

Communication design for the world wide web

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Goals of this session

- Explore issues that pertain to communication design and visual interface design
- Become familiar with basic principles of communication design
- Examine a body of examples

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Agenda

- What is design?
- Preliminary communication design preparation
- Communication design for the web
 - typography
 - design systems
 - color
 - interface design
- Critique of examples

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What is design, anyways?

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Design matters!



What is design?

Design is the act of creating a communicative artifact, whether it is a printed piece, a web site, a product, or an environment.

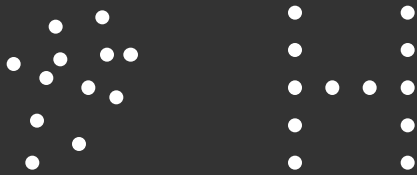
Design is a social and collaborative activity. Designers not only design the artifact, but are aware of the social and cultural systems within which the artifact is used.

All design is communication — messages transmitted from sender to receiver.

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What is communication design?

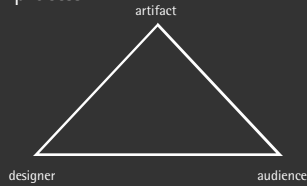
Designers work conceptually, combining words, pictures, and other graphic elements to form a communicative gestalt.



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What is communication design?

Designers work with a specific audience in mind, and create an artifact that best suits the needs of that audience. When possible, we involve actual users in our design process..



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What is the design process?

The design process is a series of events that begins when the designer receives an assignment. It continues until a correct solution is generated and implemented. The design process is not linear, but iterative.



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Communication and web design

Communication design can take advantage of the world wide web

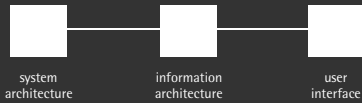
- timely
- inexpensive
- becoming simpler to configure
- create once; read on many platforms

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Communication and web design

UI design and communication design

- communication design essential in UI design
- web application development is more than technical domain
- establishing a web presence is a design activity



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Preliminary communication design preparation

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Preliminary preparation

Considerations prior to design

- determine goals and objectives
- determine audience
- determine experience of use
- budget and schedule

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Preliminary preparation

Considerations prior to design (technical)

- connection speed
- computer/device platform
- display resolution and bit depth
- browser support

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Preliminary preparation

Considerations prior to design (users)

- lost in hyperspace
- response time
- web browsing vs. reading print
- users and the presentation of your design

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Preliminary preparation

Considerations prior to design (content)

- copyright and legal issues
- ADA
- display on different devices

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Preliminary preparation

Determine project goals and objectives

- why provide a web presence?
- client may or may not understand the implications
- keep activity and resources focused
- functional specification

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Preliminary preparation

Determine primary audience

- users differ in needs, experience
- novice user = simplicity
- expert user = efficiency, customization
- accommodate wide variety or specific audience?

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Preliminary preparation

Determine experience of use

- what do users want to do?
- what do they take away from the site?

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Preliminary preparation

Determine budget and schedule

- staffing and available skills
- degree of customizing
- training and documentation
- site maintenance – “solution after next”

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Communication design for the web

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Communication and web design

- Typography
- Color
- Design systems
- Interface design

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Typography

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Typography

Our civilization is based on the alphabet and numerals. These are learned systems, which have enabled advances in science and literature.

Typography as we know it is an art of communication, measurement and proportion.

The designer structures by working with units of measurement and spatial relationships.

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Anatomy of a typeface

A typeface is a set of type families of a unifying and distinctive design (for instance, Times Roman), and a font is one instance of that family (Times Roman light italic).

All typefaces share a basic anatomy.

The standard measuring unit for type is the point, measured from top of ascender to bottom of descender.

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Anatomy of a typeface

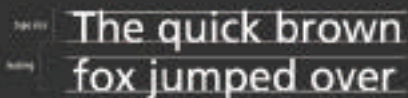
There are two kinds of type, serif and sans serif. A type family consists of a group of typefaces unified by a similar set of characteristics.



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Anatomy of a typeface

Relationships between type and the space around it is what makes paragraphs look different: size of x-height, type size, leading, and line length. Two key features of legibility are line length and leading.



Text has different alignments: flush left, flush right, centered, and justified.

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Type "etiquette"

- leading is expressed as two numbers: 10/12
- tight leading makes long bodies of text hard to read
- line length is the distance between the left and right margin of the type
- long lines of type (>70 characters) are hard to read
- very short lines break up text into non-syntactic groups of 2-3 words

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Choosing type for your design

- Begin the design process by taking inventory of text elements you need (ex: head, subhead, footnotes).
- Choose a type family or two to work with. Make sure that each typeface looks good together, and supports the intended tone of the content.
- Find suitable sizes for each of the elements. Create guidelines and maintain them.
- Test line length and leading if applicable. Look at short and long pieces of text.

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Working with type

- Use of ALL CAPS or *all italic* slows reading.
- Readers pay attention to contrast among typographic elements. Changes in weight (bold, etc.) may be noticed more than changes in typeface.
- Reversed type (white letters on a black or colored background) is a strong visual element and should be used judiciously.
- Blank space (lines, columns) helps increase legibility.

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Color

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Color matters!

The colors we seen in nature are reflections of the visible light around us.

- Helps us to distinguish elements
- Creates an emotional response
- Can create semantic meaning and communicate information

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Color is difficult

- Cultural differences and associations – Kodak yellow, Coke red
- Different disciplines deal with color in differently: physics, psychology, engineering, fine arts and design
- Highly subjective
- Relative – affected by light, context, environment
- Simultaneous contrast – color is affected by what color is next to it

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Color is difficult

To make matters worse, print media and digital media use different color models.



The additive model used by screen displays mixes colors with light (white).



The subtractive model used by print media and pigment mixes colors with ink (black).

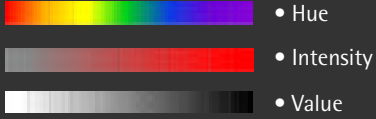
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The color wheel



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Color properties



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Hue

Hue refers to the name of the color. One hue can be varied to produce many colors: for example, pink, rose scarlet, maroon, and crimson are all colors, but the hue in each case is red.

ROYGBIV are the hue names.

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Intensity

Intensity is sometimes called chroma, or saturation. These terms refer to the brightness of a color. A color is at full intensity when there is no other pigment present in the color. Mixing black or white into a color affects its purity and intensity.

A hue is at its full intensity when it is fully saturated. Adding black or white desaturates the hue.

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Value

Value refers to the lightness or darkness of a hue or color. In pigment, value can be affected by adding white or black paint to the color.

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Choosing color for your design

Color wheel strategies

- Primary/secondary/tertiary
- Warm /cool
- Triads
- Monochromatic
- Neutrals
- Complements/split complements
- Analogous

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Digital color

Digital color and physical color are not the same.

- Print color uses CMYK or Pantone representations of color, and occasionally RGB.
- Digital color is usually represented as RGB values. A color image may be stored as three separate images, one for each of red, green, and blue, or each pixel may encode the color using separate fields for each color component.

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Digital color

Digital color uses a color look-up table (CLUT) to convert the color numbers stored in each pixel to physical RGB colors for display on the screen. The output is split into red, blue and green light generated by the computer display (CRT).

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Web safe color

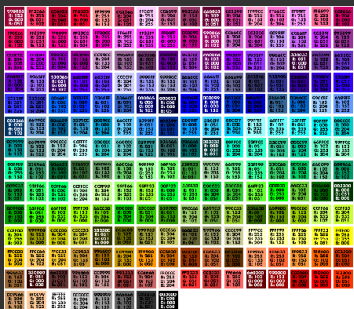
The web safe palette is the Netscape and Internet Explorer browser palette.

The palette contains 216 out of 256 colors. That is because the remaining 40 colors vary on Macs and PCs. The palette is optimized for cross-platform use.

The palette is useful for flat-color illustrations. It should not be used to remap color photographs. Use an adaptive palette (with no dithering, if possible).

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Web safe color



Web safe color



Design systems

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Design systems

Design systems and grids help create ordered and systematic designs. The functional and aesthetic benefits of a these designs are:

- Approachable – use immediately
- Recognizable – easy to assimilate and remember
- Immediate – have a greater impact on the viewer
- Usable – prominent, easy to engage with

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Design systems

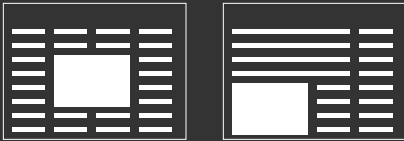
To create a design system, designers assess component parts of a design and the relationships between those parts. Train your eye to look for these relationships:

- Symmetry and asymmetry
- Scale, contrast and proportion
- Harmony
- Alignment
- Proximity and correspondence

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Symmetry and asymmetry

Symmetry is similarity of form or arrangement on either side of a dividing line or plane. A symmetric organization symbolizes a restive state, while asymmetry suggests energy. Content drives designers' choices about symmetry.



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Scale, contrast, and proportion



The scale of elements determines where the viewer looks first, and what is most important. Large, powerful visual elements must be used judiciously, particularly in interface design.

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Harmony

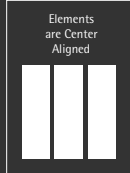


Establishing regular relationships (i.e., a pattern) allows the viewer to become comfortable with the design and move to a higher level of abstraction – the whole rather than the parts..

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Alignment

When forms, their edges, or their central axes align with one another, relationships and connections between them are established.



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Proximity and correspondence

When forms are near to each other, the eye makes visual groupings of the information. Similar size, shape, color or texture can also cause groupings.

13 1 3 21 37 21 37

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Design systems

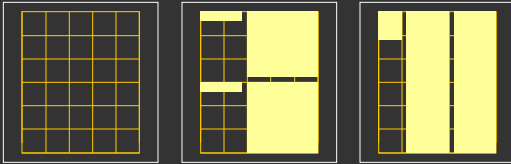
A design system is a way to organize a design, using repeated sizes, proportions, and design elements to maintain consistent functional and aesthetic qualities over a series of pages, screens, or artifacts.

Elements such as type sizes, styles, placement of elements, and colors are used consistently to unify a series of designs.

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Design systems

Design systems are based on grid systems.



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Design systems

Grids allow the layout to be codified across a series of pages, displays, etc.

Grids are based on columns and rows.

The more columns and rows, the more flexible the design.

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Design systems

When a grid is put to good use, it will create a regular and rhythmic design.

Consistent use of a grid, paired with visual elements, will create a consistent "look and feel" in a manual, web site, or GUI.

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Design systems

Why is it good to have a design system?

- Structured: the foundation on which the design is built
- Predictable: simplifies the task of communicating information to the user
- Efficient: the basic design work is complete, and the design can be repeated easily

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Creating a design system

- Assess your communication goals. Where will the information be displayed? Who is the audience? What is the purpose of the communication?
- Group each item of information into a small number (5-7) of categories according to origin or intended use.
- Determine the rank or importance of each group. Organize into a smaller number (3-5) of echelons based on this ranking.

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Creating a design system

- Use appropriate variables to establish hierarchy. Large, bold type might be used for the most important information. A systemic location on the grid might be reserved for pictures.
- Use a grid to base your designs on.
- Use the squint test to make sure echelons are hanging together as a unit, but with enough difference to be visually separated from each other.

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Interface design

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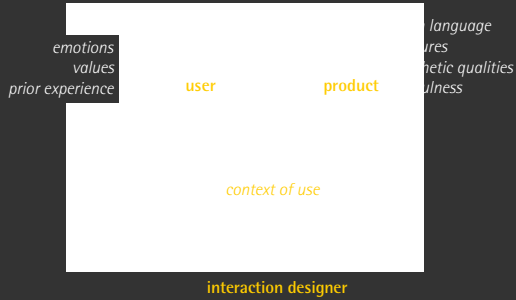
What is interface design?

An interface is the link between a product and its user. It communicates how a product is used, and creates an experience for the people who use it.

An interface is an aggregate of characteristics that a user initially engages with in order to make use of a product.

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What is interface design?



What is interface design?

An interface offers the user a story of use. If it matches how the user thinks, it is easy to use.

If the product is complex, inaccessible, unlearnable, or unfamiliar, the user will not be able to use it.

What is interface design?

Interface design is the act of conceiving of, planning, and executing a set of product characteristics. For example:

- A car's interface is its dashboard, door handles, etc.
- The Starbuck's interface is the music, furniture, cups, space, and coffee products that are sold there
- A software interface is the buttons, widgets, and modes of interaction

Designing an interface system

- Use a grid, and establish modular units
- Use repeat elements to reinforce structure
- Look at the set of information to discern commonalities from screen to screen
- Look for elements that should be visually related
- Think about how the user would navigate through and use the interface
- Sketch, iterate, get user feedback, iterate, and refine

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Critique of examples

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Resources

General Design and Typography

- Carter, Rob, Meggs, Philip B., and Day, Ben. *Typographic Design: Form and Communication*.
- Meggs, Philip B. *Type and Image: The Language of Graphic Design*.
- Tufte, Edward. *Envisioning Information*.
- Tufte, Edward. *The Visual Display of Quantitative Information*.

Typography and Layout

- Schriver, Karen A. *Dynamic Document Design: Creating Text for Readers*

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Resources

Color

- Albers, Josef. Interaction of Color.
- Itten, Johannes and Birren, Faber. The Elements of Color.

Visual Interface Design

- Mullet, Kevin and Sano, Darryl. Designing Visual Interfaces.
- Howlett, Virginia. Visual Interface Design for Windows.

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Resources

Web sites

General Design

Mundi Design
<http://www.mundidesign.com/>

Typography

Studiomotiv
<http://www.studiomotiv.com/counterspace/>

Color

Color research at Brown University:
<http://www.cs.brown.edu/exploratory/>

Web color

<http://www.lynda.com/>

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