

- The name of subsection the link will lead to
- The kind of information to be found at the destination
- Warning about possible problems to be encountered at the other end
- Restrict them to no more than 60 characters

Page Title

- Should contain many keywords at possible
- Provide a page title
 - That possess meaningful keywords
 - Whose first word is its most important descriptor
 - That makes sense when viewed completely out of context
 - That is different from other page titles
 - Is written in mixed case using the headline
- Do not highlight keywords

Heading and Headlines

- Used to scan to find screen content of interest.
- Their wording must provide a strong clue as to the content they relate to
- Heading should be descriptive and straightforward
- No clever, cute or funny headline
- Skip leading articles (the and a)

UNIT-V**Create Meaningful Graphics, Icons and Images****Creating Images**

- Create familiar and concrete shapes
- Create visually and conceptually distinct shapes
 - Incorporate unique features of an object
 - Do not display within a border
- Clearly reflect object represented
- Simple reflect object represented, avoiding excessive detail
- Create as a set, communicating relationships to one another through common shapes
- Provide consistency in icon type
- Create shapes of the proper emotional tone

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Icons

- Icons are most often used to represent objects and actions with which users can interact
- Icons may stand alone on a desktop or in a window, or be grouped together in a toolbar
- A secondary use of a icon is to reinforce important information, a warning icon in a dialog message box

Characteristics of Icons

- **Syntactics** refers to a icon's physical structure
 - Shape, Color, Size
 - Similar shapes and colors can be used to classify a group of related icons
- **Semantics** is the icon's meaning
 - What does it refer – a file, a waste basket, or some other objects?
- **Pragmatics** is how the icons are physically produced and depicted
 - Is the screen resolution sufficient to illustrate ?
- Syntactics, semantics and pragmatics determine an icon's effectiveness and usability

Influences on Icon Usability

- Provide icons that are
 - Familiar
 - Clarity
 - Simple
 - Consistent
 - Directness of the meaning
 - Efficient
 - Discriminable from others

- Also consider the
 - Context in which the icon is used
 - Expectancies of users
 - Complexity of task

Choosing Icons

- A Successful Icon
 - Looks different from all other icons
 - Is obvious what it does or represents
 - Is recognizable when no larger than 16 pixels square
 - Look as good in black and white as in color
- Size
 - 16x16, 24x24, 26x26, 32x32 pixels 16-and-256 color version
 - Use colors from the system palette
- Provide as large a hot zone as possible
 - With stylus or pen: 15 pixels square
 - With mouse: 20 pixels square
 - With finger: 40 pixels square

Choosing Images

- Use existing icons when available
- Use images for nouns, not verbs
- Use traditional images
- Consider user cultural and social norms

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Drawing Images

- Providing consistency in shape over varying sizes
- Do not use triangular arrows in design to avoid confusion with other system symbols
- When icons are used to reflect varying attributes, express these attributes as meaningfully as possible
- Provide proper scale and orientation
- Use perspective and dimension whenever possible
- Accompany icon with a label to assure intended meaning

Icon Animation and Audition

- Animation

- Use
 - To provide feedback
 - For visual interest
- Make it interruptible or independent of user's primary interaction
- Do not use it for decoration
- Permit it to be turned off by the user
- For fluid animation, present images at 16++ frames /second
- Auditions
 - Consider auditory icons

The design Process

- Define the icon's purpose and use
- Collect, evaluate, and sketch ideas
- Draw in black and white
- Draw using an icon-editing utility or drawing package
- Test for users
 - Expectations
 - Recognition
 - Learning
- Test for clarity
- Register new icons in the system's registry

Graphics in Web

- Use Graphics to
 - Supplements the textual content, not as a substitute for it
 - Convey information that can't be effectively accomplished using text
 - Enhance navigation through
 - Presenting a site overview
 - Identifying site pages
 - Identifying content areas

- Limit the use of graphics that take long time to load
- Coordinate the graphics with all other page elements

Images

- Use standard images, image internationalization
- Provide descriptive text or labels with all images
- Distinguish navigational images from decorative images
- Minimize
 - The number of presented images
 - The size of presented images
 - Image animation
 - Number of colors
- GIF, JPEG is prefer

Photographs/Pictures

- Use when every aspect of the images is relevant
- Use JPEG format
- On the initial page
 - Display a small version
 - A thumbnail
 - Zoom-in on most relevant detail
 - Link to larger photos showing as much detail as needed

Video

- To show the proper way to perform a task
- To provide a personal message
- To grab attention
- Never automatically download a video into a page
- Provide controls (playing, pausing, and stopping)

- Considering using
 - Existing video
 - Audio only
 - A slide show with audio

Diagrams

- To show the structure of objects
- To show the relationship of objects
- To show the flow of a process or task
- To reveal a temporal or spatial order

Animation

- To explain ideas involving a change in
 - Time
 - Position
- To illustrate the location or state of a process
- To show continuity in transitions
- To enrich graphical representations
- To aid visualization of 3-D structures
- Provide a freeze frame and stop mode
- Avoid distracting animation

Audition

- Uses as a supplement to text and graphics
- To establish atmosphere
- To create a sense of place
- To teach
- To sample

- The content should be simple
- Provide audio controls

Combining Mediums

- Use sensory combination that work best together
 - Auditory text with visual graphics
 - Screen text with visual graphics
- Both the visual and auditory information should be totally relevant to the task being performed
- Visual and auditory textual narrative should be presented simultaneously
- Considering downloading times when choosing a media
- Testing
 - Legibility
 - Comprehensibility
 - Acceptance

Choose the Proper Colors

Color Uses

- Use color to assist in formatting
 - Relating elements into grouping
 - Breaking apart separate groupings of information
 - Highlighting or calling attention to important information
- Use color as visual code to identify
 - Screen captions and data
 - Information from different sources
 - Status of information
- Use color to
 - Realistically portray natural objects

- Increase screen appeal

Possible Problems with Color

- High Attention-Getting Capacity
 - Viewer might associate, tie together, screen elements of same color
 - Result in confusing, slower reading
- Interference with Use of Other Screens
- Varying Sensitivity of the Eye to Different Colors
 - Viewing red and blue → Eye fatigue
- Color-Viewing Deficiencies
- Cross-Disciplinary and Cross-Cultural Differences
 - For financial managers - Corporate qualities or reliability
 - For health care professionals – Death
 - For nuclear reactor monitors – Coolness or water
 - For American movie audiences – Tenderness or Pornography

Choosing Colors for Categories of Information

- Color chosen to organize information or data on a screen must aid the transfer of information from the display to the user, Some examples of using color code
 - If decisions are made based on the status of information on the screen, color-code the types of status the information
 - Screen searching is performed to locate information of particular kind, color-code for contrast
 - If the sequence of information use is constrained or ordered, use color to identify the sequence
 - If the information on a screen is crowded, use color to provide visual grouping

- Never rely on color as the only way of identifying a screen element

- Always consider how spatial formatting, highlighting, and messages may also be useful

Color in Context

- Color are subject to contextual effects
- Small adjacent colored images may appear to the eye to merge or mix

- A color on a dark background will look lighter and brighter than the same color on a light background
- Colors also change as light levels change

Usage

- Design for monochrome first or in shades of black, white and gray
- Doing this will permit the screen to be effectively used:
 - By people with a color-viewing deficiency
 - On monochrome displays
 - In conditions where ambient lighting distorts the perceived color
 - If the color ever fails
- Use colors conservatively
 - Do not use color where other identification techniques, such as location, are available

Discrimination and Harmony

- Select 4-5 colors for best absolute discrimination
 - Red, yellow, green, blue, and brown
- Select 6-7 colors for best comparative discrimination
 - Orange, yellow-green, cyan, violet, and magenta
- Choose harmonious colors
 - One color plus two colors on either side of its complement
 - Three colors at equidistant point around the color circle
- For extended viewing or older viewers, use brighter colors

Emphasis

- To draw attention or to emphasize elements, use bright or highlighted colors or use less bright colors for deemphasize
 - The perceived brightness of colors from most to least is white, yellow, green, blue, red

- To emphasize separation, use contrasting colors
 - Red and green, blue and yellow
- To convey similarity, use similar colors
 - Orange and yellow, blue and violet

Common Meanings

- To indicate that actions are necessary, use warm colors
 - Red, orange, yellow
- To provide status or background, use cool colors
 - Green, blue, violet, purple
- Conform to human expectation
 - Red: Stop, fire, hot, danger
 - Yellow: Caution, slow, test
 - Green: Go, OK, clear, vegetation, safety
 - Blue: Cold, water, calm, sky, neutrality
 - Gray, White: Neutrality
 - Warm colors: Action, response required, spatial closeness
 - Cool colors: Status, background information, spatial remoteness
- Typical implications of color with dramatic portrayal are
 - High illumination: Hot, active, comic situations
 - Low illumination: Emotional, tense, tragic, romantic situations
 - High saturation: Emotional, tense, hot, comic situations
 - Warm colors: Active, leisure, recreation, comic situations
 - Cool colors: Efficiency, work, tragic and romantic situations
- Proper use of color also requires consideration of the experiences and expectation of the screen viewers

Location and Ordering

- In the center of the visual field, use red and green

- For peripheral viewing, use blue, yellow, black, and white
 - Use adjacent colors that differ by hue and value or lightness for a sharp edge and maximum differentiation
 - Order colors by their spectral position
 - Red, orange, yellow, green, blue, indigo, violet
- Foregrounds and Backgrounds
- Foregrounds
 - Use colors that highly contrast with the background color
 - For text or data
 - Black on light-color background of low intensity (no bright white)
 - Desaturated spectrum colors such as white, yellow, or green on dark background
 - Warmer more active colors
 - To emphasize an element, highlight it in a light value of the foreground color, pure white, or yellow
 - To deemphasize an element, lowlight it in a dark value of the foreground color

Foregrounds and Backgrounds

- Backgrounds
 - Use colors that do not compete with the foreground
 - Use
 - Light-colored backgrounds of low intensity: Off-white or light gray
 - Desaturated colors
 - Cool, dark colors such as blue or black
 - Colors on the spectral extreme end
 - Blue, black, gray, brown, red, green, and purple

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Color spectrum → <http://www.brobstsystems.com/colors.htm>

Gray Scale

- For fine discrimination use a black-gray-white scale
 - Recommend values
 - White: Screen background, text located in any black area
 - Light gray: Background of a Pushbutton area
 - Medium gray: Icon background area, Menu drop shadow, Window drop shadow, Inside area of system icons, Filename bar
 - Dark gray: Window boarder
 - Black: Text, Window title bar, Icon border, Icon elements, Ruled lines

Text in Color

- Text in color is not as visible as it is in black
- When switching text from black to color
 - Double the width of lines
 - Use bold or larger type:
 - If originally 8 to 12 points, increase by 1 to 2 points
 - If originally 14 to 24 points, increase by 2 to 4 points

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- Check legibility by squinting at text
 - Too-light type will recede or even disappear

Choosing color for web pages

- Always minimize the number of presented colors for faster downloading
- Always consider color in context, never in isolation
- Use similar or same color schemes throughout a Web site → help the user maintain a sense of place
- Foreground colors should be as different as possible from background colors
- The most recommended foreground text color is black presented on a light-colored background of low intensity (off white or light gray)
- Use dark backgrounds when establishing contrast between an area of the screen and the main screen body
- High intensity colors as background (such as red, magenta and bright green) must be avoided
- When choosing foreground and background colors, ensure that contrasting combinations are selected
- Use a uniform color in large screen areas
 - Large areas of the same color download faster
- For smaller elements, the more contrast is required
- Use flat Web-safe colors
- Select color that can be easily reproduced in black and white

Use of Color to Avoid

- Relying exclusively on color (Spatial Formatting and component locations)
- Too many colors at one time
- Highly saturated, spectrally extreme colors together

- Red/blue and yellow/purple
 - Yellow/blue, green/blue and red/green
 - Low-brightness color for extended viewing or older viewer
 - Colors of equal brightness
 - Colors lacking contrast
 - Fully saturated colors for frequently read screen components Use of Color to Avoid
 - Pure blue for text, thin lines, and small shapes
 - Colors in small areas
 - Colors for fine details
 - Black, gray, and white will provide better resolution
 - Other colors for large area or attracting attention
 - Non-opponent colors
 - Red/yellow or green/blue
 - Recommend: Red/green or yellow/blue
 - Red and green in the periphery of large-scale displays
 - Yellow and blue are much better
- Use of Color to Avoid
- Adjacent colors only differing in the amount of blue they possess
 - Single color distinctions for color-deficient user
 - Using colors in unexpected ways
 - Using color to improve readability of densely packed text
 - Recommend to use space lines