EID Emerging Interface Design

REVIEW FOR FINAL EXAM

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Raster and Vector

1. What are some of the common formats for saving Photoshop and Illustrator files?
    - **Ps:** psd, jpgs, bmp, png, tiff, and gif
    - **Ai:** ai, eps, pdf, and svg

2. Contrast Photoshop (bitmapped) and Illustrator (vector) programs.
    - **Ps:** resolution-dependent, image editing program
    - **Ai:** resolution-independent, object-oriented program

3. List three benefits to using Illustrator.
    - Resized easily without losing resolution quality
    - Easy to edit, reuse, and repurpose
    - File sizes are typically small

Mobile Concepts

1. List some reasons why mobile is considered more significant than desktop.
    - Personal
    - Always on and with us and usually connected
    - Accelerometer, Gyroscope, and Magnetometer
    - Location detection, digital compass
    - Multi-touch sensors
    - Video and Image (capture input from a camera)
    - Dual camera (front and back)
    - Ambient Light (light/dark environment awareness)

2. Define accelerometer, gyroscope, and magnetometer.
    - **Accelerometer:** senses movement and gravity to ascertain intuitive movements and speed
    - **Gyroscope:** the axis is unaffected by tilting or rotation giving the device 360 degrees of motion
    - **Magnetometer:** senses electromagnetic fields

3. What are some familiar mobile contexts?
    - Bored, Busy and Lost

4. Which orientation should you optimize mobile for first?
    - Portrait

Responsive & Adaptive

1. Think with Google cited what percentage of people begin on one device and then continue on another?
    - 90%

2. What three things are crucial to designing for various platforms?
    - Visual Consistency
    - Flexible Layout
    - Focus on Content

3. What is responsive and adaptive design?
    - **Responsive Design (RWD):** designing a site or app with specific properties (fluid grid layouts) that allow it to work on all devices
    - **Adaptive Design (AWD, or Dynamic Serving):** designing a site with conditions that change depending on the device (multiple fixed width layouts)

4. What are some common RWD layouts?
    - **Mostly Fluid** (most popular, only 2 major views)
    - **Column Drop** (popular for 3 column designs)
    - **Layout Shifter** (requires distinct layouts for each breakpoint)
    - **Tiny Tweaks** (suitable for single column layouts, with subtle adjustments to type size and images where appropriate)
    - **Off Canvas** (moves supplementary content off screen, from where it can be brought in)

5. Why are *.svg* images preferred?
    - Resolution is based on image paths, not pixels, so they remain the same at any size.

6. What is the concept *Mobile First?*
    - Websites should be designed first for mobile devices including only task/items that visitors use most. Then, as the screen real estate increases, additional tasks, and features can be added based on priority.

Wireframing

1. What are the preliminary stages for building an app or website?
    - Brainstorm › Sketch › Wireframe › Mock-up › Prototype

2. What is a wireframe?
    - The visual guide that represents the skeletal framework of a website or mobile app

3. What are the two types of wireframes?
    - **Low-fidelity (lo-fi):** blocked diagrams
    - **High-fidelity (hi-fi):** a rough draft of app/site

4. What are some wireframing considerations?
   - Eliminate distractions
   - Use color carefully
   - Don't over design it
   - Use real sizes
   - Accordances (signifiers) matter

Principles of Design and Organization

1. What are the elements of design?
   - Shape
   - Space
   - Line
   - Color
   - Texture

2. What are the most basic principles for organizing visual information?
   - Contrast
   - Alignment
   - Repetition
   - Proximity

3. Web and mobile interface balance often comes in which four forms?
   - Symmetry
   - Approximate symmetry
   - Radial symmetry
   - Asymmetry

4. What are the four properties behind Gestalt principles?
   - **Emergence** (the whole is identified before the parts)
   - **Reification** (our mind fills in the gaps)
   - **Multi-stability** (the mind seeks to avoid uncertainty)
   - **Invariance** (we are good at recognizing similarities and differences)

5. Be able to identify the four main ways that items are *grouped* according to Gestalt principles.
   - Continuity
   - Enclosure
   - Proximity
   - Similarity

6. What are the primary principles that affect design as a whole?
   - Unity
   - Variety
   - Hierarchy
   - Proportion

7. Define Hick's Law.
   - The time it takes for a person to make a decision as a result of the number of possible choices.

8. Define Fitt's Law.
   - The time required to move to a target area rapidly is a function of the ratio between the distance to the target and the width of the target.

Visual Hierarchy

1. What are the building blocks of visual hierarchy showing emphasis/contrast?
   - Size
   - Color
   - Layout
   - Spacing
   - Style

2. What are the two natural reading patterns and how should they be applied?
   - **F Pattern:** content-rich pages (text-heavy)
   - **Z Pattern:** strong primary content

3. What are some of the functions of white space?
   - Improves comprehension
   - Clarifies relationships
   - Draws attention

4. How does one achieve typographical hierarchy?
   - Size
   - Weight
   - Position
   - Color
   - Style
   - Combining Typefaces

Grids & Layout

1. Apply the four main types of grids.
   - **Manuscript Grid** (large continuous blocks of text)
   - **Column Grid (discontinuous information)**
   - **Modular Grid** (more complex layouts, greater flexibility)
   - **Hierarchal Grid** (organic structure)

2. What are the benefits of working with a grid?
   - **Clarity (brings order)**
   - **Efficiency (can quickly add to)**
   - **Economy (can collaborate)**
   - **Continuity (structural harmony)**

3. Be able to identify the basic anatomy of a layout.
   - Margins & Gutters
   - Columns & Rows
   - Module
   - Spatial Zone
   - Flow-line

4. What is the golden ratio based on? Give an example from nature and architecture.
   - Phi (1.618)
   - Nautilus shell and Notre Dame Cathedral

Color

1. Apply and break down the two main color models.
   - **CMYK** = (Print) Cyan, Magenta, Yellow, and Black
   - **RGB** = (Web) Red, Green, and Blue

2. What is the difference between monochromatic and achromatic?
   - **Monochromatic:** using any shade, tint, or tone of one color
   - **Achromatic:** colorless scheme using blacks, whites, and grays

3. What is the difference between tone, tint, and shade?.
   - **Tint:** color + white
   - **Tone:** color + gray
   - **Shade:** color + black

4. What is the difference between warm and cool colors?
   - **Warm:** colors that advance (reds, oranges, yellows)
   - **Cool:** colors that recede (greens, blues, violets)

5. What are some of the common color connotations for the following colors?
   - **Red:** powerful, stimulating, dynamic
   - **Pink:** romantic, sensitive, youthful
   - **Orange:** warm, friendly, bright
   - **Yellow:** cheerful, spirited, uplifting
   - **Green:** nature, refreshing, restful
   - **Blue:** dependable, authoritative, serene
   - **Violet:** royal, mystical, creative
   - **Black:** powerful, classic, weighty
   - **Brown:** wholesome, durable, comforting
   - **White:** innocent, clean, peaceful

6. Be able to identify the following color schemes:
   - Monochromatic
   - Complementary
   - Analogous
   - Triad
   - Split complement
   - Tetrad

7. What are the major influences of color trends?
   - Mainly fashion, then other industries: advertising, automotive, beauty, health, cosmetics, interior design, electronics, film, etc.

8. What are the current color trends?
   - Various applications of vibrant color
   - Dark aesthetics
   - Natural color palettes

9. How is vibrant color currently applied?
   - Flat color palettes
   - Monotone color schemes
   - High contrast

Branding & Style Guide

1. Explain the difference between a logo and a brand.
   - **Logo:** A graphical mark used to identify a company, organization, or product
   - **Brand:** tells people who you are and what you do

2. List three influential logo designers.
   - Saul Bass
   - Ivan Chermayeff
   - Paul Rand

3. What are some of the qualities of effective logo designs?
   - Simple but distinctive
   - Proportionate
   - Limited color palette
   - Legible typography
   - Personality

4. What is a mood board?
   - An arrangement of images, materials, pieces of text, etc., intended to evoke or project a particular style or concept

5. What is a style guide?
   - A style guide is a comprehensive document that keeps track of all the repeating elements for a project

6. What are the benefits of creating a style guide?
   - Makes it easy to hand over a project
   - Maintains control of the design
   - Provides unity and brand voice
   - Avoids cheapening the design, message, and branding

Icons and Images

1. What is an icon?
   - **Icon:** a sign, symbol, picture or image that stands for or represents an object in its resemblance as an analogy for it

2. What is symbol standardization?
   - An attempt to create a specific symbol vocabulary that can be used in a variety of situations like transportation and health care

3. Give two examples of globalization leading to increased use of symbols.
   - Department of Transportation standardization
   - Olympic Games

4. What are some of the benefits to symbol icons?
   - Faster to recognize than text
   - Immediate feedback
   - More attractive
   - Easy to remember

5. What were some of the first digital visual metaphors?
   - Folders
   - Trashcan

6. What are some of the tips for symbol-icon sets?
   - Make sure they have shared attributes (weight, size, style)
   - Cast consistent lighting, reflections, and shadows
   - Don't use more than 6 colors in a set
   - Build on basic 2D geometric shapes (geons)
   - Keep icons iconic and straightforward (build off familiarity such at the established DOT)

7. When is it crucial to use photography?
   - When the details of a real thing matter

8. When is it best to use video?
   - When explaining a process
   - When details are better revealed through motion

9. When is best to use interactive graphics?
   - Configuring something (custom purchase)
   - Teaching tools & Educational games (input and feedback are key to engagement)
   - Demos & Simulations (try something out)

Type and Legibility

1. Be able to identify the following different styles of type.
   - Serif (e.g., Old-style and Transitional)
   - Modern (hairline serifs)
   - Slab Serif (square serifs)
   - Sans Serif (no serifs)

2. Which type style is more readable (serif or sans serif)?
   - They are equal in terms of readability

3. Be able to label the following:
   - Baseline
   - Cap height
   - X-height
   - Ascender
   - Descender

4. Mobile and web text is often measured in what relative unit?
   - Scalable pixels (sp)

5. Define the following typographical terms:
   - **Leading:** (line height) space in-between lines
   - **Kerning:** (letter spacing) space in-between letters
   - **Tracking:** (word spacing) overall tightness or looseness of a word(s)
   - **Ligatures:** when two or more characters form one character for legibility or aesthetic purposes
   - **Small Caps:** capital letters that are the approximate size of lowercase letters

6. When do you use the following dashes?
   - **En Dash:** (–) indicate duration (ranges, time, etc.)
   - **Em Dash:** (—) change of thought or to break up sentences with too many commas

7. When should you hang your punctuation?
   - For bullets or quotation marks to have a strong clean alignment

8. List and apply the main paragraph styles.
   - **Align Left** (ragged right): easiest to read
   - **Align Right** (ragged left): suitable for captions and call outs
   - **Center**: poetic, not meant for large amounts of text
   - **Justified** (flush): crisp handsome look, but vulnerable to awkward hyphens and rivers

9. Define the following paragraph problems that one should avoid:
   - **Rivers:** white space running through type
   - **Orphan:** one word left at the bottom of a line
   - **Widow:** one line on the next column or page

10. What are some of the rules of typography?
    - Never condense, extend, or stretch type
    - Do not use text-type for display purposes and display-type for text-type
    - Do not stack type

11. How is dramatic type often applied?
    - Extreme size (large and small)
    - Superimposed on images
    - Creative use of simple typefaces
    - Custom typeface
    - Artistic fonts

12. What is the difference between legibility and readability?
    - **Legibility:** the clarity of individual characters and how quickly they are deciphered
    - **Readability:** the level of comprehension and visual comfort when reading

13. When dealing with text and color what are some of the factors that affect legibility?
    - Font selection and weight
    - Position and spacing
    - Size
    - Color

14. Which factor affects legibility most significantly?
    - Color

15. Should you use lorem ipsum past the lo-fi stage?
    - No, content is king