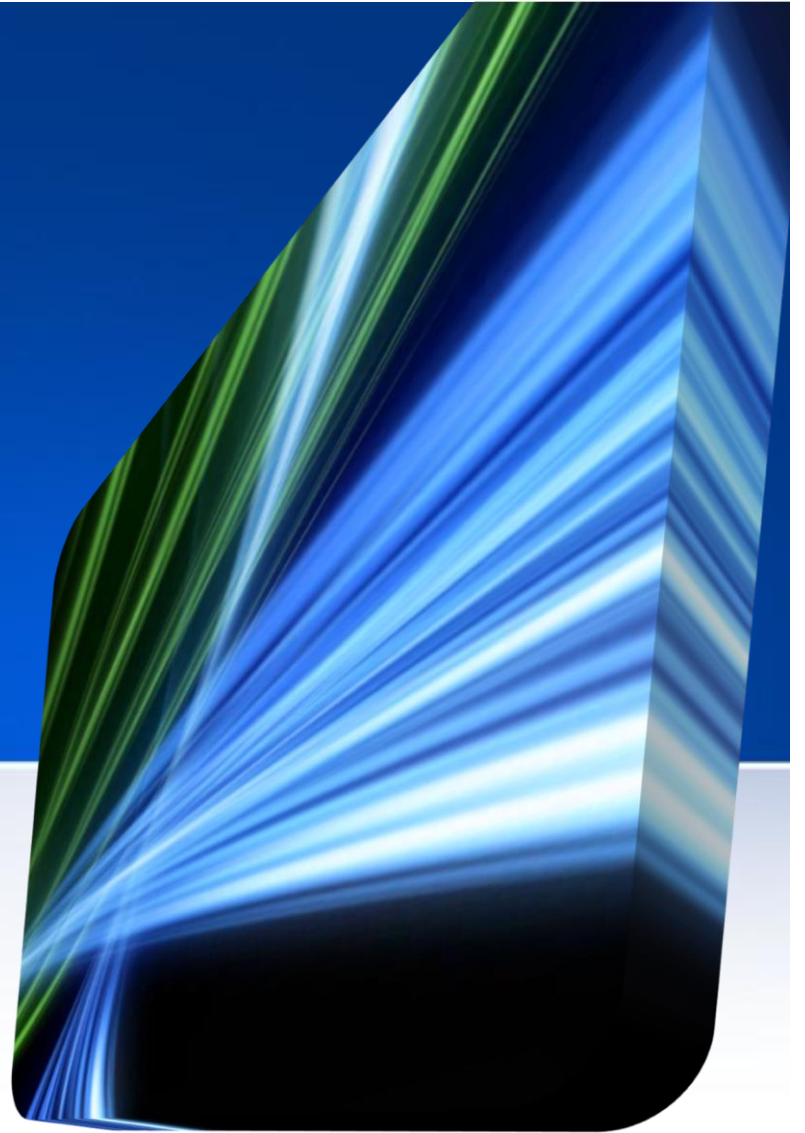


Visual Design



HCI

- **The *Human* – user – Focus on People**
- ***Computer*** – machine that runs the system
- **Interaction** – interface

“Human–computer interaction (HCI) involves the study, planning, design and uses of the interfaces between people and computers.”

-Wikipedia

You are cordially invited to Robert and Alexandra's delectable after-dinner party. Wine and nibbles will be served. when: june 30th, 2012 at 9:30pm. Where: the pad. if you need directions, ping us. Kindly let us know if you'll be attending by june 1st.

**from Scott Klemmor hci-class.org*

You are cordially invited to
Robert and Alexandra's delectable after-dinner party.

Wine and nibbles will be served.

When: june 30th, 2012 at 9:30pm.

Where: the pad. if you need directions, ping us.

Kindly let us know if you'll be attending by june 1st.

**from Scott Klemmor hci-class.org*

YOU ARE CORDIALLY INVITED TO...

**Robert and Alexandra's
delectable after-dinner party**

Wine and nibbles will be served.

WHEN **June 30th, 2012 at 9:30pm.**

WHERE **The pad.** if you need directions, ping us.

Kindly let us know if you'll be attending by **June 1st**

Which is nicer?

AIKIDO



Aikido is a unique martial art that integrates body, mind and spirit. Graceful and powerful, it emphasizes peace and harmony over aggression and violence.

BEGINNER CLASS

**Starts Sunday,
April 27, 2008
1:00 - 2:00 p.m.**

8-week course – \$95

Adult class (12 and older).
No martial arts
experience necessary.
Call to reserve a space.

Regular Classes

Tuesday 7:30 p.m.
Thursday 7:45 p.m.
Sundays, 1:00 & 2:15 p.m.

**PLEASE COME AND VISIT
ANY OF OUR CLASSES
TO DETERMINE IF
AIKIDO IS RIGHT FOR YOU!**

PORTSMOUTH AIKIDO
at the Seacoast Family Y
550 Peverly Hill Road
Portsmouth, NH

CALL 603-431-8560
www.PortsmouthAikido.com

AIKIDO



*Aikido is a unique martial
art that integrates body,
mind, and spirit.*

*Graceful and powerful, it
emphasizes peace and
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Come Visit

Please come and visit any
of our classes to determine
if Aikido is right for you!

Portsmouth Aikido
at the Seacoast Family Y
550 Peverly Hill Road
603-431-8560
www.portsmouthaikido.com

Goals for Visual Design

- Convey structure
- Draw people in, provide hooks

**from Scott Klemmor hci-class.org*

Another Example: Google

The Google logo is centered on a white background. It consists of the word "Google" in its signature multi-colored font: blue 'G', red 'o', yellow 'o', blue 'g', green 'l', and red 'e'.A simple, minimalist search bar with a thin gray border. On the right side of the bar is a small, gray microphone icon, indicating voice search functionality.

Search- know what to do when go there.
Logo reads loud and clear.
Google page is famous for its [minimalism](#)

Visual Tools

- 3 basic visual tools for organization and hierarchy:

1. Typography

2. Layout

3. Color

**from Scott Klemmor hci-class.org*

Typographic Terms: Sans Serif vs. Serif



HCI HCI

Many say

Texts:

Serif – body in text (easier to read)

Sans Serif – use for Headers

Online:

Some say that sans serif can be easier to read on the web.

Not bad advice, but reading is also familiarity – if read with one style may be faster with that style.

In practice – it's what you're accustomed to.

What does this say?

I am a jelly donut

**from Scott Klemmor hci-class.org*

What does this say? Cont.

THE SPUR OF THE MOMENT

**from Scott Klemmor hci-class.org*

Answers

- The second one was harder:
 1. I am a jelly donut
 2. jfk spoke in berlin
- More information coded in top half than bottom half of text.

TAE CAT

Scott Klemmor hci-class.org

- More people would say THE CAT rather than TAE CHT

- Expectation plays an important role.

Another Example



- What is this?

- Ambiguous?

Context helps

The image shows the letters 'A', 'B', and 'C' in a large, hollow, sans-serif font. The letters are positioned in the center of the slide, below the title. The 'A' is on the left, 'B' is in the middle, and 'C' is on the right. The letters are black outlines on a white background.

**Human-Computer Interaction 3rd edition by Alan Dix, Janet Finlay, Gregory D. Abowd, Russel Beale.*

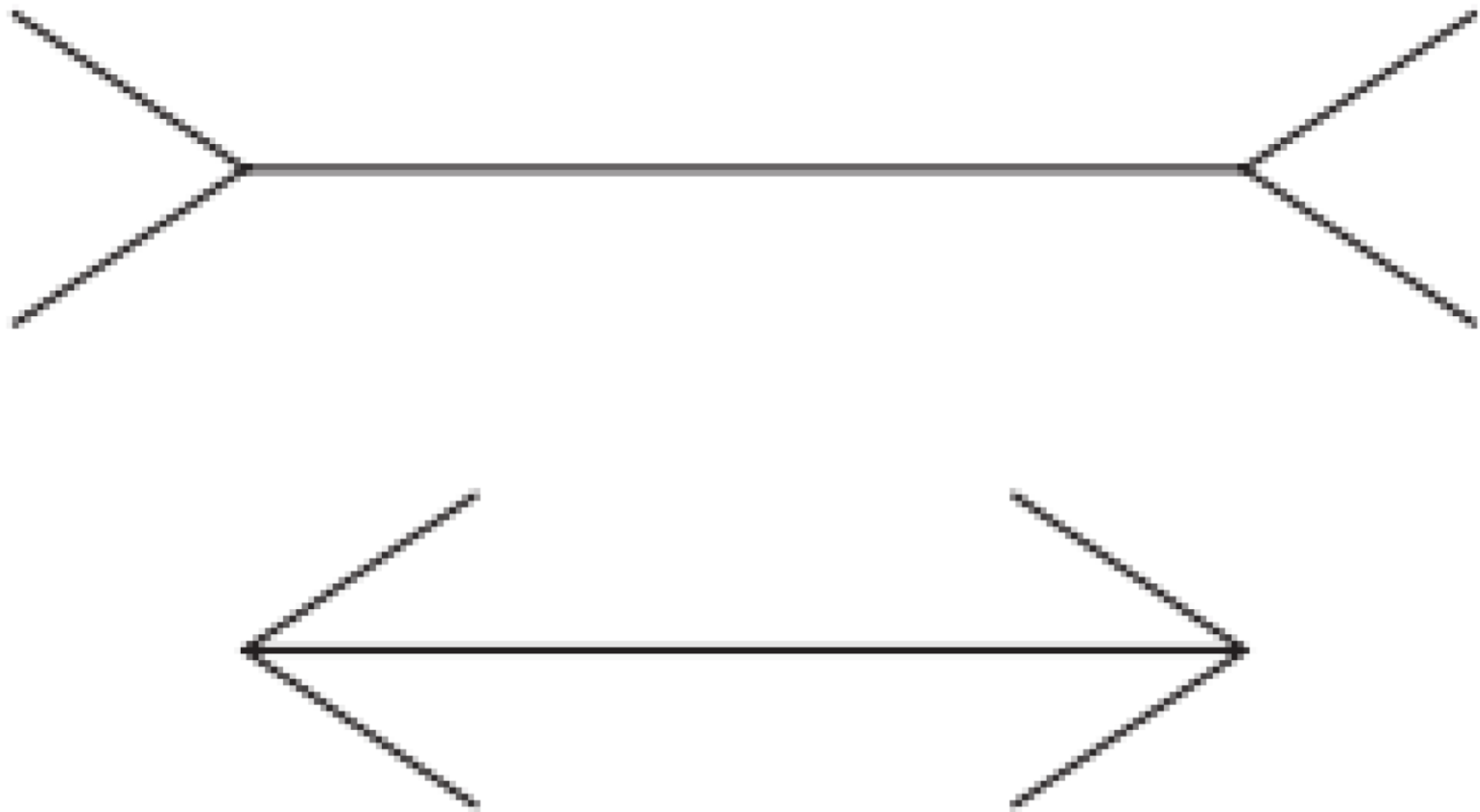
Context Helps: Our expectations help

to disambiguate



**Human-Computer Interaction 3rd edition by Alan Dix, Janet Finlay, Gregory D. Abowd, Russel Beale.*

Which line is longer?



**Human-Computer Interaction 3rd edition by Alan Dix, Janet Finlay, Gregory D. Abowd, Russel Beale.*

Expectations

- Our Expectations can also create optical illusions.

Another Example of expectations

- Read the below:

The quick brown
fox jumps over the
the lazy dog.

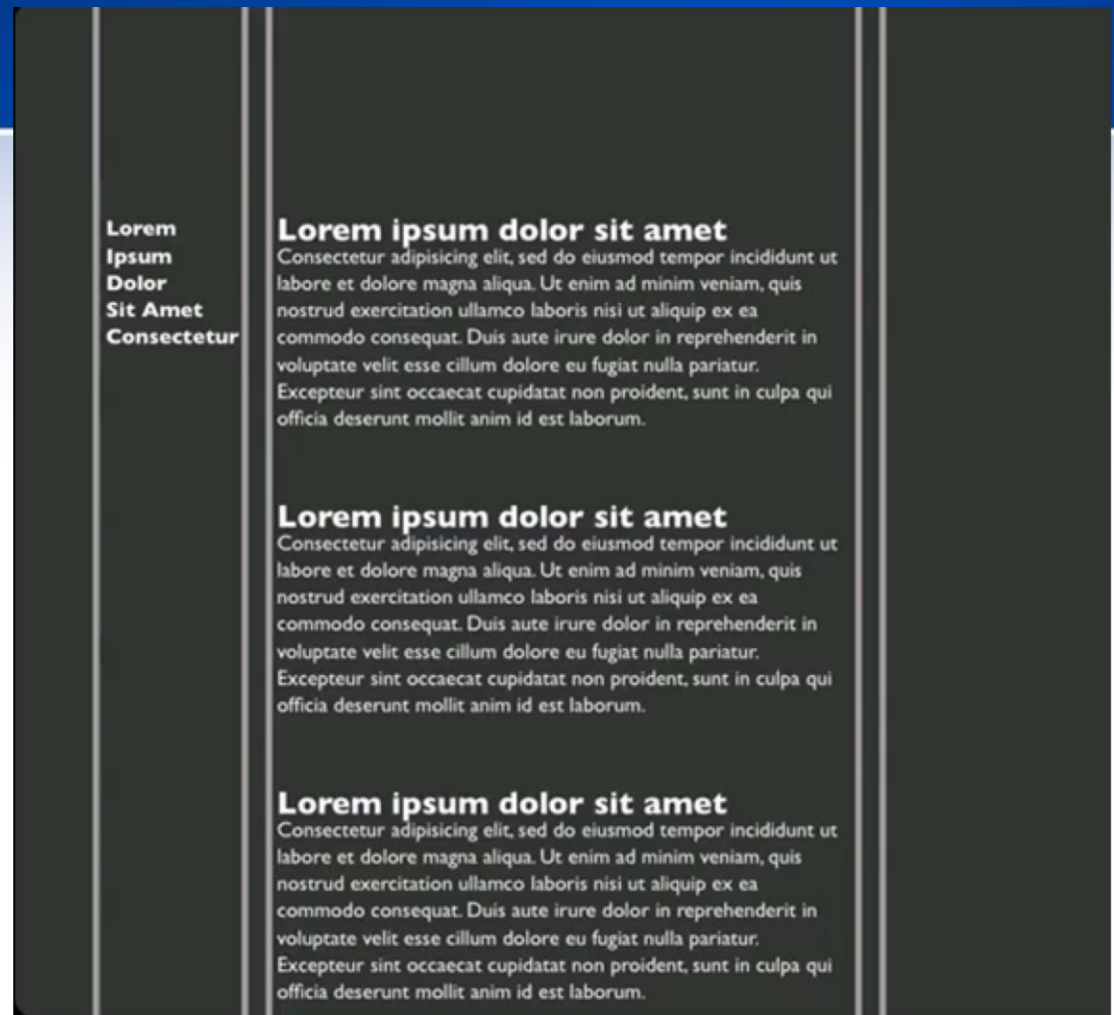
Expectations and Meanings

- When you're creating a document, you want to eliminate conflicts between automatically perceived meaning and actual meaning.
- Try saying the below colors.

purple blue green yellow red
red purple green yellow blue
blue yellow green red purple
yellow blue green red purple
yellow red blue green purple
green red yellow purple blue
purple green red blue yellow
yellow red green purple blue
blue green purple yellow red
green yellow purple blue red
yellow green red blue purple
yellow purple red blue

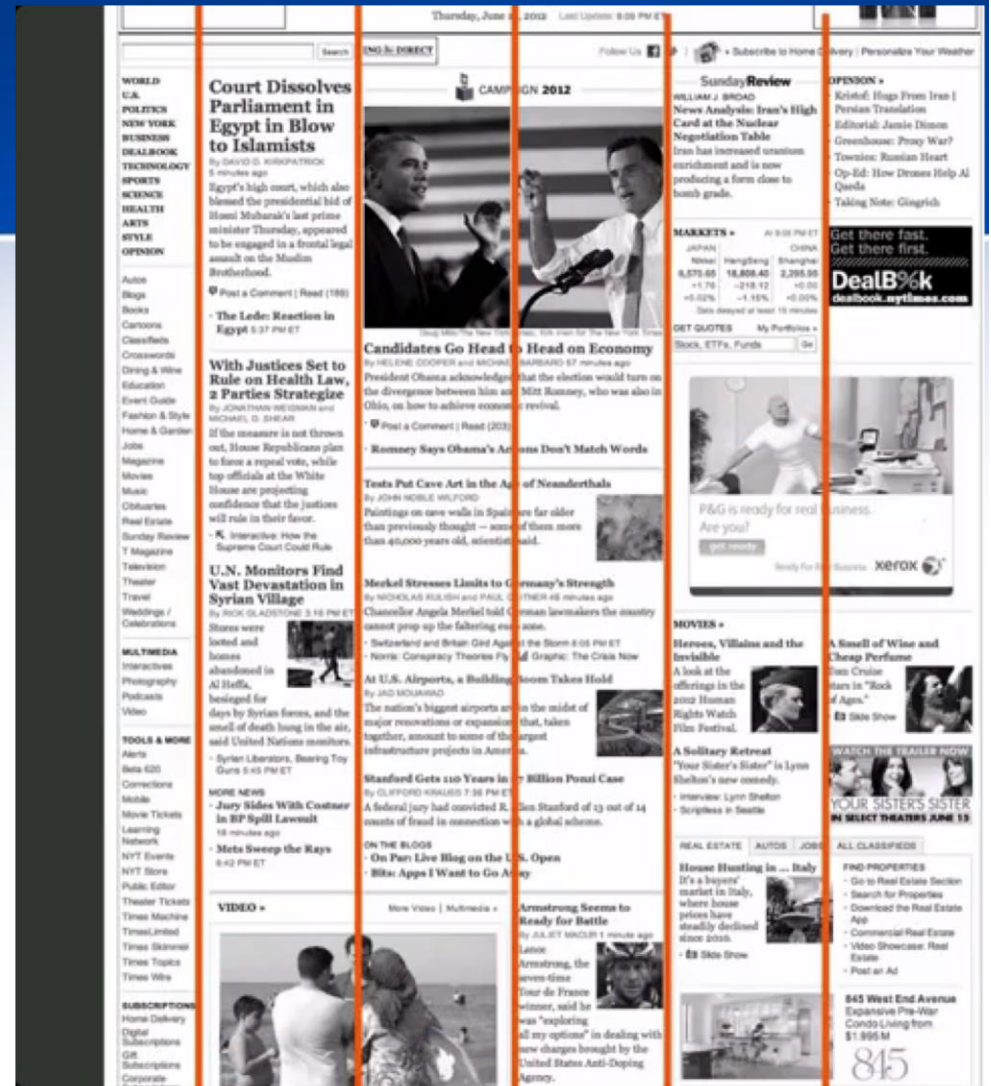
<http://www.visualmess.com/>

- Grid – perhaps a narrow left side is for navigation and wide main section for body/content



**from Scott Klemmor hci-class.org*

- Newspapers, books, and the Web use grids.
- NYTimes – 5 column for content with 6th for navigation.
- Some are 2 columns wide to make it dynamic.



**from Scott Klemmor hci-class.org*


Context-View

- Context view - Most recent article on top and bigger.

Sports
moments ago

Woods Plays First Round With Precision

By BILL PENNINGTON



Harry How/Getty Images

Tiger Woods, playing with Phil Mickelson and Bubba Watson, showed who was in charge with a one-under par 69 in the featured pairing of the first round of the 112th United States Open.

U.S.
moments ago

Senate Panel Blocks Rules on Seasonal Jobs

By THE ASSOCIATED PRESS

The vote would delay rules designed to make it more difficult for businesses like seafood processors to exploit foreign workers and to get more Americans into seasonal jobs.

N.Y. / Region
moments ago

Parlors Face Age-Limit Bill Over Tanning by Teenagers

By ERIC P. NEWCOMER

Teenagers under 17 would be able to get suntans only the old-fashioned way under a bill working its way through the New York State Legislature.

Opinion
moments ago

Ground Zero Cancers

Adding 50 cancers to the list of illnesses covered by a health fund was the right thing to do because we have an obligation to help those harmed by exposure at ground zero.

Business Day
moments ago

Smithfield Foods' Profit Drops on Lower Margins for Pork

By THE ASSOCIATED PRESS


The pork producer's net income fell to 49 cents a share from 59 cents a share last year.

Business Day
moments ago

Anything-but-Ordinary Mom Pitches for Chobani Yogurt

By STUART ELLIOTT


Chobani, the market leader in Greek yogurt in the United States, is advertising its new children's product with a campaign that features the former Olympian Jennie Finch.



Sports
moments ago

Armstrong Seemingly Readies for Battle

By JULIET MACUR



*from Scott Klemmor hci-class.org

Alignment

- Alignment styles:
 - Left-alignment is faster for skimming.
 - If centered – a little slower since not aligned.
 - right-aligned – can be clearer in cases (ex. form)
- Use scale – important parts put bigger, less important smaller – so people know what's more and less important in a page.

- Let's improve this:

Web Applications.....	cs142
Interactive Software Design.....	cs294h
Paradigm Shifts in Mobile & Social Computing Systems.....	cs294s
Research Topics in Human-Computer Interaction....	cs376

**from Scott Klemmor hci-class.org*

Table of Contents, cont.

- Can make whichever side you want stand out:

Right-aligned

Left-aligned

Size contrasts

cs142	Web Applications
cs294h	Interactive Software Design
cs294s	Paradigm Shifts in Mobile & Social Computing Systems
cs376	Research Topics in Human-Computer Interaction
cs377d	d.compress - Designing Calm
cs379l	Designing Liberation Technology
cs402	Beyond Bits & Atoms: Designing Technological Tools
educ333B	Envisioning the Future of Learning
ee47	Press Play: Interactive Device Design

Amazon: Right-Alignment

**from Scott Klemmor hci-class.org*

Very clear on what to fill out. right-aligned left-aligned

The image shows a web form titled "Add an address" with a yellow header bar. The form contains several input fields and a dropdown menu, each with a label to its left. Two blue arrows point from the text "right-aligned" to the labels "Full Name:" and "Address Line1:". Another blue arrow points from the text "left-aligned" to the label "Address Line2:". The form fields are: "Full Name:" (text input), "Address Line1:" (text input with placeholder "Street address, P.O. box, company name, c/o"), "Address Line2:" (text input with placeholder "Apartment, suite, unit, building, floor, etc."), "City:" (text input), "State/Province/Region:" (text input), "ZIP:" (text input), "Country:" (dropdown menu showing "United States"), and "Phone Number:" (text input). Below these is a section titled "Optional Delivery Preferences (What's this?)" in orange. It contains "Address Type:" (dropdown menu showing "Select an Address Type") and "Security Access Code:" (text input with placeholder "For buildings or gated communities"). At the bottom are two buttons: "Save & Add Payment Method" (yellow) and "Save & Continue" (grey).

Add an address

Full Name:

Address Line1:
Street address, P.O. box, company name, c/o

Address Line2:
Apartment, suite, unit, building, floor, etc.

City:

State/Province/Region:

ZIP:

Country:

Phone Number:

Optional Delivery Preferences (What's this?)

Address Type:

Security Access Code:
For buildings or gated communities

Header for form (on top right) label on top.

Header less important when familiar with fields, can stick out less.

The image shows a screenshot of the Amazon 'Your Account' page. The page is organized into a grid of sections. At the top, there is a navigation bar with the Amazon logo, user information (Scott's Amazon.com), and links to Today's Deals, Gift Cards, and Help. Below this is a search bar and a 'Go' button. The main content area is titled 'Your Account' and contains several sections: 'Orders' (with a box icon), 'Payment' (with a credit card icon), 'Settings' (with a gear icon), 'Order History' (with a list icon), 'Payment Methods' (with a credit card icon), 'Account Settings' (with a gear icon), 'More Order Actions' (with a list icon), 'Gift Cards' (with a card icon), 'Address Book' (with a list icon), and 'E-mail from Amazon' (with an envelope icon). On the right side, there is a 'Sign In' form with fields for 'E-mail Address' and 'Password', and a 'Sign In' button. Below this is a 'Your Other Accounts' section with links to various accounts and a 'Sell Your Stuff' button. At the bottom right, there is a 'Kindle Support' section with links to Kindle Help Home, Get to know your Kindle, and Kindle Software Updates. A blue arrow points from the text 'Header for form (on top right) label on top.' to the 'E-mail Address' label in the sign-in form.

amazon Prime

Scott's Amazon.com Today's Deals Gift Cards Help

Shop by Department Search All Go Hello, Scott Your Account Cart Wish List

Your Account

Orders
See & Modify Recent Orders

View, Modify, Track or Cancel an Order

Order History
View Open Orders
View Your Digital Orders
Download Order Reports
View Your Kindle Orders

More Order Actions
Return Items or Gifts
Manage Subscribe & Save Items
Manage Magazine Subscriptions
Leave Seller Feedback
Leave Packaging Feedback
Manage Prime Membership
View Your E-mails with Sellers

Search Orders
Title, Department, Recipient... Go

E-mail Address
Password
Sign In

Your Other Accounts
Your Seller Account
Your Trade-In Account
Corporate Customers
Web Services Account
Amazon Payments Account
Sell Your Stuff

Kindle Support
Kindle Help Home
Get to know your Kindle
Kindle Software Updates

Payment
Credit Cards & Gift Cards

Payment Methods
Manage Payment Options
Add a Credit or Debit Card
Amazon Credit Cards
Shop with Points
Use Purchase Delegation

Gift Cards
View Gift Card Balance
Apply a Gift Card to Your Account
Manage Scheduled Gift Cards
Manage Bulk Gift Card Orders
Purchase a Gift Card

Settings
Password, Prime & E-mail

Account Settings
Change Account Settings
Name, e-mail, password and mobile phone
Forgot Your Password?
1-Click Settings
Manage Prime Membership
Amazon Student Membership

Address Book
Manage Address Book
Add New Address

E-mail from Amazon
E-mail Preferences & Notifications
AmazonLocal and Amazon Delivers
E-mail Subscriptions

*from Scott Klemmor hci-class.org

Color

- **Color** –rely on other tools first.
- After scale, and layout, use black/white/grayscale.
- After you have a good greyscale in black and white – add color.

[Scott's Amazon.com](#)
[Today's Deals](#)
[Gift Cards](#)
[Help](#)

[Amazon Gift Cards for Dad](#)

[Shop by Department](#)

[Search](#)

[Go](#)

[Hello, Scott](#)
[Your Account](#)

[Cart](#)

[Wish List](#)

[Books](#)
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[New Releases](#)
[Best Sellers](#)
[The New York Times® Best Sellers](#)
[Children's Books](#)
[Textbooks](#)
[Sell Your Books](#)

New Releases

Last 30 days (1)

Last 90 days (4)

Coming Soon (1)

Department

Any Department

Books

Computers & Technology (362)

Education & Reference (268)

Arts & Photography (33)

Professional & Technical (106)

Business & Investing (71)

Law (5)

Science & Math (28)

Politics & Social Sciences (30)

Teens (1)

Crafts, Hobbies & Home (8)

Literature & Fiction (8)

Humor & Entertainment (5)

Comics & Graphic Novels (1)

Children's Books (2)

Health, Fitness & Dieting (1)

Medical Books (7)

History (3)

Cookbooks, Food & Wine (1)

Christian Books & Bibles (1)

Religion & Spirituality (1)

Calendars (1)

Format

Paperback (365)

Hardcover (43)

Kindle Edition (9)

HTML (3)

PDF (2)

Books - "Web Form Design"

Showing 1 - 12 of 452 Results

Sort by [Relevance](#)

Format

Paperback

(365)

Hardcover

(43)

Kindle Edition

(9)

HTML

(3)

PDF

(2)

1.

LOOK INSIDE!

Web Form Design: Filling in the Blanks by Luke Wroblewski (May 2, 2008)

★★★★☆ (33 customer reviews)

Format	Price	New	Used
Paperback			
Order in the next 13 hours to get it by Monday, Jun 18.	\$39.00 \$39.00 <small>offlist</small>	\$38.96	\$31.91
Kindle Edition			
Auto-delivered wirelessly	\$12.10		

Excerpt - Front Cover: "... WEB FORM DESIGN Filling in the Blanks by LUKE WROBLEWSKI foreword by ..." [See a random page](#) in this book.

Sell this back for an Amazon.com Gift Card

2.

LOOK INSIDE!

Forms that Work: Designing Web Forms for Usability (Interactive Technologies) by Caroline Jarrett, Gerry Gaffney and Steve Krug (Nov 26, 2008)

★★★★☆ (27 customer reviews)

Format	Price	New	Used
Paperback			
Order in the next 18 hours to get it by Monday, Jun 18.	\$64.96 \$43.24 <small>offlist</small>	\$29.41	\$25.29
Only 7 left in stock - order soon.			
Get \$2 in MP3s. See Details			
Kindle Edition			
Auto-delivered wirelessly	\$41.04 (or rent from \$19.07)		

Other Formats: Unknown Binding

Excerpt - Front Cover: "... Forms that Work Designing Web Forms for Usability -> (_ C _ " [See a random page](#) in this book.

Sell this back for an Amazon.com Gift Card

*from Scott Klemmor hci-class.org

- It all worked, but if you use color better.

The screenshot shows the Amazon website interface. At the top, the Amazon logo is on the left, and navigation links like 'Scott's Amazon.com', 'Today's Deals', 'Gift Cards', and 'Help' are in the center. On the right, there's a section for 'Amazon Gift Cards for Dad'. Below the header, a search bar contains the text 'Web Form Design'. To the left of the search bar, there's a 'Shop by Department' dropdown menu. To the right, there are links for 'Hello, Scott', 'Your Account', 'Cart', and 'Wish List'.

The search results are displayed under the heading 'Books: "Web Form Design"'. It shows 'Showing 1 - 12 of 452 Results' and a 'Sort by' dropdown menu set to 'Relevance'. Below this, there's a 'Format' section with buttons for 'Paperback (188)', 'Hardcover (43)', 'Kindle Edition (9)', 'HTML (3)', and 'PDF (7)'. The results are listed in two columns. The first result is 'Web Form Design: Filling in the Blanks by Luke Wroblewski (May 2, 2008)'. It has a 'LOOK INSIDE!' button and a star rating of 4.5 stars from 33 customer reviews. The price for the paperback is \$39.00, with a 'Prime' badge. The second result is 'Forms that Work: Designing Web Forms for Usability (Interactive Technologies) by Caroline Jarrett, Gerry Gaffney and Steve Krug (Nov 26, 2008)'. It also has a 'LOOK INSIDE!' button and a star rating of 4.5 stars from 22 customer reviews. The price for the paperback is \$43.24, with a 'Prime' badge. Both results show 'New' and 'Used' prices.

On the left side of the search results, there's a 'Department' section with a list of categories and their item counts. Below that, there's a 'Format' section with a list of formats and their item counts.

*from Scott Klemmor hci-class.org

- Don't overdo color. Fewer is more powerful.

Color is good...

- Color can
 - Soothe
 - Add accents to an uninteresting display
 - Facilitate subtle discriminations in complex displays
 - Emphasize the logical organization of information
 - Draw attention to warnings
 - Evoke strong emotional reactions of joy, excitement, fear, or anger

- **Guidelines**

- Use color conservatively
- Limit the number and amount of colors
- Color coding should support the task
- Consider the needs of color-deficient users
- Be consistent in color coding
- Be alert to common expectations about color codes
- Be alert to problems with color pairings

Color Guidelines

Designing the User Interface:
Strategies for Effective Human
Computer Interaction 5th edition
by Ben Shneiderman and
Catherine Plaisant.

Guidelines for using color

- Use color conservatively: Limit the number and amount of colors.
- Recognize the power of color to speed or slow tasks.
- Ensure that color coding supports the task.
- Make color coding appear with minimal user effort.
- Keep color coding under user control.
- Design for monochrome first.
- Consider the needs of color-deficient users.
- Use color to help in formatting.
- Be consistent in color coding.
- Be alert to common expectations about color codes.
- Be alert to problems with color pairings.
- Use color changes to indicate status changes.
- Use color in graphic displays for greater information density.

Benefits of using color

- Various colors are soothing or striking to the eye.
- Color can improve an uninteresting display.
- Color facilitates subtle discriminations in complex displays.
- A color code can emphasize the logical organization of information.
- Certain colors can draw attention to warnings.
- Color coding can evoke more emotional reactions of joy, excitement, fear, or anger.

Dangers of using color

- Color pairings may cause problems.
- Color fidelity may degrade on other hardware.
- Printing or conversion to other media may be a problem.

Affordances

- **Affordances** – perceived and actual properties of an object.
- A chair affords (“is for”) support, therefore sitting.
- Glass is for seeing through.
- Wood is used for solidity, opacity, support, or carving.
- Flat smooth surfaces are for writing on.
- So wood is also for writing on.

**Design of Everyday Things*

Affordance Example



The handles on a tea set provide an obvious affordance for holding.

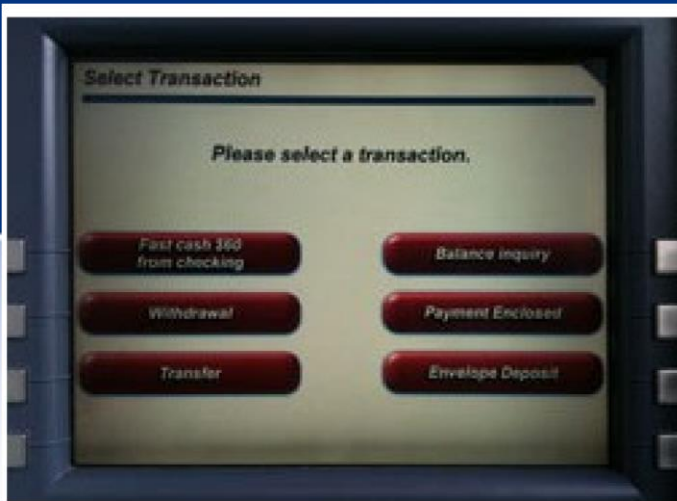


*wikipedia

Perceived Affordance

- **Perceived affordance** – action a user *perceives* as being possible based on how the object is being presented:
- For example, if your design includes a “button” make that button look pushable.

ATM example - many users try to press these buttons, only to realize after a few attempts that the buttons are actually to the right and left of each label. In this case, objects give off an inaccurate perceived affordance.



Affordances, cont.

- Affordances provide clues to the operations of things. Knobs are for turning. Slots are for insert things. Balls are for throwing or bouncing.
- When affordances are taken advantage of, the user knows what to do just by looking. No picture, label, or instruction is required.
- Complex things may require instruction, but simple things should not.

- When simple things need pictures, labels, or instructions, the design has failed.

**Design of Everyday Things*

Digital affordances

Amazon's "add to cart" button provides a cue to initiate a buying experience.



Cultural Constraints, Cultural Conventions

- Convention constrains creativity.
- However, unless we follow the major conventions, we are doomed to fail.
- You cannot successfully introduce:
 - a non-qwerty keyboard today – Scrollbars not on the right-hand side – Or require double-clicking on web links.
- For better or for worse, human culture changes slowly, if at all.

Cultural constraints and conventions, cont.

- Cultural constraints and conventions are about what people believe and do.
- The way to find out what people do is to go out and watch them.
- Not in the laboratories, not in the usability testing rooms, but in their normal environment.

What Designers Should Do

1. **Visibility** – Any function that a user can do - make it visible.
2. Provide user with clear **feedback** so they know what's happening.
3. Be **consistent** with existing standards and platform conventions.
4. Make them able to **undo**.
5. Provide a **systematic** way to discover all functionality.
 - Example: a new website – rollover all menu bar should show you every option
6. **Reliable** – random things shouldn't happen, what's supposed to happen should.

GUI vs. Command-line

- Which is better?
- **It depends**
- Based on the 6 principles, GUI is better – visibility, feedback, consistency, non-destructive, discoverability
 - GUI – move file – drop and drag
 - Command-line – need to know name of the command, minimal feedback, don't know if worked, easy to make errors. – Either can be reliable.
- Command-line is better sometimes, when is that?
 - Like **programming**, power when you can express things abstractly and work more efficiently.



Example: move all files that match a certain criteria from one place to another.

Scott Klemmor hci-class.org

Information

- People want information quickly.
- Watch users use the site:
 - Do they know where to go or flail around?
 - Look at their confidence before and after.
 - Back Button - lots of use of the back button means there are issues with the navigation.

Tips

- Generic icons rarely help, use specific icons.  
- Icons help when:
 - Show what you expect
 - When you know what something looks like but not what it's called.
 - Good redundant coding can help – picture and word example: (can mouseover volume icon)

More Tips

- Improve website:
 - Lengthen link – don't use one short word
 - Long titles (7/8 words)
 - also helps accessibility – if using screen reader
- Example:
 - You can find the video [here](#) Or better yet:
 - [Here is a video on HCI Design.](#)

Location

- Does the location of a link matter?
- **YES!**

Eye Tracking Studies

- Eye Tracking Studies show there are places on the screen where the users look most often:



**from Scott class.org Klemmor hci-* Ed Cutrell – Microsoft Research.

Eye Trackers

- [Eye Tracker Video](#)

Cristiano Ronaldo

Eye tracking studies, cont.

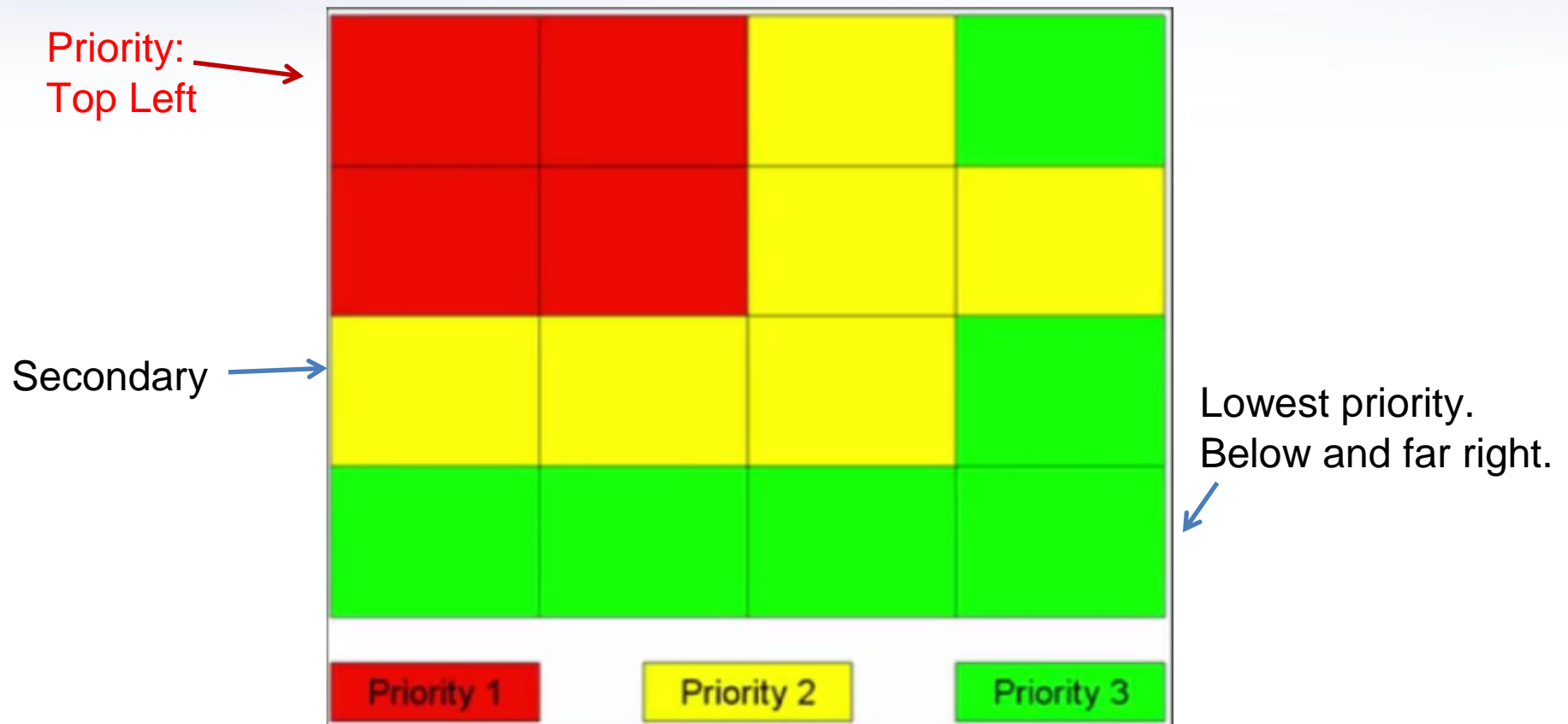


The heatmaps from the eyetracking study. Red indicates the area where the user looked most, yellow indicates fewer views, and blue indicates the fewest views. Gray is used for areas that were not viewed. The image on the left is from an article in the “About us” section of a corporate web site, the center image is a product page on an e-commerce web site, and the image on the right is from a search engine results page (Jakob Nielsen).

Where do people most often look?

Know where good stuff often is.

Poynter Institute: Where people mostly look in English language websites (left to right)



**from Scott Klemmor hci-class.org*

Scrolling

- People are more likely to scroll if they think it's worthwhile.
- If the content above doesn't look good, people won't scroll down.
- If the content on top is really good then people will scroll.

How do people read online?

- Usability Expert Jakob Nielsen studied how people read online.
- The answer:
 - They don't
- Web Browsing –people don't stay on one site – they have many tabs open and switch between them.
- Therefore:
 - concise text
 - Scannable: subheadings, bulleted lists, short paragraphs

**from Scott Klemmor hci-class.org*