

Graphic and Interaction Design for User Interfaces

Suguru Ishizaki • Department of English, Carnegie Mellon University

Overview:

- »A very brief history of graphic design
- »A brief overview of graphic design principles for user interface / web design
- »The role of designers in software product development

A very brief history of graphic design



Ambassadeurs: Aristide Bruant by Henri de Toulouse-Lautrec, late 1890's.
(Wikipedia Commons)



Jules Chéret showing his work to Henri de Toulouse-Lautrec. Late 1800's.
(Wikipedia Commons)



Uncle Sam recruiting poster. 1916-1917
(Wikipedia Commons)



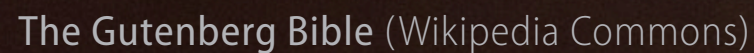
A Coca-Cola advertisement from the 1890's
(Wikipedia Commons)



An example of Illuminated manuscript. 1450.
(Wikipedia Commons)



Engraving of printer using the early Gutenberg letter press during the 15th century. ~16-19 century
(Wikipedia Commons)





A case of cast metal type pieces and typeset matter in a composing stick.
(Wikipedia Commons)



23

WITH SURE AND GENTLE LOVE,
GOD IS OUR SHEPHERD.
GOD WILL LEAD US HOME.

1 A psalm of David.

The Lord is my shepherd,
I need nothing more.

2 You give me rest in green meadows,
setting me near calm waters,
where you revive my spirit.

3 You guide me along sure paths,
you are true to your name.

4 Though I should walk
in death's dark valley,
I fear no evil with you by my side,
your shepherd's staff to comfort me.

5 You spread a table before me
as my foes look on.
You soothe my head with oil:
my cup is more than full.

24

A HYMN TO ACCLAIM GOD'S SOVEREIGNTY
OVER ALL CREATION.
WELCOME THE LORD.

1 A psalm of David.

God owns this planet
and all its riches.
The earth and every creature
belong to God.

2 God set the land on top of the seas
and anchored it in the deep.

3 Who is fit to climb God's mountain
and stand in his holy place?



American Magazines, 2011
(iStockphoto)

AIGA

INSPIRATION | ABOUT AIGA

WHY DESIGN?

EVENTS & COMPETITIONS

TOOLS & RESOURCES

Participate in a meaningful dialogue about design's capacity to benefit business and society, and the pivotal role a professional designer plays in that process.

DESIGN FOR GOOD



design for good.

A movement to ignite, accelerate and amplify design-driven social change.

Around the world, designers are creating better communities by working with nonprofits and citizen groups to improve the human experience. AIGA's **Design for Good** initiative encourages and recognizes pro bono and social engagement design projects.

Section: [Why Design](#) - Tags: [Design for Good](#)

8 Recommendations

STRATEGY

Why Design?

DESIGN CREATES VALUE FOR BUSINESS

Design is an investment in innovative thinking, positioning,

WHY DESIGN

External Resources

RSS

Return on Influence, the New ROI

Amy Jo Martin on measuring the "warm metrics" of social media — including engagement levels, viral factors and sentiment analysis. [blogs.hbr.org/cs...](#)

To Win, Integrate Design And Business

In this excerpt from "The Method Method," founders of the design- and eco-friendly brand explain the value of having creative leadership at the highest ranks of business. [www.good.is/post...](#)

Designers Are The New Drivers Of American Entrepreneurialism

Bruce Nussbaum: the "growing desire among designers to bring their user focus, strategic vision, iterative methodologies, and propositional thinking to the still-geeky, tech/engineering-centric world of startups

promises to be [www.fastcodesign...](#)

SOCIAL ENGAGEMENT

Why Design?

DESIGN IMPROVES SOCIETY

Designers bring empathy and creativity to social challenges. Empathy helps in understanding the human-centered solutions that can make a real difference in real people's lives; creativity can defeat habits with innovative approaches to making a measurable difference.

1 Recommendation

AIGA POSITION ON SPEC WORK

AIGA maintains its position against speculative work while recognizing that the decision on whether to take the risks of speculative work is up to individual designers.

Section: [Why Design](#) - Tags: [compensation](#), [ethics](#)

QUALITY

Why Design?

PROFESSIONAL DESIGNERS SERVE CLIENTS

1 Recommendation

External Resources (cont.)

The Future of Education

Creating the Future of Education and Work wants to help educators foster creativity and conceptual thinking in schools.

[www.swiss-miss.c...](#)

In and Around: Cultures of Design and the Design of Cultures

From the Emigre archives, this essay by Andrew Blauvelt about designers as witnesses and participants in culture still rings true.

[www.emigre.com/E...](#)



Five Myths About Pro Bono Design | Co. Design

John Cary contends that pro bono work is not work for free, but an opportunity to channel

TRANSPARENCY

Why Design?

DESIGN MAKES THE CITIZEN EXPERIENCE CLEAR

Design can strengthen democracy by building trust in the communication between government and the governed. Trust emerges from understanding; design is a critical intermediary in making the complex clear and enhancing understanding.

1 Recommendation

CULTURE

Why Design?

DESIGN FOSTERS CULTURAL UNDERSTANDING

Effective design focuses clearly on the audience, the customer or the ultimate beneficiary. The design process begins with research into how real people behave.

1 Recommendation

DESIGN BUSINESS

Graphic Design:

A profession emerged
from the traditions
of **painting** and
printing

Commercial Artists

Graphic Artists

Graphic Designers

Visual Communication Designers

Communication Designers

Information Designers

Interaction Designers

Commercial Artists

Graphic Artists

Graphic Designers



Illustrators
Icon Designers

Visual Communication Designers

Communication Designers

Information Designers

Interaction Designers

Commercial Artists

Graphic Artists

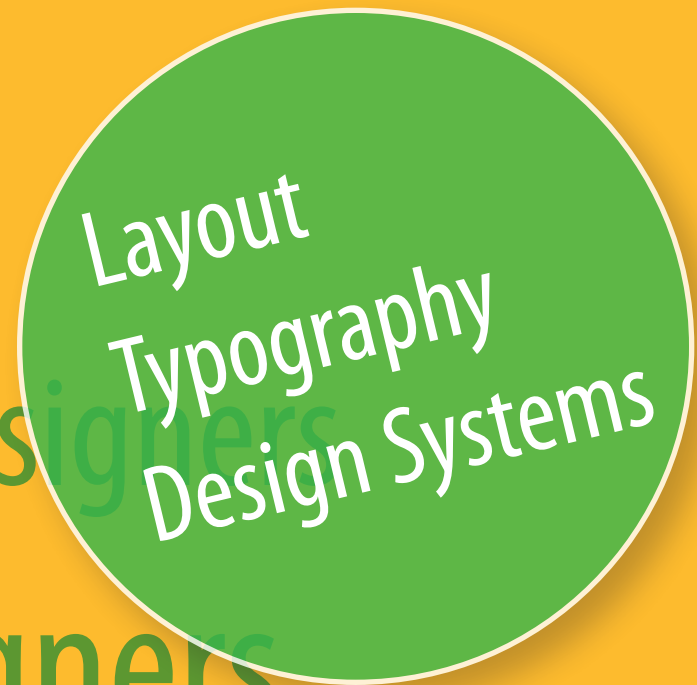
Graphic Designers

Visual Communication Designers

Communication Designers

Information Designers

Interaction Designers



Commercial Artists

Graphic Artists

Graphic Designers

Visual Communication Designers

Communication Designers

Information Designers

Interaction Designers



Info. Graphics
Visualization
Info. Architecture

Commercial Artists

Graphic Artists

Graphic Designers

Visual Communication Designers

Communication Designers

Information Designers

Interaction Designers

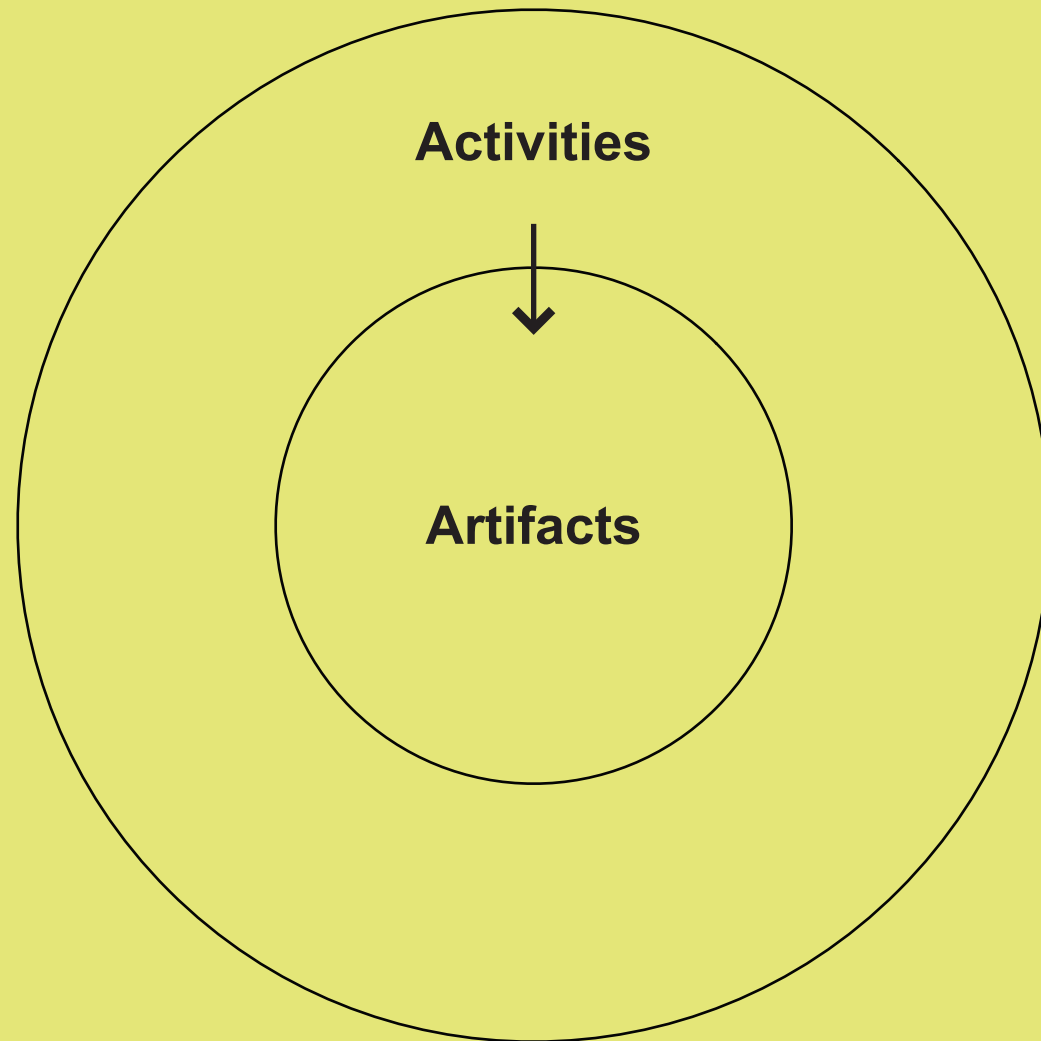
Visual Design
Typography, Layout etc.

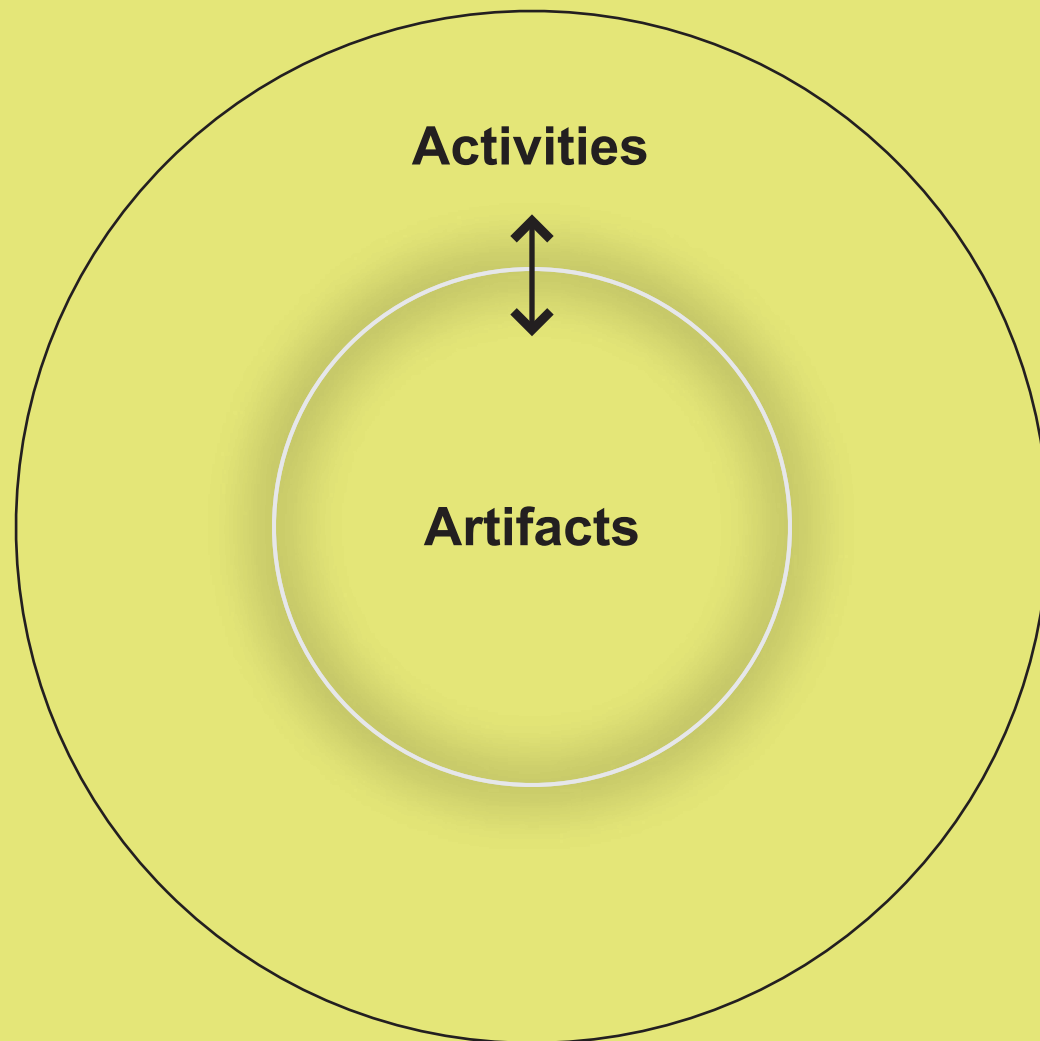
Requirements / PM

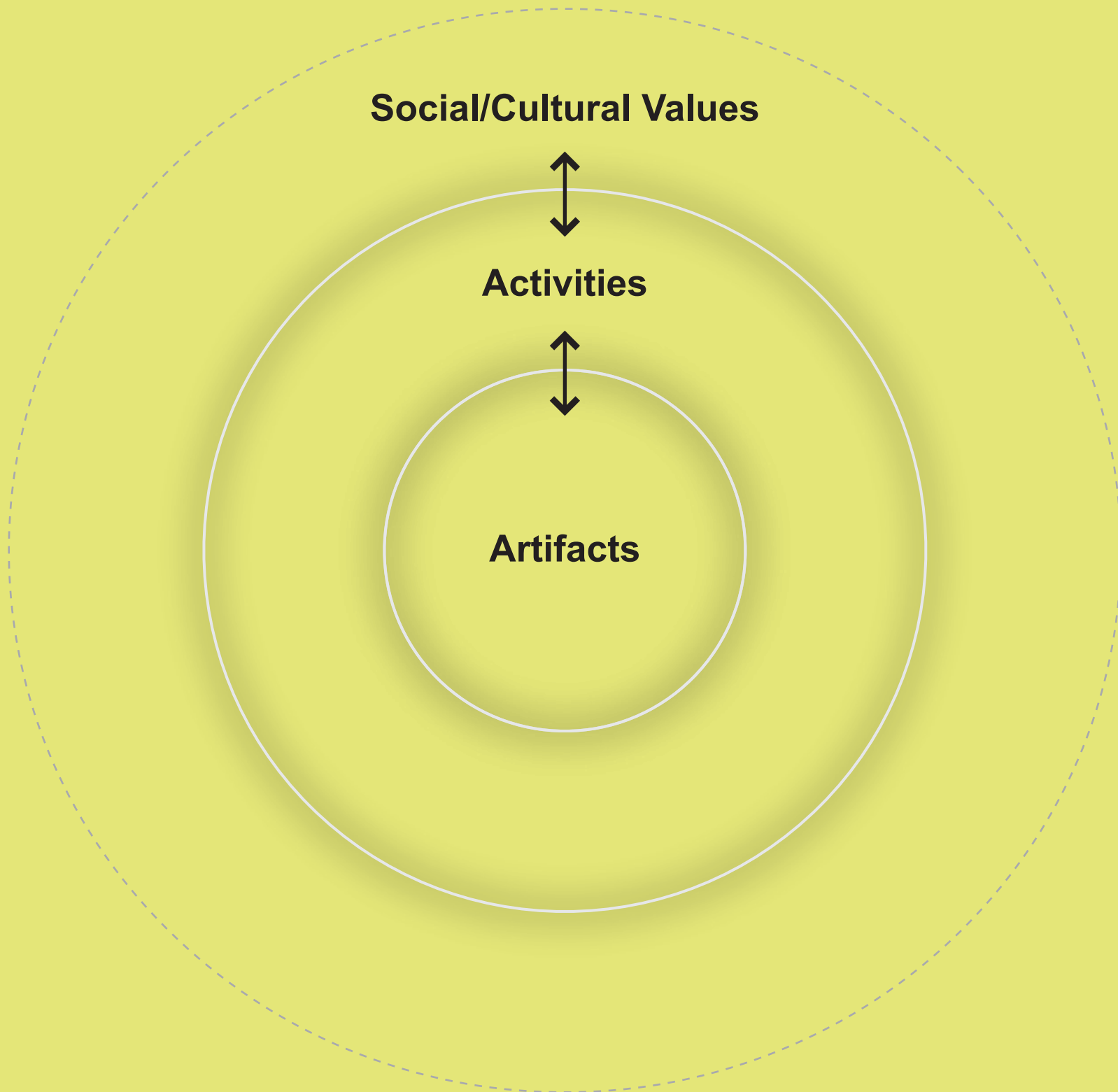
Prototyping

User Interface

Facilitation







A brief overview of graphic design principles for user interface / web design

Typography

Art of visually
arranging type for
communication

Legibility

The degree to which letters and words are recognized by the reader

Legibility—Color Contrast



Legibility—Color Contrast



Character Space

cornet

cloth

burn

cornet

clock

burn



FOUND ON REDONDO BEACH, AUGUST 21, 2005.

Legible Type size depends on

- » **Viewing distance** (e.g., driving, cooking, etc.)
- » **Technology** (e.g., Computer screen, Newspaper)
- » **Reader's age is not a huge concern**



Readability

The facility and
comfort with
which text can be
comprehended

Line length

Article Discussion

Read Edit View history

Search



The Free Encyclopedia

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Монгол

Nederlands

Human-computer interaction

From Wikipedia, the free encyclopedia

(Redirected from Human Computer Interaction)

This article is about the interaction between users and computers. For the direct communication between brain cells and computers, see [Brain-computer interface](#).

Human-computer Interaction (HCI) is the study, planning, and design of the interaction between people ([users](#)) and computers. It is often regarded as the intersection of [computer science](#), [behavioral sciences](#), design and [several other fields of study](#). Interaction between users and computers occurs at the [user interface](#) (or simply *interface*), which includes both software and [hardware](#); for example, characters or objects displayed by software on a personal computer's [monitor](#), input received from users via hardware [peripherals](#) such as [keyboards](#) and [mouses](#), and other user interactions with large-scale computerized systems such as aircraft and power plants. The [Association for Computing Machinery](#) defines human-computer interaction as "a discipline concerned with the design, evaluation and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them."^[1] An important facet of HCI is the securing of user satisfaction (see [Computer user satisfaction](#)).

Because human-computer interaction studies a human and a machine in conjunction, it draws from supporting knowledge on both the machine and the human side. On the machine side, techniques in [computer graphics](#), [operating systems](#), [programming languages](#), and development environments are relevant. On the human side, [communication theory](#), graphic and industrial design disciplines, [linguistics](#), [social sciences](#), [cognitive psychology](#), and [human factors](#) such as [computer user satisfaction](#) are relevant. Engineering and design methods are also relevant. Due to the multidisciplinary nature of HCI, people with different backgrounds contribute to its success. HCI is also sometimes referred to as **man-machine interaction (MMI)** or **computer-human interaction (CHI)**.

Attention to human-machine interaction is important, because poorly designed human-machine interfaces can lead to many unexpected problems. A classic example of this is the [Three Mile Island accident](#) where investigations concluded that the design of the human-machine interface was at least partially responsible for the disaster.^{[2][3][4]} Similarly, accidents in aviation have resulted from manufacturers' decisions to use non-standard [flight instrument](#) and/or [throttle](#) quadrant layouts: even though the new designs were proposed to be superior in regards to basic human-machine interaction, pilots had already ingrained the "standard" layout and thus the conceptually good idea actually had undesirable results.

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- 5 Display designs
 - 5.1 Thirteen principles of display design
 - 5.1.1 Perceptual principles
 - 5.1.2 Mental model principles
 - 5.1.3 Principles based on attention
 - 5.1.4 Memory principles
- 6 Human-computer interface
- 7 Current research
 - 7.1 User customization



A mouse is a pointing device that functions by detecting [two-dimensional](#) motion relative to its supporting surface.

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Goals

[\[edit\]](#)

A basic goal of HCI is to improve the [interactions](#) between users and computers by making computers more [usable](#) and receptive to the user's needs. Specifically, HCI is concerned with:

- methodologies and processes for designing interfaces (i.e., given a task and a class of users, design the best possible interface within given constraints, optimizing for a desired property such as learnability or efficiency of use)
- methods for implementing interfaces (e.g. software toolkits and [libraries](#); efficient [algorithms](#))
- techniques for evaluating and comparing interfaces
- developing new interfaces and [interaction techniques](#)
- developing descriptive and predictive models and theories of interaction

A long term goal of HCI is to design systems that minimize the barrier between the human's cognitive model of what they want to accomplish and the computer's understanding of the user's task.

Professional practitioners in HCI are usually designers concerned with the practical application of design methodologies to real-world problems. Their work often revolves around designing [graphical user interfaces](#) and [web interfaces](#).

Researchers in HCI are interested in developing new design methodologies, experimenting with new hardware devices, prototyping new software systems, exploring new paradigms for interaction, and developing models and theories of interaction.

Differences with related fields

[\[edit\]](#)

HCI differs from [human factors](#) (or [ergonomics](#)) in that with HCI the focus is more on users working specifically with computers, rather than other kinds of machines or designed artifacts. There is also a focus in HCI on how to implement the computer software and hardware mechanisms to support human-computer interaction. Thus, [human factors](#) is a broader term; HCI could be described as the human factors of computers – although some experts try to differentiate these areas.

HCI also differs from [human factors](#) in that there is less of a focus on repetitive work-oriented tasks and procedures, and much less emphasis on physical stress and the physical form or [industrial design](#) of the user interface, such as [keyboards](#) and [mouse devices](#).

Three areas of study have substantial overlap with HCI even as the focus of inquiry shifts. In the study of [personal information management](#) (PIM), human interactions with the computer are placed in a larger informational context – people may work with many forms of information, some computer-based, many not (e.g., whiteboards, notebooks, sticky notes, refrigerator magnets) in order to understand and effect desired changes in their world. In [computer supported cooperative work](#) (CSCW), emphasis is placed on the use of computing systems in support of the collaborative work of a group of people. The principles of [human interaction management](#) (HIM) extend the scope of CSCW to an organizational level and can be implemented without use of computer systems.

Design principles

[\[edit\]](#)

When evaluating a current [user interface](#), or designing a new user interface, it is important to keep in mind the following experimental design principles:

- Early focus on user(s) and task(s): Establish how many users are needed to perform the task(s) and determine who the appropriate users should be; someone who has never used the interface, and will not use the interface in the future, is most likely not a valid user. In addition, define the task(s) the users will be performing and how often the task(s) need to be performed.
- [Empirical](#) measurement: Test the interface early on with real users who come in contact with the interface on an everyday basis. Keep in mind that results may be altered if the performance level of the user is not an accurate depiction of the real human-computer interaction. Establish quantitative usability specifics such as: the number of users performing the task(s), the time to complete the task(s), and the number of errors made during the task(s).
- [Iterative design](#): After determining the users, tasks, and empirical measurements to include, perform the following iterative design steps:
 1. Design the user interface

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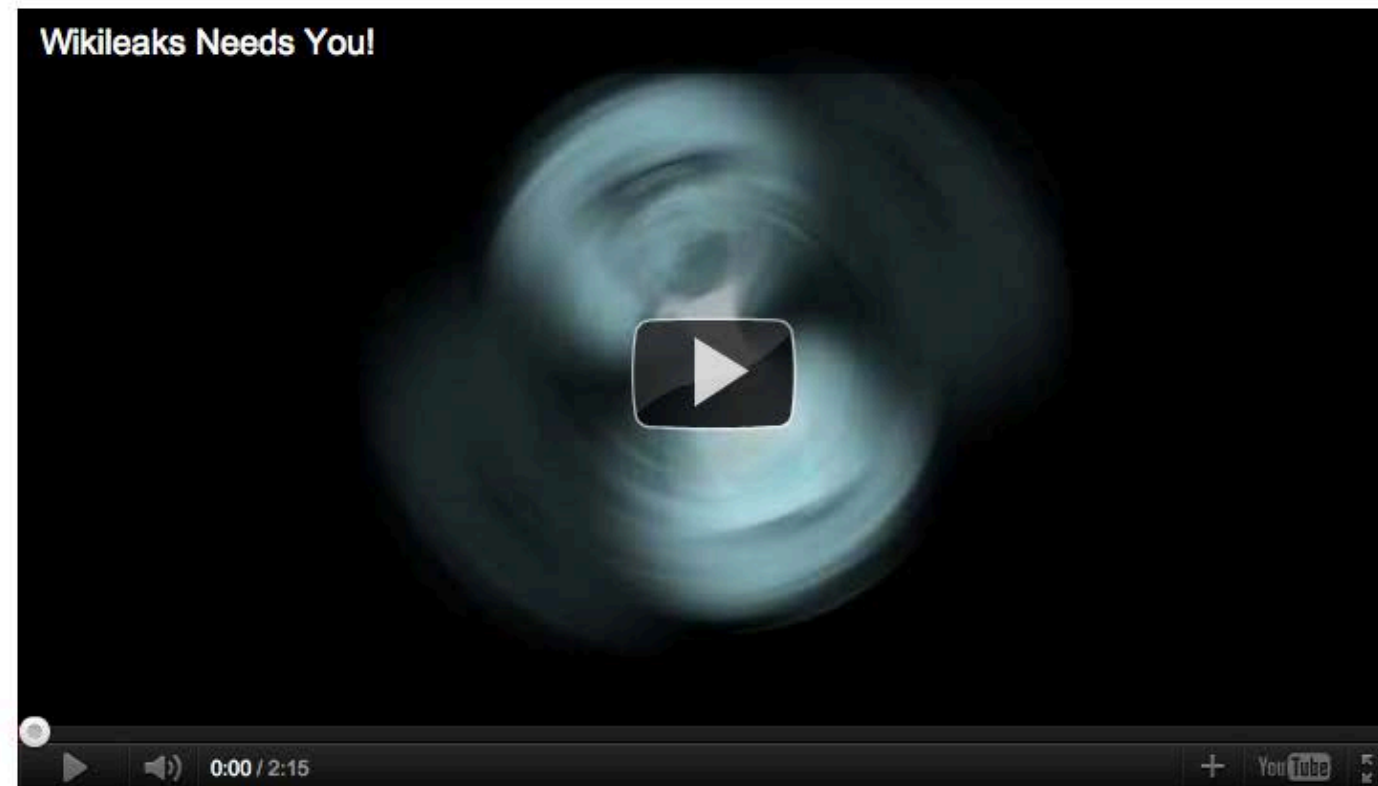
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[Julian Assange: Statement
on the Unauthorised, Secret](#)

We are forced to temporarily suspend publishing whilst we secure our economic survival. For almost a year we have been fighting an unlawful financial blockade. We cannot allow giant US finance companies to decide how the whole world votes with its pocket. Our battles are costly. We need your support to fight back. Please donate now.

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ABOUT

What is Wikileaks ?



WikiLeaks is a not-for-profit media organisation. Our goal is to bring important news and information to the public. We provide an innovative, secure and anonymous way for sources to leak information to our journalists (our electronic drop box). One of our most important activities is to publish original source material alongside our news stories so readers and historians alike can see evidence of the truth. We are a young organisation that has grown very quickly, relying on a network of dedicated volunteers around the globe. Since 2007, when the organisation was officially launched, WikiLeaks has worked to report on and publish important information. We also develop and adapt technologies to support these activities.

WikiLeaks has sustained and triumphed against legal and political attacks designed to silence our publishing organisation, our journalists and our anonymous sources. The broader principles on which our work is based are the defence of freedom of speech and media publishing, the improvement of our common historical record and the support of the rights of all people to create new history. We derive these principles from the Universal Declaration of Human Rights. In particular, Article 19 inspires the work of our journalists and other volunteers. It states that everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers. We agree, and

we seek to uphold this and the other Articles of the Declaration.

1.2 How WikiLeaks works

WikiLeaks has combined high-end security technologies with journalism and ethical principles. Like other media outlets conducting investigative journalism, we accept (but do not solicit) anonymous sources of information. Unlike other outlets, we provide a high security anonymous drop box fortified by cutting-edge cryptographic information technologies. This provides maximum protection to our sources. We are fearless in our efforts to get the unvarnished truth out to the public. When information comes in, our journalists analyse the material, verify it and write a news piece about it describing its significance to society. We then publish both the news story and the original material in order to enable readers to analyse the story in the context of the original source material themselves. Our news stories are in the comfortable presentation style of Wikipedia, although the two organisations are not otherwise related. Unlike Wikipedia, random readers can not edit our source documents.

As the media organisation has grown and developed, WikiLeaks been developing and improving a harm minimisation procedure. We do not censor our news, but from time to time we may remove or significantly delay the publication of some identifying details from original documents to protect life and limb of innocent people.

We accept leaked material in person and via postal drops as alternative methods, although we recommend the anonymous electronic drop box as the preferred method of submitting any material. We do not ask for material, but we make sure that if material is going to be submitted it is done securely and that the source is well protected. Because we receive so much information, and we have limited resources, it may take time to review a source's submission.

We also have a network of talented lawyers around the globe who are personally committed to the principles that WikiLeaks is based on, and who defend our media organisation.

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November 27, 2011

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Chevy Volt Battery Fires Prompt U.S. Probe

by THE ASSOCIATED PRESS



Enlarge

J. Scott Applewhite/AP

The National Highway Traffic Safety Administration said Friday that it has opened a formal safety defect investigation of the lithium-ion batteries in General Motors Co.'s Chevrolet Volt to assess the risk of fire in the electric car after a serious crash.

November 26, 2011

text size A A A

New fires involving the lithium-ion batteries in General Motors Co.'s Chevrolet Volt have prompted an investigation to assess the risk of fire in the electric car after a serious crash, the National Highway Traffic Safety Administration said Friday.

One Volt battery pack that was being closely monitored following a government crash test caught fire Thursday, the safety administration said in a statement. Another recently crash-tested battery emitted smoke and sparks, the statement said.

GM, which was informed of the investigation on Friday, said in a statement that the Volt "is safe and does not present undue risk as part of

normal operation or immediately after a severe crash."

The latest fires are in addition to a battery fire in a crash-tested Volt six months ago.

NHTSA learned of a possible fire risk involving damaged Volt batteries when a fire erupted in a Volt that was being stored in a parking lot at a test facility in Burlington, Wis. The fire was severe

Q When thinking of financial institutions that offer private wealth management services, which of the following first comes to mind?

- ☐ Wilmington Trust Co.
- ☐ U.S. Trust, Bank of America Private Wealth Mgmt
- ☐ Bessemer Trust Co.
- ☐ Northern Trust Co.
- ☐ None of the above

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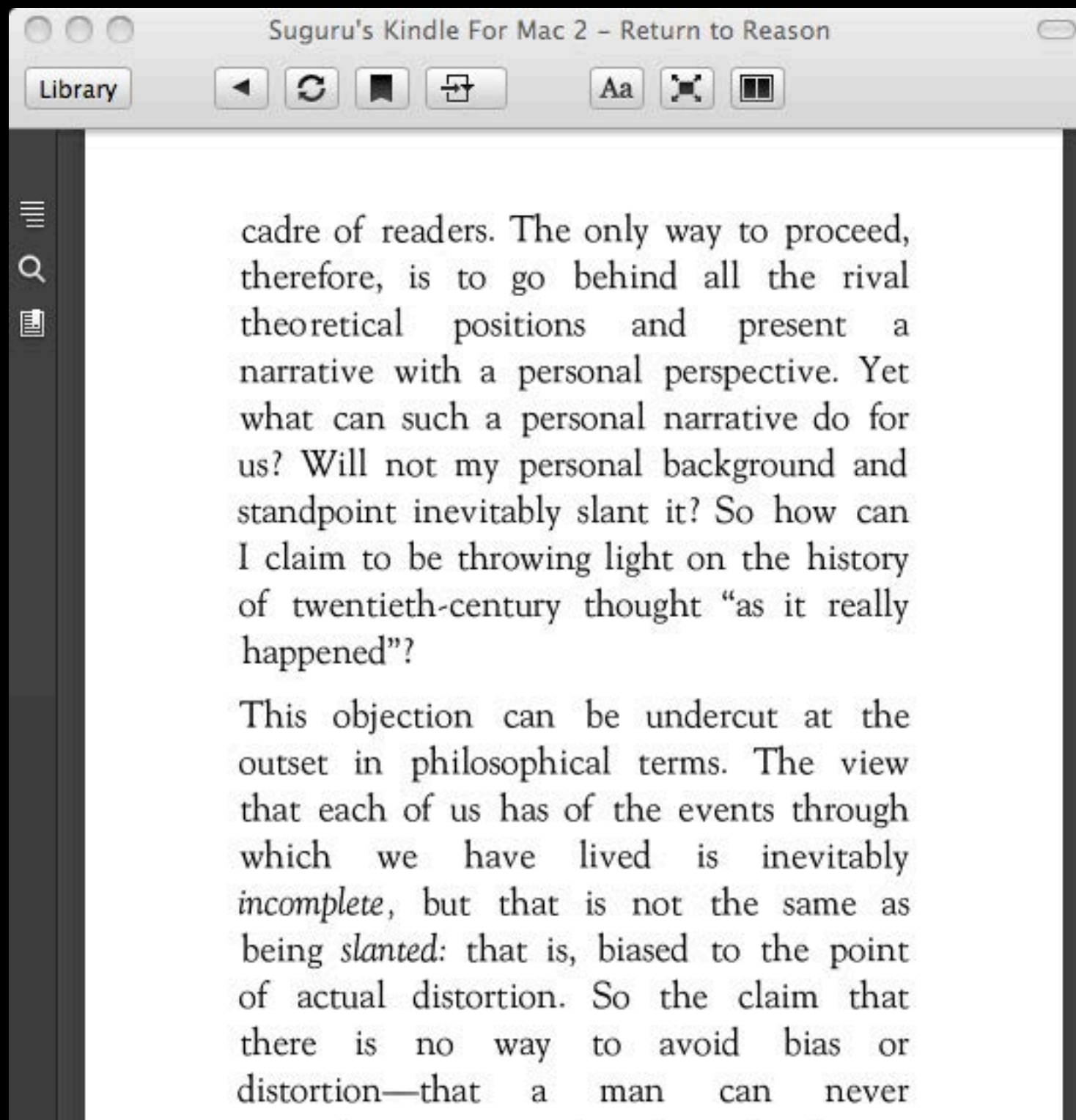
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Justified vs. Ragged
Right Margins?



cadre of readers. The only way to proceed, therefore, is to go behind all the rival theoretical positions and present a narrative with a personal perspective. Yet what can such a personal narrative do for us? Will not my personal background and standpoint inevitably slant it? So how can I claim to be throwing light on the history of twentieth-century thought “as it really happened”?

This objection can be undercut at the outset in philosophical terms. The view that each of us has of the events through which we have lived is inevitably *incomplete*, but that is not the same as being *slanted*: that is, biased to the point of actual distortion. So the claim that there is no way to avoid bias or distortion—that a man can never appreciate a woman’s point of view, a Christian a Buddhist’s, an Albanian a Serb’s—elevates a practical problem to the



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Buy Now

Figure 1-1. Live at Web 2.0 Expo. You can see the kamikaze remote control in my left hand.

My brain snapped into gear and I looked out into the crowd to get my bearings. My eyes, on their way back to the center of the room, stopped at the countdown timer. There I found a surprise. Instead of the 10 minutes I expected—the 10 minutes I'd planned, prepared, and practiced for—I had only 9 minutes and 34 seconds. Twenty-six of my precious seconds were gone.

I confess here in the comforts of this book, with no audience and no pressure, 26 seconds doesn't seem worth complaining about. It's barely enough time to tie your shoelaces. But there in the moment, raring to go, I was caught off guard. I couldn't imagine how I wasted 26 seconds without starting. (I'd learn later that Brady's introduction and my walk across the big stage explained the lapse.) And as I tried to make sense of this surprising number, more time went by. My brain—not as smart as it thinks it is—insisted on playing detective right there, live on stage, consuming even more precious time. I don't know why my brain did this, but my brain does many curious things I have to figure out later.

Meanwhile, I'm rambling. Blah blah innovation blah

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orphan

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widow

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Sweet Justice: justified text for the web

23 April 2010

[Sweet Justice](#) is a Javascript library you can drop onto any web page to create beautiful justified text. Even supercalifragilisticxpealadocious.

Sweet Justice lovingly inserts the obscure yet wonderful soft hyphen into the text of any element marked with the **sweet-justice** class, and turns on [CSS text justification](#). It requires either jQuery or YUI3 to function.

Enjoy!

- [Carlos](#)

From [Wikipedia](#): Justification has been the preferred setting of type in many western languages through the history of movable type. This is due to the classic Western manuscript book page being built of a column or two columns, which is considered to look "best" if it is even-margined on the left and right. The classical Western column did not rigorously justify, but came as close as feasible when the skill of the penman and the character of the manuscript permitted. Historically, both scribal and typesetting traditions took advantage of abbreviations (sigla), ligatures, and swash to help maintain the rhythm and colour of a justified line.

The use of movable type solidified this preference from a technological point of view. It was much easier to handle and make emendations to large amounts of type that had words or syllables at the ends of lines than it was to respace the ends of lines.

Line length

8-12 words/line

~60 characters/line

Leading (Line Spacing)

leading

There are ways of setting lines of type which may work well enough, and yet keep the reader subconsciously worried by the fear of 'doubling' lines, reading three words as one, and so forth.

leading

There are ways of setting lines of type which may work well enough, and yet keep the reader subconsciously worried by the fear of 'doubling' lines, reading three words as one, and so forth.


Debt Crisis Lurches Toward Heart of Euro Zone as Rifts Grow - NYTimes.com

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Debt Crisis Lurches Toward Heart of Euro Zone as Rifts Grow

By STEPHEN CASTLE AND DAVID JOLLY
Published: November 21, 2011

BRUSSELS — Sharply divided European leaders faced mounting signs on Monday that the [debt crisis](#) was striking at the heart of the euro zone.




Enlarge This Image

Olivier Hoslet/European Pressphoto Agency

Lucas Papademos, the Greek leader, left, and José Manuel Barroso, president of the European Commission, met on Monday.

Multimedia



Interactive Feature

Tracking Europe's Debt Crisis

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A major credit agency warned of a cut in the top-grade rating of France, which was one factor in a slide of more than 3 percent in many of Europe's major indexes.

[Moody's Investors Service](#) said that rising borrowing costs and a deteriorating economic outlook were putting pressure on France's creditworthiness. Moody's has maintained France's AAA rating so far, as have the other major ratings agencies, but it warned in October that it could put the rating on review.

"This crisis is hitting the core of the euro zone," Olli Rehn, the European commissioner for economic and monetary affairs, said Monday. "We should have no illusions about this."

A loss of France's AAA rating would have implications beyond Paris. It would signal that the crisis had spread to core euro zone members and that its effects could no longer be contained to peripheral nations like Greece, Portugal and Ireland.

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Tight Leading

Risks grow with Europe's debt crisis

http://www.post-gazette.com/pg/11330/1192775-82.s... Reader

Risks grow with Europe's debt crisis

Saturday, November 26, 2011
By Neil Irwin, The Washington Post

Europe's debt crisis is going from bad to worse.

The borrowing rates for troubled, and even not-so-troubled, European governments soared again Friday, heightening the danger of an all-out collapse in Europe's common currency. It comes as political leaders across the continent are all pointing to each other as needing to act to avert a worse outcome.

The danger is most pressing in Italy, where the rate the nation must pay to borrow money for a decade rose Friday for the fifth straight day, to 7.23 percent from 6.64 percent a week ago. The increase came in an auction of new bonds for which demand was weak, pushing the rate the Italian government must pay to borrow money for two years up four-tenths of a percentage point, a remarkably big one-day jump, to 7.5 percent.

With debt totaling 120 percent of Italy's economy, higher rates could create a dangerous, self-reinforcing spiral for the country: the higher its borrowing costs, the more onerous the interest payments. That in turn increases the likelihood of economy-cratering tax increases and spending cuts or a catastrophic default.

Over recent days, the sense of impending threat has even spread to nations that have generally sound finances. Standard & Poor's cut its long-term credit rating for Belgium to AA on Friday from AA+, expressing concern that the nation may have to engage in costly bank bailouts that will strain its finances.

Nations that have seen a sharp run-up in their borrowing costs in recent days also include France, Austria and Finland.

Investors are selling off bonds of almost all European nations out of fear that a self-reinforcing cycle is taking hold in which higher borrowing costs further strain governments' finances, threatening losses among the banks that own government debt and further slowing an economy that is already on the brink of recession.

When this same set of circumstances has developed in the past two years, some combination of stronger European nations and the European Central Bank has acted to promise a wall of money to stop the cycle in its tracks.

Today, however, "it appears Europe's fiscally stronger sovereigns are reaching their limits in terms of supporting their fiscally weaker counterparts," said F

JAMES FELICI Foreword by Frank Romano

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FRANK ROMANO

Executive Director of the American Institute of Design

Recommended Reading on Typography

Visual Hierarchy

Arrangement of visual elements in a graduated series, from the most prominent to the least prominent

Creating Visual Hierarchy

» By using “Contrast”

- Size
- Weight
- Color
- Position

» By using Spatial Relationship (Grouping)

- Proximity
- White (empty space)

Size

Big



Small

Medium



Weight

Black



Bold



Semibold



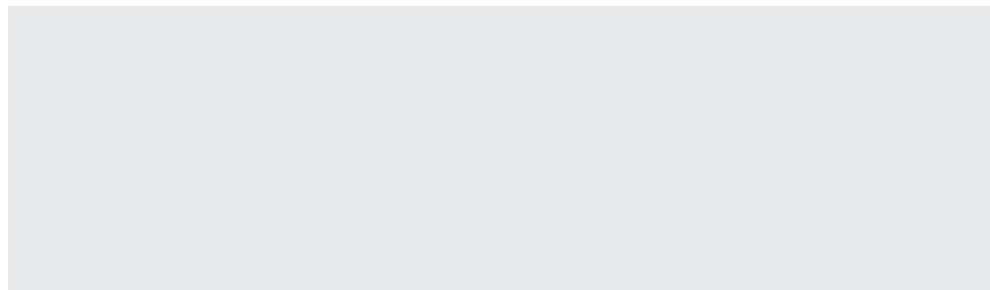
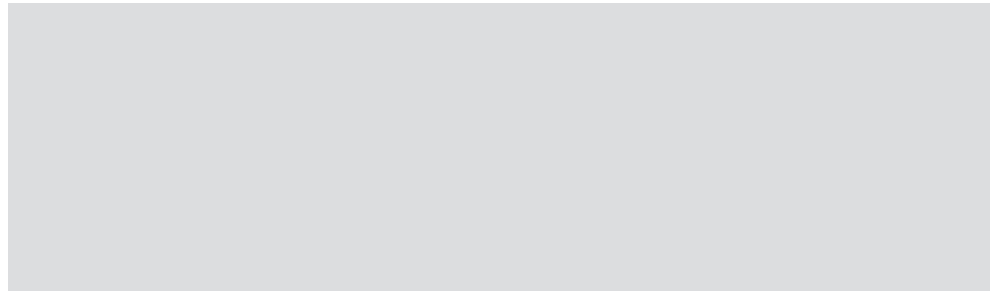
Regular



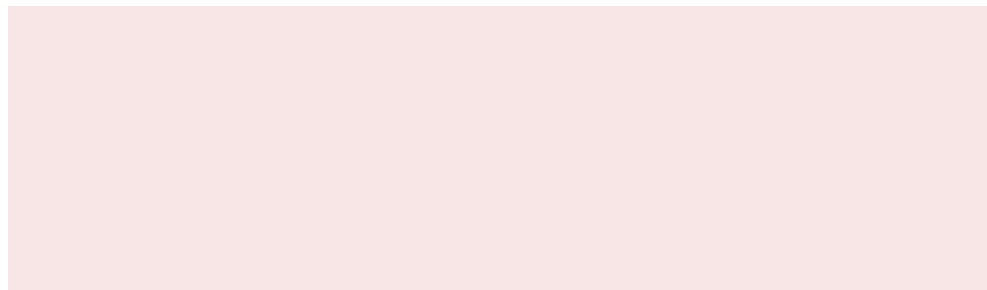
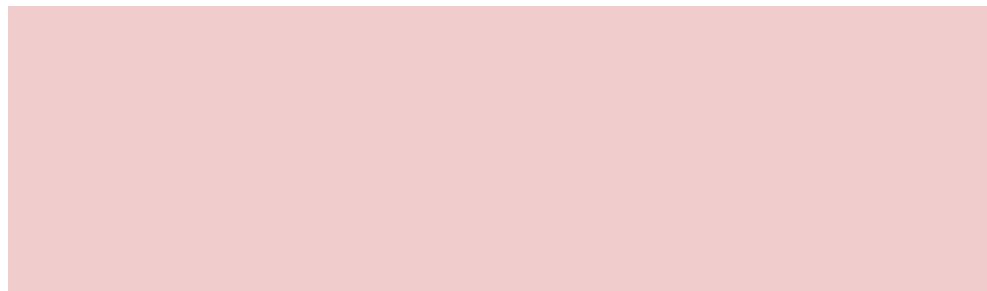
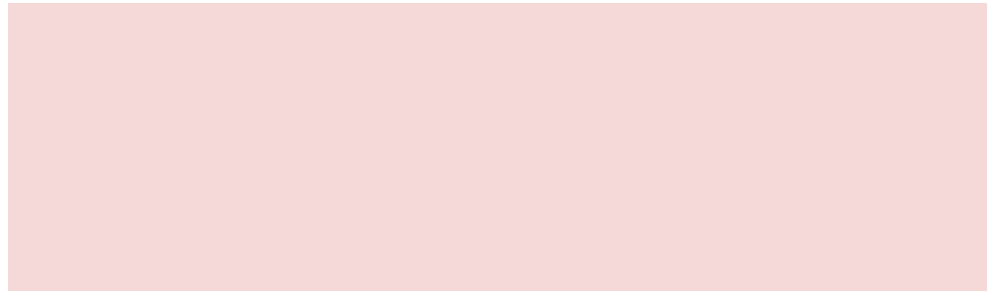
Light



Color (Value)



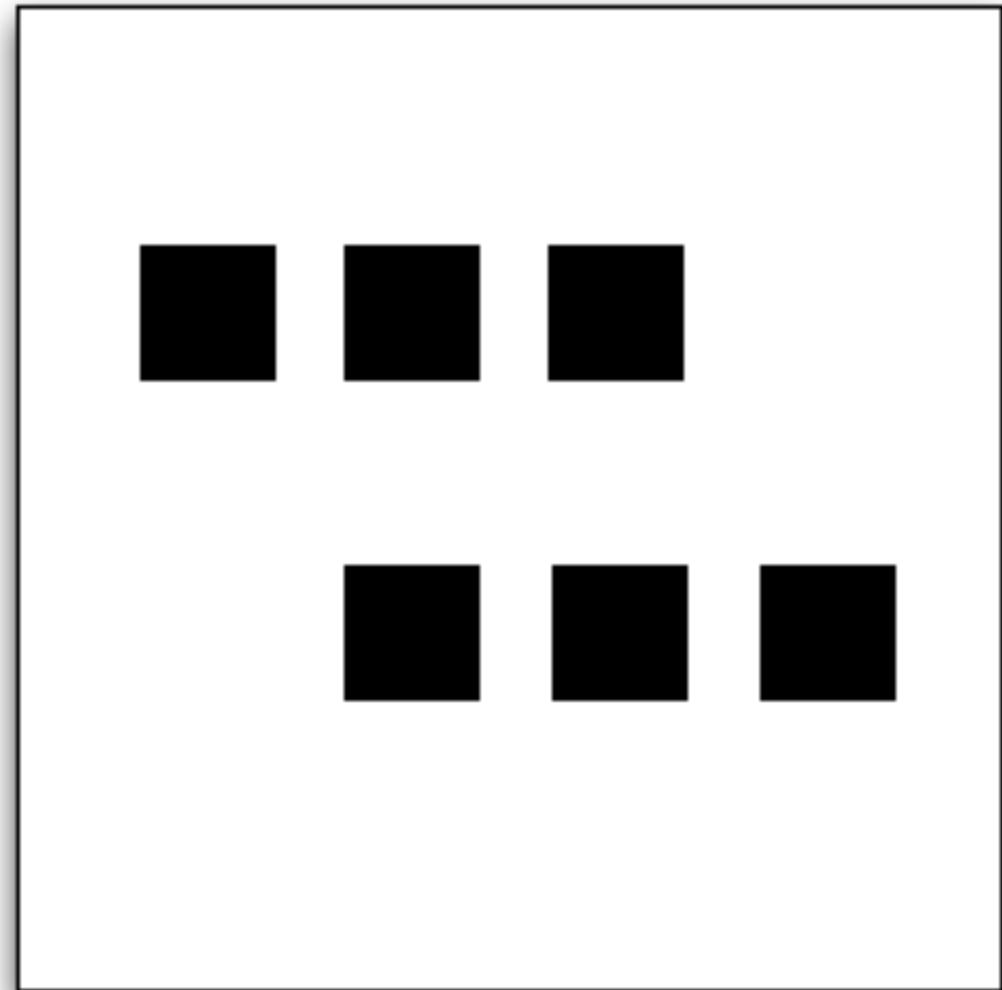
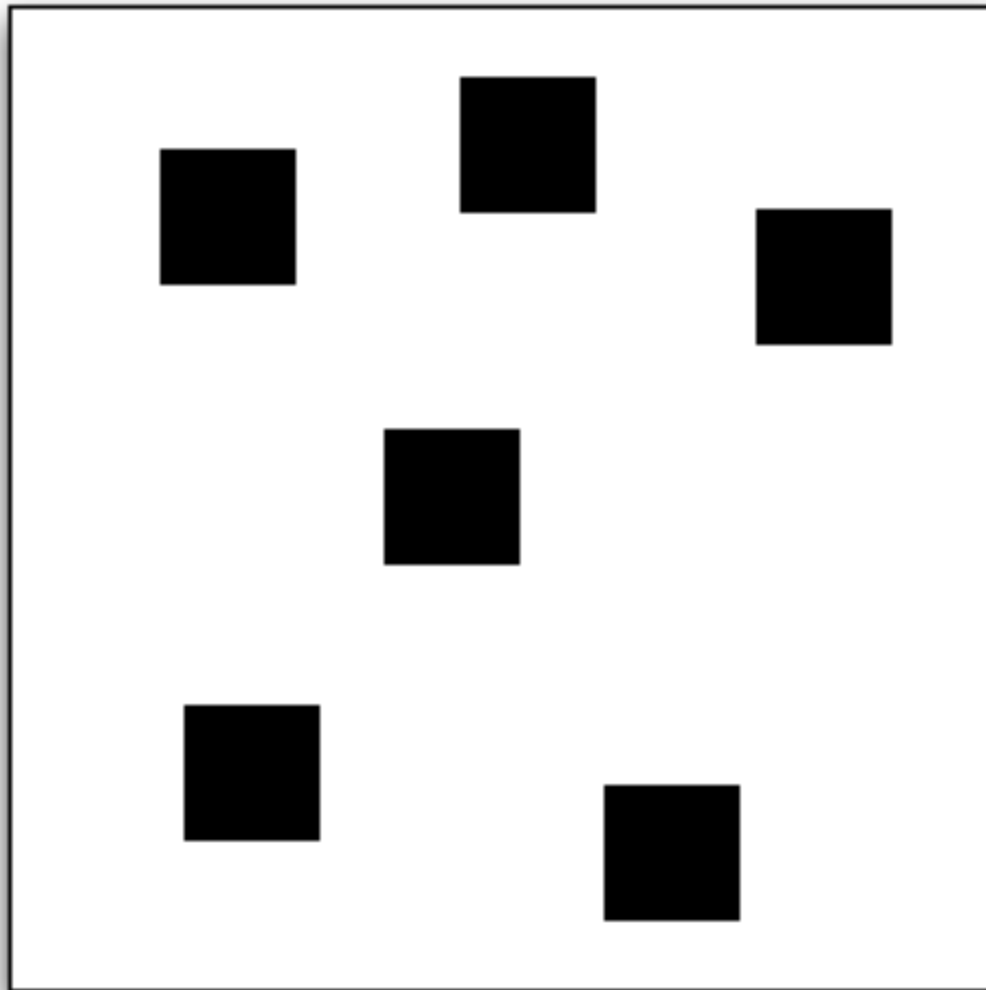
Color (Value)



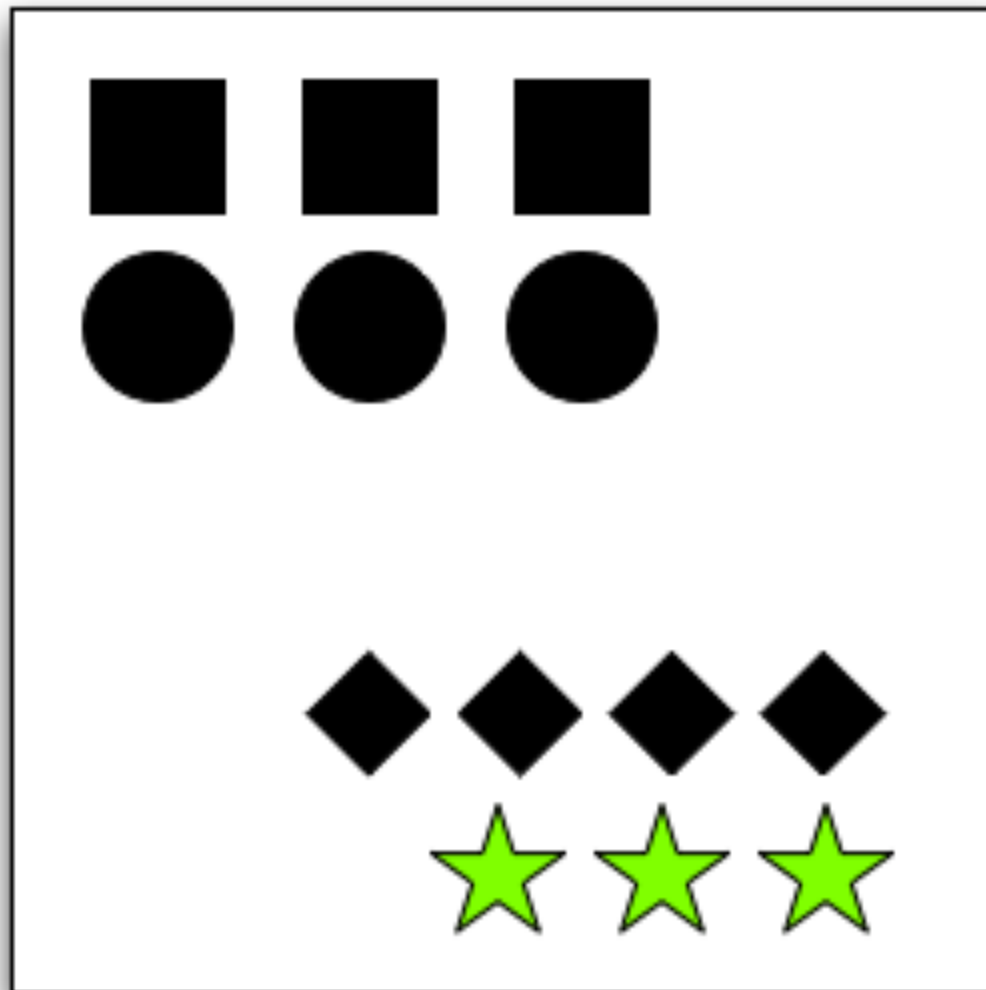
Color (Saturation)



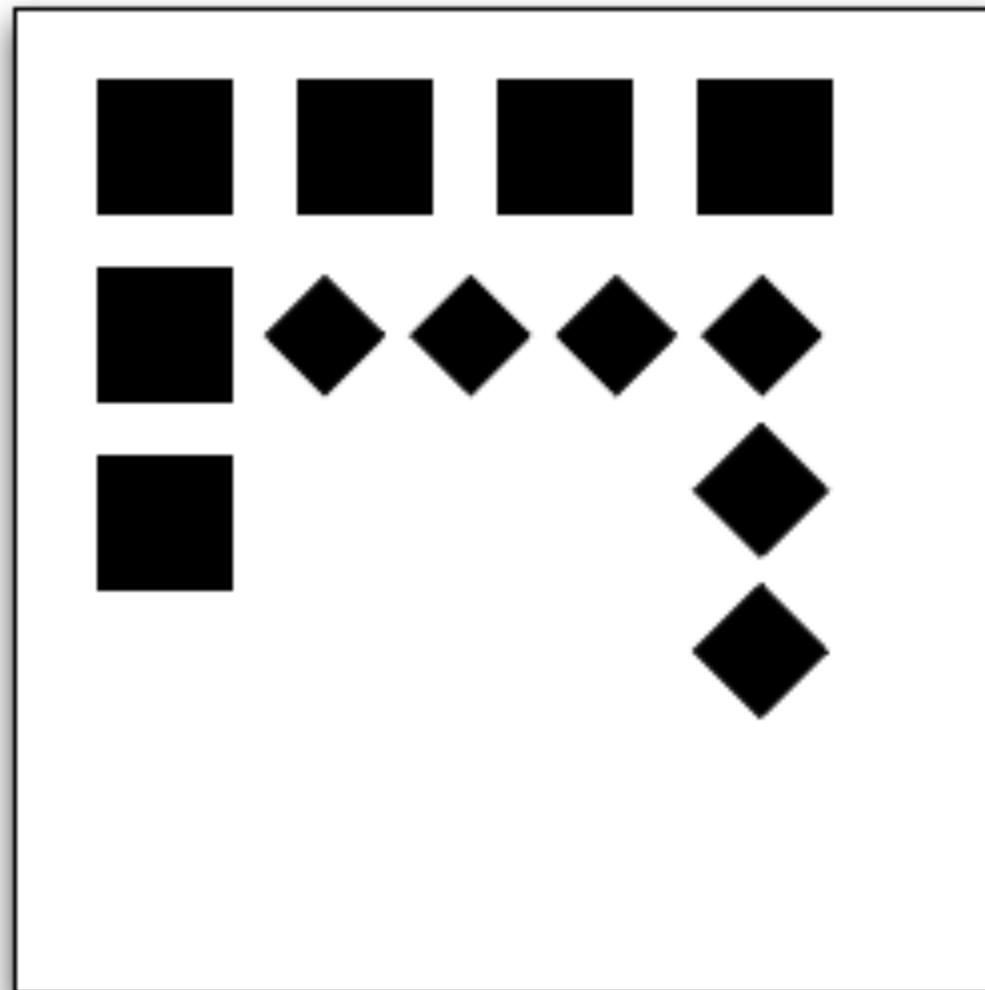
Visual Grouping



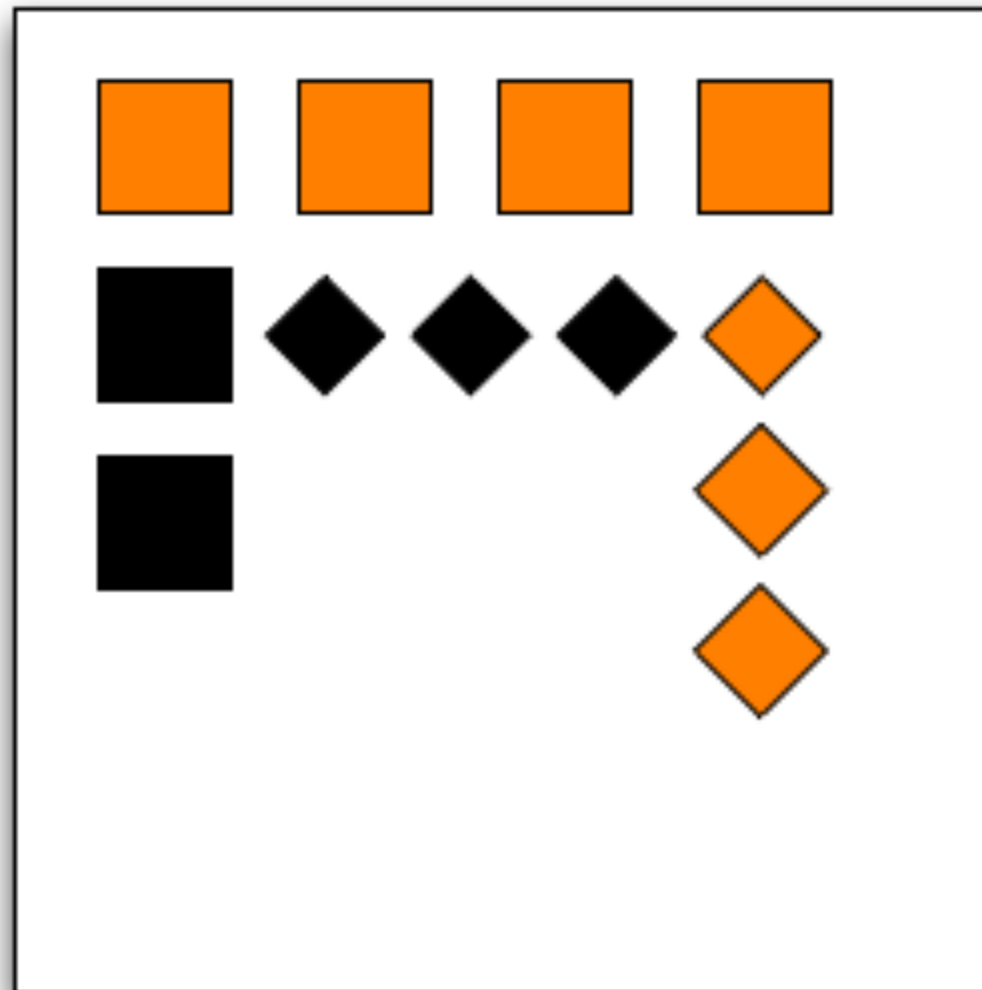
Visual Grouping



Visual Grouping



Visual Grouping



Order

The Center for Africanamerican Urban Studies and the Economy (CAUSE)

Department of History, Carnegie Mellon University

Presents

Dr. Thomas A. Guglielmo

Italian Americans' Relations with African Americans in Interwar Chicago

Friday, 29 October 2004

4:30 p.m. refreshments

5-6:30 p.m. lecture and discussion

Baker Hall A53 (H&SS Auditorium)

Carnegie Mellon University

Order + Spatial Grouping

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Order + Spacial Grouping + Color/Value + Weight

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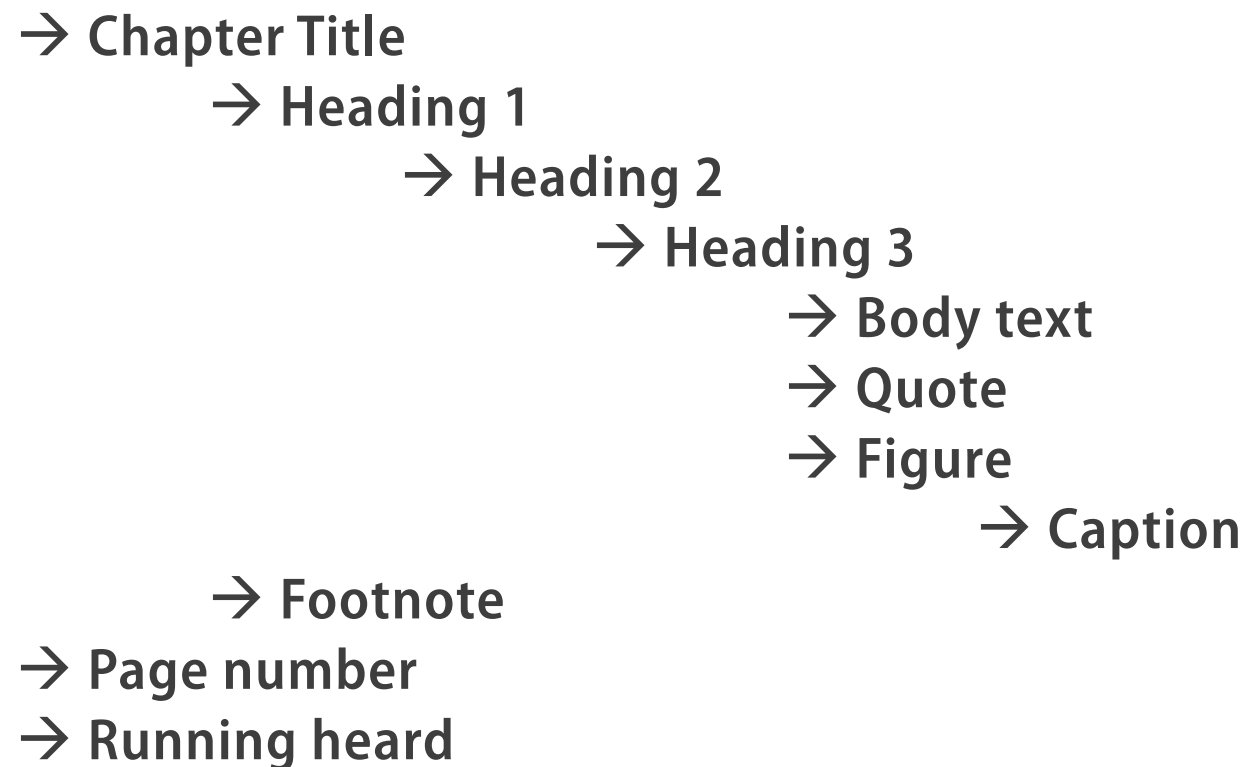
Friday, 29 October 2004

4:30 p.m. refreshments

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Baker Hall A53 (H&SS Auditorium)

Visual Hierarchy is created based on the document structure



Document structure is represented by

- » Type size
- » Typeface
- » Type weight
- » Type color
- » Type style (italic, condensed, extended etc.)
- » Color of a text block
- » Indentation
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- » Photographs
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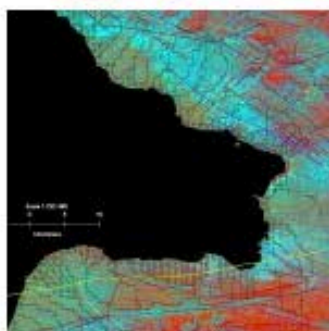
Water



Weather

Original Articles

Use of Remote Sensing for Groundwater Mapping in Haiti



Sustainable access to safe drinking water is a public health issue directly linked to the economy in Haiti and around the world. This research applies remote-sensing techniques to data from ASTER satellite imagery to produce maps useful for placing community-level water-filtration installation systems in Port au Prince and surrounding areas.

Donna O. Burnett, posted on November 22nd, 2011

[Articles](#), [Water Availability](#)

IEEE Conference Focuses on Tech Solutions to Humanitarian Challenges



How can technology advancement benefit humanity? The IEEE Technology for the Benefit of Humanity conference addressed this question and the practical challenges technological solutions pose to overcoming humanitarian needs.

My Tam H. Nguyen, posted on November 21st, 2011

[Articles](#), [Technology](#)

[Addressing Environmental Sustainability](#)

Virtual Poster Session

Earthzine Hosts Third DEVELOP Virtual Poster Session and Competition



Earthzine is hosting its third Virtual Poster Session, featuring 11 projects from high school and university students involved in NASA's DEVELOP National Program. Project teams researched topics ranging from wildfire

predictive mapping to air quality monitoring, highlighting the capabilities of NASA Earth observations to address local policy issues and enhance decision-making.

DEVELOP, posted on November 10th, 2011

[DEVELOP Virtual Poster Session](#)

Call for Papers

Call for Papers – Climate Consensus: Steps Toward a Global Understanding of Climate



Earthzine is soliciting articles of 800–3,000 words for its first quarter 2012



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Every Major City in America Has a Restaurant Guide.

In Atlanta It's...

Restaurant Guide

Cash

Payments

Search

Reports



Logout

Payments

Cash Position **\$105,462**Payments (0) **\$0**Ending Cash **\$105,462**

6 Payments

2 Need follow-up

Approve 0

\$0⁰⁰

6 open payments

Bill

Type

Comments

\$610⁰⁰Nolan Hardware and Supplies
Tools and Misc. Equipment

Current

1

Check

1

\$196²⁵Robert Carr Masonry
Delivery Fee

Current

1

ACH

1

\$333³³Townley Insurance Agency
Automobile:Insurance

Current

1

Check

1

\$330³⁰Townley Insurance Agency
Automobile:Insurance

Current

1

Check

1

\$427⁶²Townley Insurance Agency
Automobile:Insurance

Current

1

ACH

1

\$50²³Townley Insurance Agency
Automobile:Insurance

Current

1

Wire

1

Approve 0

\$0⁰⁰

2 payments need follow-up



-

Col. Co. & Electric

Cash

\$112,608

Account	Calculated Cash	General Ledger
Checking	56,809.00	56,809.00
Savings	23,888.00	23,888.00

0 \$50K \$100K

Total Cash

Alerts (7)



- Check Payment to Smile Insurance for \$5,664.33 was rejected (7/23, 4:56pm)
- Wire Payment to JRT Partners for \$45,000 was approved (7/23, 4:56 PM.)
- Check Payment to Redbones Barbecue for \$555.00 was approved (7/23, 4:56 PM)

...

Payables

\$13,300

Selected for Submission (8)

\$72,019

Submitted for Approval (3)

\$47,499
Current\$15,077
1-30\$9,513
31+

<u>Bills</u>	17	<u>Payments</u>	35
<u>Unpaid</u>	14	<u>Unpaid</u>	14
		<u>Rejected</u>	2
		<u>Failed</u>	1
		<u>In Process</u>	7
		<u>Paid</u>	11

0 \$50K \$100K

Selected

Submitted

Current

1-30

31+

Vendors

Total	126
Outstanding	13

Documents

Unattached	2
------------	---

Design Systems

- The front or back of any official publication must include the Carnegie Mellon University wordmark. Campuses, schools/colleges, departments and centers/institutes may use our template design (page 6) or their own logo but must adhere to the approved brand guidelines.

OFFICIAL WORDMARK

Carnegie Mellon University

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Carnegie Mellon University

2. SECONDARY/STACKED (SPACE RESTRICTION)

3. NOT TO BE USED EXTERNALLY
CAN USE INTERNALLY ON POSTERS, SIGNAGE AND MERCHANDISE
(SEE MERCHANDISE GUIDELINES (.PDF))
WWW.CMU.EDU/MARCOM/PROMOTIONS/INDEX.HTML

VISUAL GUIDELINES FOR USE OF WORDMARK

Leave at least 6 pts. buffer space around the wordmark.

Carnegie Mellon University

Smallest size for print publications (Brochures, Newsletters, Posters, Etc.)

12.5 PICAS / 2 1/8 INCHES

Carnegie Mellon University

7 PICAS / 1 1/8 INCHES

CARNEGIE MELLON UNIVERSITY BRAND GUIDELINES | 06/08/2010

Recommended size for electronic production
151 PIXELS
Carnegie Mellon University

Do not stack Carnegie Mellon

Carnegie Mellon

Do not combine the wordmark with another graphic element.

Carnegie Mellon University

UNIVERSITY COLORS

Using a consistent color palette helps build awareness and recognition for Carnegie Mellon. Be sure to use Pantone Matching System (PMS) color values, not the swatches here, to assure exactly the right match.

PRIMARY COLOR PALETTE

Our main color is PMS 187 red, accompanied by black, white, light gray and dark gray. The official wordmark should appear in these colors.



TARTAN PLAID COLOR PALETTE

In addition to the primary colors, the Carnegie Mellon tartan plaid inspires a second set of official colors. The tartan color palette is most effective when used for background colors on event materials and merchandise.



OFFICIAL TARTAN PLAID

The Tartan Plaid (official university plaid) is the preferred version for print. Carnegie Mellon Band members wear the official plaid in their kilts/uniforms. Wool material on a spool and wrapping paper sheets are available in the bookstore.

Please contact The Communications Design and Photography Group at commdesign-photog@andrew.cmu.edu to obtain the official plaid.



CARNEGIE MELLON UNIVERSITY BRAND GUIDELINES | 06/08/2010

8

OFFICIAL UNIVERSITY SEAL

The official seal of Carnegie Mellon University from 1967 was originally reserved for only official documents, including diplomas, presidential and trustee minutes or other legal, academic or official university documentation—or on the highest awards or certificates.

The seal can now also be used for FORMAL occasions and formal products, including items for commencement, specific gift items in brass, silver or pewter, appropriate clothing (sports coats), stationery and other items. DO NOT use the official seal in combination with the wordmark. If an item is in question, please contact Marketing Communications at marketing-info@andrew.cmu.edu. Please contact The Communications Design and Photography Group at commdesign-photog@andrew.cmu.edu to obtain the official seal graphic.

The Official Seal: 4-color, 1-color



4-color version



1-color version (greater than 2 inches)
If the one color seal is used two inches or greater in diameter, Carnegie Mellon University appears in a bolder font.



1-color version (less than 2 inches)
If the one color seal (shown here in PMS 187) is used at a diameter less than two inches, Carnegie Mellon University appears in a lighter font.
One-color version can be printed in black, PMS 187-red, Metallic PMS 877-silver and 873-gold.
Ideal for embossing and foil stamping.



White vesicle reversed out of a background
When reversing the seal out of a color or black background, do not use the 1-color (black) version; always use the reversed (white) version.

CARNEGIE MELLON UNIVERSITY BRAND GUIDELINES | 06/08/2010

9

AIGA

INSPIRATION | ABOUT AIGA | WHY DESIGN? | EVENTS & COMPETITIONS | TOOLS & RESOURCES

FIND A JOB

FIND A DESIGNER

FIND A CHAPTER

FIND A STUDENT GROUP

AIGA, the professional association for design, is committed to advancing design as a professional craft, strategic tool and vital cultural force.

1 Recommendation

THE WEEKLY WRAPAROUND: NOVEMBER 18

Article by AIGA editors November 18, 2011.

Via [handpaintedtype.com](#)

Design Envy picks from *Command X: Season 3* winner Jesse Reed, the web joining forces to oppose legislation (SOPA and PIPA), Benetton's provocative new campaign, Design Indaba's food fight, reactions to last week's announcement from Adobe, Noel Burch's "conscious competence learning model" and the importance of balance—these are our stories of the week.

Section: [Inspiration](#) - Tags: [The Wraparound](#)

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RECENT TWEETS

AIGAdesign (AIGA) A big thanks to [@joshritchie](#) and [@rtcrooks](#) of [@columnfive](#) for an inspiring week of [#DesignEnvy](#) posts! <http://t.co/LkSPQs4s>

Yesterday

AIGAdesign (AIGA) Today on [#DesignEnvy](#), [@joshritchie](#) features the unmatched contextualized infographics by Peter Ørntoft: <http://t.co/TndhUBnS>

Yesterday

FEATURED PORTFOLIO

2010 Portfolio:

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CHAPTER SPOTLIGHT



AIGA Idaho

NEWS FROM AIGA

[AIGA launches Design for Good to harness creative talent for social good](#)

October 27, 2011.

NEW YORK—October 27, 2011. AIGA, the professional association for design, is launching the Design for Good initiative to connect and amplify the pro bono efforts of designers, firms, students and chapters across the country—and in turn, inspire more involvement.

[AIGA urges the Obama 2012 campaign to reconsider its jobs poster contest](#)

Richard Grefe October 24, 2011.

AIGA executive director Richard Grefe responds to "Art Works: A Poster Contest to Support American Jobs," the Obama for America contest for posters promoting the Obama administration's jobs program.

[Designers gather in Phoenix to address shifts in the design profession](#)

NEW YORK—October 6, 2011. What is the role of design in a rapidly shifting world? Next week hundreds of professional designers, educators and design students will gather to address this very question at the AIGA Design Conference, taking place in Phoenix from October 13–15. The theme of this year's conference is "Pivot," focusing on how design and designers are shifting to address changes in society, the economy and culture.

INFOGRAPHICS IN CONTEXT: PETER ØRNTOFT

Curated by [Column Five](#) on November 25, 2011

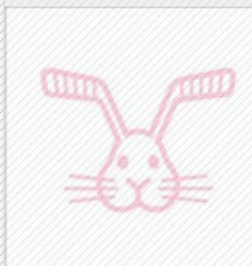
Vote Now!

Via [peterorntoft.com](#)

While this project has been covered by many, I can't help but consider it when I'm asked to think of projects I wish I would have done—or at least been a part of. I have seen a number of projects similar to this lately, but none that were executed so well, or so originally...

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FROM THE ARCHIVES

Hockey Bunnies Logo
Egnerd

AIGA'S NEW CASE STUDY

AIGA

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Feed your creative appetite with interviews, essays, profiles and personal stories of designers near and far, past and present. Get inspired!

FORMAT

[Article](#) (200)
[Biography](#) (158)
[Case study](#) (1)
[Publication](#) (0)
[Slideshow](#) (1)
[Video](#) (38)
[Webinar](#) (2)
[Press release](#) (0)

COLLECTIONS

[Medalists](#) (91)
[Design Journeys](#) (23)
[Fellows](#) (36)
[Corporate Leaders](#) (14)
[Mentoring essays](#) (51)
[Artist Series videos](#) (6)

TOP TEN TAGS

[graphic design](#) (182)
[Voice](#) (180)
[AIGA Medal](#) (95)
[personal essay](#) (75)
[branding](#) (65)
[mentoring](#) (58)
[interview](#) (53)
[typography](#) (41)
[AIGA Fellow](#) (38)
[identity design](#) (35)

THE WEEKLY WRAPAROUND: NOVEMBER 18

Article by AIGA editors November 18, 2011.



Via [handpaintedtype.com](#)

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Section: [Inspiration](#) - Tags: [The Wraparound](#)

1 Recommendation

DESIGN ENVY



Between Five Bells:
 Nick Felton
 November 21, 2011

FROM THE ARCHIVES



Real Good Experiment
 mono

MEMBER SHARED
 LINK

DESIGN + DATA = POWER: WEBINAR RECAP AND RESOURCE LIST

Article by [Callie Neylan](#) November 4, 2011.



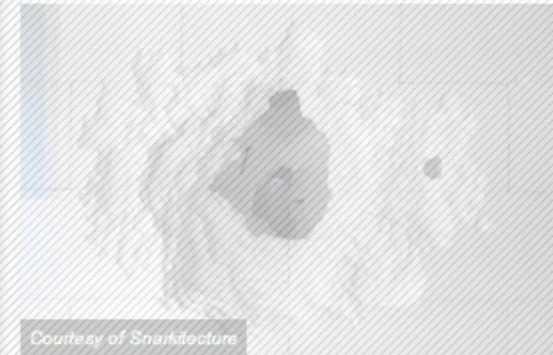
Slide by [Angela Shen-Hsieh](#)

Callie Neylan, moderator for AIGA and Adobe's "Breakthroughs" series, gives a post-webinar overview on how designers and their clients can use data to improve the impact of their work.

Section: [Inspiration](#) - Tags: [professional development](#), [continuing education](#), [metrics of effectiveness](#), [data visualization](#), [information design](#), [marketing](#)

THE WEEKLY WRAPAROUND: OCTOBER 28

Article by AIGA editors October 28, 2011.



Courtesy of [Snarchitecture](#)

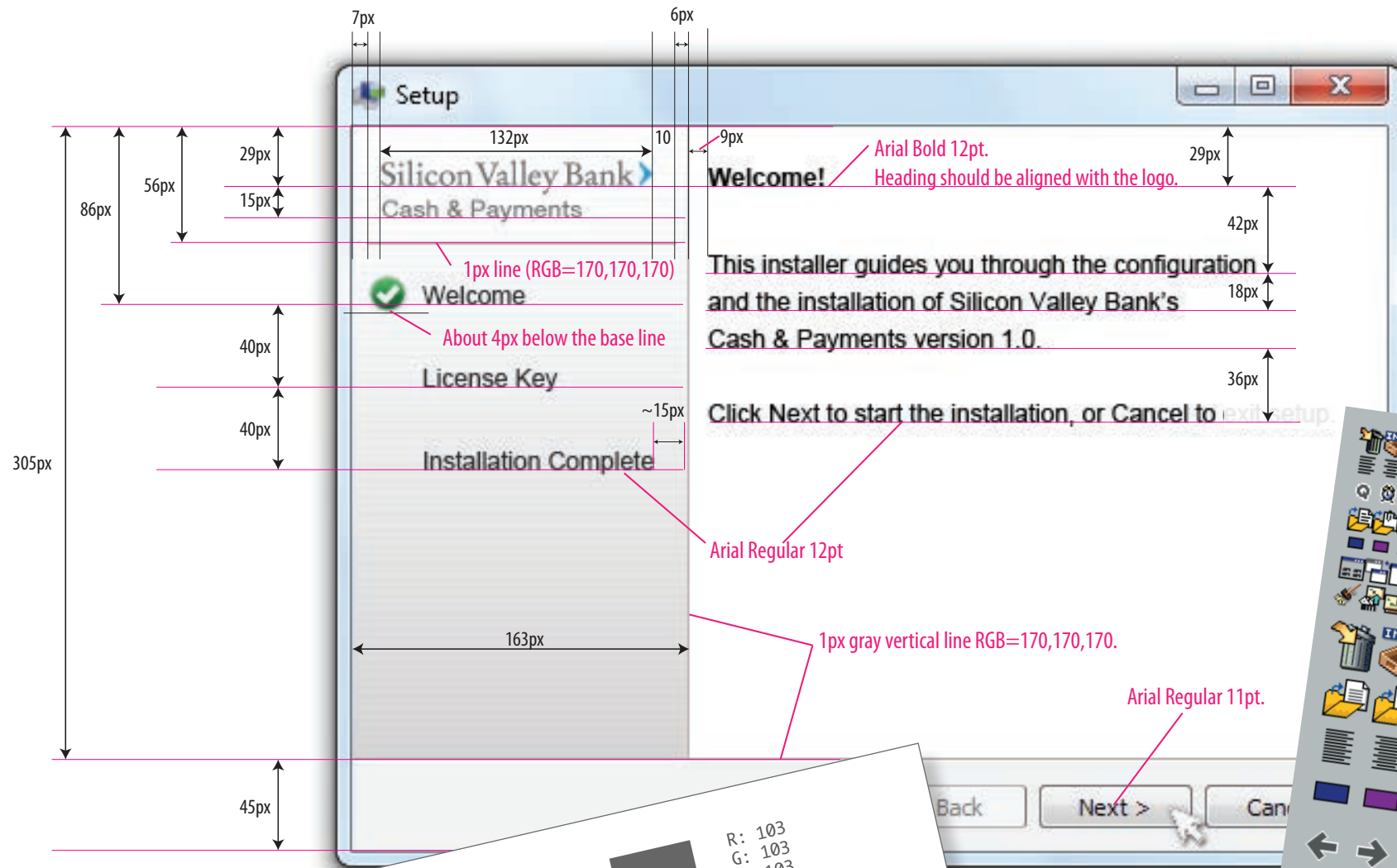
A designer's ideal skill set, Design Envy picks from WeShouldDeltAll, the jobs poster contest, An Event Apart, an honest look at what Michael Bierut loves about design, great artists stealing and Christoph Niemann's illustrations for the Art Directors Club Hall of Fame Gala are our top stories this week.

Section: [Inspiration](#) - Tags: [The Wraparound](#)

MONSTER OF

Showing 1 - 6 of 200

1 2 3 4 5 ... 34



The role graphic designers in software product development

Prototyping

Wireframes, UI Flow
diagrams

Customer Service

Pending Items (2)

Reports

History

Find a Customer or User

Find

Add a New User

First

Last

M.I.

☒ Account Manager ☐ CFO

Email

Cell Number

CFO's iPad UDID

*If the iPad is already registered for another user,
it must be de-registered first.*

Add

Add a New Customer

Add

Customer Service

Pending Items (2)

Reports

History

Find a Customer or User

Find

Add a New User

Rhodes Consulting

Freedom Printing

Arrow Logistics

Bear Markets

FedEx

Email

Cell Number

CFO's iPad UDID

Add

Add a New Customer

Enter a New Company Name

Add

Customer Service

Pending Items (2)

Reports

History

Find a Customer or User

Add a New User

First	Last	M.I.
<input type="text" value="Francine"/>	<input type="text" value="Austin"/>	<input type="text" value="C"/>

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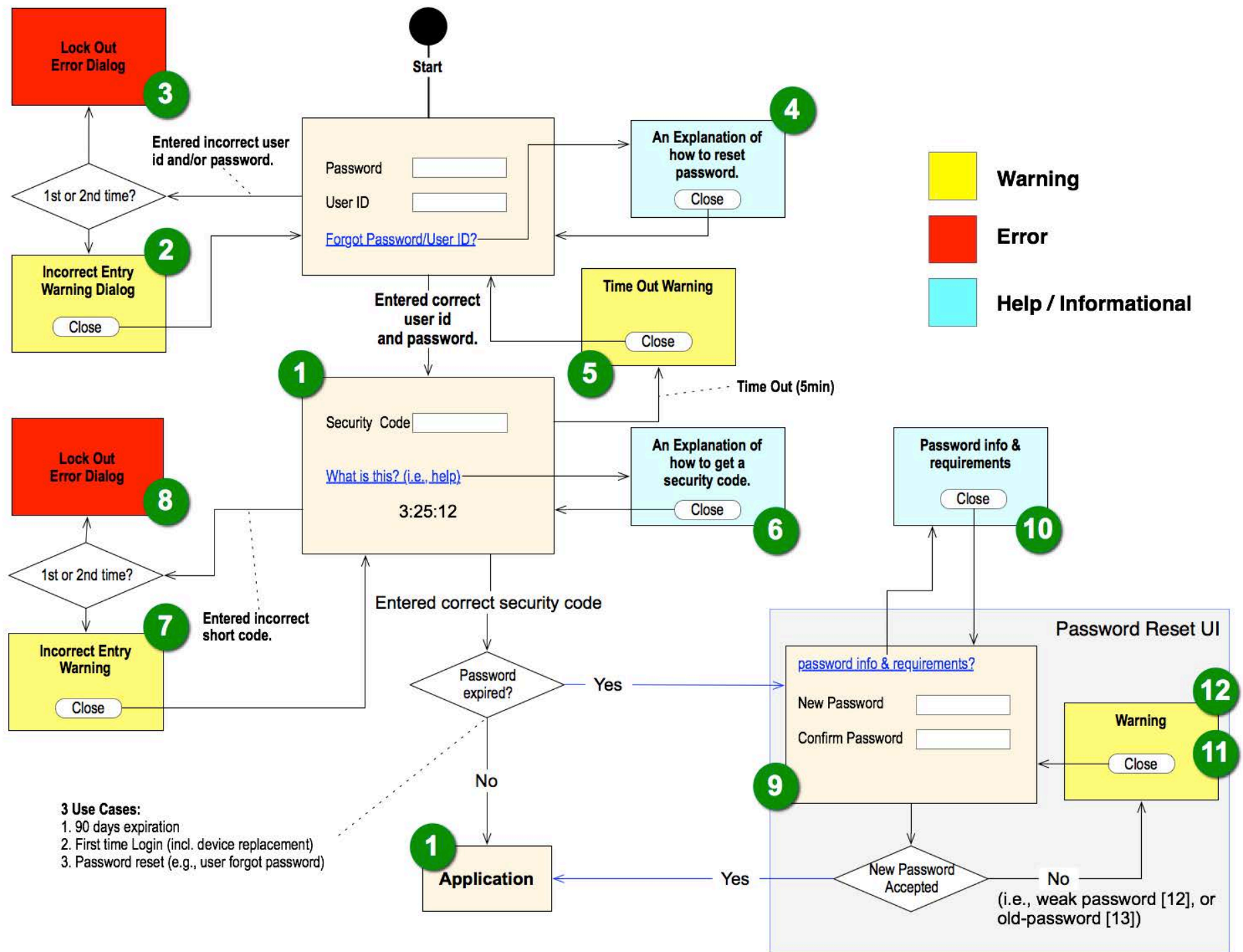
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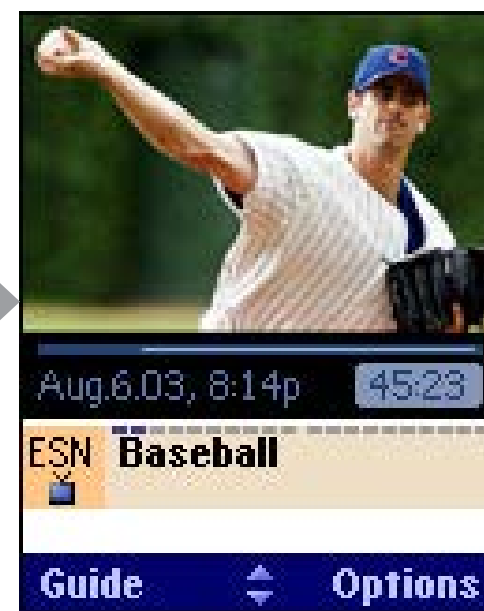
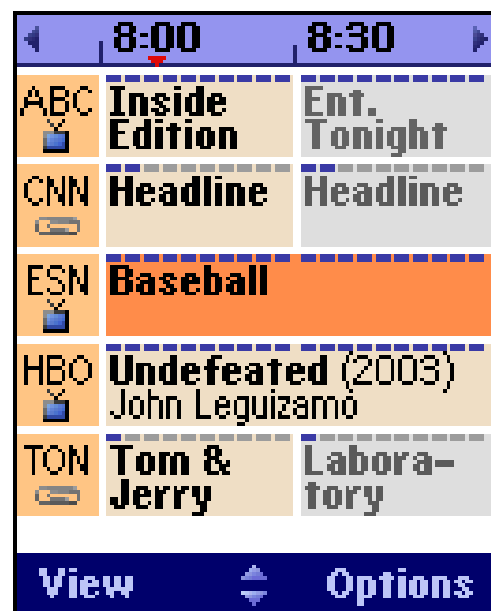
CFO's iPad UDID

Add

Add a New Customer

Add





Involve designers in the
requirement development
process.

Prototyping

High-Fidelity Screen

Mockups—*What will the UI look like?*



Tree National Bank

Cash & Payments

Username testUser

Password

Login

[Forgot your user name or password?](#)

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Tree National Bank

Cash & Payments

Token

You have 5 minutes to enter the security code.  00:00:182

Enter

[Not sure where to find your security code, or need help?](#)

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Tree National Bank

Cash & Payments



Forgot your user name or password?

For security reasons, you must contact customer support to reset your password.

Customer Support: (415) 123-4567

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Tree National Bank

Cash & Payments



Weak Password. Passwords must contain at least 8 alphanumeric characters, and

- include both uppercase (A-Z) and lowercase (a-z) characters.
- include digits (0-9) and special characters (!@#\$%^&*()_+|~-=\`{}[]:;'\<?>?,./) in addition to letters.

Please try again.

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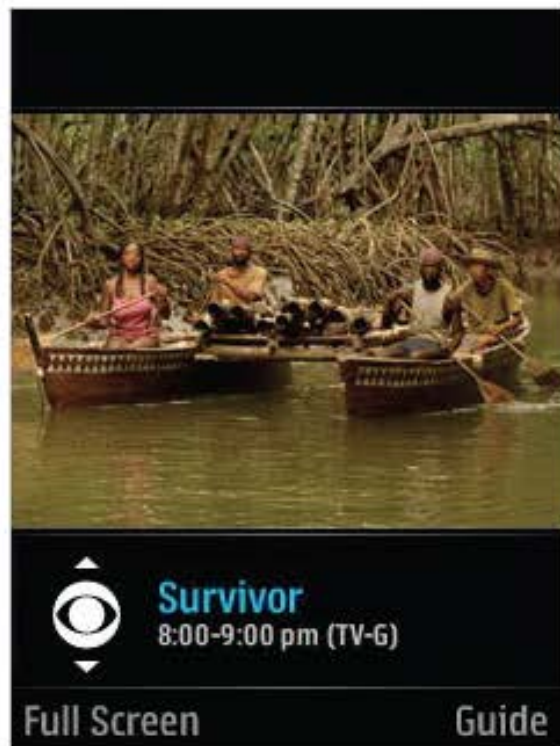
?



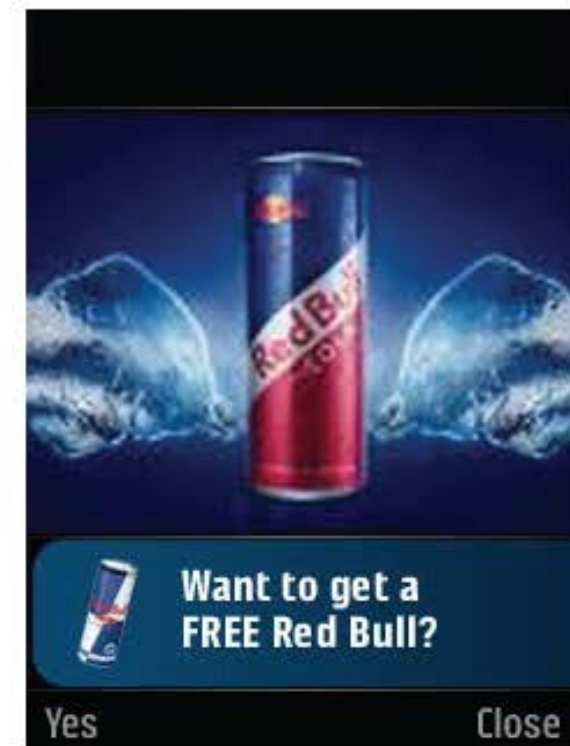
.?123

.?123





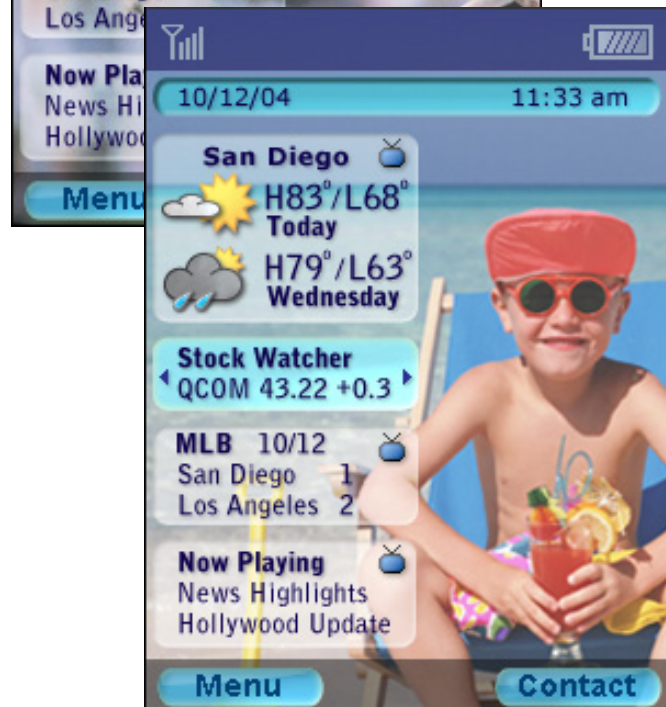
Red Bull Ad starts to play.

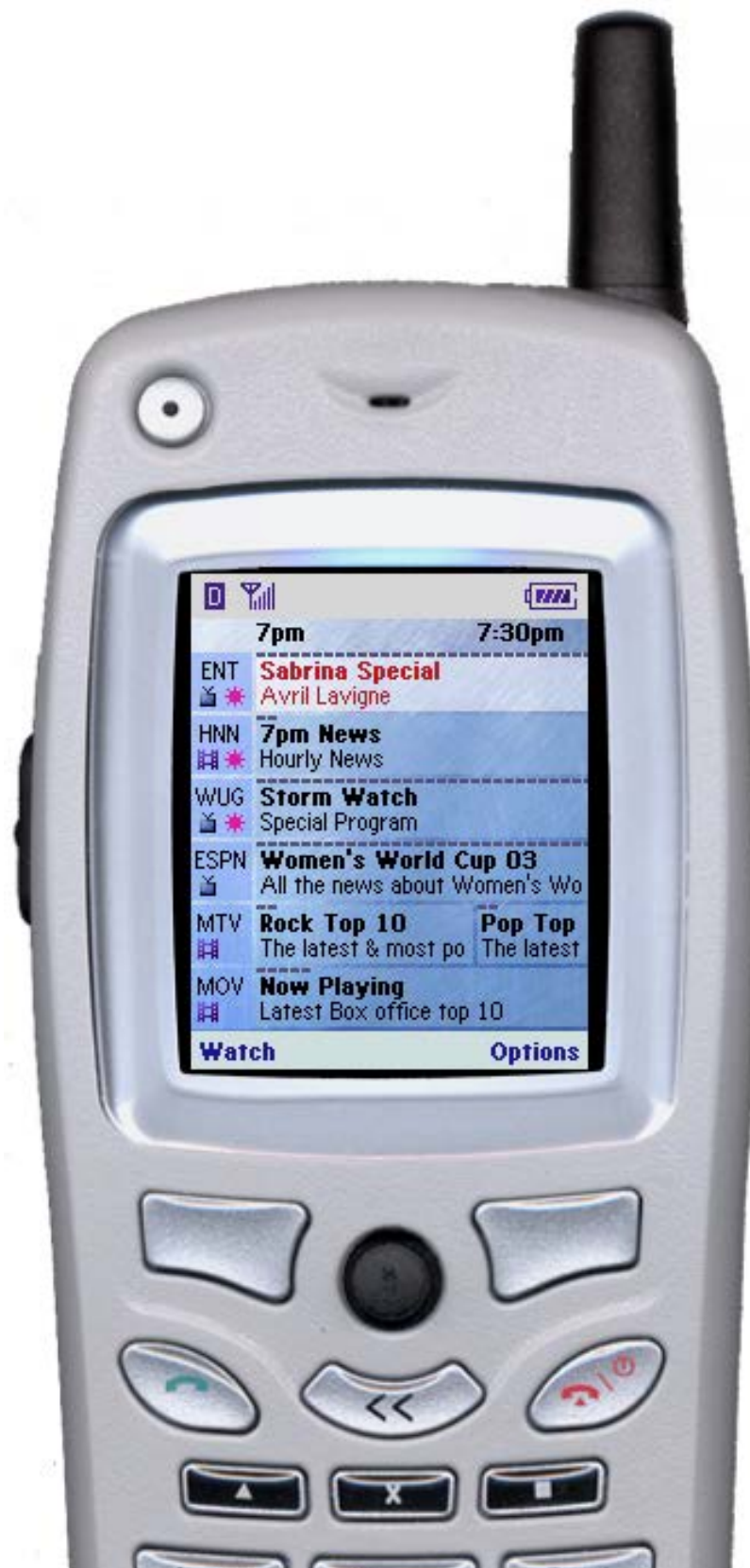


LSK (Yes)
or OK

Auto dismiss after x seconds.



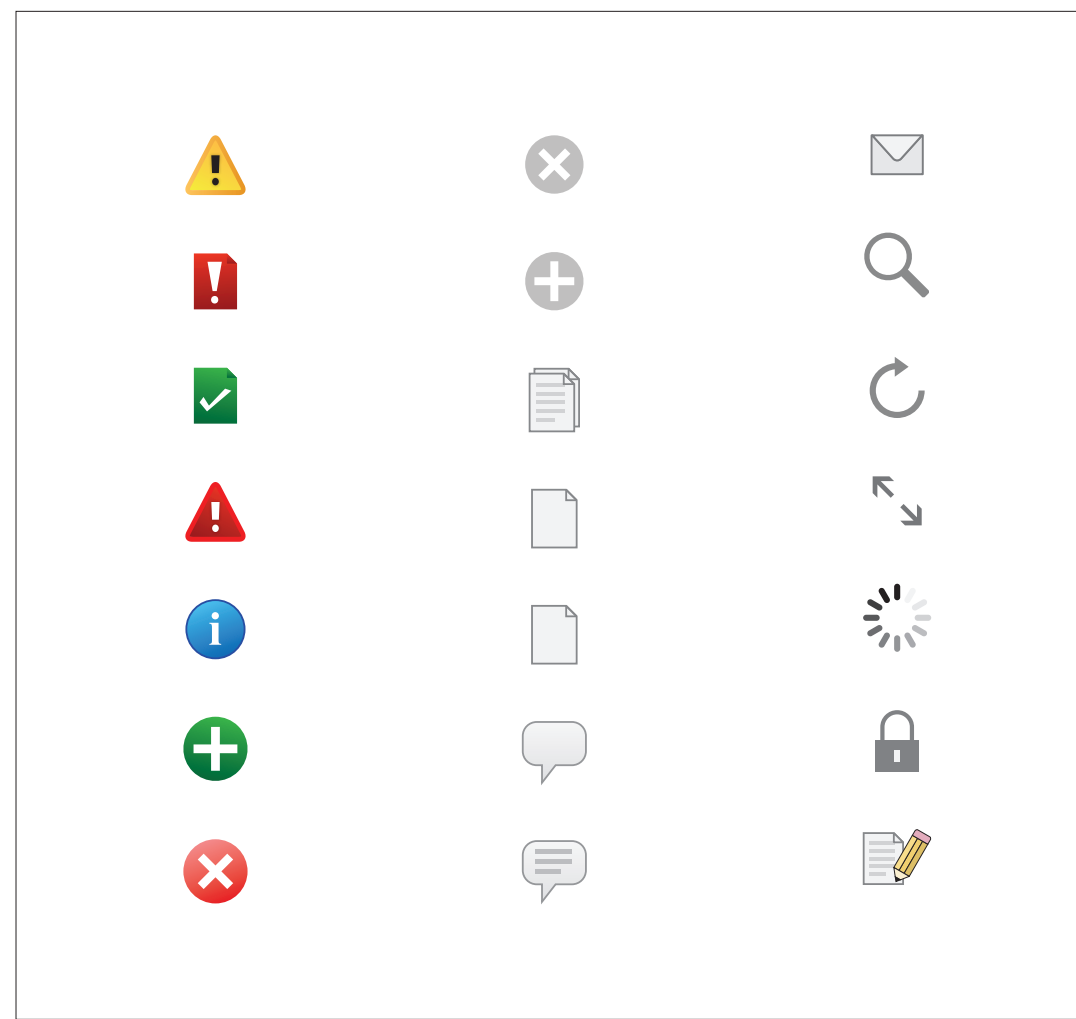
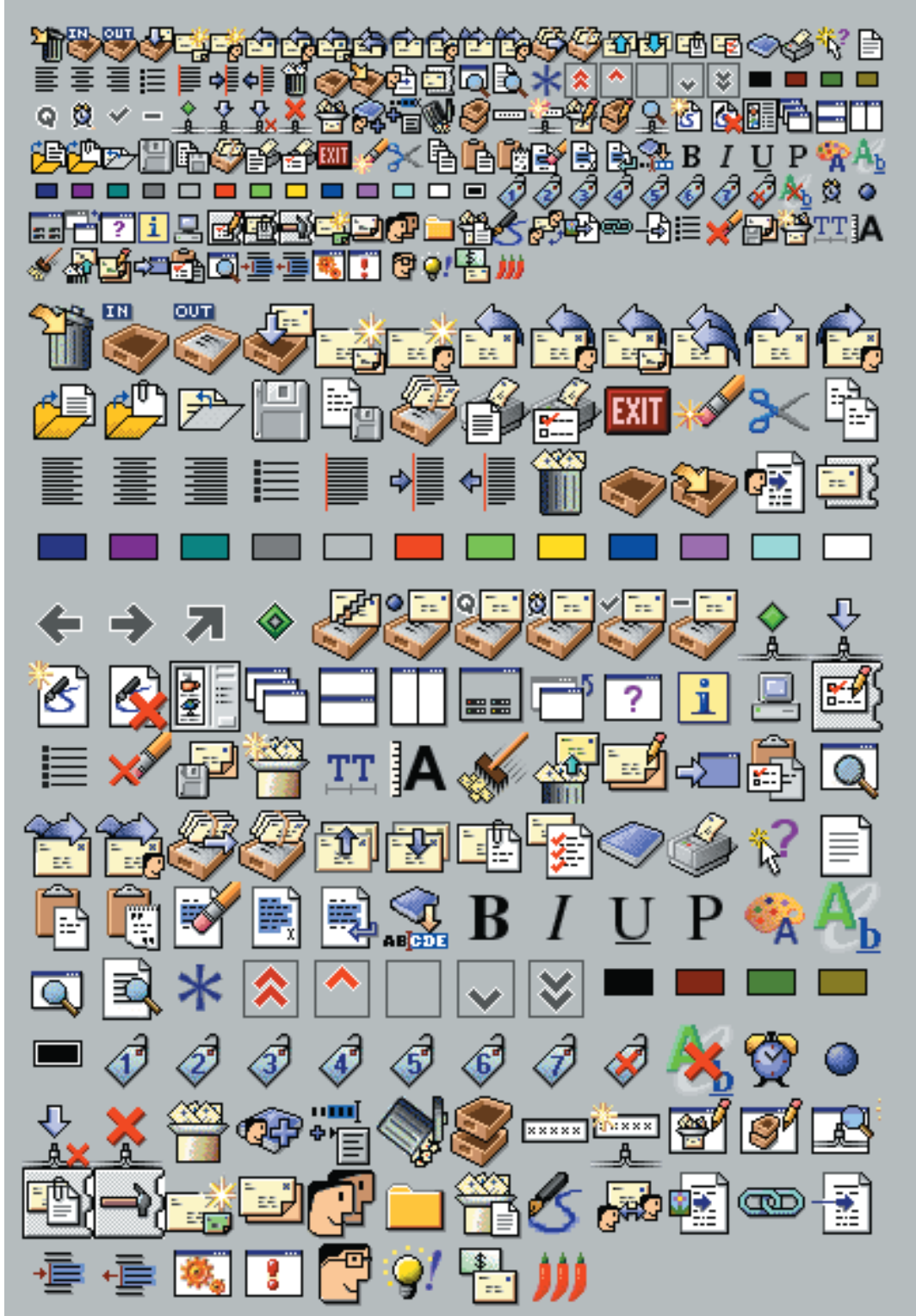




Graphic Assets/Specs

Icons, Image Files,

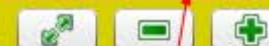
Color Specs



My Scenarios ▾

- My Scenario #1
- ✓ My Scenario #2
- My Scenario #3
- SAVE
- SAVE AS

Zoom



Avenir 35 Light (White/Opacity 80%)

Avenir 55 Roman (White/Opacity 80%)

Arial 11pt

Arial 12pt Bold

Arial 12pt

Account Takeover

Description Employees or a criminal 3rd-party take over the account of a customer and empty the account or max out the credit line.

Line of Business Credit Card; Retail Bank; Securities Brokerage

Fraud/Compliance Cat. Account Takeover; Employee Fraud; Identity Theft

Perpetrator Organized Crime; Employee

Patterns Employees: Add one or more authorized users or change address, issue new plastic/checks/PIN, all without a phone call from a customer service rep.

Business App/System Core Banking; CRM; Trading

Related Scenarios Identity Theft

- ☒ New Search
- ☐ Search within results

Search

Title	Description
ACH Credit Card Fraud	A fraudster maxes out the credit line on a credit card, and then generates a fraudulent ACH transaction from an ...
Air Loans	This is a non-existent property loan where there is usually no collateral. An example of an air loan would be where ...
Account Takeover	Employees or a criminal 3rd-party take over the account of a customer and empty the account or max out the credit line...
Cash Collateral Loan	Credit accounts that are cash collateralized and are used in the layering and integration stages of money laundering. ...
Chargeback Fraud	A customer pays for a good or service in a mail order/telephone order (MOTO) transaction but then claims never to ...
Front-Running	A broker trades in a security on their own account immediately before executing trades on one of his/her customers ...

Demand designers to
produce high quality work.

Consider integrating
qualified designers into
the engineering team,
and let them implement
their designs directly.

Some Tips

Not All Graphic
Designers have the
same skill set. So,
understand your
needs first

Not all Interaction
designers can work
as a graphic/visual
designer

Icon design is
HARD, and you
should find a good
icon designer with
experience

Iterative Design

often happens

informally between

engineers and

designers

Find UI Engineers
with experience
working with
Designers

Involve Designers
Early in the Product
Development Process
(e.g., contextual inquiry, product
concept development etc.)

Designers need to
work closely with
both the engineering
team and the product
management team

Find designers who
can **write** well

Experienced
Interaction Designers
would make a good
Product Manager

Develop *your own*
Sensitivity for Visual
and Interaction
Design. You will attract
good designers

