

Scalable Adaptive Graphics Environment (SAGE™)

SAGE is cross-platform, community-driven, open-source visualization and collaboration middleware that utilizes shared national and international cyberinfrastructure for the advancement of scientific research and education.



Scalable Adaptive Graphics Environment (SAGE™)

A framework enabling participants to access, display and share a variety of data-intensive information, in a variety of resolutions and formats, from multiple sources, on tiled display walls of arbitrary size.

-Digital-cinema animations

-High-resolution images

-High-definition video-teleconferences

-Presentation slides

-Documents

-Spreadsheets

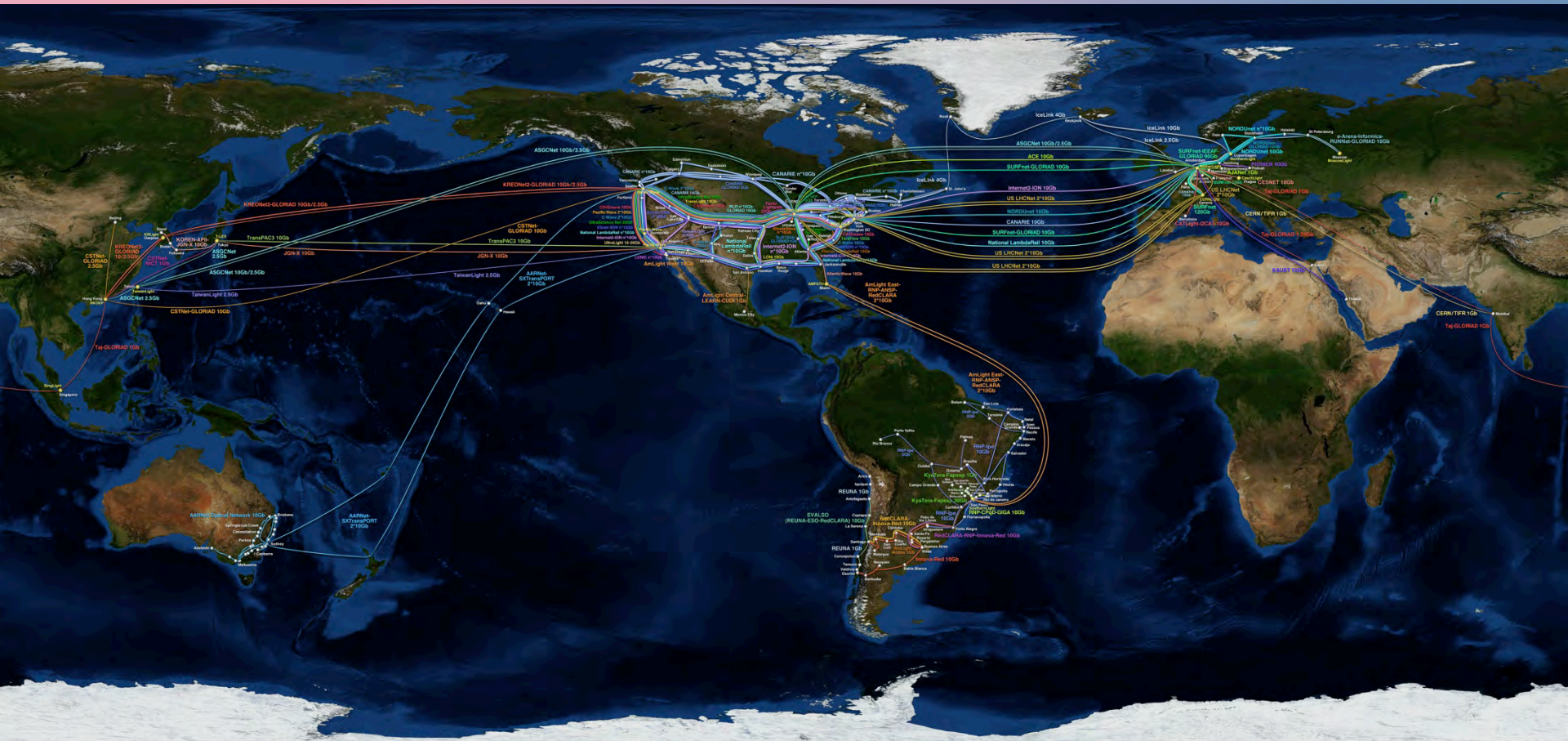
-Laptop screens

SAGE2

Users want to juxtapose more than one visualization, not use the entire wall for a single visualization.



The Global Lambda Integrated Facility (GLIF) Map



iOS7 UIO Guidelines

Minimum target size

44 pixels width by 44 pixels height

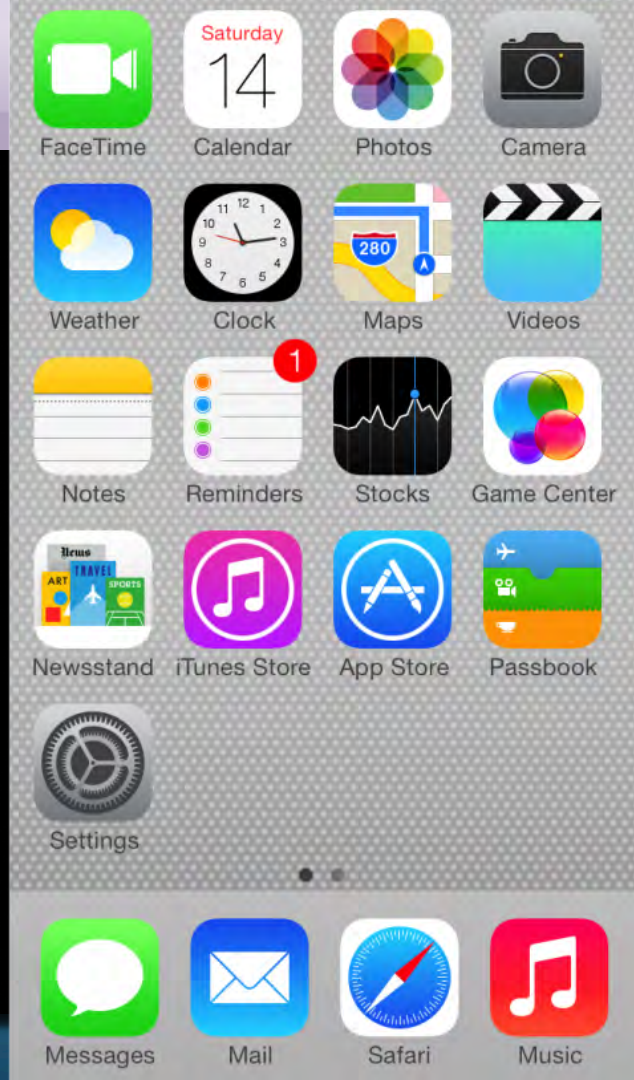
Pixel width of the average adult index finger

1.6 to 2 cm (16 – 20 mm) = ~ 45 – 57 pixels

Pixel width of the average thumb

1 inch (2.5 cm) = ~72 pixels

(An MIT Touch Lab study of Human Fingertips to investigate the Mechanics of Tactile Sense)



iOS 6 and 7 icons

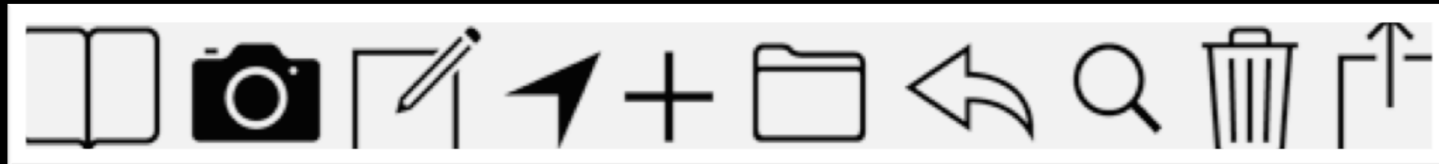


Icons

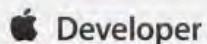
App icon - launch icon



Bar icons - menu icons



iOS Developer



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iOS Developer Program

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iOS Human Interface Guidelines

Developer

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Resource Types

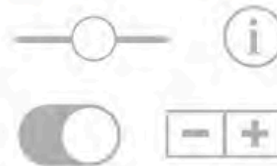
- Getting Started
- Guides
- Reference
- Release Notes
- Sample Code
- Technical Notes
- Technical Q&As
- Video
- Xcode Tasks

Topics

- Audio & Video
- Data Management
- General
- Graphics & Animation
- Languages & Utilities
- Mathematical Computation
- Networking & Internet
- Performance
- Security
- User Experience

iOS 7 Design Resources

Learn how to transition your app's [user interface](#).



Documents



2041 of 2041

Title	Resource Type	Topic	Framework	Date
▶ Resolving App ID Prefix Mismatching	Technical Q&As	Languages & Utilities Distribution Tools	Security	2014-09-10 First Version
▶ Resolving the Invalid Signature binary rejection	Technical Q&As	Languages & Utilities Distribution Tools	Security	2014-09-10 First Version
▶ Resolving the Potential Loss of Keychain Access warning	Technical Q&As	Languages & Utilities Distribution Tools	Security	2014-09-10 First Version
▶ How iOS Determines the Language For Your App	Technical Q&As	User Experience	UIKit	2014-09-10 First Version
▶ Reducing Download Size for iOS App Updates	Technical Q&As	Data Management		2014-09-10 Content

iOS Human Interface Guidelines

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Creating Compatible Web Content

This chapter covers best practices in creating web content that is compatible with Safari on the desktop and Safari on iOS. Many of these guidelines simply improve the reliability, performance, look, and user experience of your webpages on both platforms. If your target is iOS, the first step is to get your web content working well on the desktop. If your target is the desktop, with minimal modifications, you can get your web content to look good and perform well on iOS too.

For example, you need to pay attention to the layout of your content and execution limits on iOS. If you use conditional CSS, as recommended in "[Optimizing Web Content](#)," your webpages optimized for iOS still work in other browsers. Read the rest of this document for how to optimize your web content for Safari.

iOS Note: When designing your webpages, be aware of how Safari on iOS presents webpages to the user and how the user interacts with your webpages using gestures to zoom, pan, and double-tap. Read [iOS Human Interface Guidelines](#) for metrics and tips on designing user interfaces for iOS.

Use Standards

The first design rule is to use web standards. Standards-based web development techniques ensure the most consistent presentation and functionality across all modern browsers, including Safari. A well-designed website probably requires just a few refinements to look good and work well on Safari.

The WebKit engine, shared by Safari on the desktop and Safari on iOS, supports all the latest modern web standards, including:

- HTML5
- XHTML 1.1
- CSS3
- ECMAScript 3 (JavaScript)
- DOM Level 2
- AJAX technologies, including XMLHttpRequest

Icon Requirements for iOS

Icon Requirements and Tips for Apple Devices

iOS Human Interface Guidelines (full version PDF)

p. 56 – Icons and Graphics

p. 207 – Icon Design

Icon and Image Design

- [“Icon and Image Sizes”](#) (page 207)
- [“App Icon”](#) (page 209)
- [“Launch Images”](#) (page 215)
- [“Bar Button Icons”](#) (page 218)
- [“Newsstand Icons”](#) (page 221)
- [“Web Clip Icons”](#) (page 224)
- [“Creating Resizable Images”](#) (page 225)

Icon Requirements for iOS – App Icon

iPhone /iPod 60 x 60, 120 x120 pixels

iPad 76 x76, 152 x 152 pixels

120 x 120 px icon without the mask



with the mask



Icon Requirements for iOS – App Icon

App Icon submitted
120 x 120 px



iOS 7 display of an app
icon on the Home screen



iOS 6 display of an app
icon on the Home screen



Icon Design

Royalty free vector shapes at all-silhouettes.com

<http://www.all-silhouettes.com>



Icon Design

1. Artboard 120x120



2. Gradient Rectangle



3. Vector Shape



4. Color Guide - 3 X



5. Off White highlight



6. Gradient Shape



GUI - Layout & Spacing

Consistent alignment and spacing contributes to more efficient information access and positive user experience.

Spacing allows information to appear more organized.

GUI - Layout & Spacing

White Space is generally defined as the space between printed text or graphics.

Spacing border – consecutively equal and enough spacing given to GUI elements.

GUI - Layout & Spacing

Alignment – the position of GUI elements in relation to each other and in the scape they reside.

Consistent

Grid

Balance

GUI - Layout & Spacing

The concept of alignment says that everything on a page should be visually connected to something else on the page.

Nothing should be placed arbitrarily.

When elements are aligned they are connected to each other, even if they are separated on the page.

Composition

Composition is the placement or arrangement of visual elements or ingredients in a work of design, as distinct from the subject of a work.

It is the organization of the elements of art according to the principles of design.

Basic Composition Principles

Hierarchy

Variety

Unity

Balance

Contrast

Rhythm

Basic Composition Principles

Hierarchy

A good design contains elements that lead the reader through each element in order of its significance.

The type and images should be expressed starting from most important to the least.



Basic Composition Principles

Variety

Objects with different characteristics lacking uniformity.



Basic Composition Principles

Unity

When all elements are in agreement, a design is considered unified.

No individual part is viewed as more important than the whole design.

A good balance between unity and variety must be established to avoid a chaotic or a lifeless design.

Basic Composition Principles

Balance

It is a state of equalized tension and equilibrium, which may not always be calm.

- Symmetry
- Asymmetrical produces an informal balance that is attention attracting and dynamic.
- Radial balance is arranged around a central element. The elements placed in a radial balance seem to 'radiate' out from a central point in a circular fashion.

Basic Composition Principles

Balance



Basic Composition Principles - Contrast

Contrast

Opposite ideas to keep interest and add dynamics

- Space
 - Filled / Empty
 - Near / Far
 - 2-D / 3-D
- Position
 - Left / Right
 - Isolated / Grouped
 - Centered / Off-Center

Basic Composition Principles - Contrast

Contrast

Emphasis is created by contrasting size, positioning, color, style, or shape. The focal point should dominate the design with scale and contrast without sacrificing the unity of the whole.

Similarity and contrast

Planning a consistent and similar design is an important aspect of a designers work to make their focal point visible. Too much similarity is boring but without similarity important elements will not exist and an image without contrast is uneventful so the key is to find the balance between similarity and contrast.

Basic Composition Principles - Con

- Form
 - Simple / Complex
 - Beauty / Ugly
 - Whole / Broken
- Direction
 - Stability / Movement
- Structure
 - Organized / Chaotic
 - Mechanical / Hand-Drawn

Sternberg George and Vladimir – Man with a movie camera film poster



Basic Composition Principles - Contrast

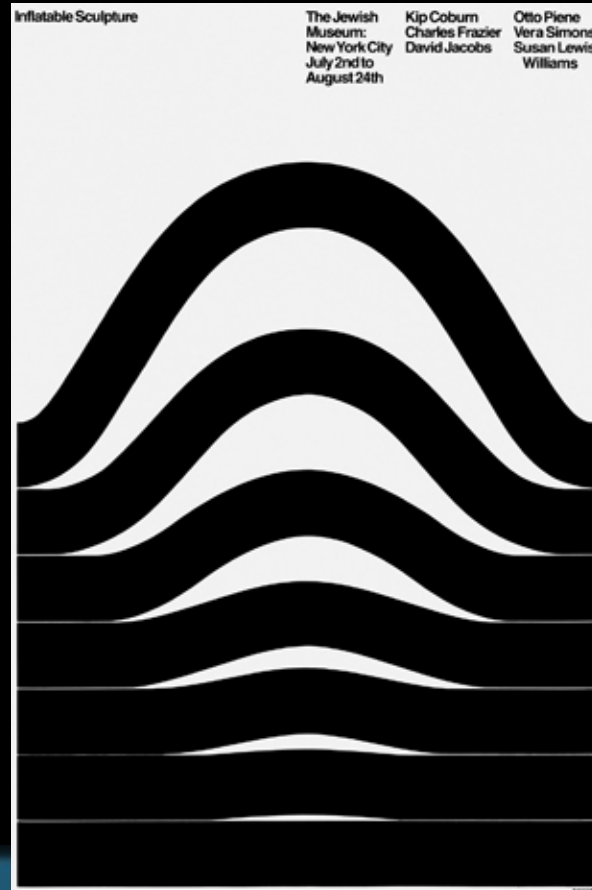
- Size
 - Large / Small
 - Deep / Shallow
 - Fat / Thin
- Color
 - Grayscale / Color
 - Light / Dark
- Texture
 - Fine / Coarse
 - Smooth / Rough
 - Sharp / Dull

Basic Composition Principles - Contrast

- Density
 - Transparent / Opaque
 - Thick / Thin
 - Liquid / Solid
- Gravity
 - Light / Heavy
 - Stable / Unstable

Basic Composition Principles - Contrast

Rhythm



Arnold Saks poster for Jewish museum
exhibition Inflatable Sculpture in NYC