

# Apple's Design Philosophy and Principles

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# Contents

- Overview
- Motivation
- Apple Product Design in a nutshell
- Human Interface Guidelines
- Apple's design philosophy : Connecting to Don Norman
- Don Norman at apple and his critique
- Analysing Don Norman's critique
- Steve Jobs at Apple
- Apple after Steve Jobs demise



# Overview



We study **Apple's design philosophy** and how it is synonymous with great design.

We want to explore what design principles Apple products incorporate and connect them with **Don Norman's User centered design principles.**

Further, we critique Don Norman's opinion of Apple's recent product designs.

Finally, we explore changes in design of Apple products during and after Steve Jobs' reign as CEO.



# Motivation



The never ending battle of brand supremacy !

Status symbol? Performance? Camera Quality?  
Pricing ?

Design ! What's your pick?

**SAMSUNG**

We started off by comparing Apple as a mobile phone brand but soon realized that it has completely revolutionized the way product design itself is perceived, raising the expectations of users.





# Apple Product Design in a nutshell

- **Simplicity and minimalistic :** Apple products have one of the most intuitive and simplest UI out there because complex designs tend to overwhelm users. This is one of the main reasons why it commands such loyalty from users, even when the price tag remains steep. According to Don Norman, the most important characteristics of a good design are : discoverability and understanding.
- **Distinctive design :** Clean, friendly and fun. Successful combination of aesthetic design without compromising functionality. As Steven Bradley says, "Human beings have an attractiveness bias; we perceive beautiful things as being better, regardless of whether they actually are better".
- **Attention to detail :** By working closely with manufacturers, Apple is able to keep a tight rein on its quality control and it is able to prevent cheap and subpar materials from entering the process and becoming part of the finished product.
- **Well-structured product design process :** A design team only has around 12 to 20 people, and this limit is advantageous in keeping the team focused. Willingness to put its products through successive design iterations, to stay up to date with new technology and expectations of people.

# Human Interface Guidelines

Apple has its own set of Human interface guidelines set for its iOS, macOS application developers so that a ‘fluid’ and ‘uniform’ experience is maintained and it integrates seamlessly with other Apple platforms.

- macOS
  - Themes
  - Visual Index
  - > App Architecture
  - > User Interaction
  - > System Capabilities
  - > Visual Design
  - > Icons and Images
  - > Windows and Views
  - > Menus
  - > Buttons
  - > Fields and Labels
  - > Selectors
  - > Indicators
  - > Touch Bar
  - > Extensions

These are the guidelines for macOS. It describes in detail various aspects of application architecture ranging from apps being built according to system capabilities to simple aspects like button design, indicators, menus etc.

The screenshot shows the Apple Human Interface Guidelines website. At the top right are links for Overview, Resources, Videos, and What's New. The main title is "Human Interface Guidelines" with a subtitle: "Get in-depth information and UI resources for designing great apps that integrate seamlessly with Apple platforms." Below this are four cards representing different platforms: macOS (laptop icon), iOS (smartphone and tablet icon), watchOS (watch icon), and tvOS (TV screen icon). Each card has a link labeled with the platform name followed by a right-pointing arrow.

# Relating iOS design principle with Don Norman's principles

**Visibility** is the basic principle that the more visible an element is, the more likely users will know about them and how to use them.

A **mapping** is a clear relationship between controls and the effect they have on the world, which should be as natural as possible.

**Affordance** refers to an attribute of an object that allows people to know how to use it. Essentially to afford means to give a clue.

## Aesthetic Integrity

Aesthetic integrity represents how well an app's appearance and behavior integrate with its function. For example, an app that helps people perform a serious task can keep them focused by using subtle, unobtrusive graphics, standard controls, and predictable behaviors. On the other hand, an immersive app, such as a game, can deliver a captivating appearance that promises fun and excitement, while encouraging discovery.

## Direct Manipulation

The direct manipulation of onscreen content engages people and facilitates understanding. Users experience direct manipulation when they rotate the device or use gestures to affect onscreen content. Through direct manipulation, they can see the immediate, visible results of their actions.

## Metaphors

People learn more quickly when an app's virtual objects and actions are metaphors for familiar experiences—whether rooted in the real or digital world. Metaphors work well in iOS because people physically interact with the screen. They move views out of the way to expose content beneath. They drag and swipe content. They toggle switches, move sliders, and scroll through picker values. They even flick through pages of books and magazines.

## Consistency

A consistent app implements familiar standards and paradigms by using system-provided interface elements, well-known icons, standard text styles, and uniform terminology. The app incorporates features and behaviors in ways people expect.

## Feedback

Feedback acknowledges actions and shows results to keep people informed. The built-in iOS apps provide perceptible feedback in response to every user action. Interactive elements are highlighted briefly when tapped, progress indicators communicate the status of long-running operations, and animation and sound help clarify the results of actions.

## User Control

Throughout iOS, people—not apps—are in control. An app can suggest a course of action or warn about dangerous consequences, but it's usually a mistake for the app to take over the decision-making. The best apps find the correct balance between enabling users and avoiding unwanted outcomes. An app can make people feel like they're in control by keeping interactive elements familiar and predictable, confirming destructive actions, and making it easy to cancel operations, even when they're already underway.

**Consistency** refers to having similar operations and similar elements for achieving similar tasks.

**Feedback** is the principle of making it clear to the user what action has been taken and what has been accomplished.

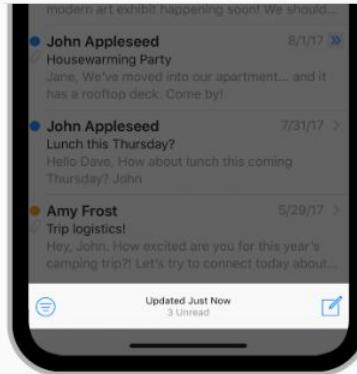
**Constraints** limit the range of interaction possibilities for the user to simplify the interface and guide the user to the appropriate next action.

# Feedback

According to Don Norman it's necessary to have a **feedback mechanism**, which informs about the ongoing functions of the device, which must be immediate and should be in such a way that keeps the user engaged.

## Feedback

Feedback helps people know what an app is doing, discover what they can do next, and understand the results of actions.



### Unobtrusively integrate status and other types of feedback into your interface.

Ideally, users can get important information without taking action or being interrupted. Mail, for example, subtly displays status information in the toolbar while navigating through mailboxes of messages. This information doesn't compete with the primary content onscreen, but can be checked at any time with a quick glance.

**Avoid unnecessary alerts.** An alert is a powerful feedback mechanism, but should be used only to deliver important—and ideally actionable—information. If people see too many alerts that don't contain essential information, they quickly learn to ignore future alerts. For additional guidance, see [Alerts](#).

# Feedback (cont.)

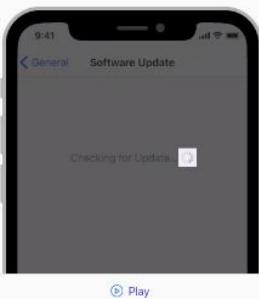
## Progress Indicators

Don't make people sit around staring at a static screen waiting for your app to load content or perform lengthy data processing operations. Use activity indicators and progress bars to let people know your app isn't stalled and to give them some idea of how long they'll be waiting.

See also [Loading](#).

## Activity Indicators

An activity indicator spins while an unquantifiable task, such as loading or synchronizing complex data, is performed. It disappears when the task completes. Activity indicators are noninteractive.



**Favor progress bars over activity indicators.** If activity is quantifiable, use a progress bar instead of an activity indicator so people can better gauge what's happening and how long it will take.

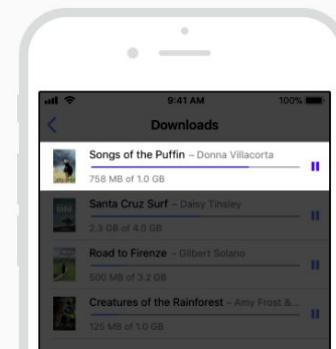
**Keep activity indicators moving.** People associate a stationary activity indicator with a stalled process. Keep it spinning so they know something's happening.

**If it's helpful, provide useful information while waiting for a task to complete.** Include a label above an activity indicator to give extra context. Avoid vague terms like *loading* or *authenticating* because they don't usually add any value.

These are instances of user engagement which are critical according to Don Norman.

## Loading

When content is loading, a blank or static screen can make it seem like your app is frozen, resulting in confusion and frustration, and potentially causing people to leave your app.



**Make it clear when loading is occurring.** At minimum, show an activity spinner that communicates something is happening. Even better, display explicit progress so users can gauge how long they'll be waiting.

**Show content as soon as possible.** Don't make people wait for content to load before seeing the screen they're expecting. Show the screen immediately, and use placeholder text, graphics, or animations to identify where content isn't available yet. Replace these placeholder elements as the content loads. Whenever possible, preload upcoming content in the background, such as while an animation is playing or the user is navigating a level or menu.

**Educate or entertain people to mask loading time.** Consider showing hints about gameplay, entertaining video sequences, or interesting placeholder graphics.



# Consistency

These are examples of maintaining consistency in product design.

By leveraging consistent elements throughout your entire experience,

## Buttons

Buttons initiate app-specific actions, have customizable backgrounds, and can include a title or an icon. The system provides a number of predefined button styles for most use cases. You can also design fully custom buttons.

## Typography

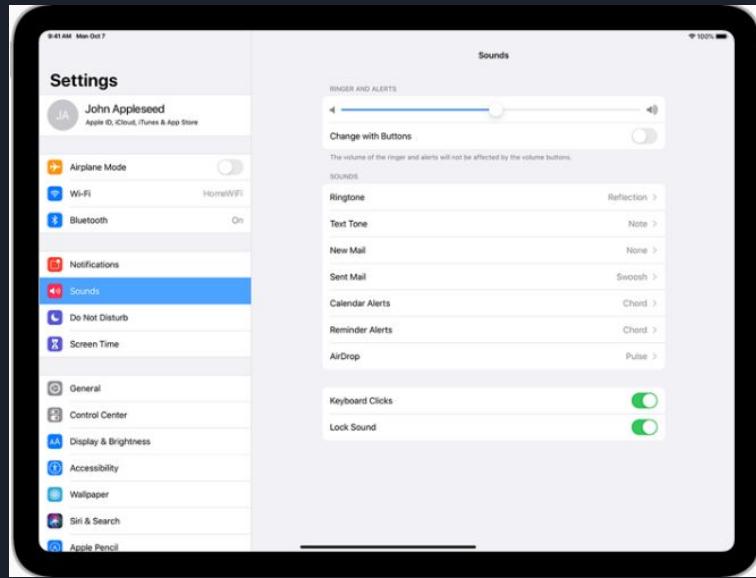
San Francisco (SF) is the system typeface in iOS. The fonts of this typeface are optimized to give your text unmatched legibility, clarity, and consistency. Download the San Francisco family of fonts [here](#). To learn about the Apple-designed symbols that integrate with the system font, see [SF Symbols](#).

(23pt)	John Appleseed
(22pt)	John Appleseed
(21pt)	John Appleseed
SF Pro Display (20pt)	<u>John Appleseed</u>
SF Pro Text (19pt)	John Appleseed
(18pt)	John Appleseed
(17pt)	John Appleseed
(16pt)	John Appleseed

**Emphasize important information.** Use font weight, size, and color to highlight the most important information in your app.

**If possible, use a single typeface.** Mixing several different typefaces can make your app seem fragmented and sloppy. Consider using one typeface and just a few font variants and sizes.

# Consistency (cont.)



## Tables

A table presents data as a scrolling, single-column list of rows that can be divided into sections or groups. Use a table to display large or small amounts of information cleanly and efficiently in the form of a list. Generally speaking, tables are ideal for text-based content, and often appear as a means of navigation on one side of a split view, with related content shown on the opposite side. For guidance, see [Split Views](#).

iOS provides three styles of table: plain, grouped, and inset grouped.



# Signifiers and mappings

Signifiers convey functions that the user can perform given a specific input. The signifiers should be as simple and clear as possible.

- › iOS
- › App Architecture
- › User Interaction
- › System Capabilities
- › Visual Design

Adaptivity and Layout

Animation

Branding

Color

Dark Mode

Materials

**Terminology**

Typography

Video

**Use familiar, understandable words and phrases.** Technology can be intimidating. Avoid acronyms and technical jargon that people might not understand. Use what you know about your audience to determine whether certain words or phrases are appropriate. In general, apps that appeal to everyone should steer clear of highly technical language. Such language may be appropriate in apps that target a more advanced or technical crowd.

**Keep interface text clear and concise.** People absorb short, direct text quickly and easily and don't appreciate being forced to read long passages to accomplish a task. Identify the most important information, express it succinctly, and present it prominently so people don't have to read too much to find what they're looking for or figure out what to do next.

**Identify interactive elements appropriately.** People should be able to tell at a glance what an element does. When labeling buttons and other interactive elements, use action verbs, such as Connect, Send, and Add.

**Avoid language that might sound patronizing.** Avoid *we*, *our*, *me*, and *my* (for example "our tutorial" and "my workouts"). They're sometimes interpreted as insulting or patronizing.

## Navigation Bar and Toolbar Icons

Use the following icons in navigation bars and toolbars. For developer guidance, see [UIBarButtonItem](#).

### TIP

You can use text instead of icons to represent items in a navigation bar or toolbar. For example, Calendar uses "Today," "Calendars," and "Inbox" in the toolbar. You can also use a fixed space element to provide padding between navigation and toolbar icons.

Icon	Name	Meaning	API
	Action (Share)	Shows a modal view containing share extensions, action extensions, and tasks, such as Copy, Favorite, or Find, that are useful in the current context.	<a href="#">action</a>
	Add	Creates a new item.	<a href="#">add</a>
	Bookmarks	Shows app-specific bookmarks.	<a href="#">bookmarks</a>
	Camera	Takes a photo or video, or shows the Photo Library.	<a href="#">camera</a>

It is important that these signifiers confirm to natural mappings that users are acquainted with for ease of usage.

Now comes the fun part.

Tognazzini worked at Apple with Steve Jobs in the early days. Norman joined Apple shortly after Jobs departed and then left shortly after Jobs returned in 1996.

They wrote an article in 2015 criticizing Apple on various aspects of user friendly design.

We critique the same but with an unbiased view:/

11.10.15

# How Apple Is Giving Design A Bad Name

For years, Apple followed user-centered design principles. Then something went wrong.

BY DON NORMAN AND BRUCE TOGNAZZINI | LONG READ

Don Norman

American researcher

jnd.org

Donald Arthur Norman is an American researcher, professor, and author. Norman is the director of The Design Lab at University of California, San Diego. He is best known for his books on design, especially *The Design of Everyday Things*. [Wikipedia](#)

Bruce Tognazzini

Bruce "Tog" Tognazzini is a usability consultant in partnership with Donald Norman and Jakob Nielsen in the Nielsen Norman Group, which specializes in human computer interaction. He was with Apple Computer for fourteen years, then with Sun Microsystems for four years, then WebMD for another four years. [Wikipedia](#)



# Some of the allegations

- ★ The **legibility of the text** is one of Apple's many design failures. What kind of design philosophy requires millions of its users to have to pretend they are disabled in order to be able to use the product?
- ★ **Recovery** dictates it should be as easy or easier to **undo** than to do. Browsers provide a back button so users can move back while surfing. iOS provides no such generalized method, so that, **for example, if you accidentally fire off a link from inside an app that takes you to Safari or YouTube, there is no straightforward means of recovery.**
- ★ Apple products deliberately **hide complexity** by obscuring or even removing important controls **reducing discoverability** of functions. The ultimate simplicity is a one-button controller: very simple, but because it has only a single button, its power is very limited unless the system has modes. **Modes** require a control to take on different meanings at different times, leading to confusion and errors. **Example: The Apple keyboard shows the letters in upper-case, no matter what is actually being typed. The only way of telling whether the keyboard will produce a capital or a lower case letter is to look at the keyboard's up-pointing arrow, which is either black or white.**
- ★ Lack of consistency : “**Rotate the iPhone, and keyboards change their layouts; rotate an iPad, and the home screen icons reorder themselves, with no simple way to predict where an icon will end up.**” The apps need to get re-ordered to fit to a different screen arrangement. There is a set way in which the apps get rearranged. Can't be so rigid about it. The horizontal typing keyboard was made for the purpose of providing more characters on the same screen.

# Style and appearance outweighing understandability and usage?

*The headline of a Forbes article says it all: "Apple iOS 9 has 25 Great Secret Features." Secret features? If these are such great features, why are they secret?*

The original principles for Apple's design stressed the importance of making systems understandable, easy to learn without manuals, and functional. Somewhere along the line, Apple lost track of the key principles that it used to follow.

**Modelessness** disappeared sometime after 2008.

**Forgiveness and Mental-Model** disappear in the jump to iOS, along with the separation of Explicit and Implied Actions.

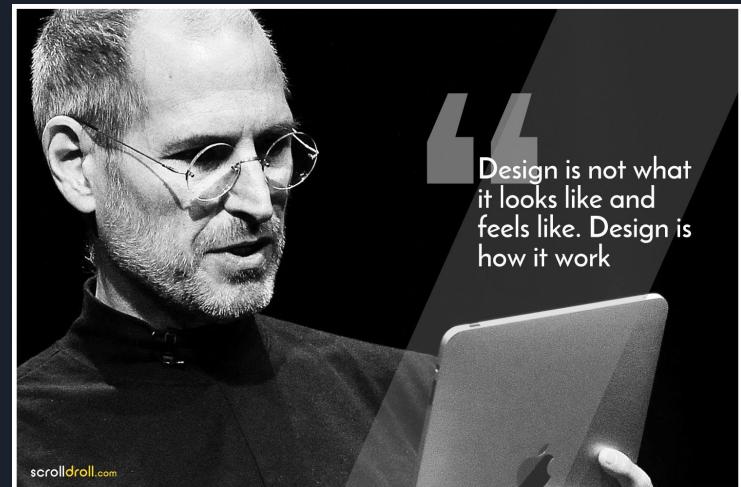
**See and Point** disappeared from the iOS Guidelines in late 2010, when moving to iOS 4.



# The man behind it all: Steve Jobs

Studying Apple's design philosophy is incomplete without him. It was Steve Jobs outlook and fanatic attention to detail and symmetry that made the brand what it is today.

Jobs' love of **simplicity in design** was honed when he became a **practitioner of Buddhism**. After dropping out of college, he made a long pilgrimage through India seeking enlightenment, but it was mainly the Japanese path of **Zen Buddhism** that stirred his sensibilities.



# Steve Jobs at Apple : A quick recap



- Steve Jobs and Steve Wozniak co-founded Apple in 1977, introducing first the Apple I and then the Apple II.
- Apple went public in 1980 with Jobs the blazing visionary and Wozniak the shy genius executing his vision.
- Executive John Scully was added in 1983 and in 1985, Apple's Board ousted the combative Jobs in favor of Scully.
- Away from Apple, Jobs invested in and developed animation producer Pixar and then founded NeXT to create high-end computers; NeXT eventually led him back to Apple.
- Jobs returned to Apple in the late 1990s and spent the years until his death in 2011 revamping the company, introducing the iPod, iPhone, and iPad, transforming technology and communication in the process.



# Steve Jobs returns

- What he found out was that Apple had been producing multiple versions of the same product to satisfy requests from retailers. **For instance, the company was selling a dozen varied versions of the Macintosh computer.** Using the philosophy, "Deciding what not to do is as important as deciding what to do," Jobs reduced the number of apple products by 70 percent.
- In less than a year, he ended the Mac clone era and distilled Apple's product matrix into a four-box grid of computers: pro desktop, pro notebook, consumer desktop and consumer notebook **to clear away confusion among consumers.**
- Jobs believed that technology is worthless unless it is also tied to elegant form, function, ease-of-use. For example, The original iMac featured a **revolutionary new design.** Like all of the other products that Apple has introduced under Jobs, **it was stripped of everything but the necessities;** Apple highlighted how easy **it was to connect to the Internet with its "There's No Step Three" ad campaign.** Floppy Drive was removed.
- Starting with the **iPod** in 2001, and then continuing with the **iPhone** and **iPad** over the next decade, Jobs rejuvenated the ailing Apple, putting it at the forefront of technology and communications.
- The first smartphone was introduced that made a touch interface that was almost **instantly intuitive** and that completely **shunned the use of a stylus.**



# Aftermath

*Apple's share price has grown fourfold since Tim Cook replaced Jobs as chief executive in 2011. The company hit a \$1tn market capitalisation 42 years after Apple was founded, in 2018. It has done well as a business.*

- Cook has been criticized for lacking the same kind of technological vision and design knowledge of his predecessor. Apple, in turn, has suffered from a **creative stagnancy** that has led to **fewer new product categories in comparison to the Jobs era** of the company's history.
- Apple's products throughout this decade have since **primarily undergone upgrades** rather than the introduction of any new product designs.
- The 2015 release of the Apple Watch was the most significant new venture since Jobs' absence, which can't be compared to other successful products.
- Apple's quality of being '**exclusive**' and having 'tightly integrated' **products that work well together went down**. Most notable was Apple's \$3-billion acquisition of Beats by Dre in 2014, though it has since **been allowed to run as an independent subsidiary**. One thing that has always remained constant in all Apple products is **compatibility**. User experience and the **ease of sync between every product line**, has been the core reason why people have bought more and more Apple products.



# What Jobs wouldn't have liked at Apple

- **iPhones with screens bigger than 3.5 inches**: Apple's original iPhone and the several generations of models that followed it all featured 3.5-inch screens, a screen size that Steve Jobs once described as the "perfect size for consumers". He also later derisively referred to rivals' larger-screen smartphones as "Hummers."
- **Tablets smaller than the original iPad**: According to Jobs a 10 inch screen is the appropriate size for a tablet. Still, under Cook, Apple went on to release the iPad mini (which was quite opposite to what Jobs did when he returned to Apple) increasing the confusion of the consumers.
- **Non-skeuomorphic software design**: Skeuomorphs are realistic imitations of real-world objects and were a major component of early iOS designs. Though it is accepted that overuse of this design approach can also make software look cluttered and tacky.
- **iPad Pro**: Jobs was famously opposed to pairing a stylus with a tablet. Was Jobs right? Nope. Look over at Samsung and you'll see it's Galaxy Note line has been popular in spite of prominently featuring a stylus for its advanced features. A finger might be great for simple interactions, but the precision of a stylus is hard to beat.

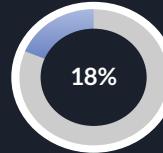


# Market trends

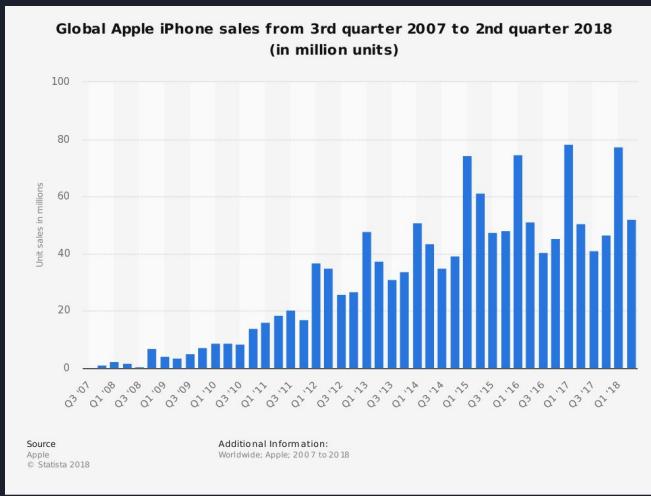
- Apple has sold over 1.3 billion iPhones since launch (2007).
- Since 2001, Apple's stock price has grown by 15,000% making the company worth \$1 trillion.
- Apple sells 18% of smartphones globally and earns 87% of smartphone profits.



Profit share



Smartphone sales globally





# Conclusions

Apple still is one of the best companies in terms of design, and it conforms to most of Don Norman's principles.

The products are user friendly and have an aesthetic appeal, though there have been attempts to introduce/explore new designs which hasn't appealed to everyone's palate.

The principles Jobs instilled in the company still are reflected in many places, though there has been a need to keep up with user demands.

Apple has created a niche for itself but only in the 'luxury products' segment, regular users find it difficult to afford, some features are too advanced for the regular user.

Putting a conclusion on 'good design' is pretty difficult. Do you like how the iPhone 11 looks? Quite subjective:/





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Thank you!

