk/~wega](http://www.sccg.sk/~wega)