

# 05. Mobile Guidelines

Faculty of Art & Design  
Chair of Interface Design

Joatan Preis Dutra  
joatan.preis.dutra@uni-weimar.de



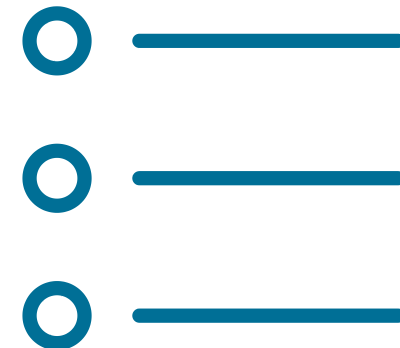
<http://www.uni-weimar.de/medien/wiki/IFD:MobileMediaDesign-SS16>



Mobile  
Media  
Design

# Summary

1. Schedule	3
2. Platforms	5
3. Guidelines	9
3.1 Interface Elements	14
3.2 Interface Structure	24
3.3 Designing for both OS	32
4. iOS & Android Comparison	73
5. WHS Apps in Germany	123
6. Overview & Tips	153
6.1 Heuristics	155
6.2 Designing for 4 – 5,5"	160
6.3 Prototype Tips	166
7. App Project	176
8. References	190



# Schedule







# Course Schedule and Details

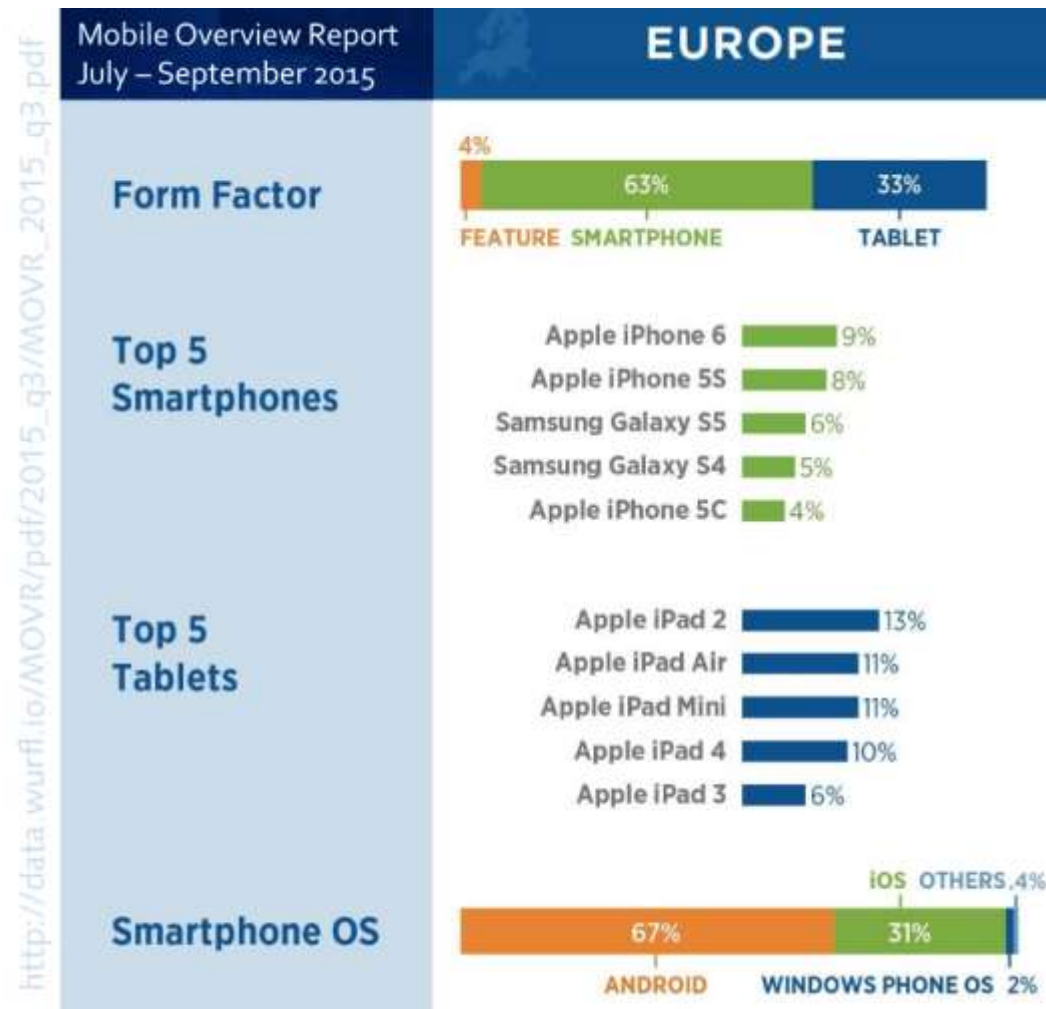
- 18.04 MMD 01 - Introduction | MMD 02 - Media & Mediatization
- 25.04 MMD 03 - Mobile Media & Apps | MMD 04 - UNESCO WHS Tourism in Germany / Project Description
- 06.05 *Deadline at 23:59 of App Evaluation*
- 09.05 MMD 05 - Mobile Guidelines | MMD 06 - Icon Design / Project Consultation
- 23.05 MMD 07 - References & Writing / Project Consultation
- 13.06 Students' Prototype Presentations – **Adults' Group**
- 20.06 Students' Prototype Presentations - **Teenagers' Group**
- 04.07 MMD 08 - Closing Lecture & Feedback
- 31.07 Deadline for the paper/essay: 23:59



# Platforms



# Mobile OS in Europe (July - September 2015)

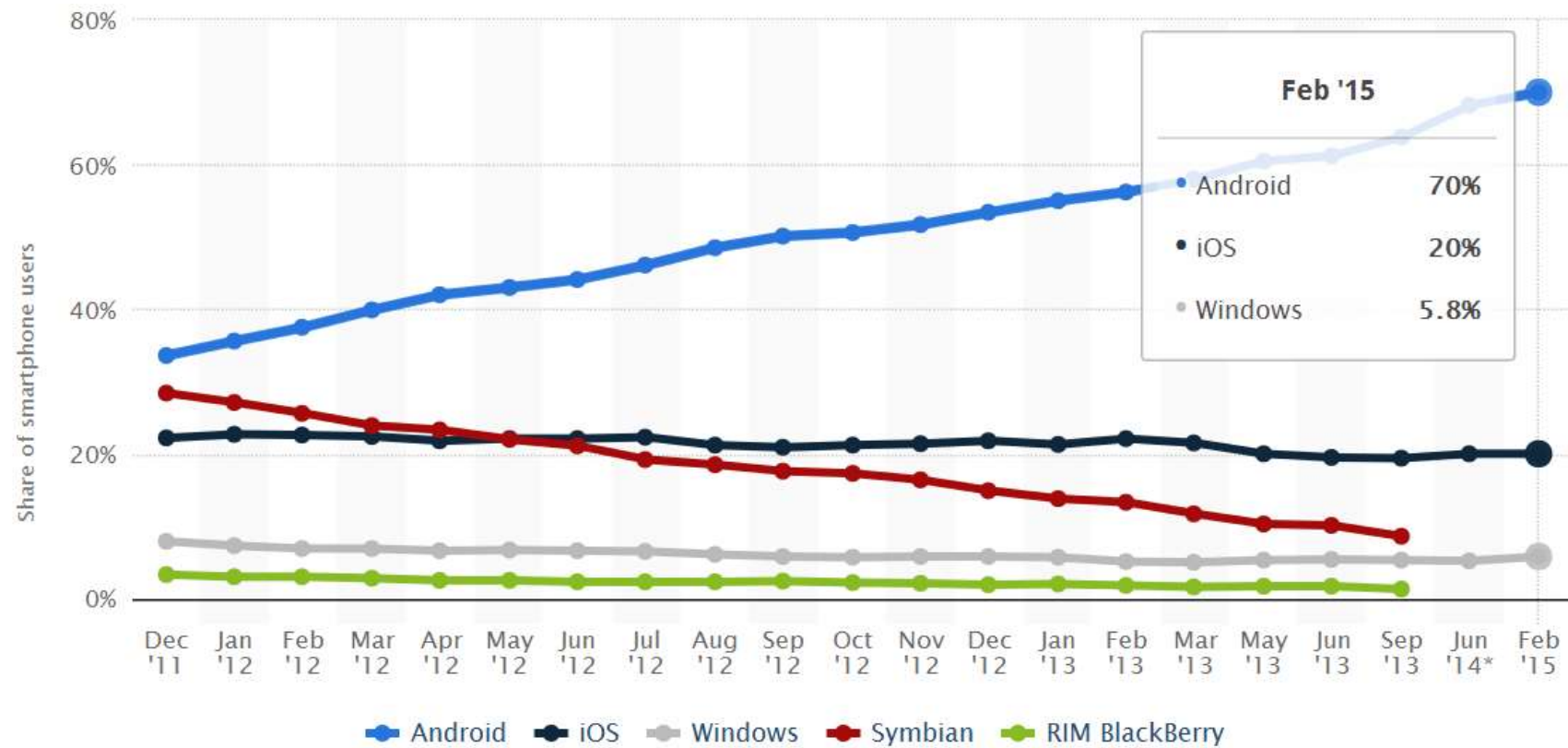


## OS:

- 67% Android
- 31% iOS

# Mobile OS in Germany

(December 2011 – February 2015)

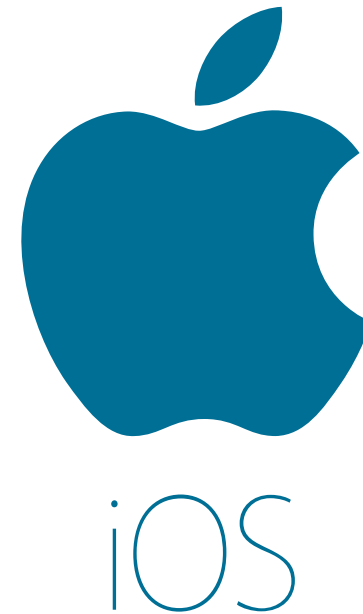


Market share of smartphone operating systems in Germany from December 2011 to February 2015

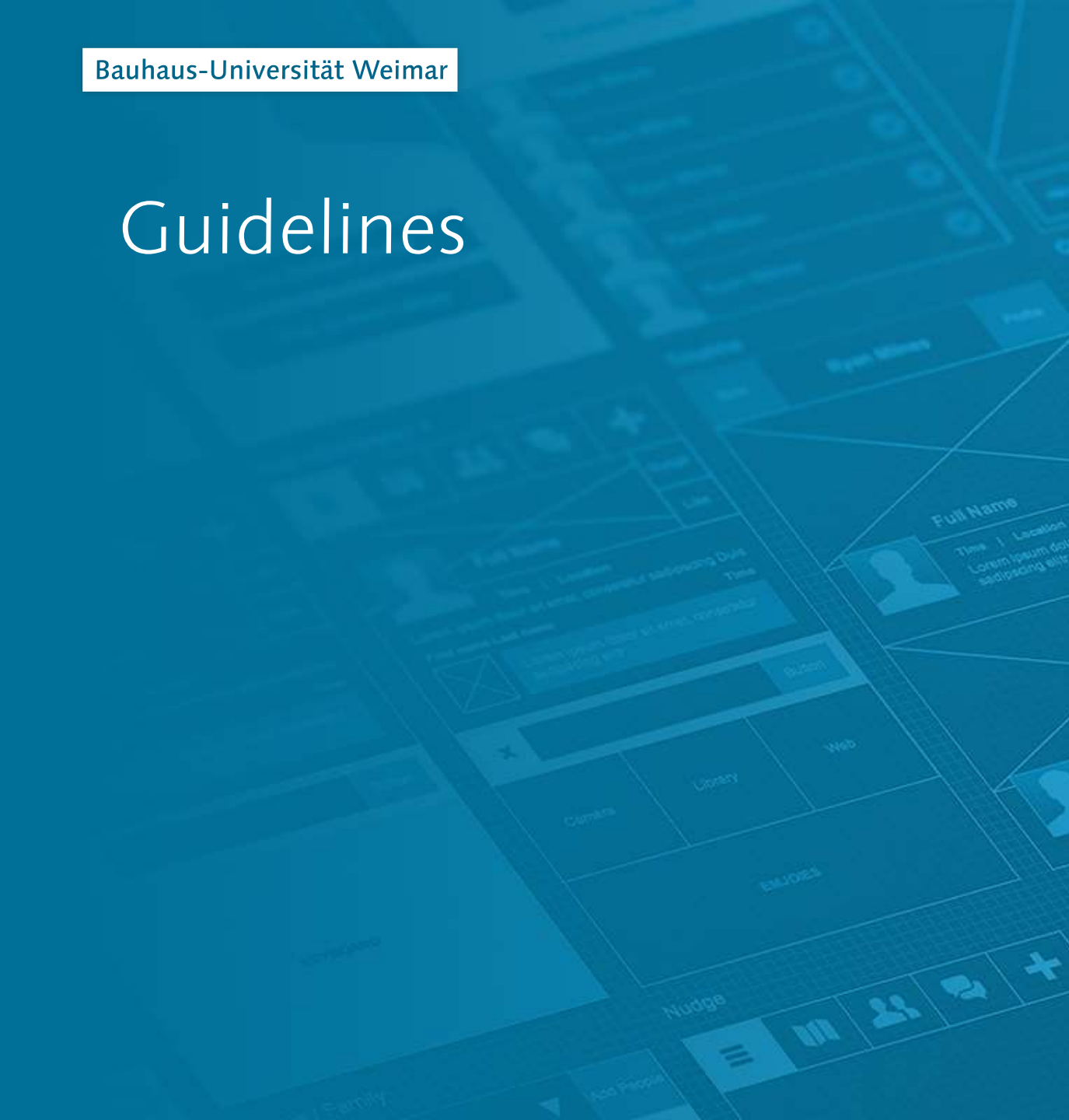


# Android & iOS

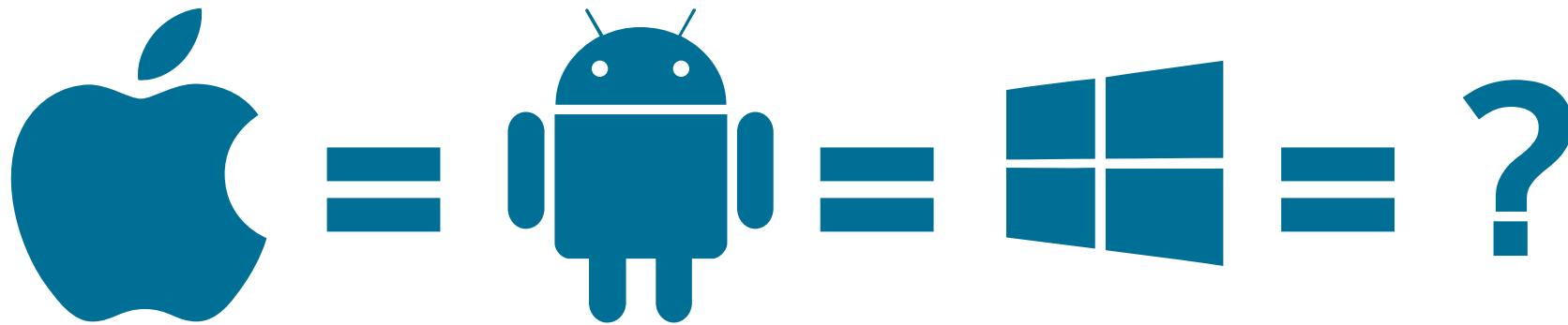
Two most popular mobile platforms



# Guidelines



# Guidelines

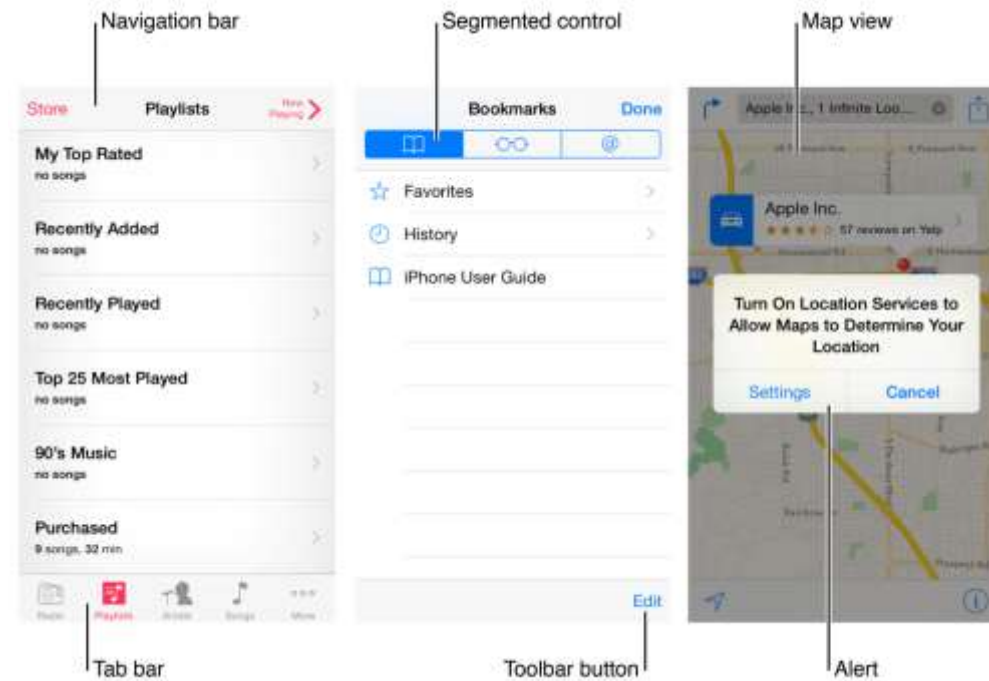
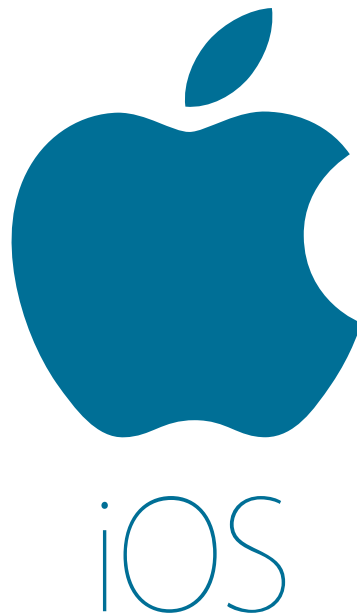




# Official Design Guidelines: iOS

## iOS Human Interface Guidelines

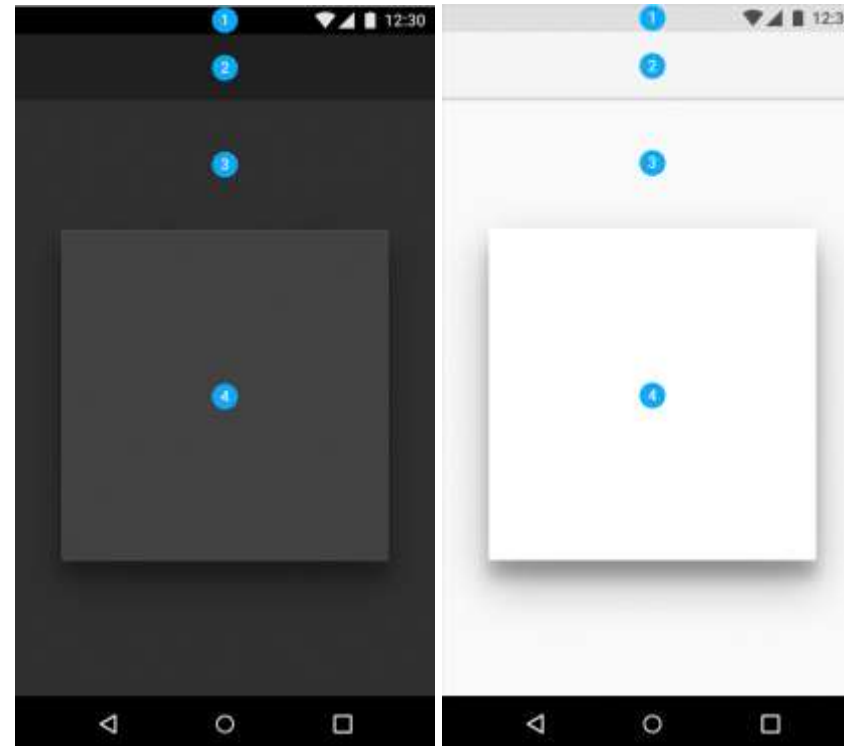
- <https://developer.apple.com/library/ios/documentation/UserExperience/Conceptual/MobileHIG/index.html>



# Official Design Guidelines: iOS

Design | Android Developers

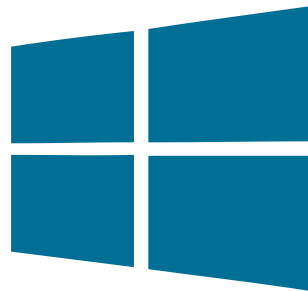
- <http://developer.android.com/design/index.html>



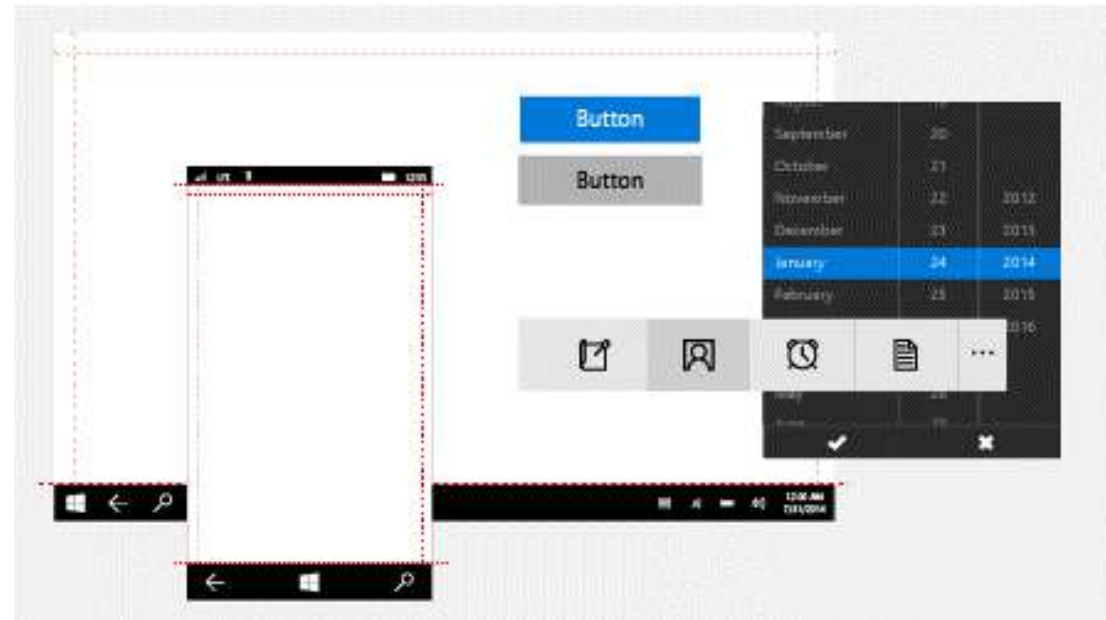
# Official Design Guidelines: Windows

## Design Universal Windows Platform (UWP) App

- <https://dev.windows.com/en-us/design>



Windows Phone





# iOS 9 vs Android 6.0

## General Interface Elements



iOS



android

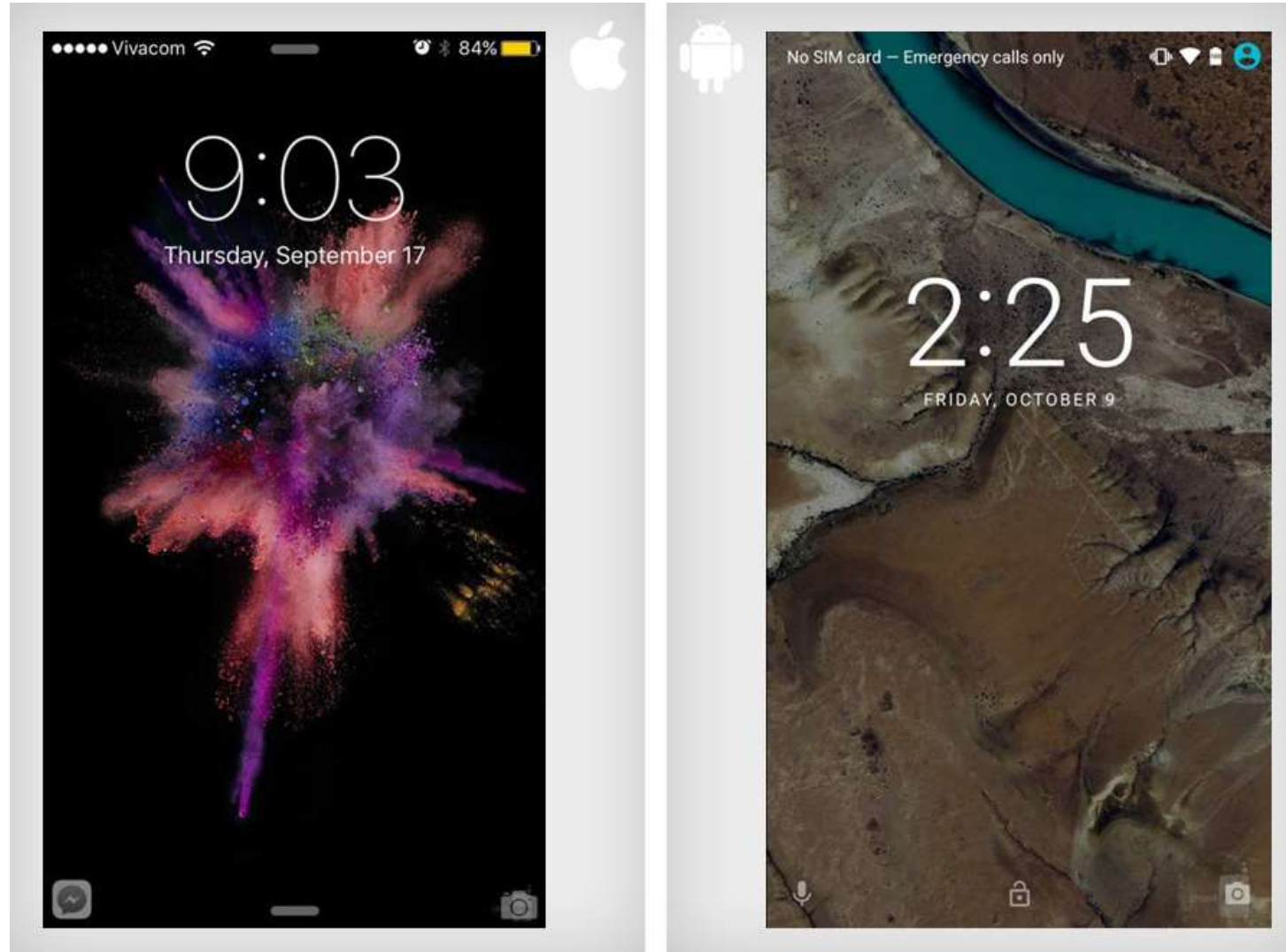
Retrieved and Modified from: iOS 9 vs Android 6.0 Marshmallow: comparison of interfaces | AppleApple .top world news.  
<http://appleapple.top/ios-9-vs-android-6-0-marshmallow-comparison-of-interfaces/>

## iOS 9 vs Android 6.0



# iOS 9 VS Android 6.0

Retrieved and Modified from: (AppleApple .top world news," n.d.)

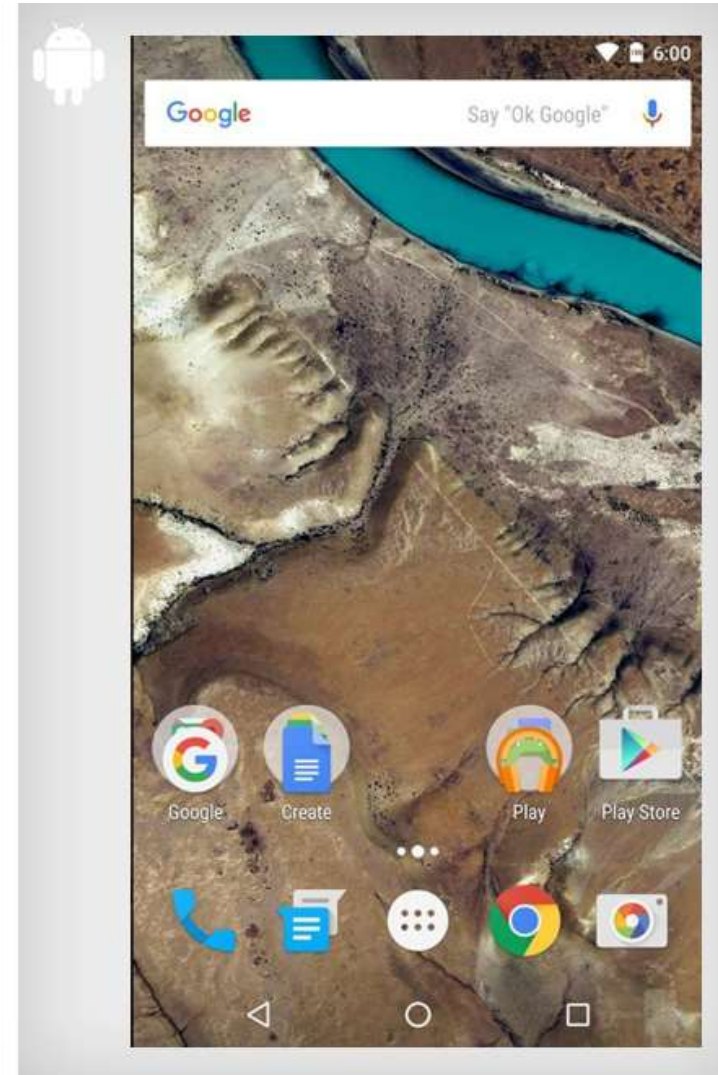
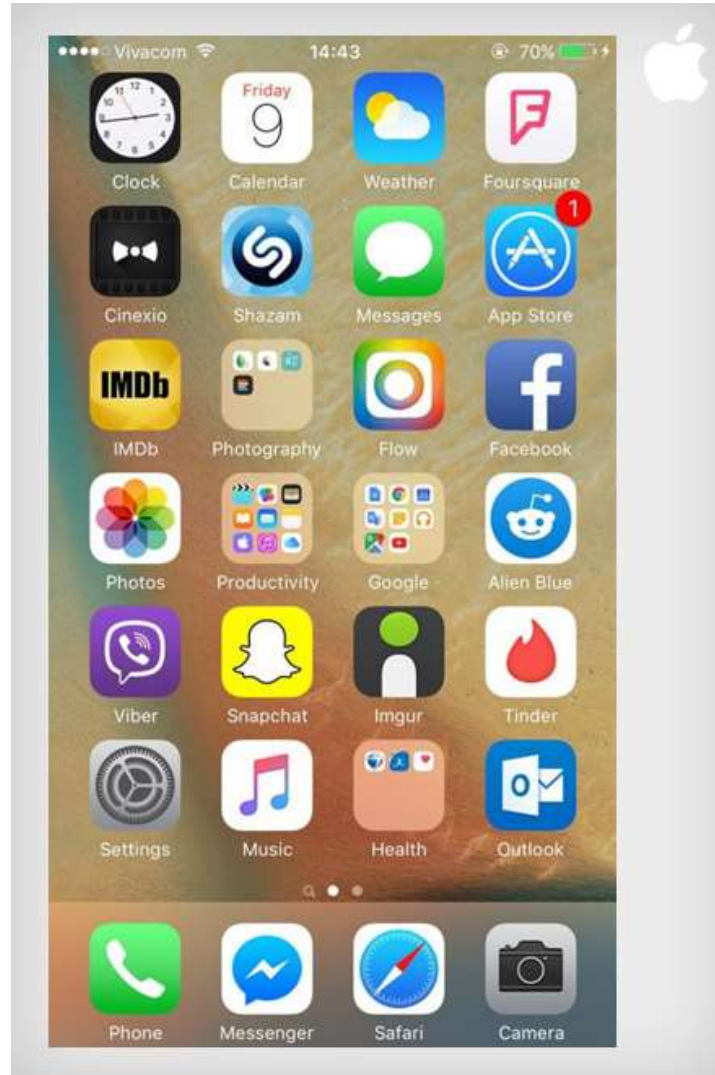


The Lock Screen iOS 9 (left) and Android 6.0 Marshmallow (right)



# iOS 9 VS Android 6.0

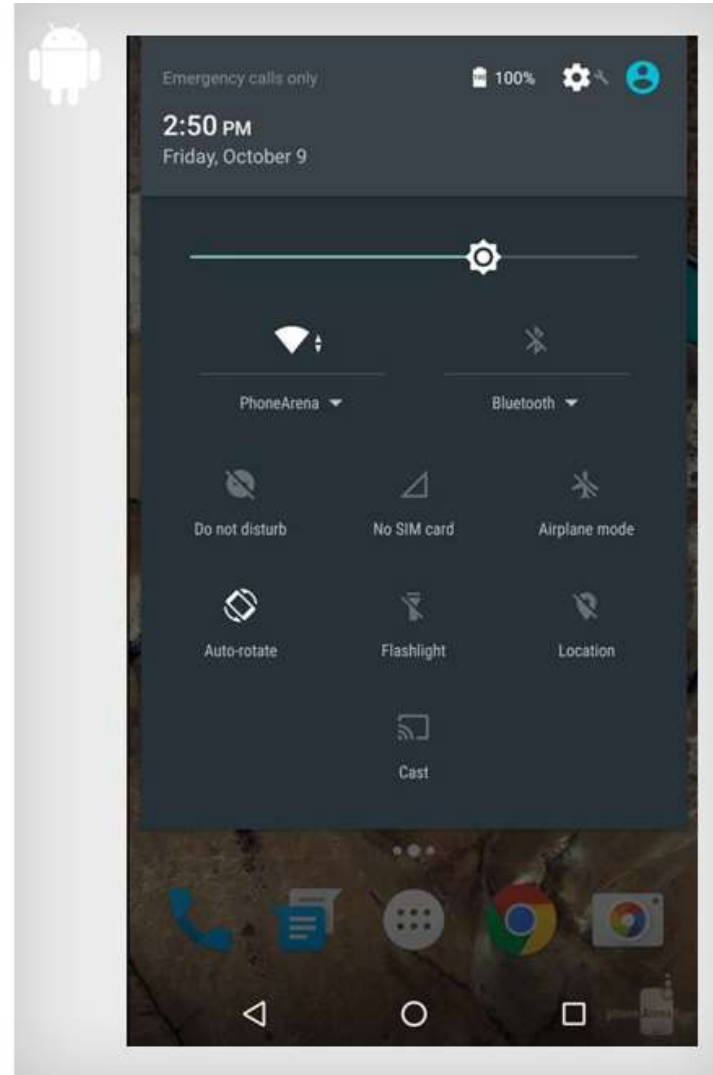
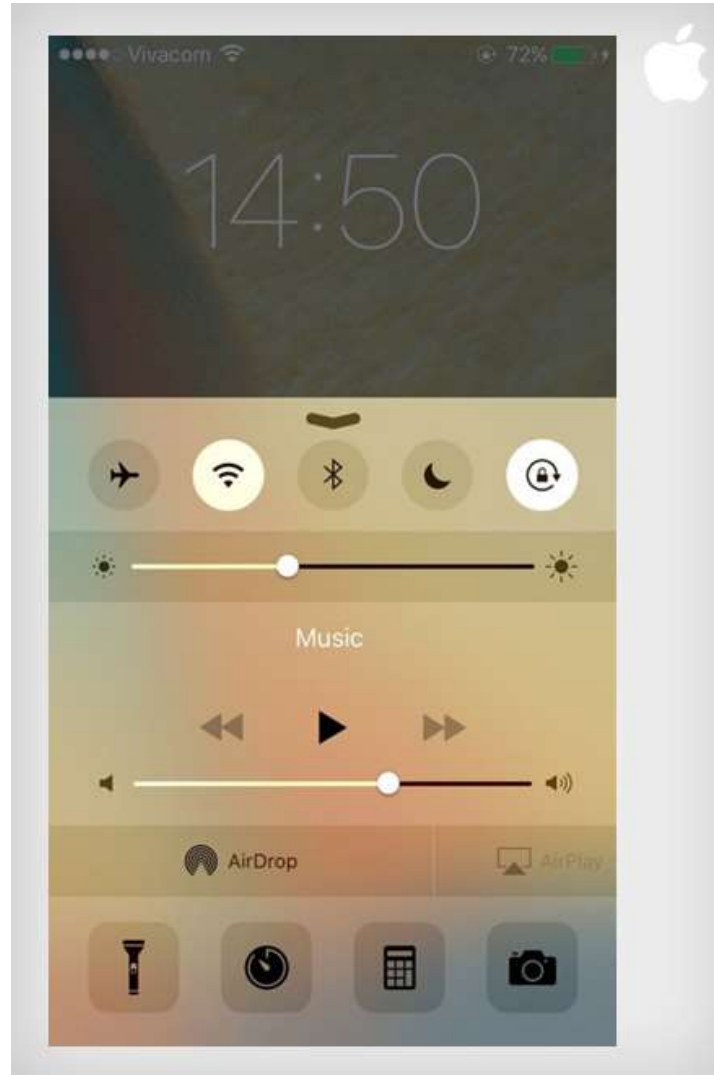
Retrieved and Modified from: (AppleApple .top world news," n.d.)



Home Screen

# iOS 9 VS Android 6.0

Retrieved and Modified from: (AppleApple .top world news," n.d.)

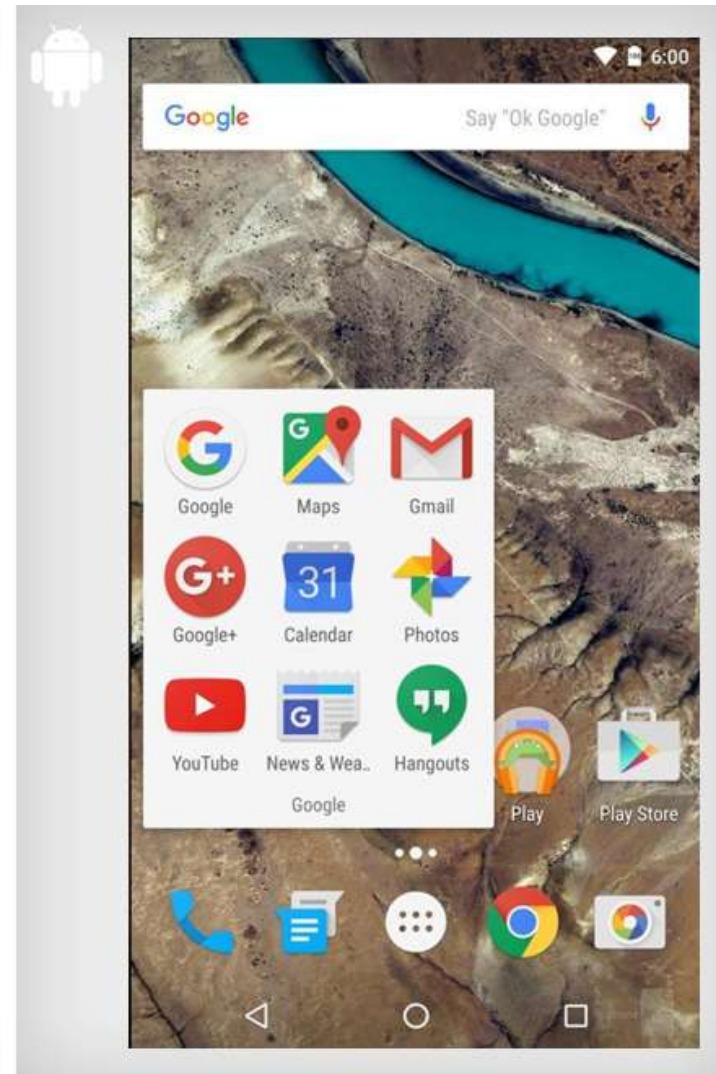


Control / Notification Center



# iOS 9 vs Android 6.0

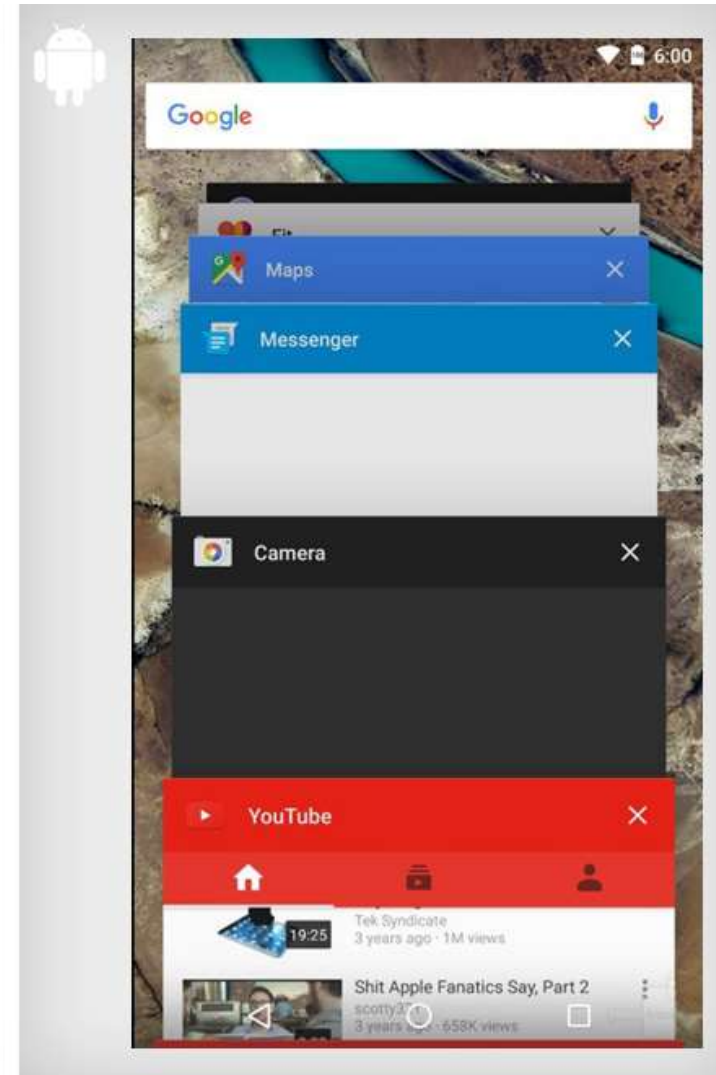
Retrieved and Modified from: (AppleApple .top world news," n.d.)



Folder

# iOS 9 vs Android 6.0

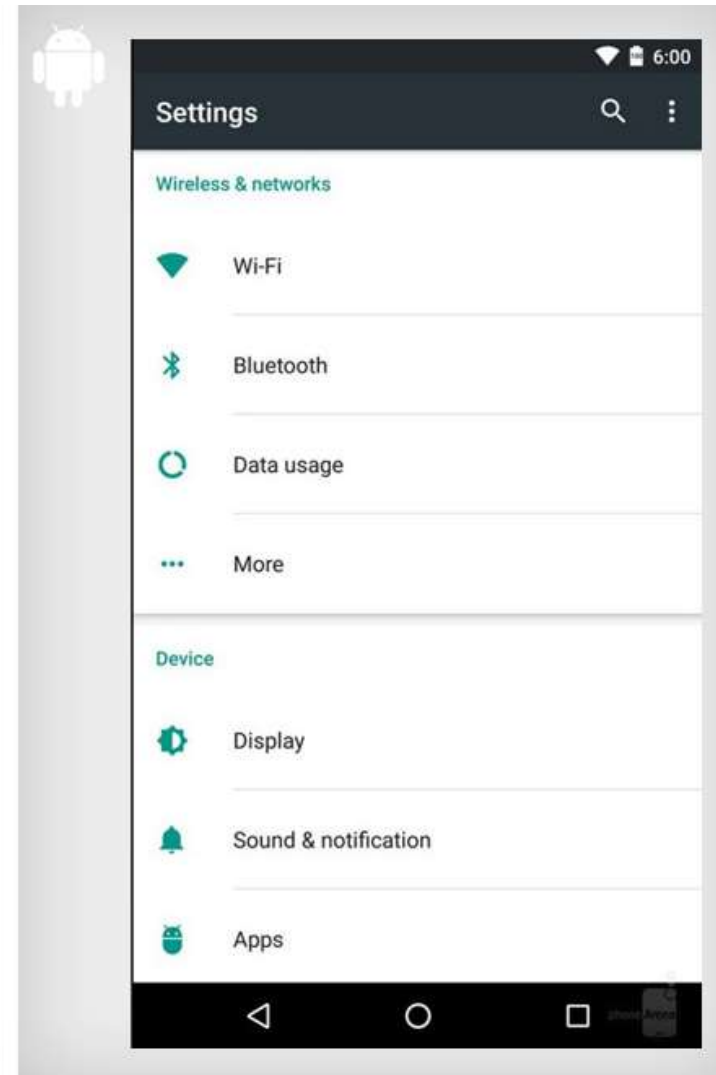
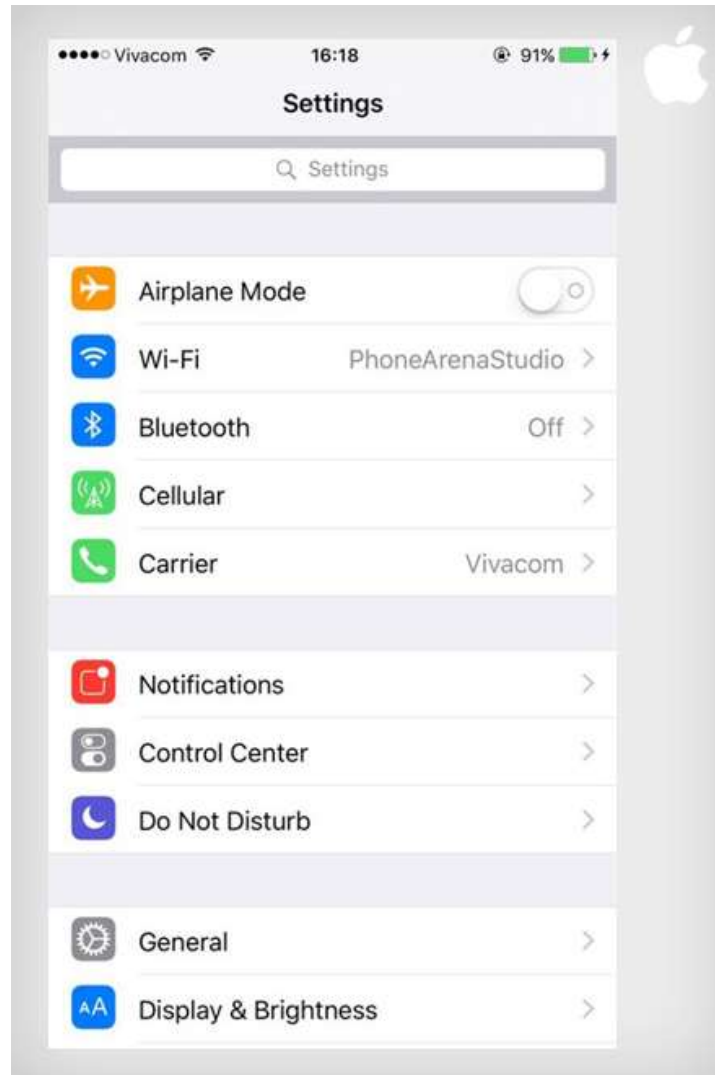
Retrieved and Modified from: (Apple, Apple .top world news," n.d.)



Multitasking bar

# iOS 9 vs Android 6.0

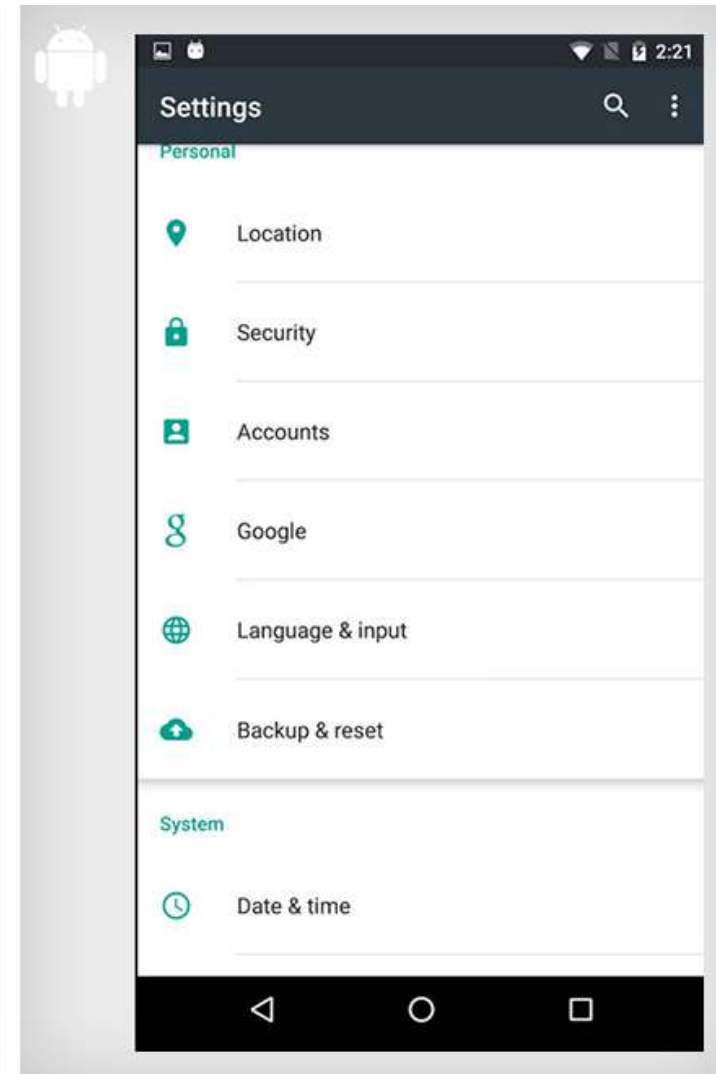
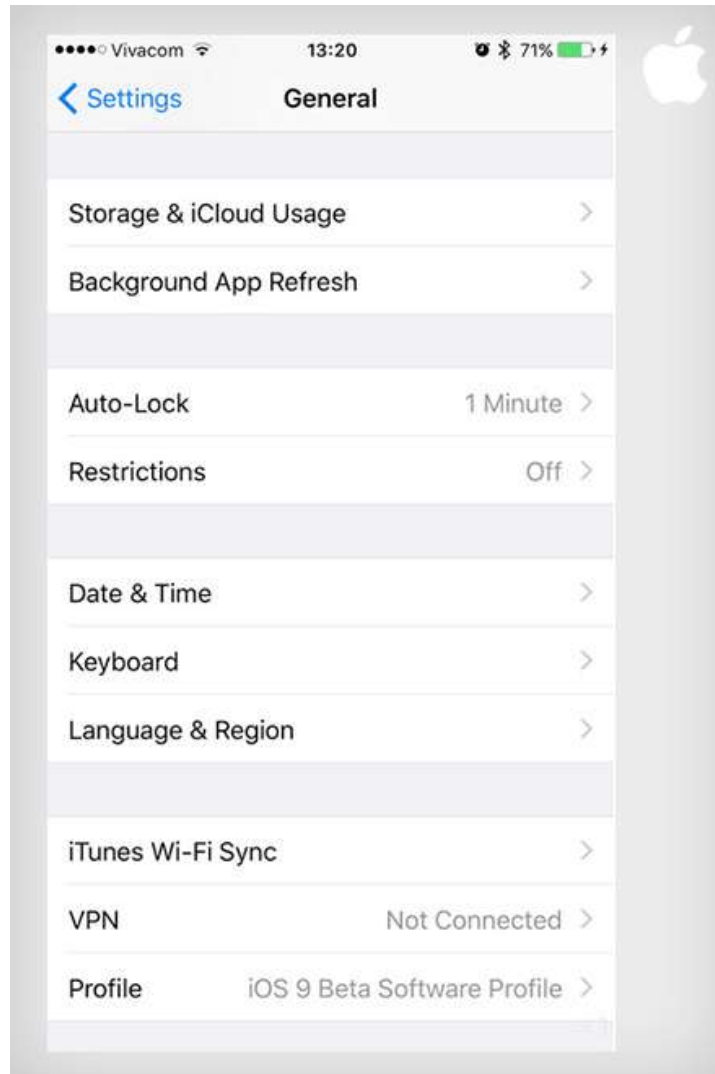
Retrieved and Modified from: (AppleApple .top world news," n.d.)



Settings



# iOS 9 vs Android 6.0



Main settings

iOS 9 vs Android 6.0

## More about the current OS:



- iOS 9 – What's New – Apple  
<http://www.apple.com/ios/whats-new/>



- Android – Marshmallow  
<https://www.android.com/versions/marshmallow-6-0/>

# iOS & Android Interface Structure



iOS



android

Retrieved and Modified from: McKibben

<http://www.kinvey.com/blog/2765/ios-and-android-design-guidelines-cheat-sheet>

## iOS & Android: Interface Structure

- Retrieved and Modified from: (McKibben, n.d.)



## iOS & Android: Interface Structure



### #1 STATUS BAR

#### Contains

Battery charge, network connection, time.

#### Things to note

It can be hidden but should only be done when the media being displayed needs the extra real estate.

### #1 STATUS BAR

#### Contains

Battery charge, network connection, time.

#### Things to note

It can be hidden but should only be done when the media being displayed needs the extra real estate.



## iOS & Android: Interface Structure



### #2 NAVIGATION BAR

**Contains**

Navigation controls (like the back button, screen title, content display control (like filtering).

**Things to note**

If the screen title is too long to fit on the screen, it should be truncated-not scaled down in size.

### #2 MAIN ACTION BAR

**Contains**

Up button, app icon, spinner.

**Things to note**

This bar is both a source of navigation as well as a toolbar for the displayed content.

## iOS & Android: Interface Structure



### #3 CONTENT DISPLAY

#### Contains

Standard and custom content views such as map view, page view, table view, web view, and collection view.

#### Things to note

This is the most customizable are of the application. Typical screen views should remain as true as possible to the standard iOS screen designs in order to maximize user familiarity.

### #3 CONTENT DISPLAY

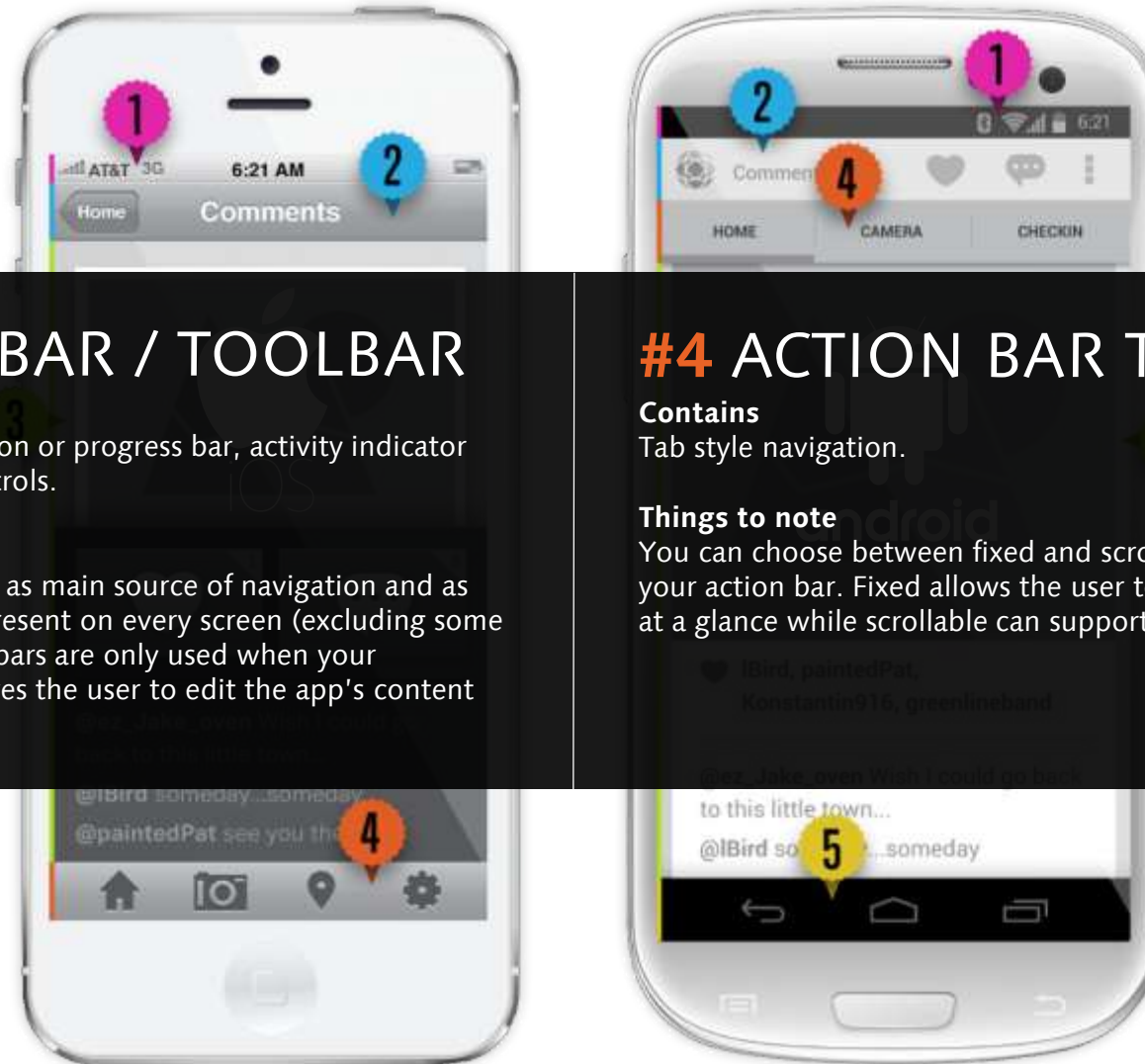
#### Contains

Standard and custom content views such as map view, page view, table view, web view, and collection view.

#### Things to note

This is the most customizable are of the application. Typical screen views should remain as true as possible to the standard android screen designs in order to maximize user familiarity.

## iOS & Android: Interface Structure



### #4 TAB BAR / TOOLBAR

#### Contains

Tab style navigation or progress bar, activity indicator and/or other controls.

#### Things to note

Tab bars are used as main source of navigation and as such should be present on every screen (excluding some edge cases). Toolbars are only used when your application requires the user to edit the app's content view.

### #4 ACTION BAR TABS

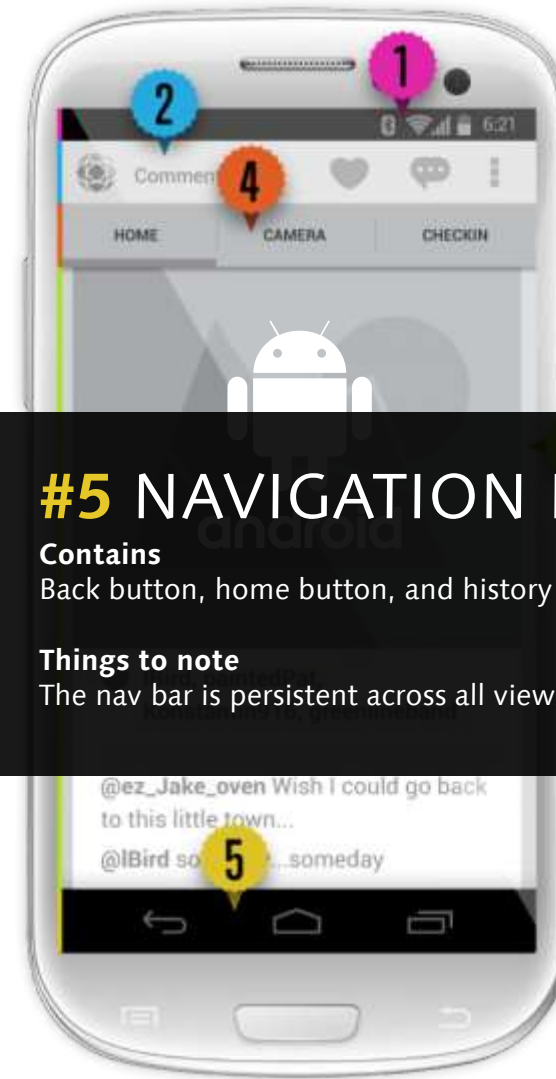
#### Contains

Tab style navigation.

#### Things to note

You can choose between fixed and scrollable tabs for your action bar. Fixed allows the user to see all options at a glance while scrollable can support more views.

## iOS & Android: Interface Structure



### #5 NAVIGATION BAR

#### Contains

Back button, home button, and history button.

#### Things to note

The nav bar is persistent across all views.

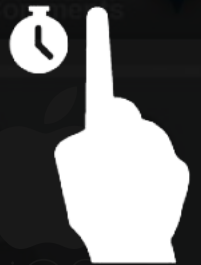


## iOS & Android: Interface Structure

### COMMON TOUCH GESTURES



Touch



Long Press



Double Touch



Flick/Swipe



Pinch Close



Pinch Open



Drag



Shake Device



# iOS & Android

## Designing for Both Android and iOS



iOS



android

Retrieved and Modified from: O'Sullivan

<http://webdesign.tutsplus.com/articles/a-tale-of-two-platforms-designing-for-both-android-and-ios--cms-23616>

iOS & Android: Design Guidelines - Retrieved and Modified from: (O'Sullivan, n.d.)

## Choose a lead

Prioritize one platform at the outset. Make this decision not based on your personal preference, but based on the market for your app.

- Do more people in your market use Android phones?
- Is it a paid app?
- What is the target audience?

Asking these questions will help you to decide on which is preferable.

## iOS & Android: Design Guidelines

### Know the rules

Read up on UI guidelines for [Android](#) and [iOS](#).

In the past Apple was known for being more strict with their guidelines. To get an app in the app store, there is an approval process which takes approximately two weeks.

Here is no approval process for the Play store.

However, due to this lower barrier to entry on Android the quality of design has traditionally been worse off.

Google are looking to change this with their [Material Design guidelines](#).

## iOS & Android: Design Guidelines

### General style

Since iOS7, Apple has shifted to a flatter design style, and ditched the skeuomorphic shadows, textures and effects which defined the iPhone's early years.

Android, having been more systematic in style in the beginning, has gone slightly the other way. **Google's Material Design** guidelines create more subtle references to the real world, with a layered "paper" approach providing more hierarchy.

## iOS & Android: Design Guidelines

### General style



### Skeuomorphism or Flat Design?



Image Retrieved from:  
<https://www.interaction-design.org/literature/article/skeuomorphism-is-dead-long-live-skeuomorphism>



## iOS & Android: Design Guidelines

### Real buttons

Android phones have a back button, which can be used to return to previous screens in the app.



**iPhones don't** have this button, so there needs to be a way to travel back to the previous screen. This is usually done by a “back” chevron in the top left of the screen, but needs to be considered throughout the various journeys in your app.

## iOS & Android: Design Guidelines

### Global elements

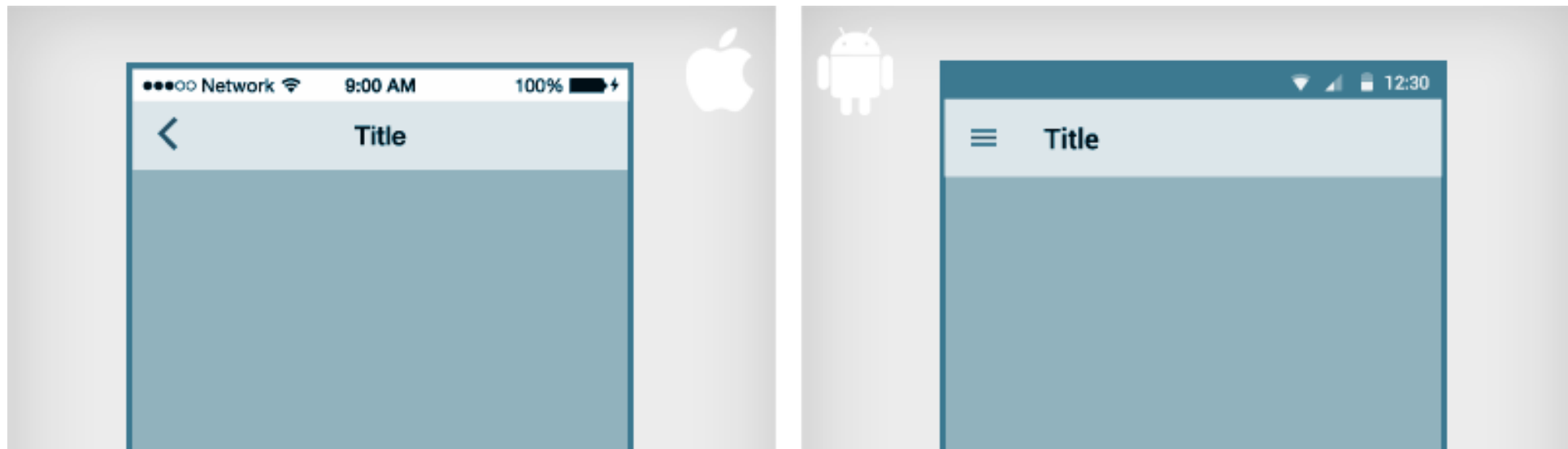
There are slight differences between the navigation bars on each platform.

On Android the text is left aligned, whereas for iOS **it's** centered. On iOS, a lot of companies replace the title of the main page with their company logo, but this is not best practice on Android.

The status bar (with your network, battery, and time information) is a **native component, and you don't need to consider the design.** Just make sure when presenting mockups to use the correct one to avoid any confusion or distraction.

## iOS & Android: Design Guidelines

### Global elements



## iOS & Android: Design Guidelines

# Navigation

Here there is an [article](#) about the architecture of an app.

There are two navigation patterns:

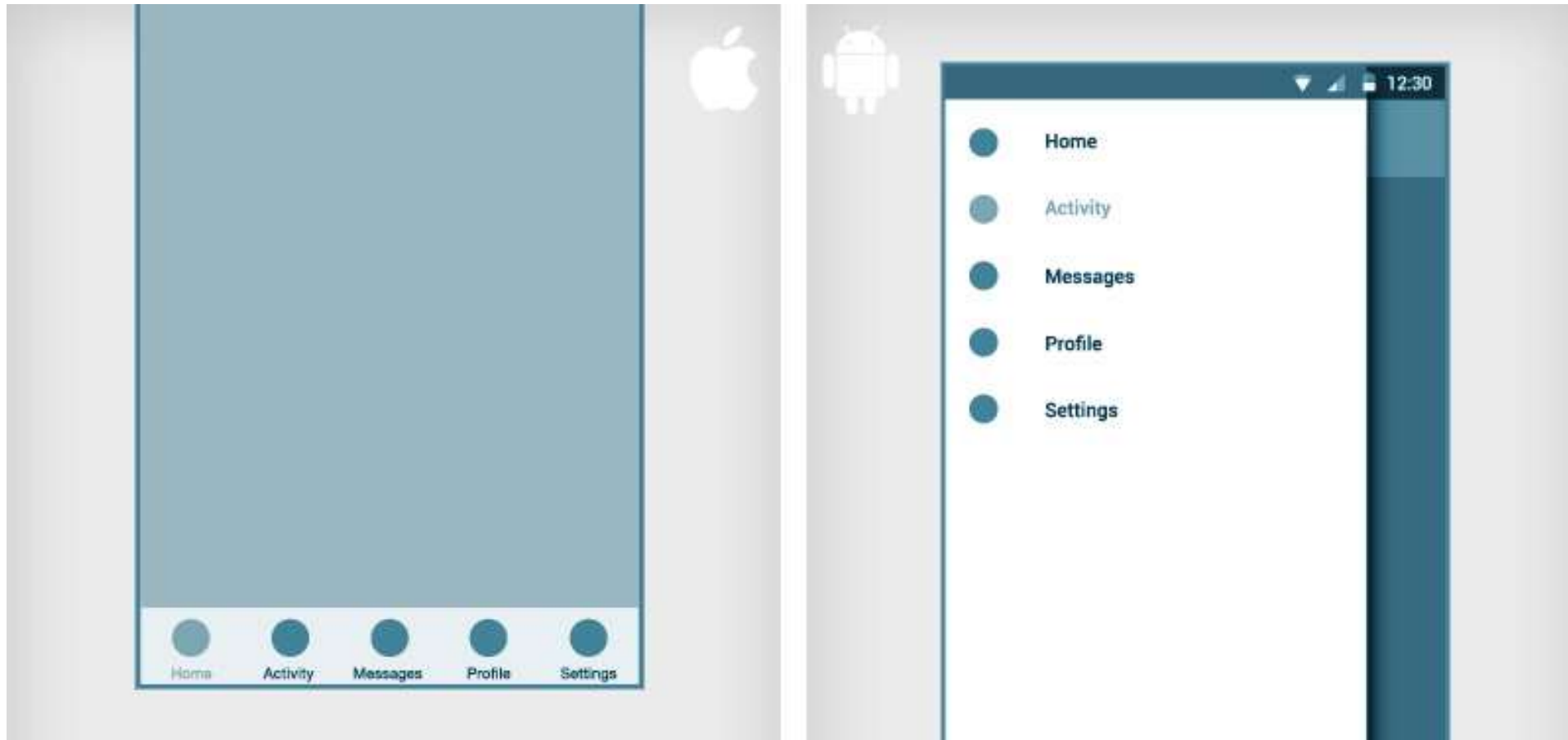
- a drawer menu for Android
- and a tab bar for iOS.

It's sometimes easier to simply hide the navigation layer while you work on individual views.



## iOS & Android: Design Guidelines

### Navigation



## iOS & Android: Design Guidelines

### Cards

Cards are becoming the primary UI pattern in digital design. They're versatile and allow users to consume quick bites of content in a way that suits mobile behaviors. Visually, cards fit in very well with **Android's material design** (it being inspired by paper). Using drop shadows and reasonable gutters between cards will create a native look and feel naturally.

## iOS & Android: Design Guidelines

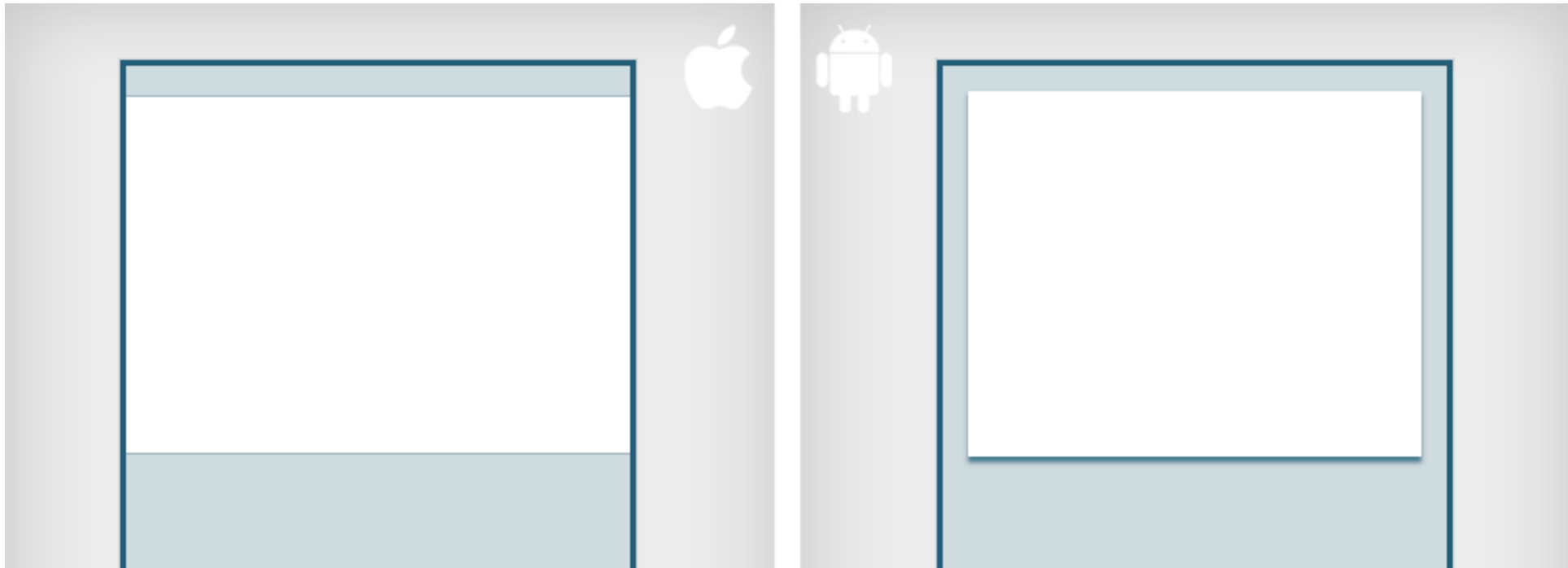
### Cards

iOS guidelines suggest using depth in transparencies and overlays, but the basic view is usually more flat.

If you're going with cards on iOS be very gentle with any use of shadow, and try to keep them as subtle as possible.

## iOS & Android: Design Guidelines

### Cards



## iOS & Android: Design Guidelines

### Typography

The system font family on iOS is San Francisco (before it was Helvetica Neue). On Android it is Roboto.

ROBOTO

ABCDEFGHIJKLMNOPQRSTUVWXYZ

SAN FRANCISCO

ABCDEFGHIJKLMNOPQRSTUVWXYZ

Image Retrieved from:  
[https://macnn.mnmcndn.com/article\\_images/129038-md-B2wigA8CUAA2\\_4A.jpg](https://macnn.mnmcndn.com/article_images/129038-md-B2wigA8CUAA2_4A.jpg)



## iOS & Android: Design Guidelines

# Typography

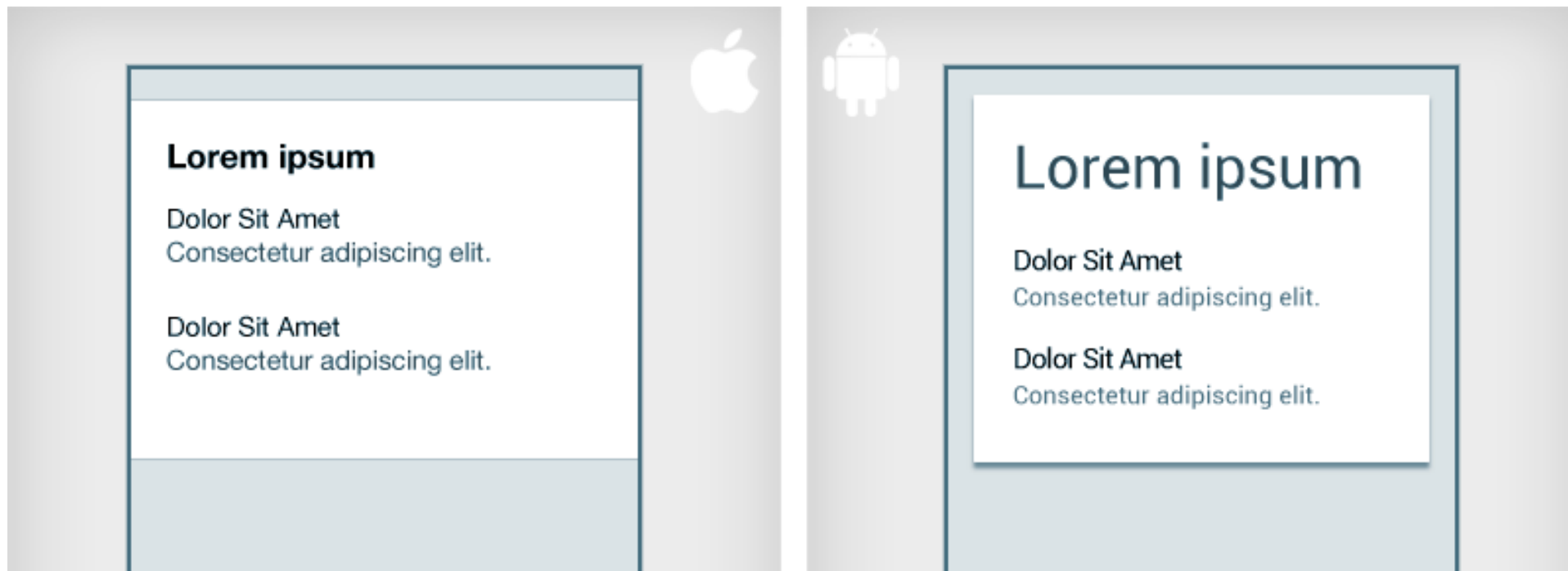
A few generalizations:

- Android Material Design uses ample white space in layout
- There is also more dramatic use of font sizing in material design. Striking headings with lots of space provide the hierarchy
- On iOS, there is less dramatic variation in sizing. But there is slightly more variation in font weights, which still allows you to create a hierarchy.
- Typically, both platforms use lighter weights in the font family. However, in the example below, the Android design is using light and regular weights of Roboto, while the iOS design is using bold and regular weights of San Francisco.

## iOS & Android: Design Guidelines

# Typography

This is a very simple example, to emphasize how even in simple ways the typography can immediately tell you if you're dealing with an Android or an iOS app.



## iOS & Android: Design Guidelines

### Button styles

There are several button styles defined in Material Design:

- **Floating action buttons:** the most traditionally shaped buttons. The drop shadows are quite heavy and lift them off the page. These should only be used on backgrounds, or sparingly on cards. **They shouldn't be used at all on alerts or popups, as doing so** creates too many layers of depth. The primary action takes your accent color, while the secondary versions are usually a less prominent color.
- **Flat buttons:** essentially text in your accent color, without any bounding elements. They use padding and all caps case to give them structure.

## iOS & Android: Design Guidelines

### Button styles

Compared to Material Design, iOS apps are typically flat in appearance, making no use of depth or drop shadows.

The primary buttons have a fill color, while the secondary buttons are reversed out, using a stroke of the same color.

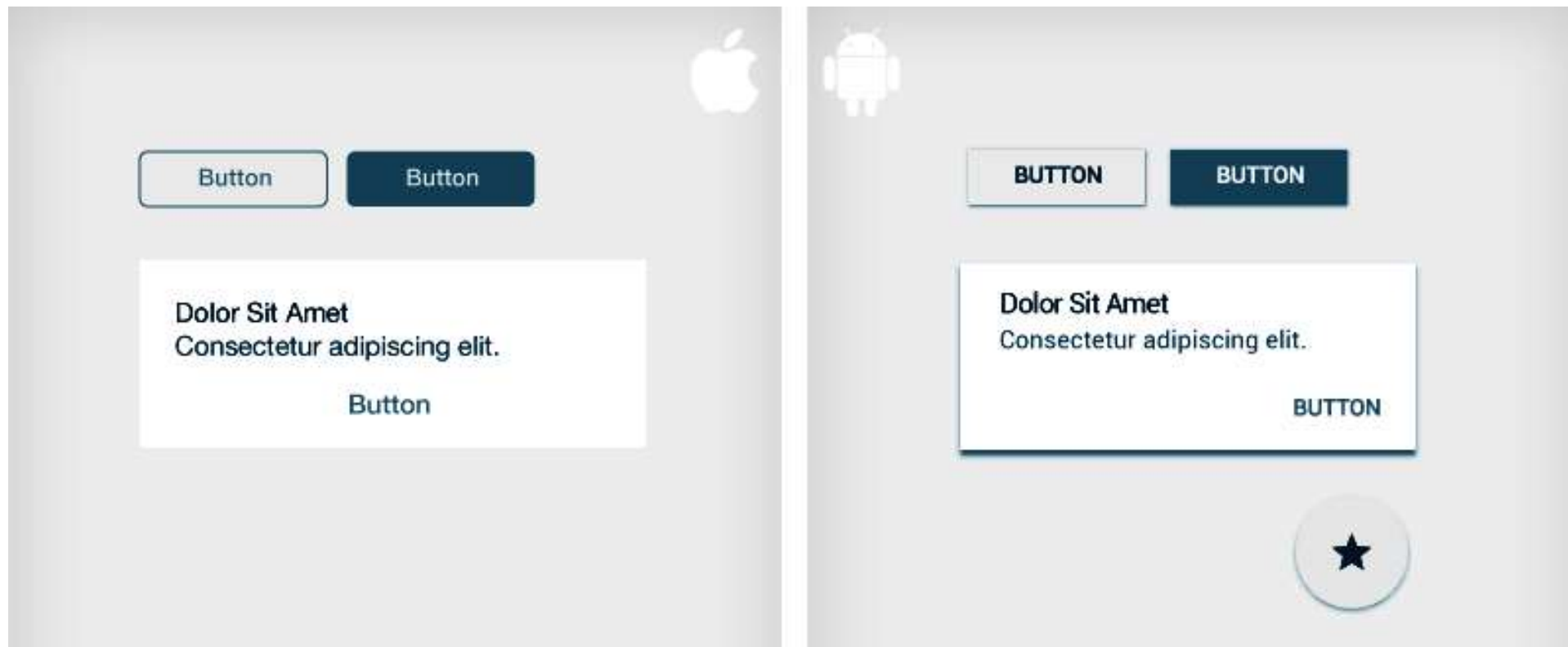
This metaphor can become somewhat limited, especially when compared to tabs and other elements to follow.

**To get this very flat style right, it's important to have clear and consistent metaphors for what colors mean in your app.**

## iOS & Android: Design Guidelines

### Button styles

iOS also has a plain text style button, but it doesn't share Android's uppercase styling, and is lighter in font weight.





## iOS & Android: Design Guidelines

### Action Sheets

Action sheets allow users to choose from a multitude of actions from one UI item. For example, when I touch (or long press) on an image I might want to share, upload, copy, or delete the picture.

iOS and Android deal with this in slightly different ways. Firstly, there are similar action sheets which display from the bottom of the screen, as an overlay on the current view.

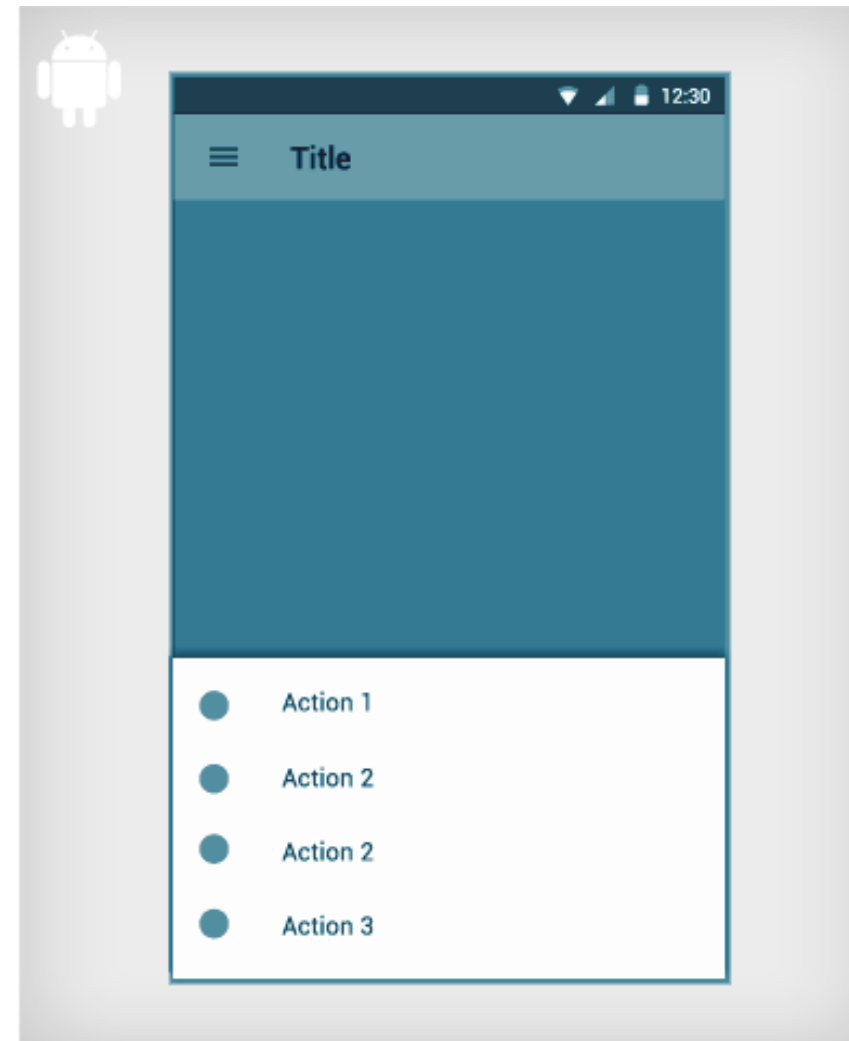
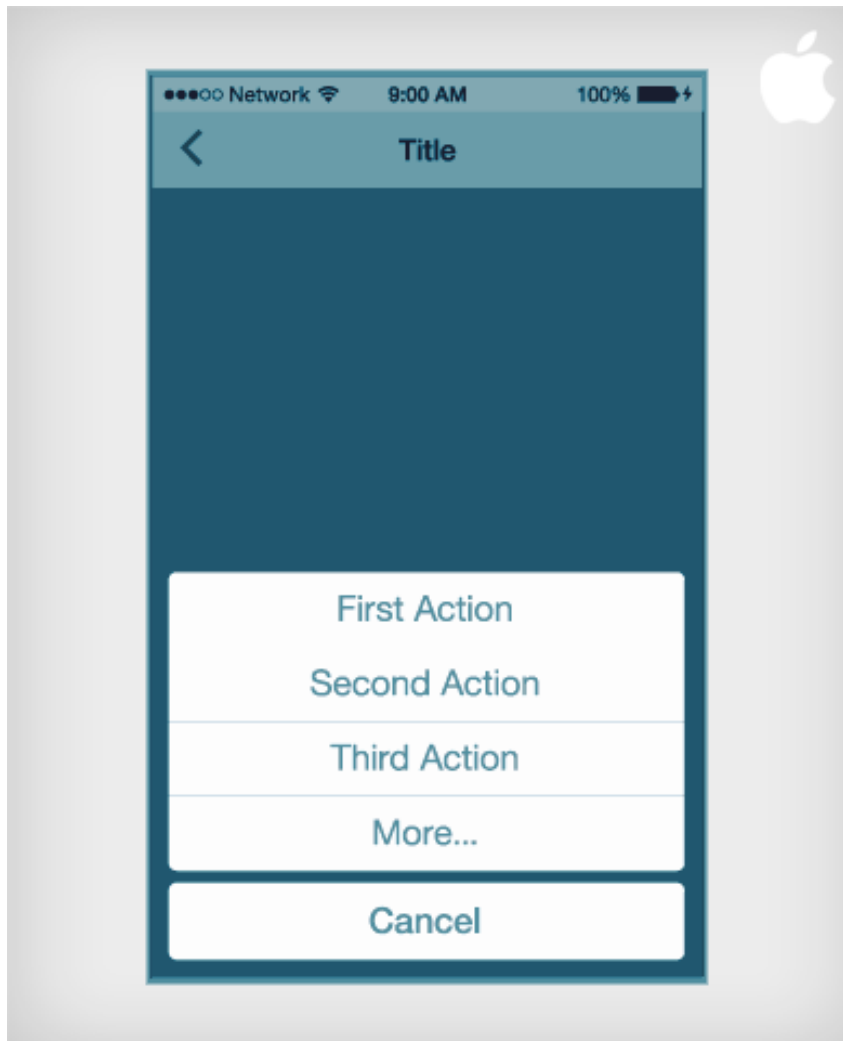
## iOS & Android: Design Guidelines

### Action Sheets

With Action sheets, overlays, and alerts, iOS and Android use different details to indicate depth in layers:

- Android overlays have a solid color with a slight drop shadow to indicate that it is a “paper” layer above.
- iOS overlays have no drop shadow, but have a slight transparency on the background.

## iOS & Android: Design Guidelines Action Sheets



## iOS & Android: Design Guidelines

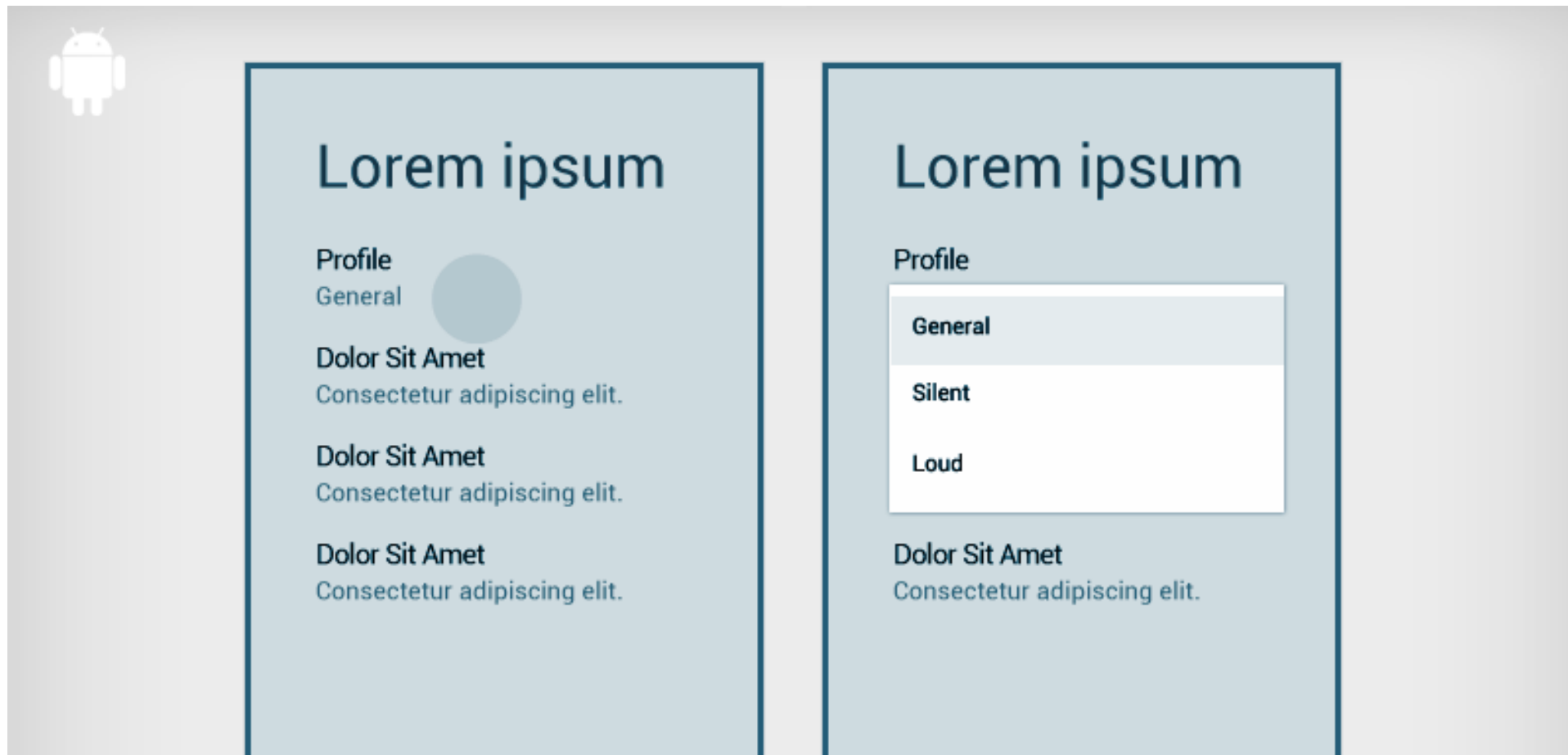
### Action Sheets: Dropdown buttons

Existing only on Android, these are a quick fire method of making a selection. Bear in mind, however, that there isn't a native iOS equivalent (except 3D Touch).

In the next example, the user presses on “profile”, and is presented with a simple menu in that location to choose one of the available profiles. These menus are also used frequently from the overlay button in the action bar, indicated by three vertical dots.

## iOS & Android: Design Guidelines

### Action Sheets: Dropdown buttons





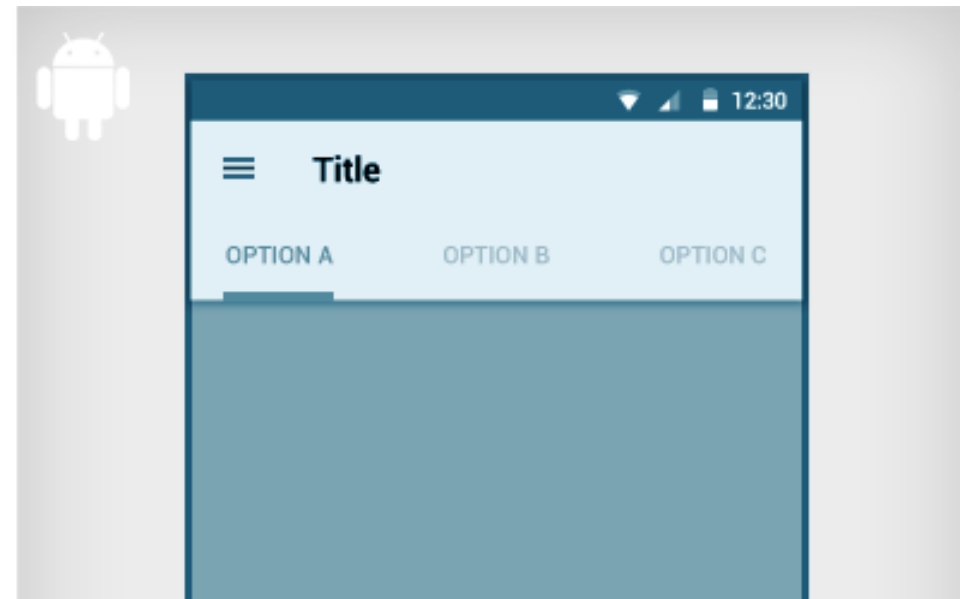
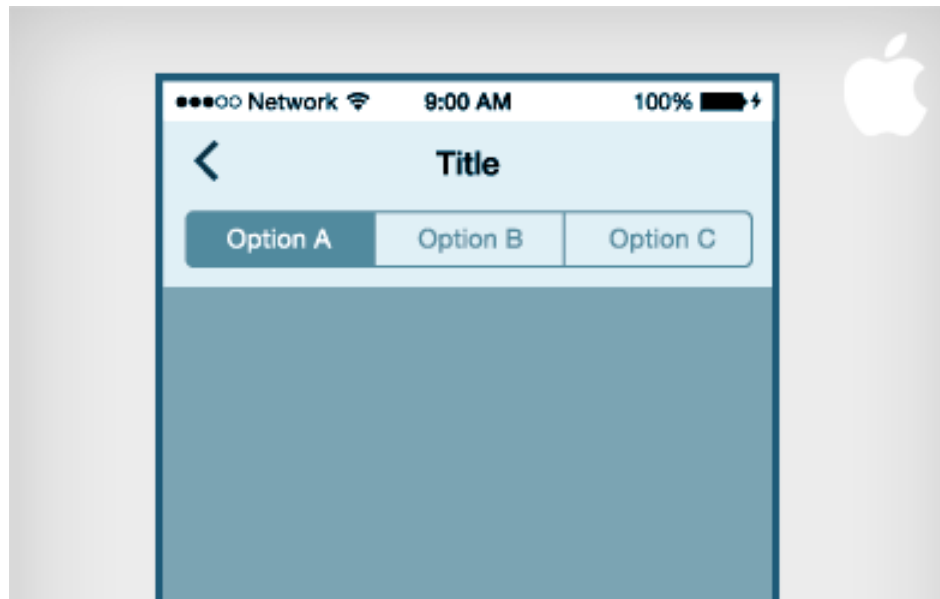
## iOS & Android: Design Guidelines

### Segmented controls

Segmented controls are used to switch between different content within a single view. Their use is much the same, but they're very distinctive visually on each platform so it's important to use the right style. On iOS there are three tabs, styled similarly to the line buttons discussed previously. On Android, they are denoted by a simple underline, and given a lot more white space to signify their interaction.

## iOS & Android: Design Guidelines

### Segmented controls



## iOS & Android: Design Guidelines

### Alerts

The Android alerts use the flat button styles that were shown earlier, dimensions for which can be found in the material design guidelines. **The actions sit on the bottom right of the alert. The “buttons” are actually entirely text based.** They use all caps to give them more structure, and they carry the primary action color of your app.

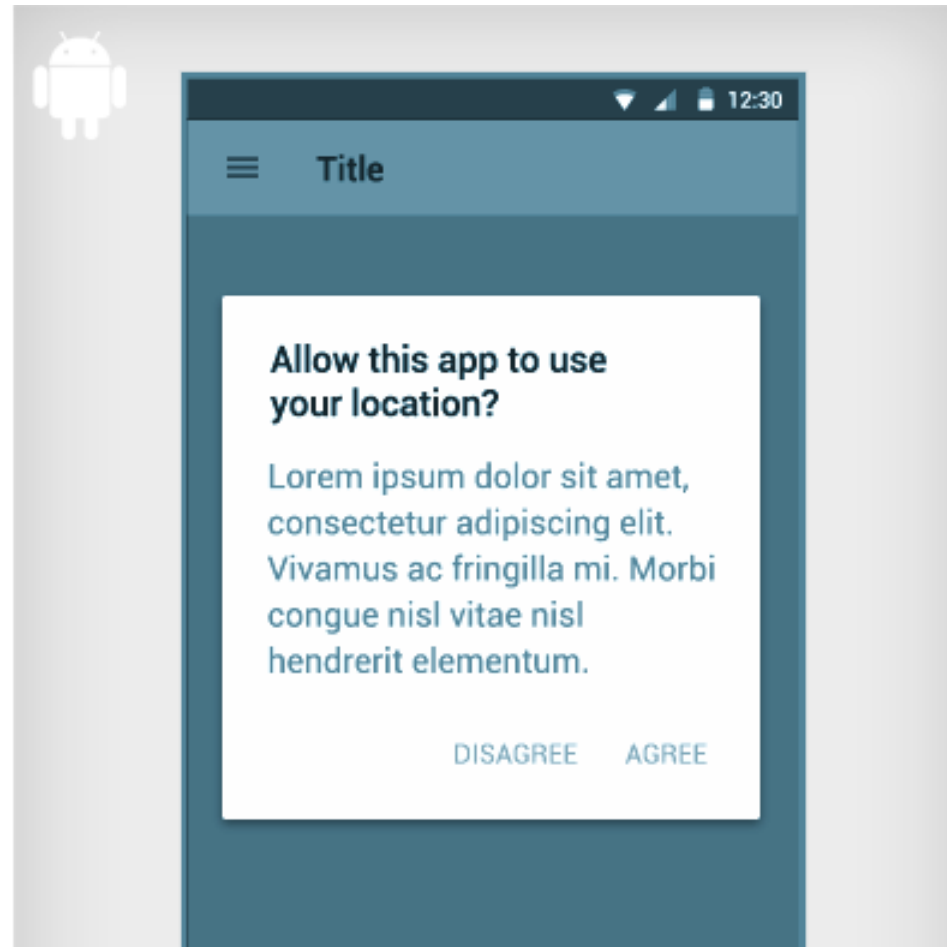
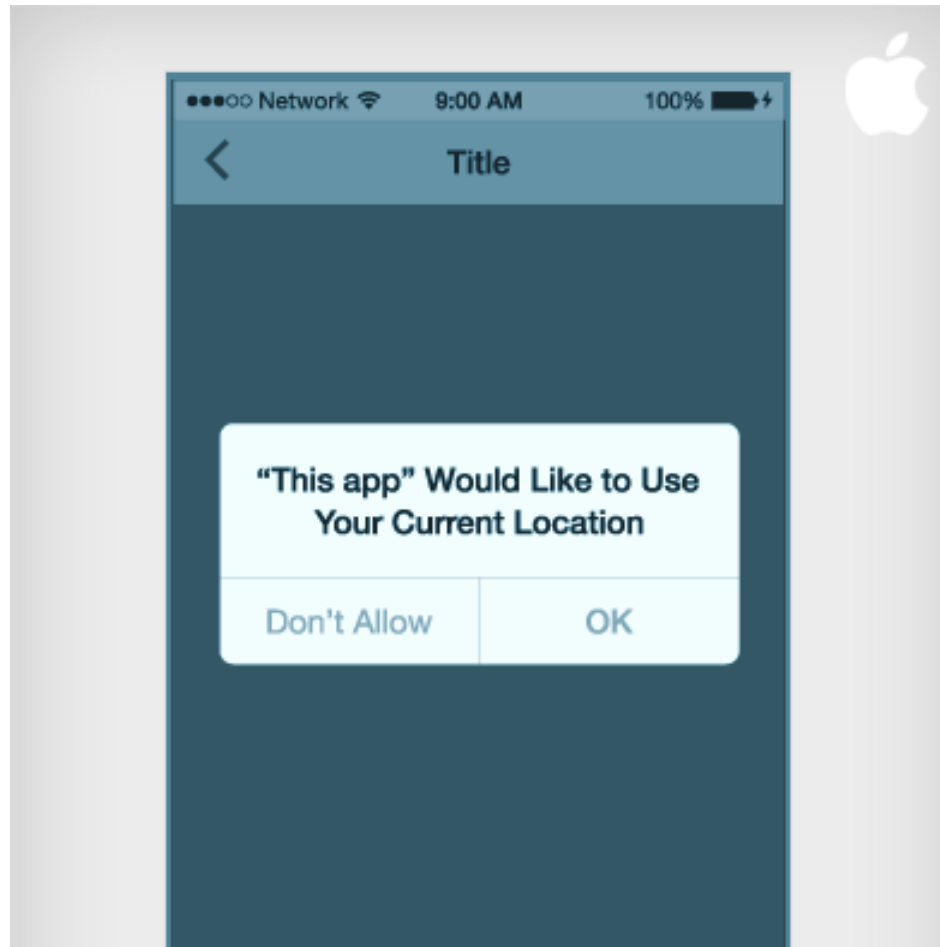
## iOS & Android: Design Guidelines

### Alerts

On iOS, the actions are separated by dividers. They are usually in sentence or title case, as they gain their structure from the separate blocks. They are centered in the field, and again they will inherit your active color.

## iOS & Android: Design Guidelines

### Alerts





## iOS & Android: Design Guidelines

### Icons

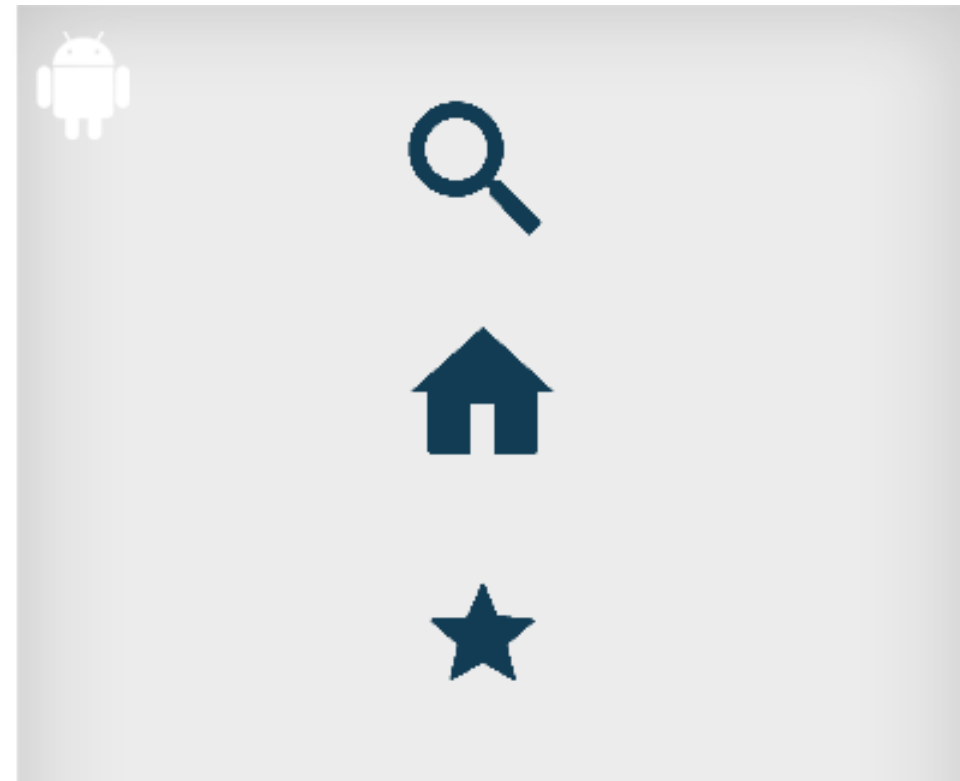
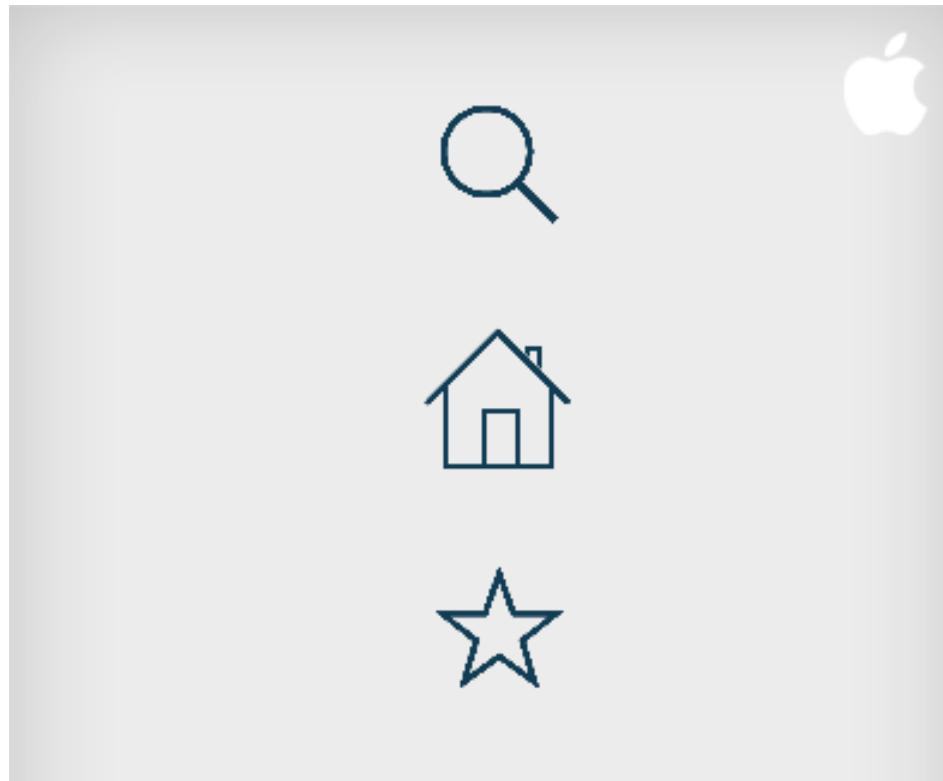
iOS popularized line icons, with very thin strokes.

The Android system icons have thicker strokes, or are entirely solid icons.

In the past, Android icons used perspective or a three dimensional twist, but now their guidelines specify two dimensional icons viewed **straight on**. Here's a quick example with several icons for comparison, or use the direct links to icon guidelines for [Android](#) or [iOS](#)

## iOS & Android: Design Guidelines

### Icons



## iOS & Android: Design Guidelines

### Icons

#### Android

- <https://www.google.com/design/icons/index.html>
- <http://www.google.com/design/spec/style/icons.html#icons-product-icons>

#### iOS

- [https://developer.apple.com/library/ios/documentation/UserExperience/Conceptual/MobileHIG/BarIcons.html#//apple\\_ref/doc/uid/TP40006556-CH21-SW1](https://developer.apple.com/library/ios/documentation/UserExperience/Conceptual/MobileHIG/BarIcons.html#//apple_ref/doc/uid/TP40006556-CH21-SW1)
- [https://developer.apple.com/library/ios/documentation/UserExperience/Conceptual/MobileHIG/Iconography.html#//apple\\_ref/doc/uid/TP40006556-CH59-SW1](https://developer.apple.com/library/ios/documentation/UserExperience/Conceptual/MobileHIG/Iconography.html#//apple_ref/doc/uid/TP40006556-CH59-SW1)

## iOS & Android: Design Guidelines

### Common UI Controls

Radio buttons, check boxes, fields and switches are functional components that should be given a native feel. As with alerts and dialogues, these controls and inputs are an area of trust and familiarity for the user.

Use the native components as much as possible for these, so that people (a) know how to use them, and (b) trust your app with their sensitive data or payment details.

## iOS & Android: Design Guidelines

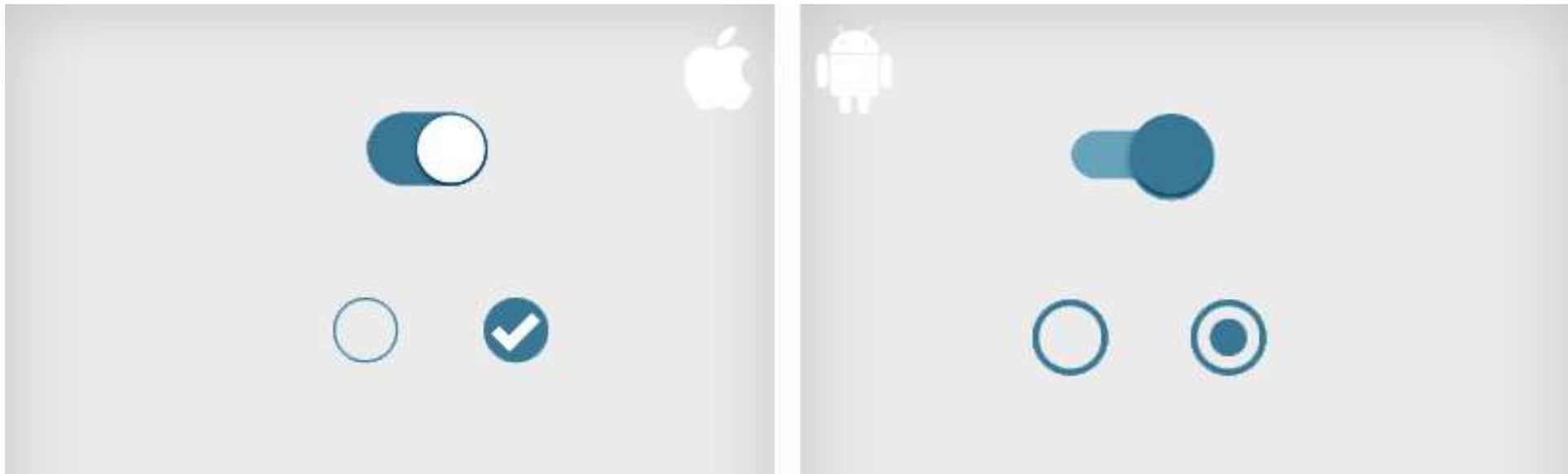
### Common UI Controls

In the next example we see switch and radio button equivalents for Android and iOS. Again, the differences are small enough for you to progress with one design, and tweak for the other later, but the subtle differences are essential for a native look. Use your UI kit as much as possible for these components, and again communicate with developers early on in the process.



## iOS & Android: Design Guidelines

### Common UI Controls



## iOS & Android: Design Guidelines

### Summary

It isn't an impossible task to create a native feel for your app on both iOS and Android with one design.

Try to keep on top of these tweaks from the beginning, keep an eye out for components that feel out of sync on one platform, and always work as closely as you can with developers.

## iOS & Android: Design Guidelines

### Resources

#### Guidelines

If you want to know more, a lot of the information I've provided can be found in the platform guidelines:

- [iOS Human interface guidelines](#)
- [Android material design guidelines](#)

## iOS & Android: Design Guidelines

### Resources

#### Icons

Even if you're making your own, or commissioning icons, they're useful to have as placeholders while you work. Icon design can be a job in itself, and you don't want icons to slow you down while you get an overall feel for your app. I recently found the links below on icons8 look pretty good, or flaticon.com is great for more general icons.

- [Line icons which are great for iOS design](#)
- [Flat icons that work well with material design](#)

## iOS & Android: Design Guidelines

### Resources

#### UI Kits

These UI Kits will save you recreating basic native controls and matching sizes. You can pluck out the pieces you need and then switch between them for the Android and iPhone output of your designs.

- [An excellent PSD template for iOS from Teehan + Lax](#)
- [Android Material Design PSD Template](#)



## iOS & Android: Design Guidelines

## Resources

### Mockups

It's always useful to have device mockups for presenting your app. These come in many categories. You might want a basic device mockup for context, a simplified flat device to let your app shine, or a lifestyle mockup to present a use case.

- [Official iPhone device downloads](#)
- [Flat apple devices with multiple perspectives](#)
- [Nexus 6 flat mockup](#)
- [Lifestyle mockups from placeit](#)

## iOS & Android: Design Guidelines

### Resources

### Templates



#### iOS Template

- <http://bit.ly/1Os2dwM>



#### Android Template

- <http://bit.ly/12NjzN6>

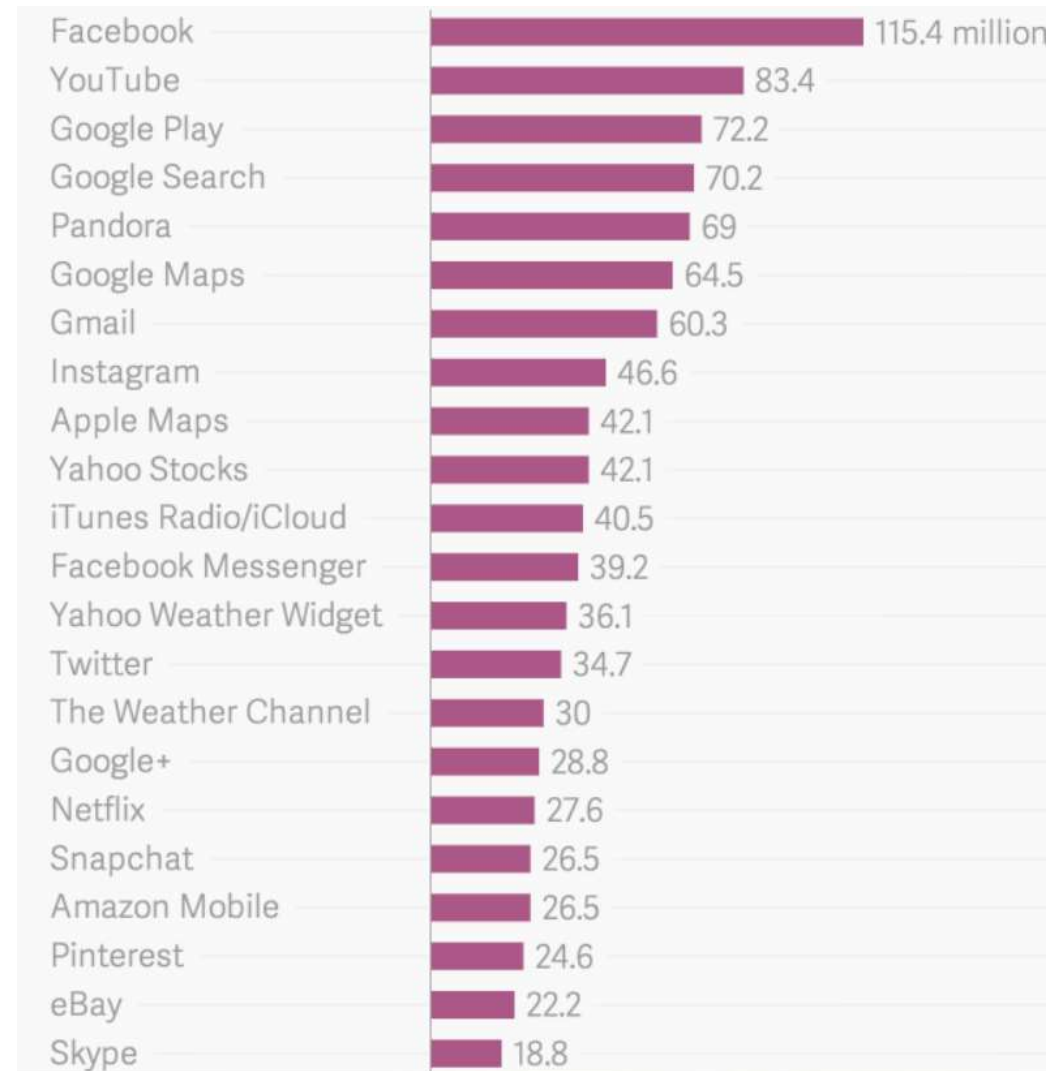
# iOS and Android comparison



# iOS & Android: Differences



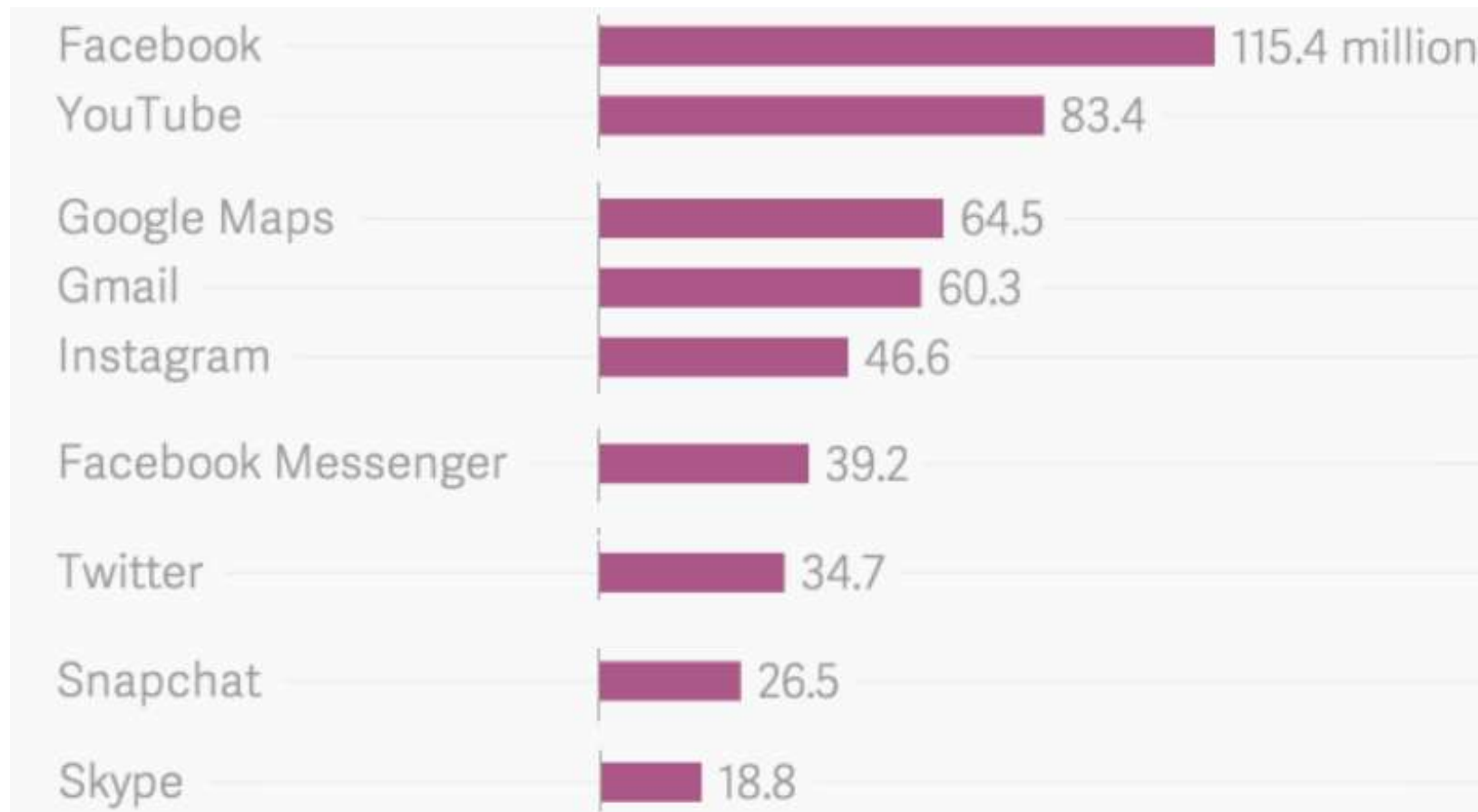
# Top Mobile Apps by US unique visitors, June 2014



Retrieved and modified from: <http://qz.com/481245/these-are-the-25-most-popular-2015-mobile-apps-in-america/>



# Top Mobile Apps by US unique visitors, June 2014



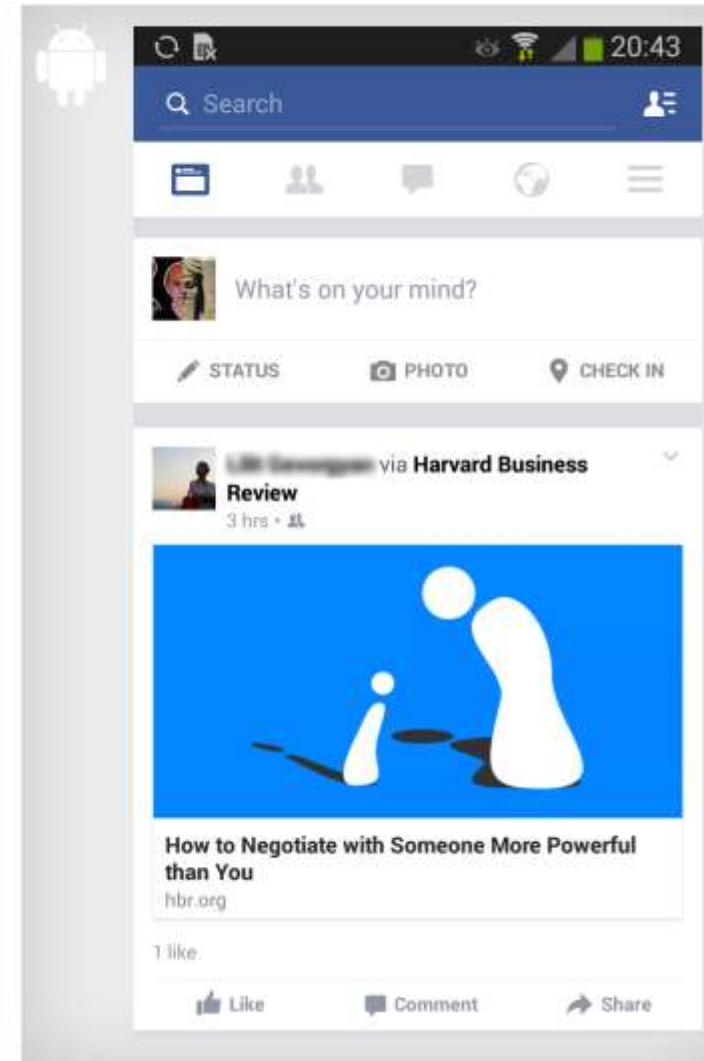
# iOS & Android: Examples & Differences

Examples retrieved at 23<sup>rd</sup> November 2015, using:

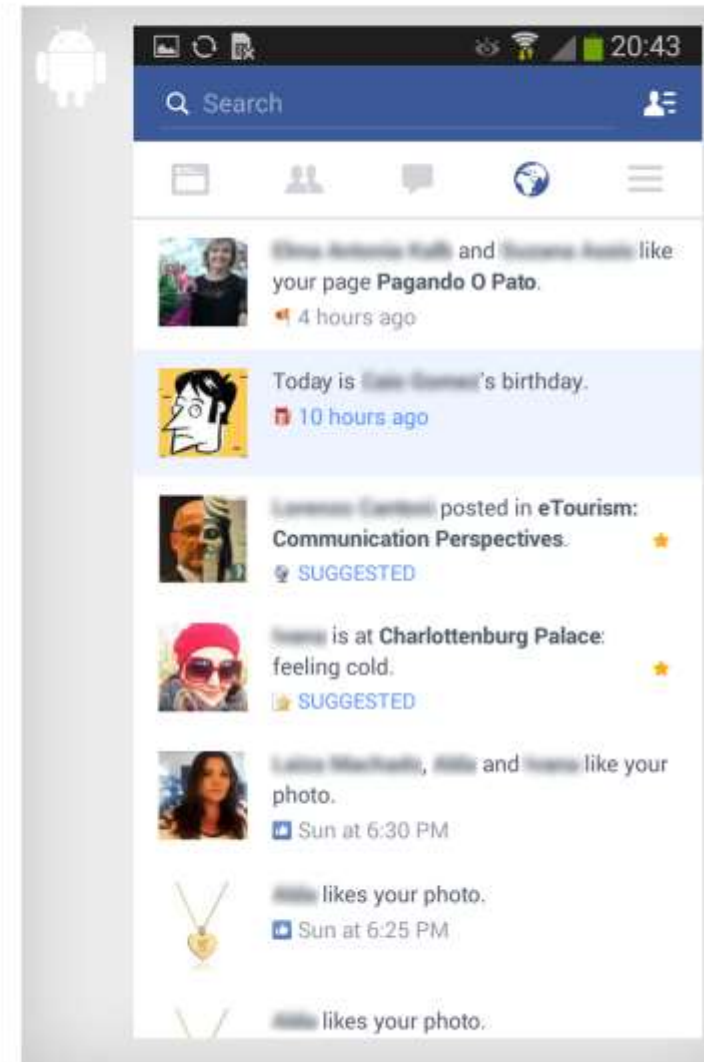
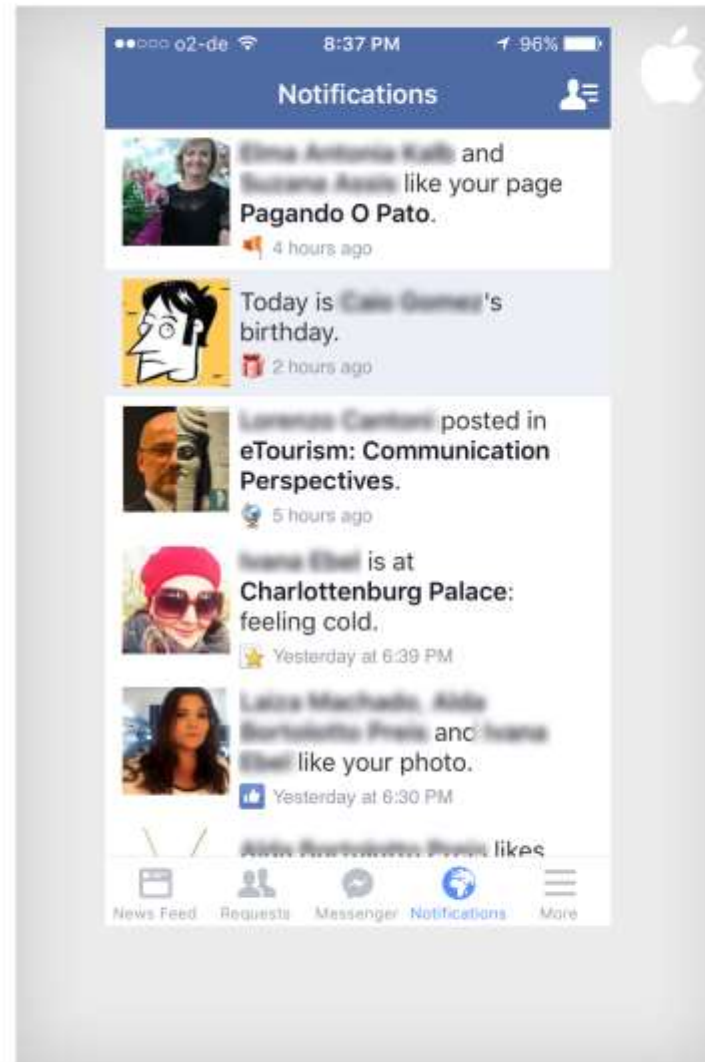
- iPhone 5c
  - iOS 9.2
  - 640 × 1136 pixels
  - 4"
- Samsung Galaxy S3
  - Android 4.3
  - 720 x 1280 pixels
  - 4.8"



## iOS vs. Android Differences



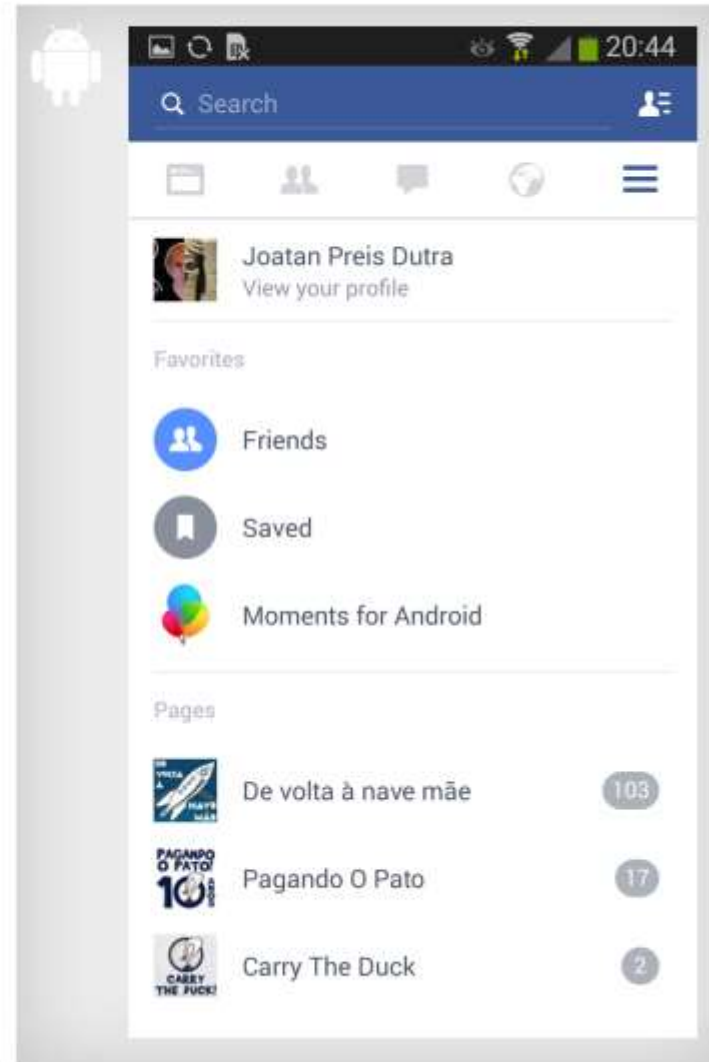
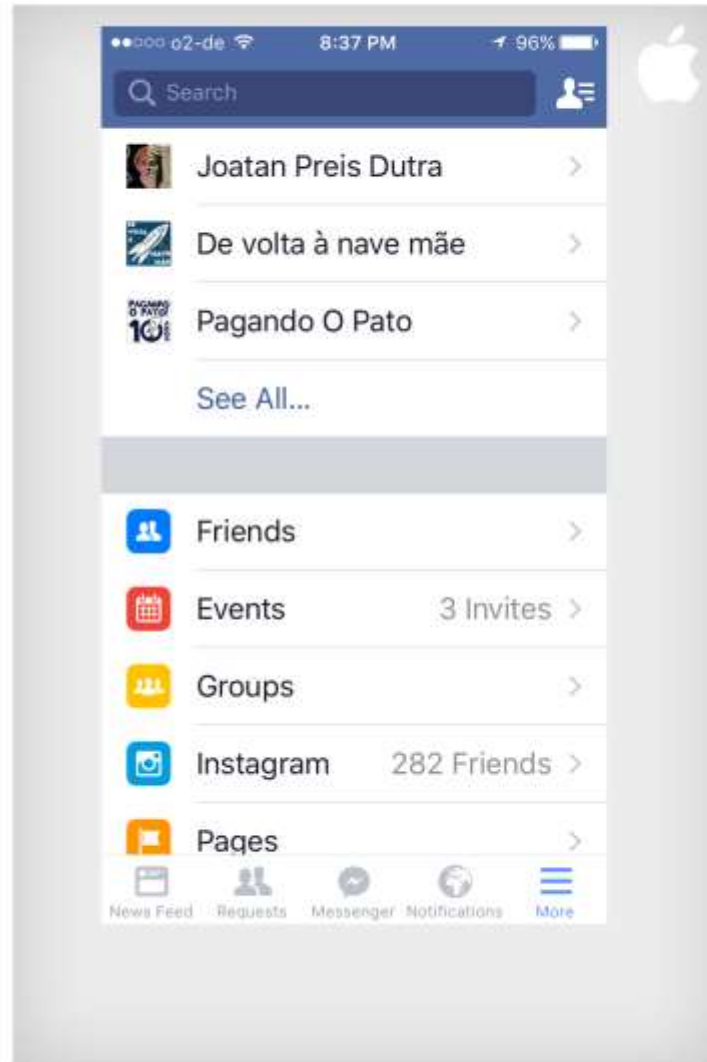
# iOS vs. Android Differences





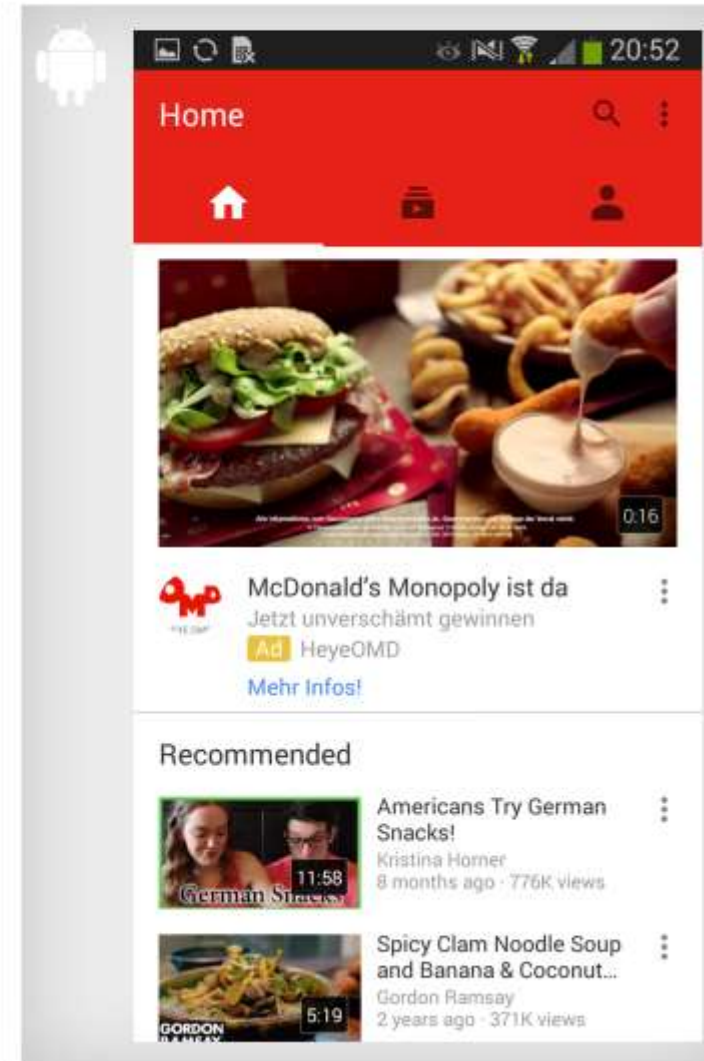
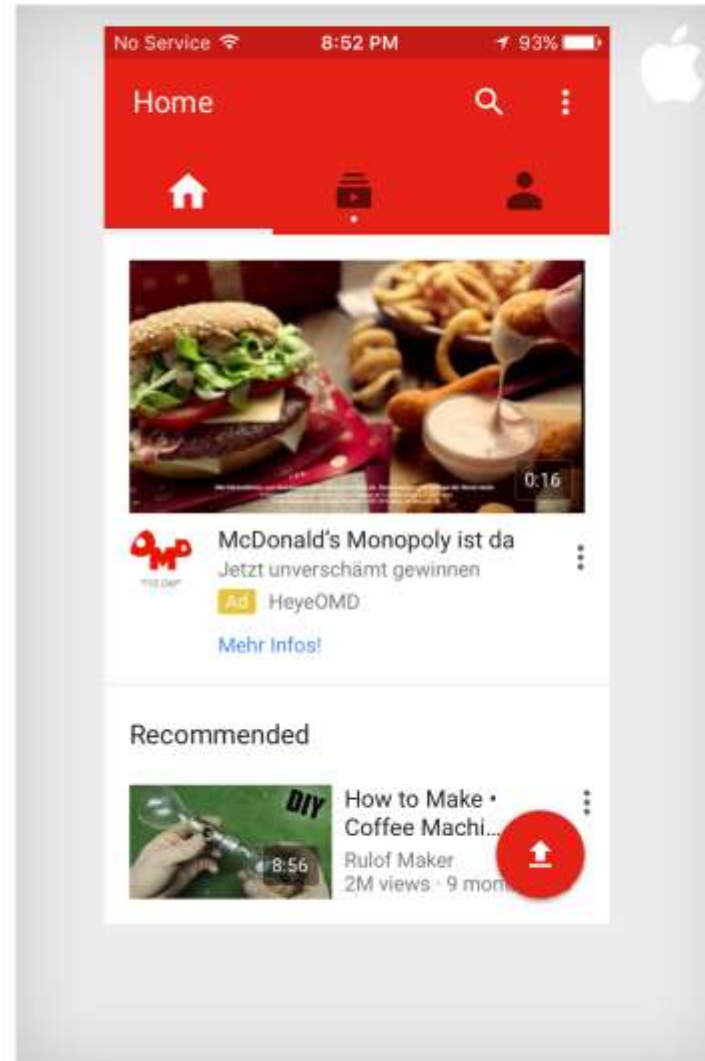
## iOS vs. Android

### Differences

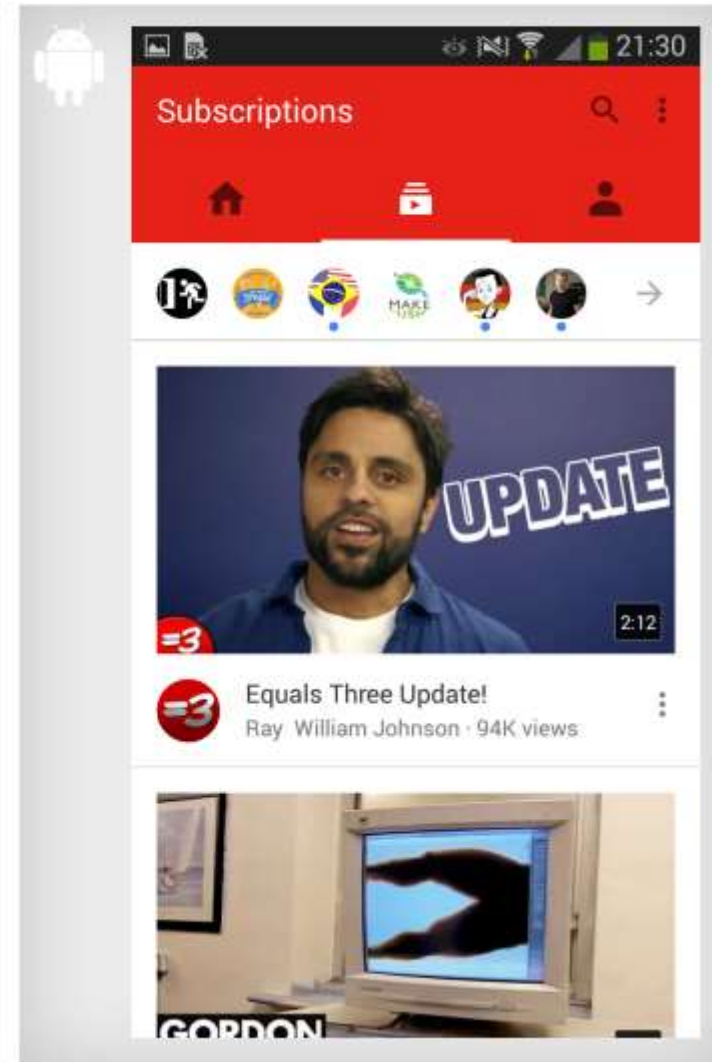
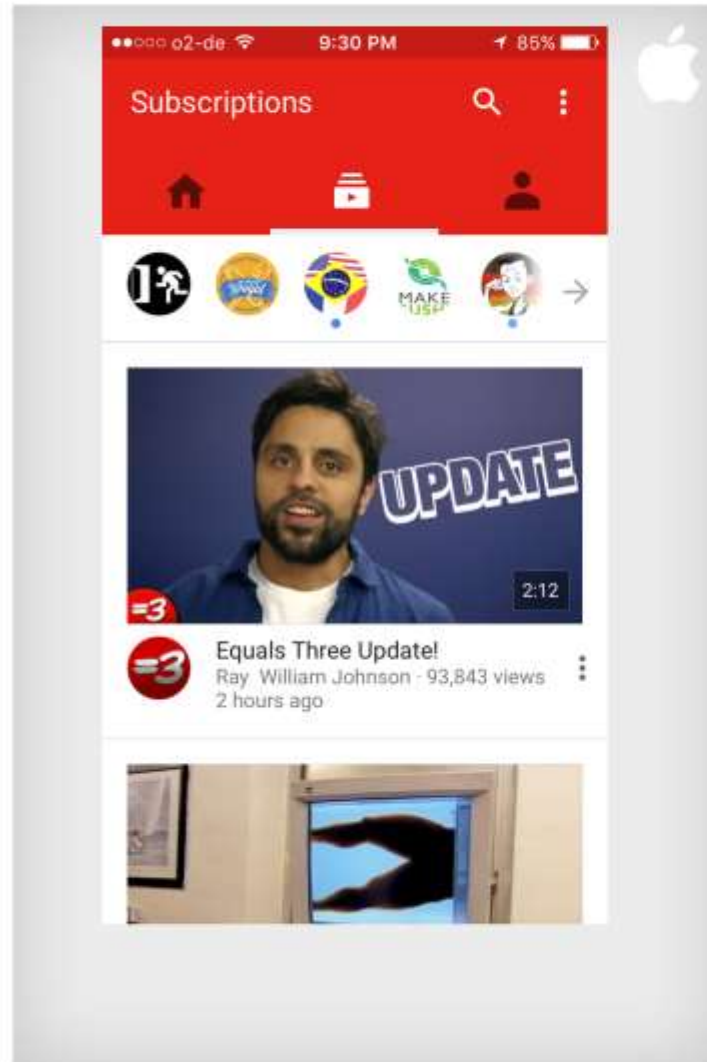




# iOS vs. Android Differences

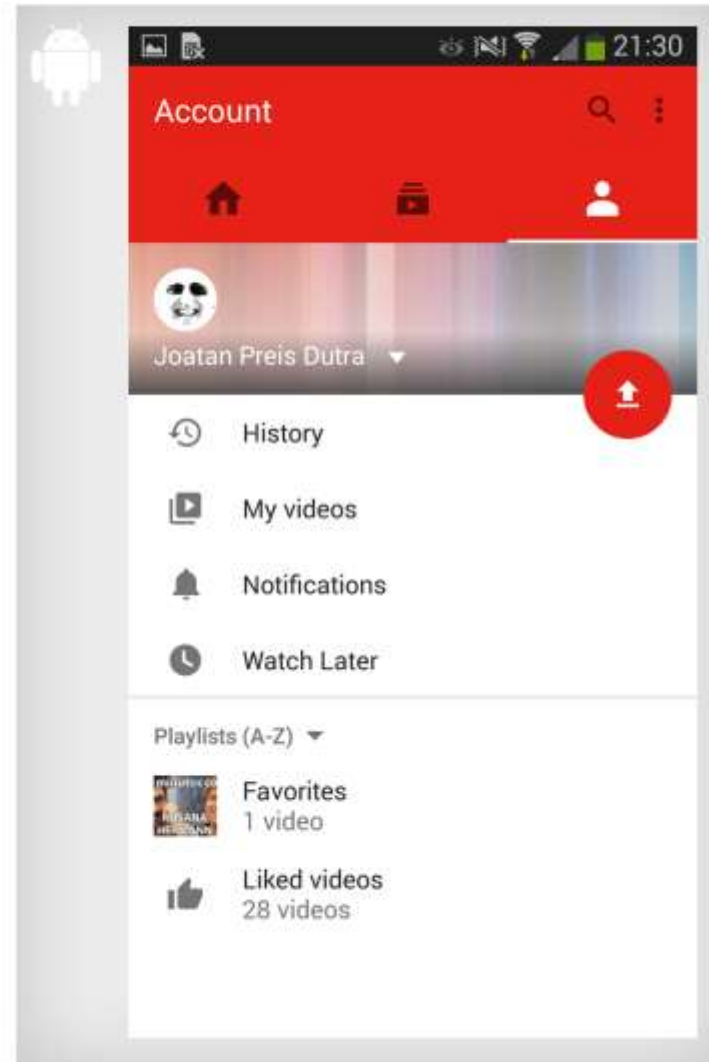
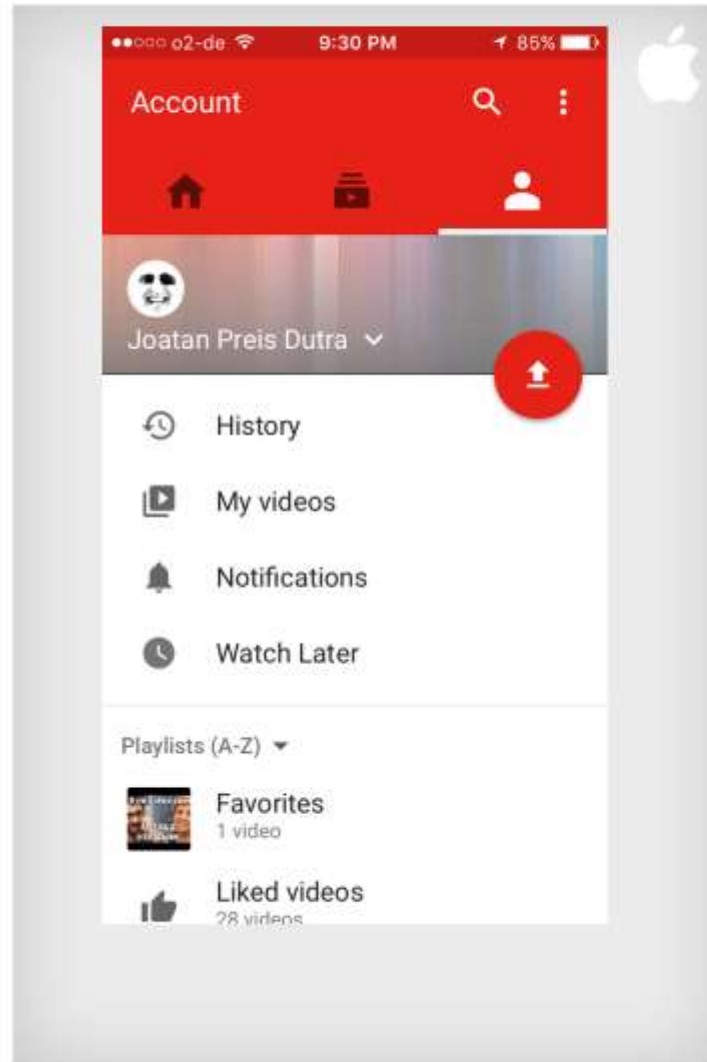


# iOS vs. Android Differences

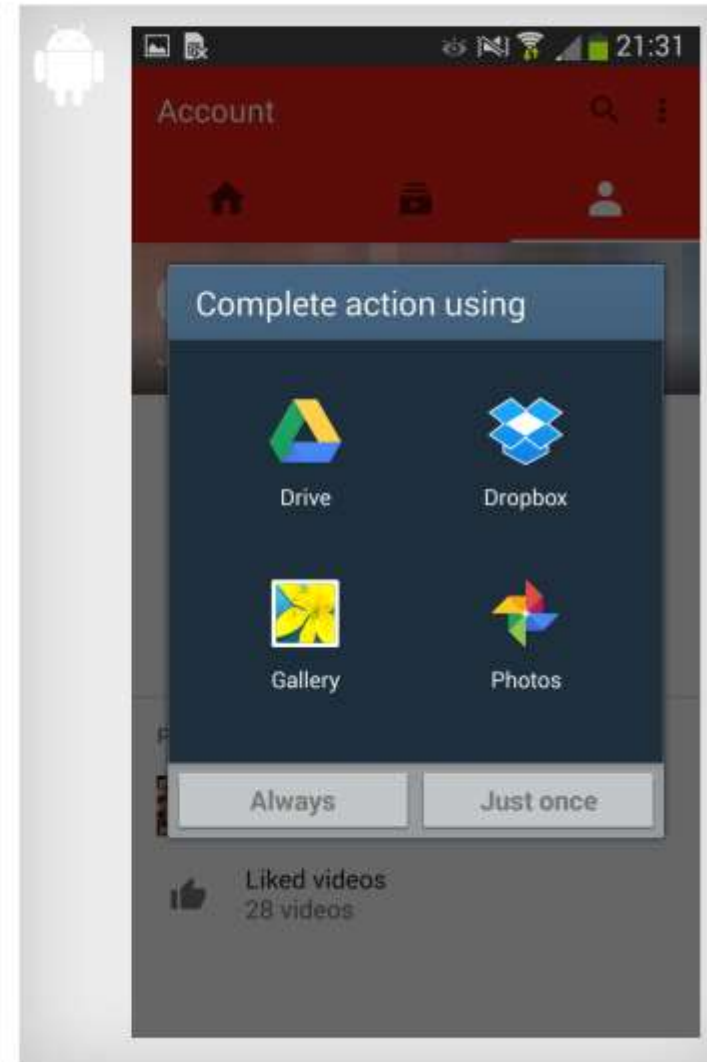
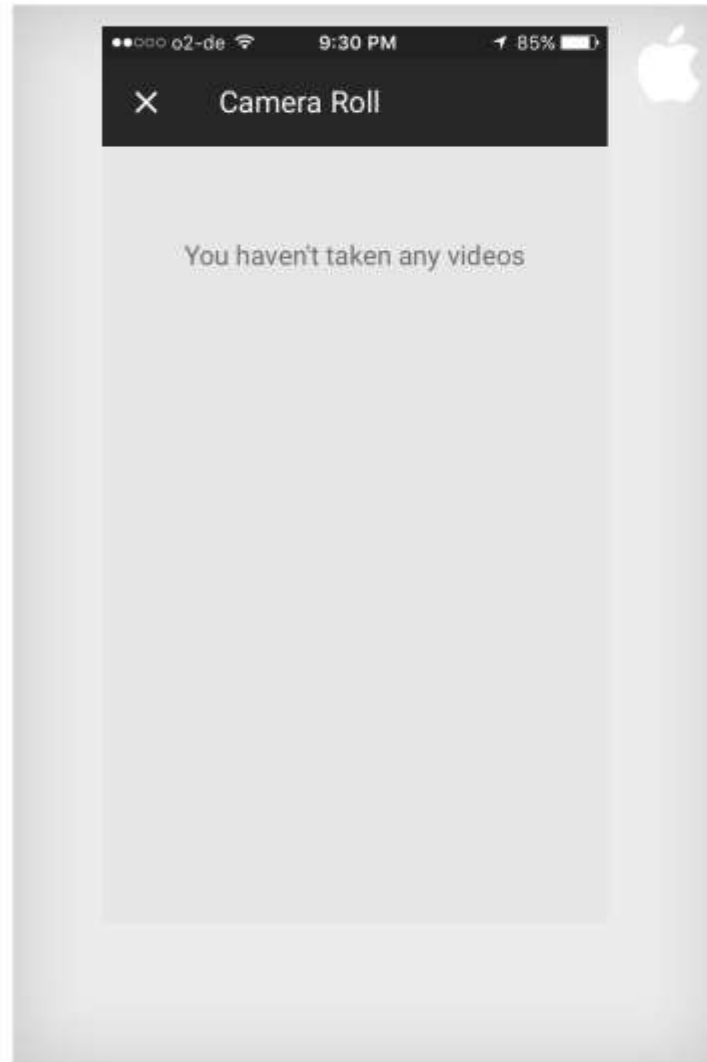


## iOS vs. Android

### Differences

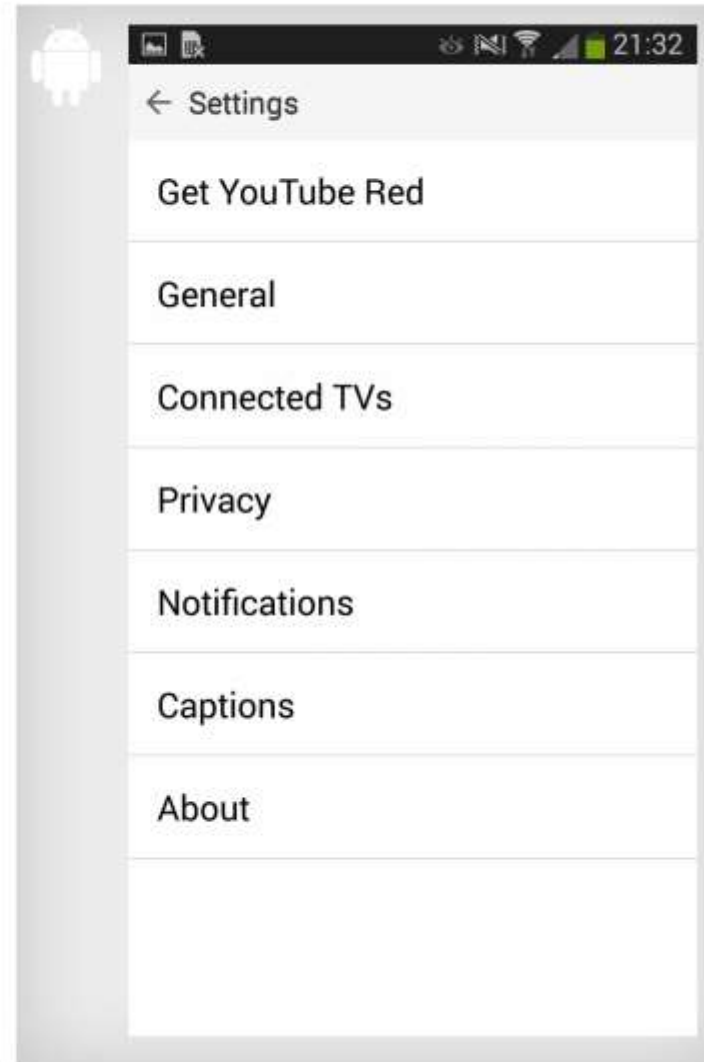
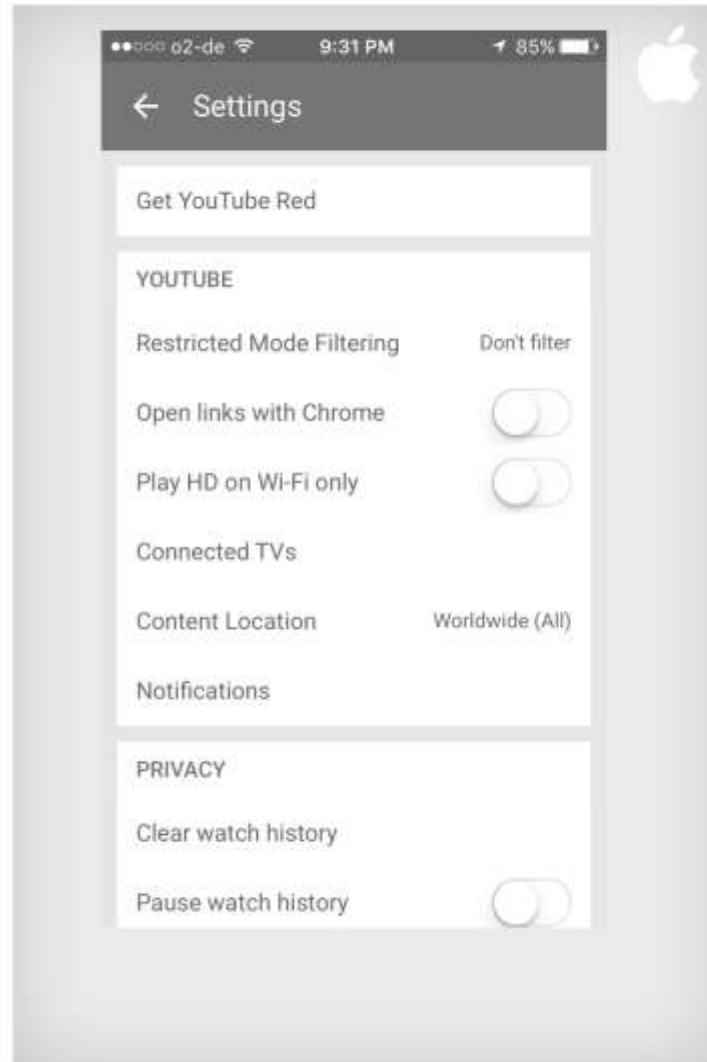


# iOS vs. Android Differences

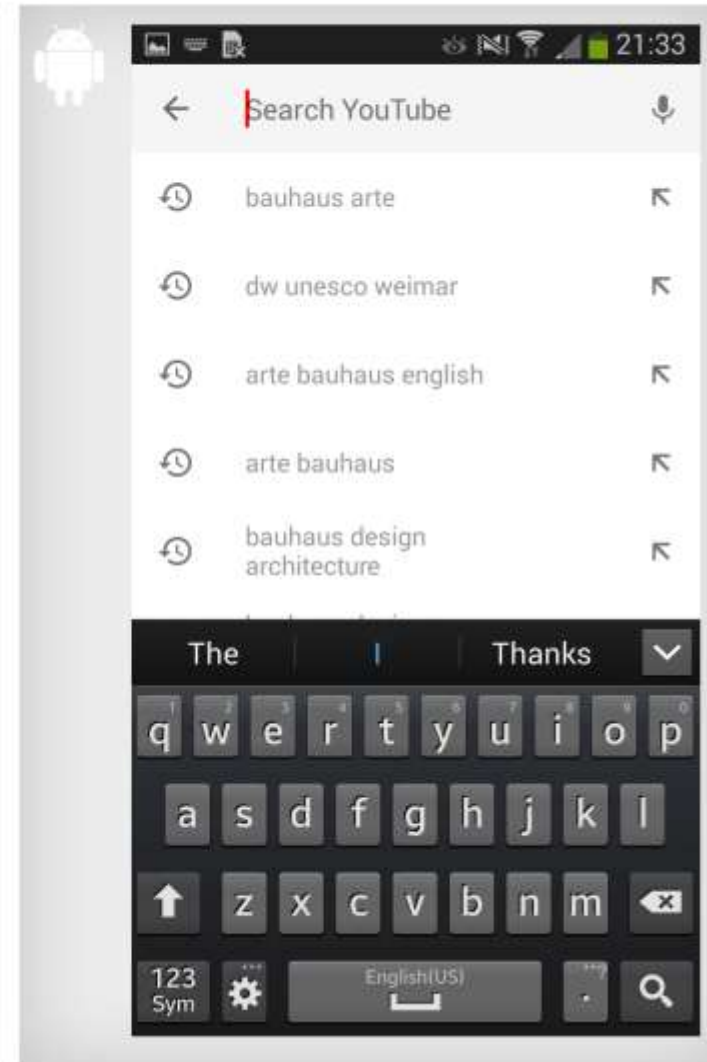
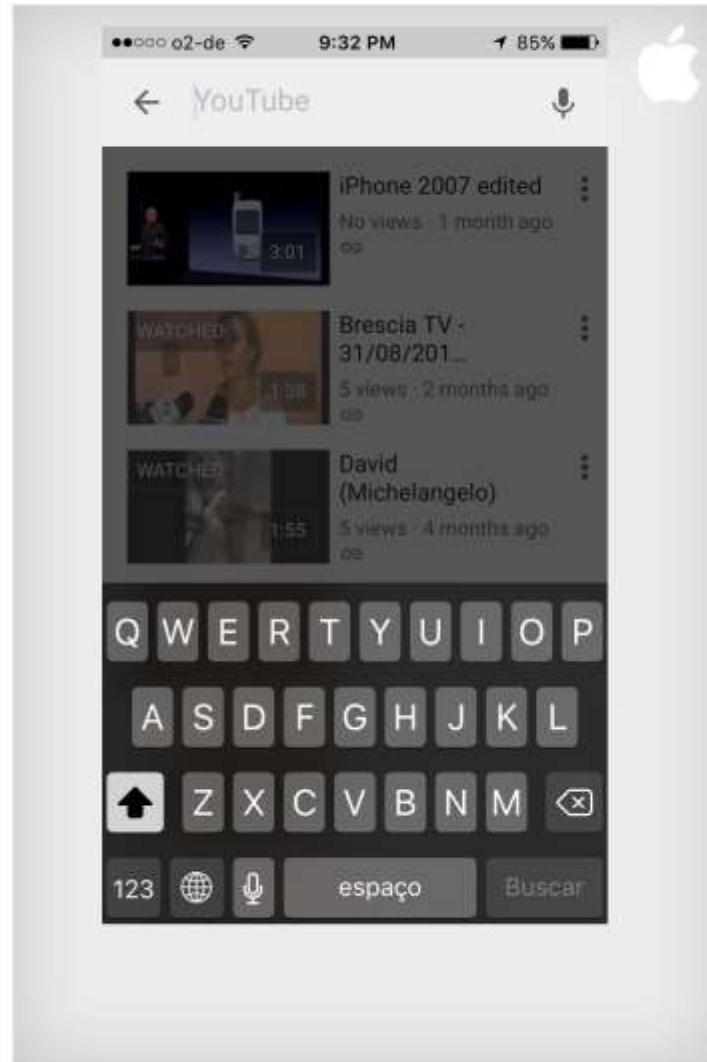




## iOS vs. Android Differences



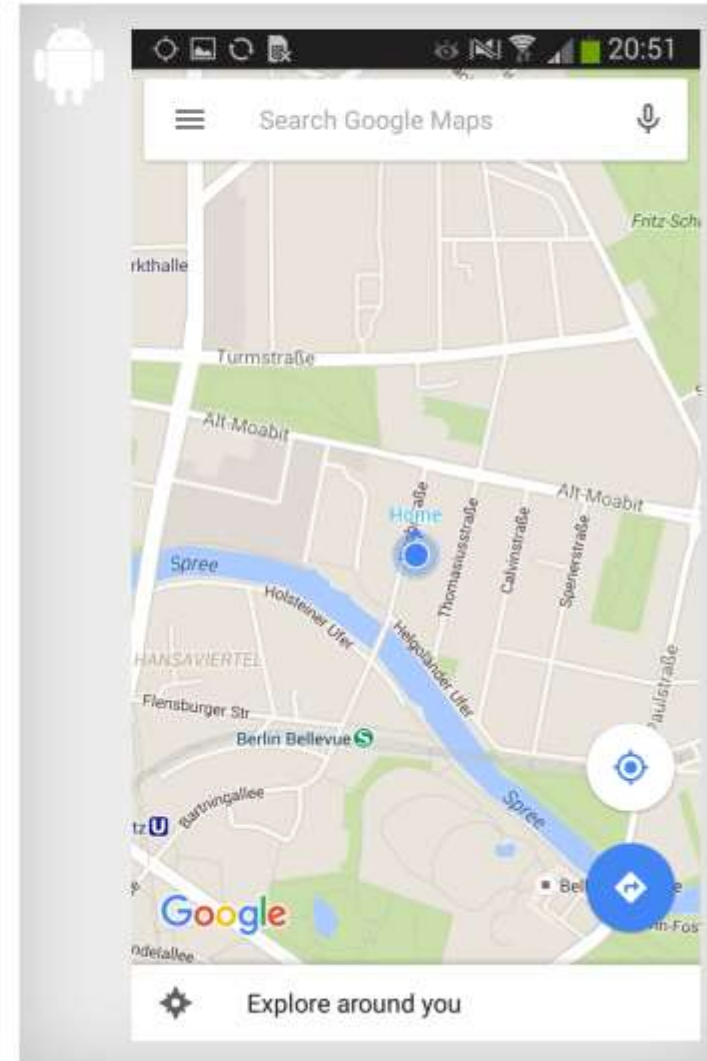
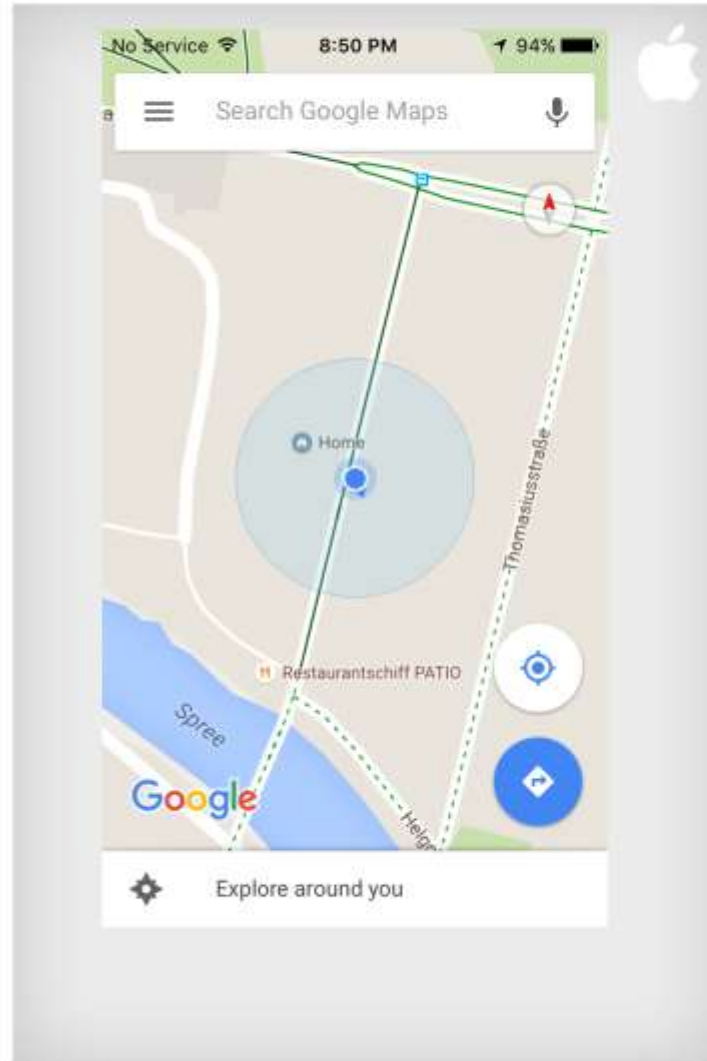
## iOS vs. Android Differences





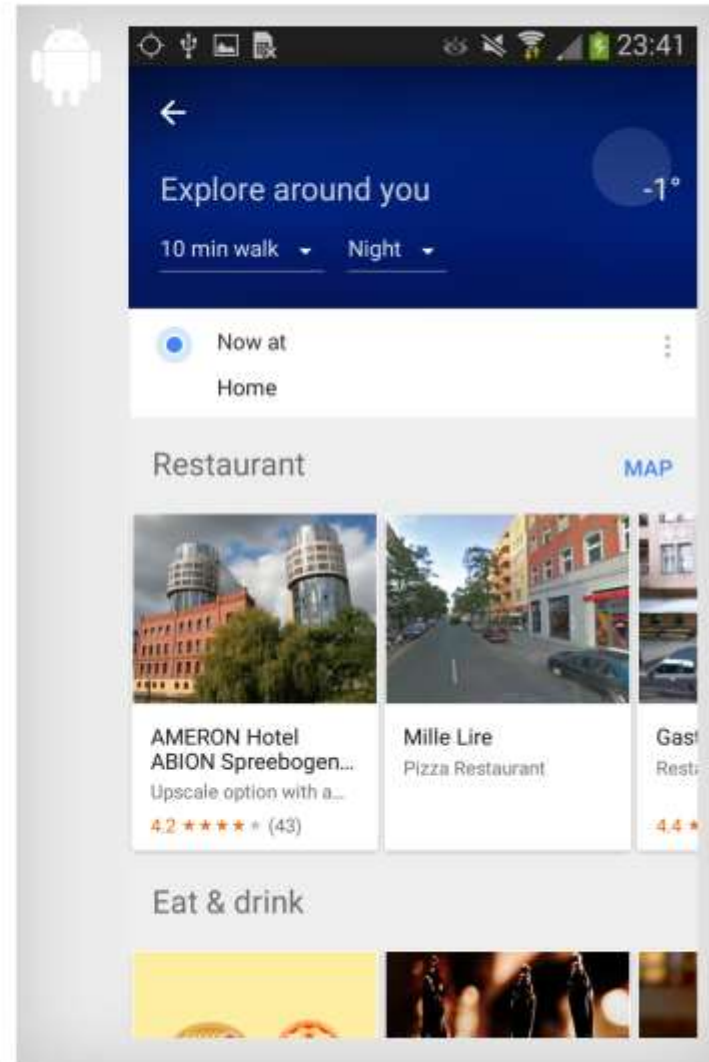
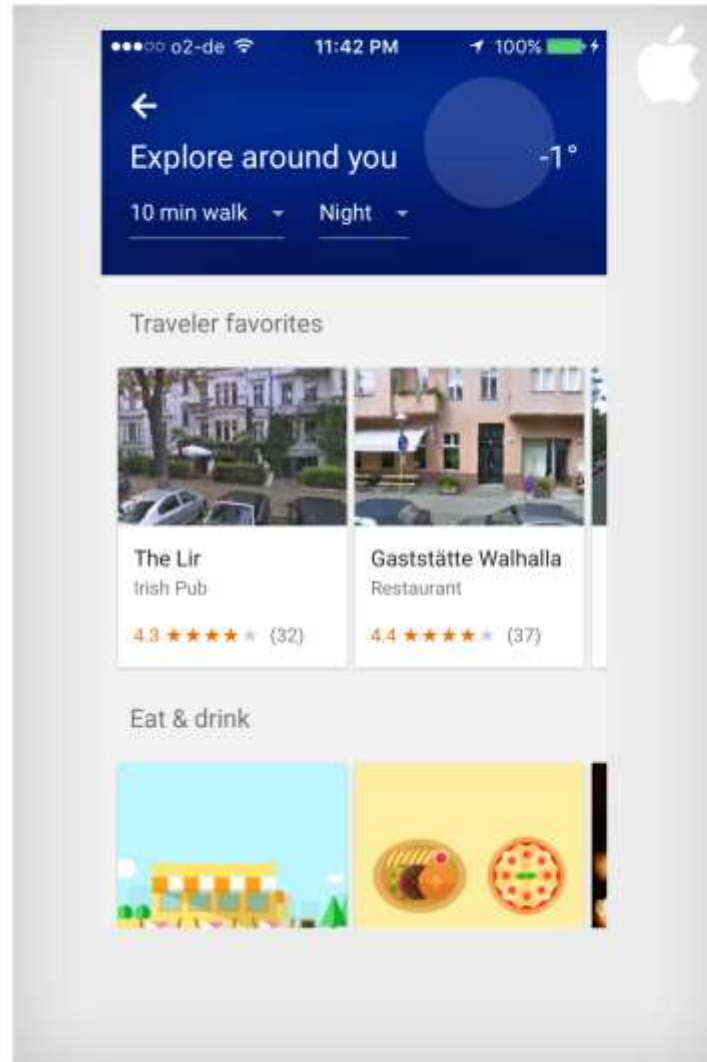
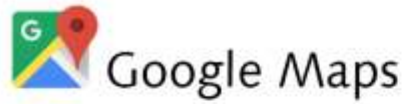
iOS vs.  
Android

Differences



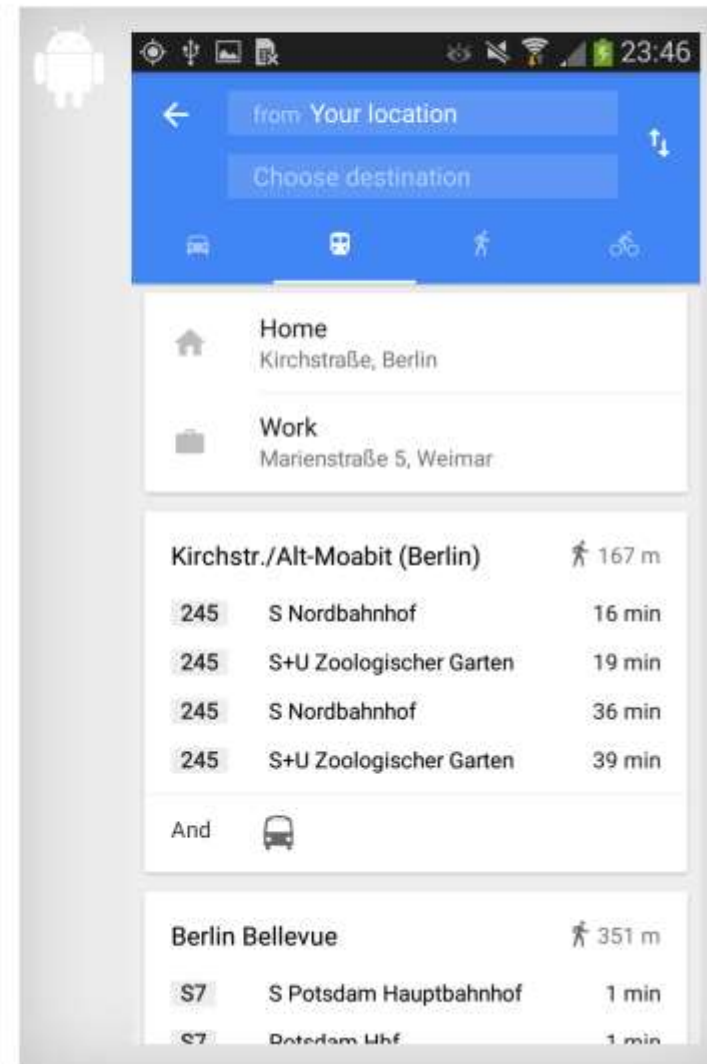
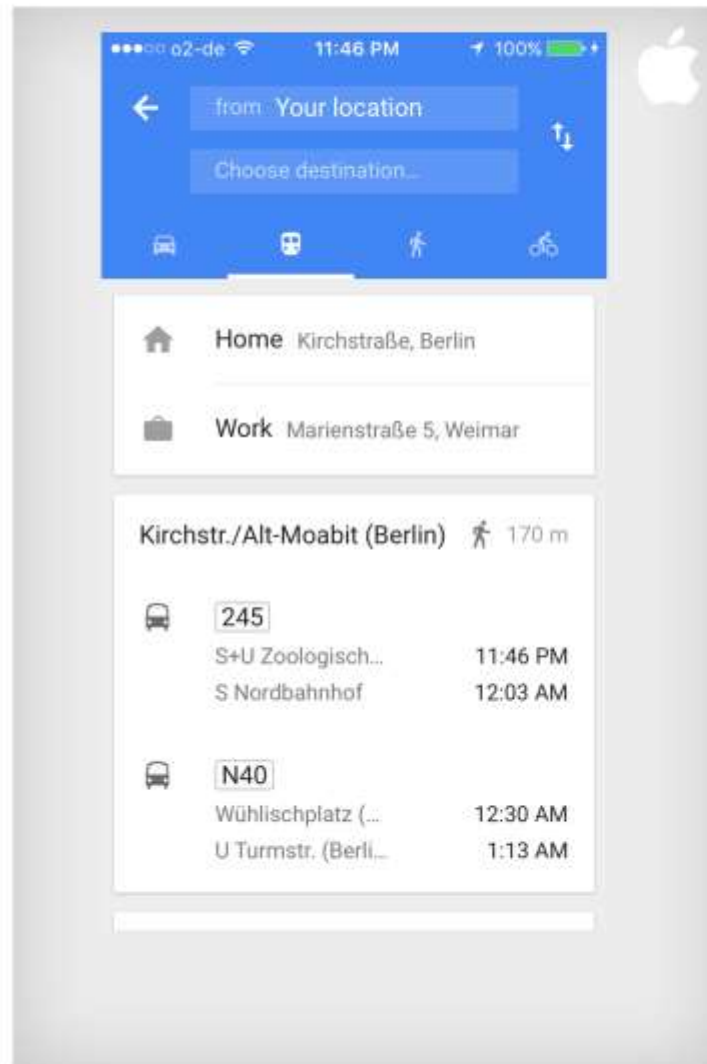
## iOS vs. Android

### Differences



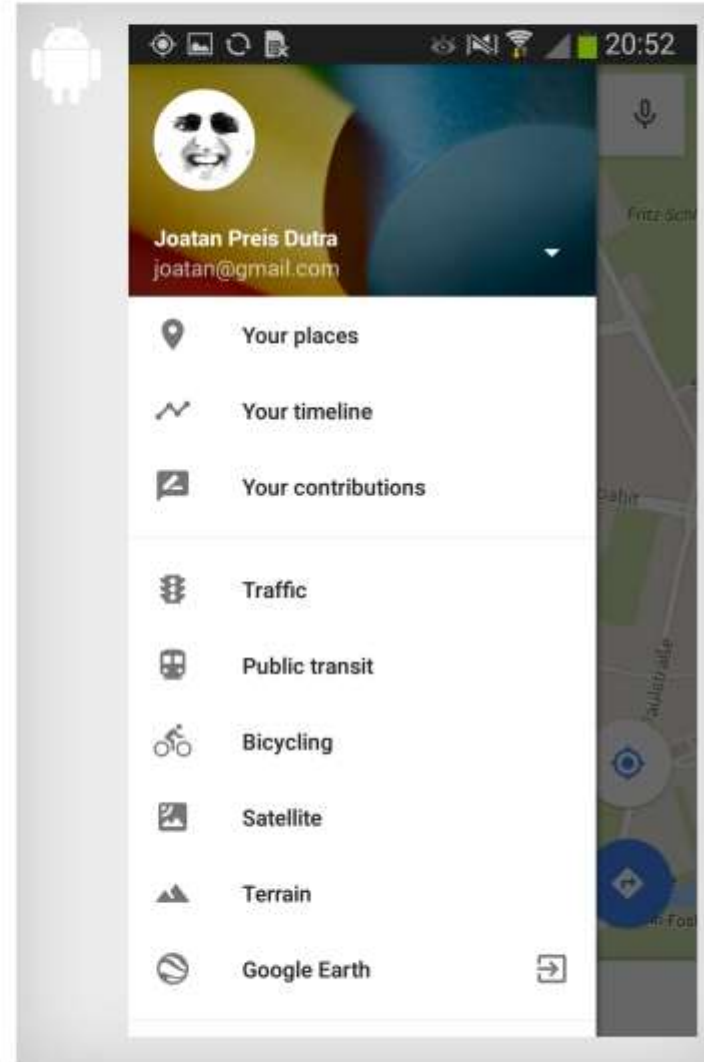
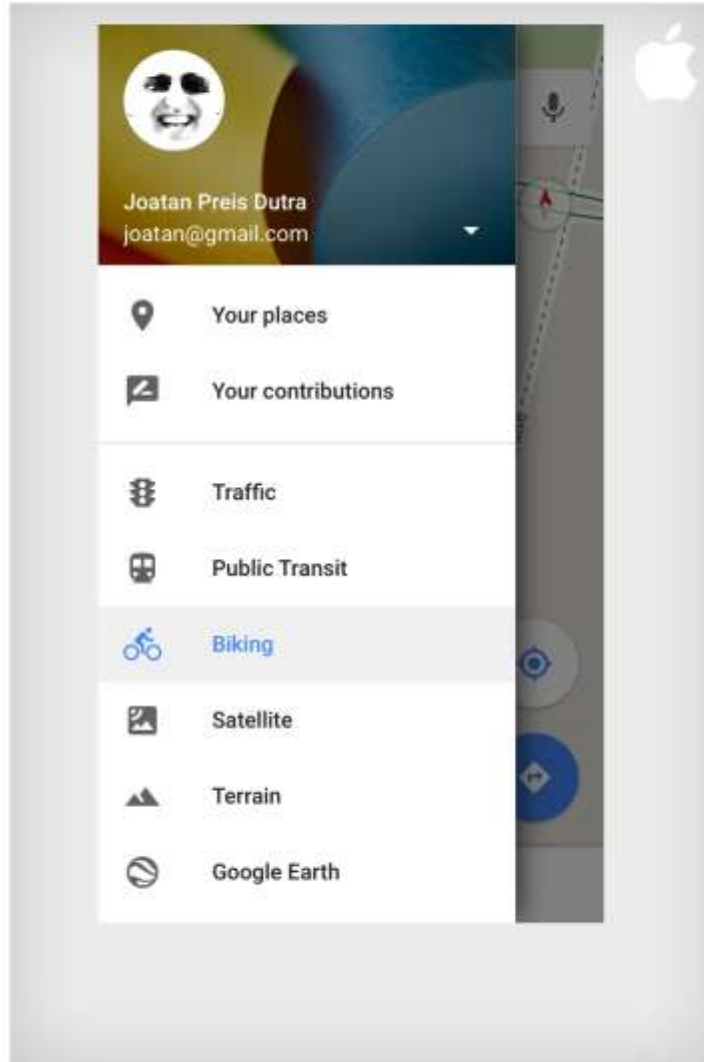
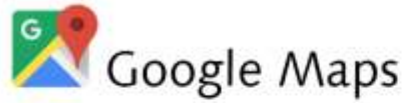
# iOS vs. Android

## Differences



## iOS vs. Android

### Differences

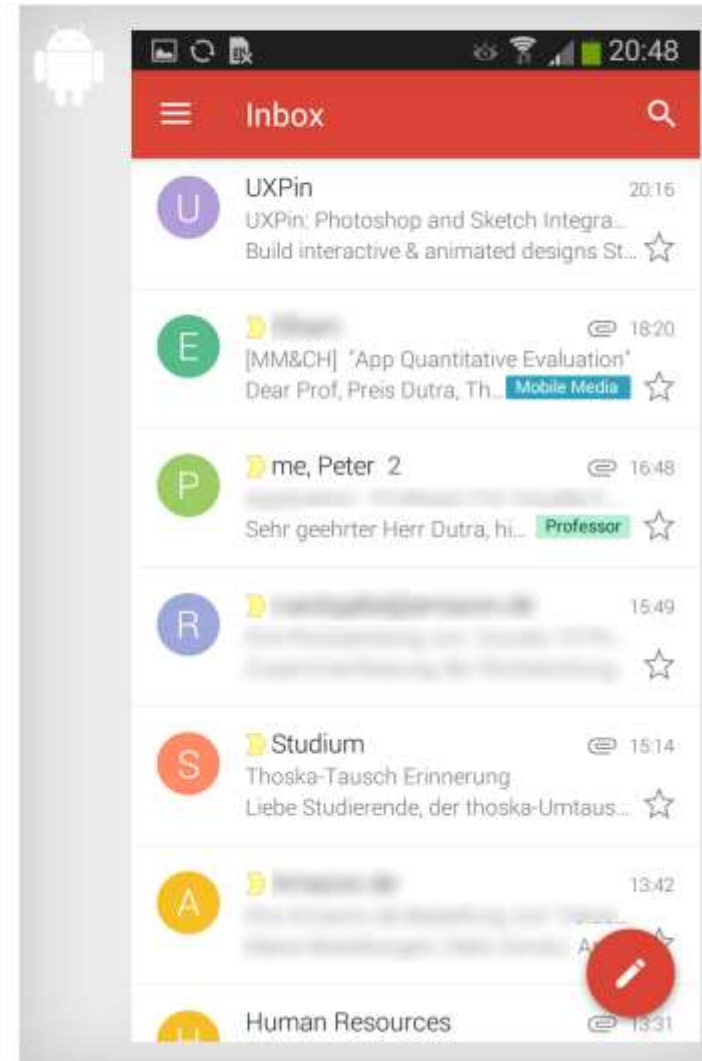
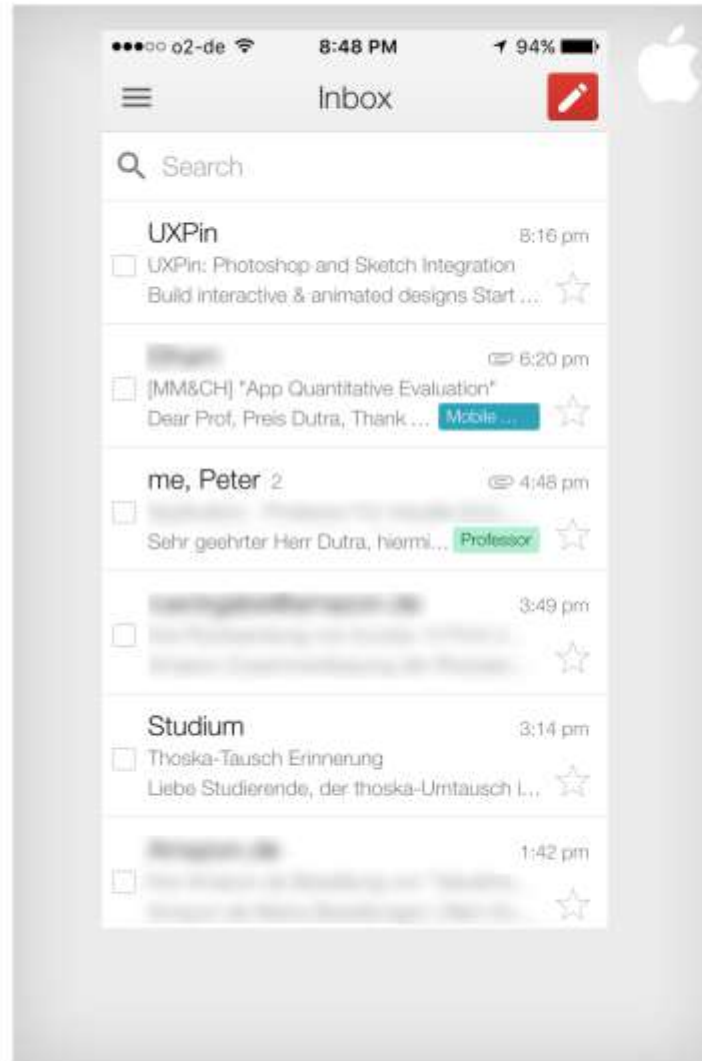




## iOS vs. Android Differences

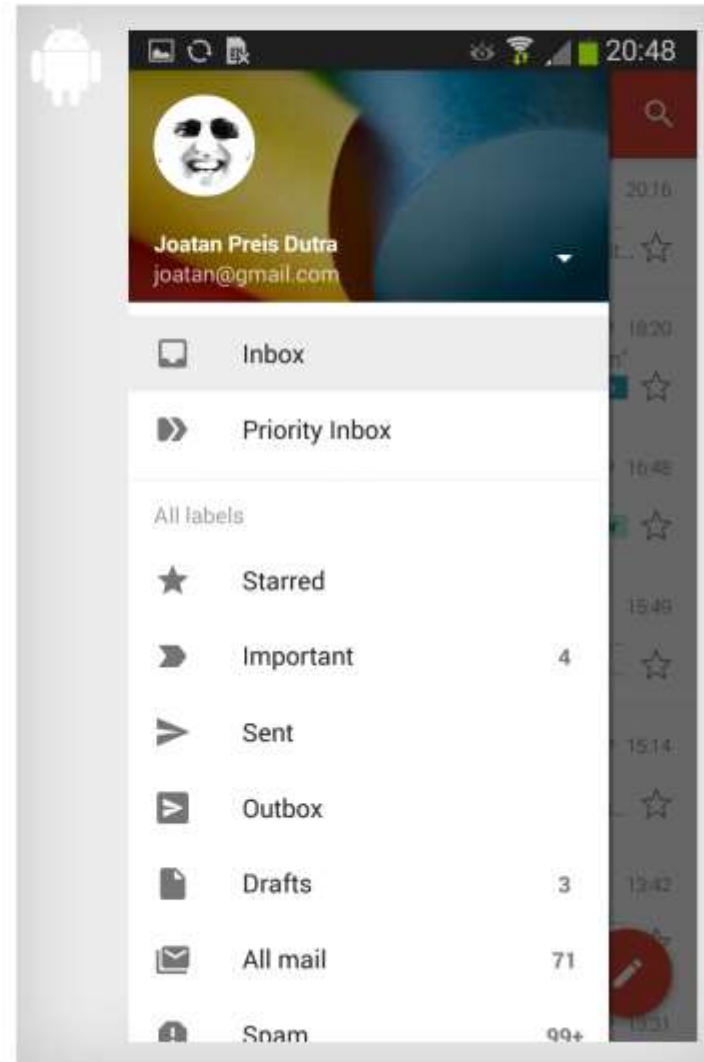
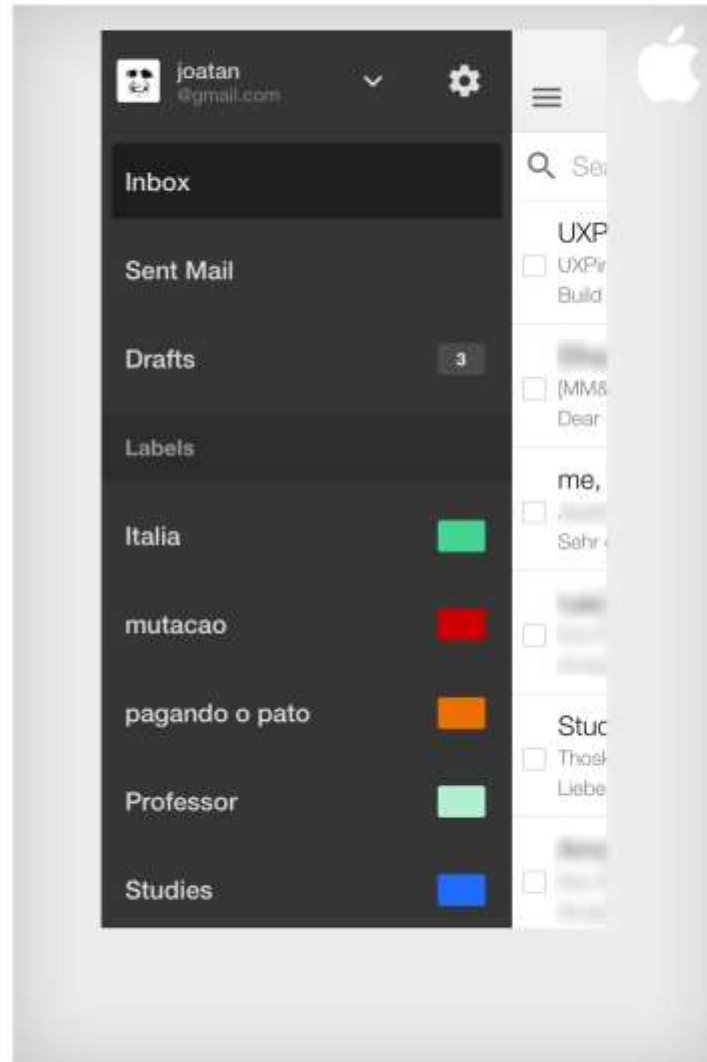


Gmail



## iOS vs. Android

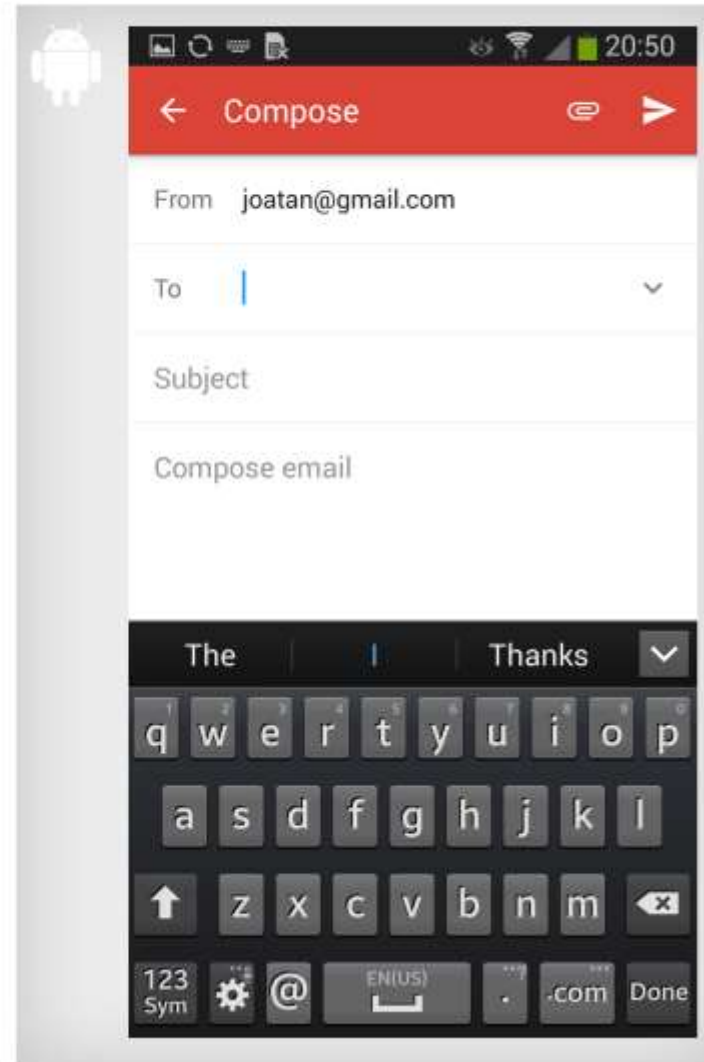
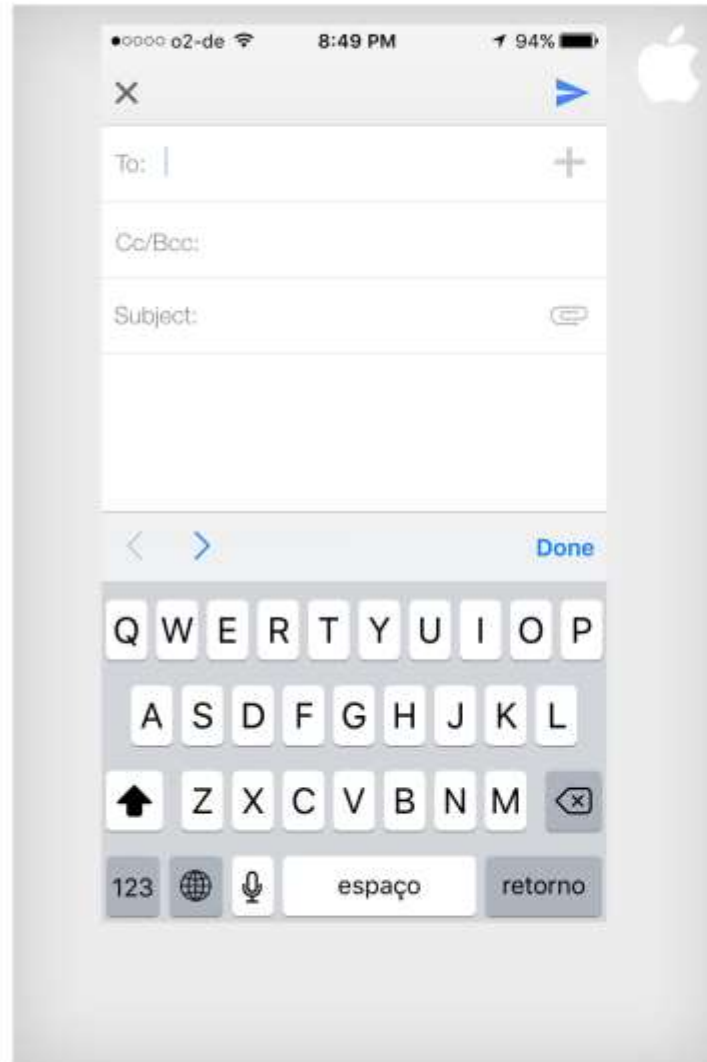
### Differences





# iOS vs. Android

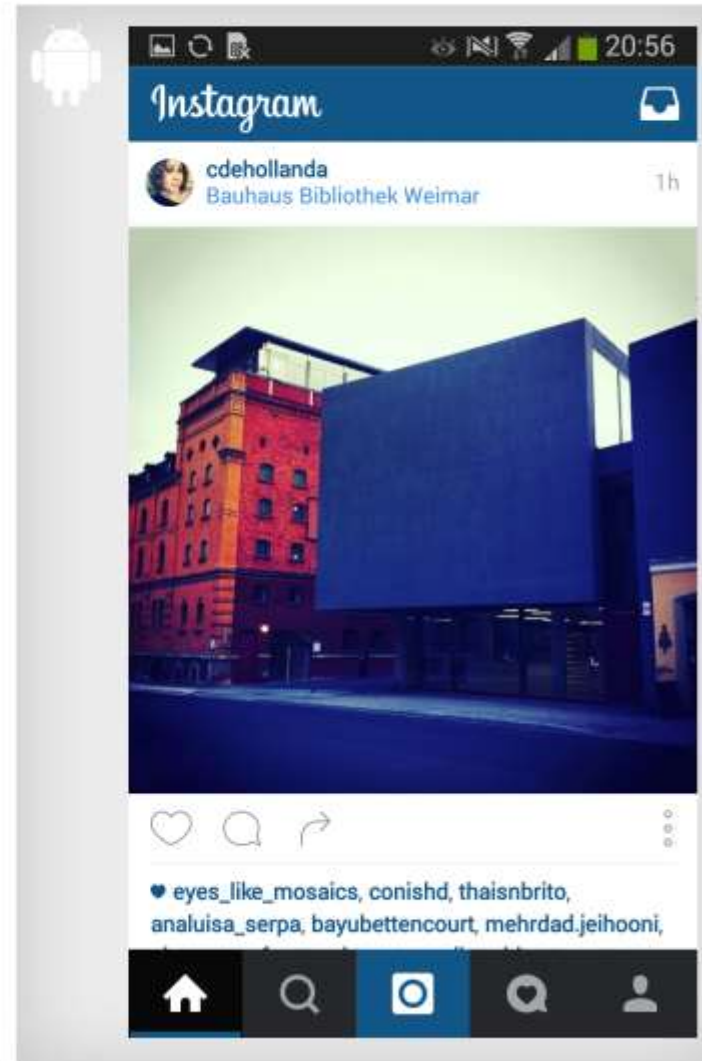
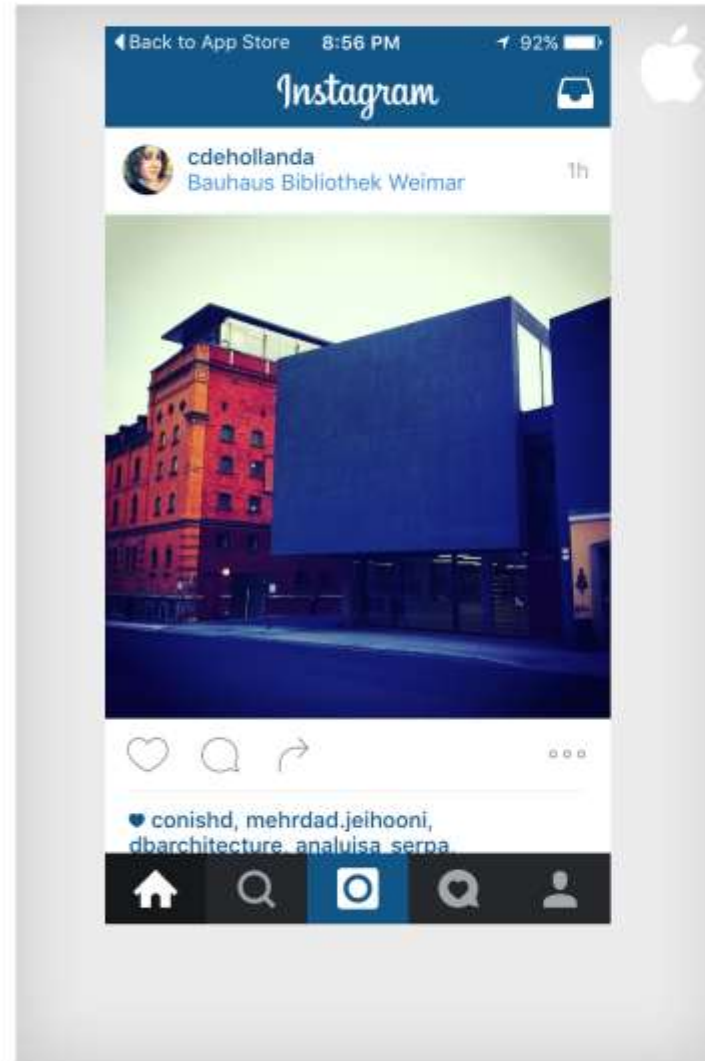
## Differences



# iOS vs. Android Differences



Instagram



iOS vs.  
Android

Differences



Instagram

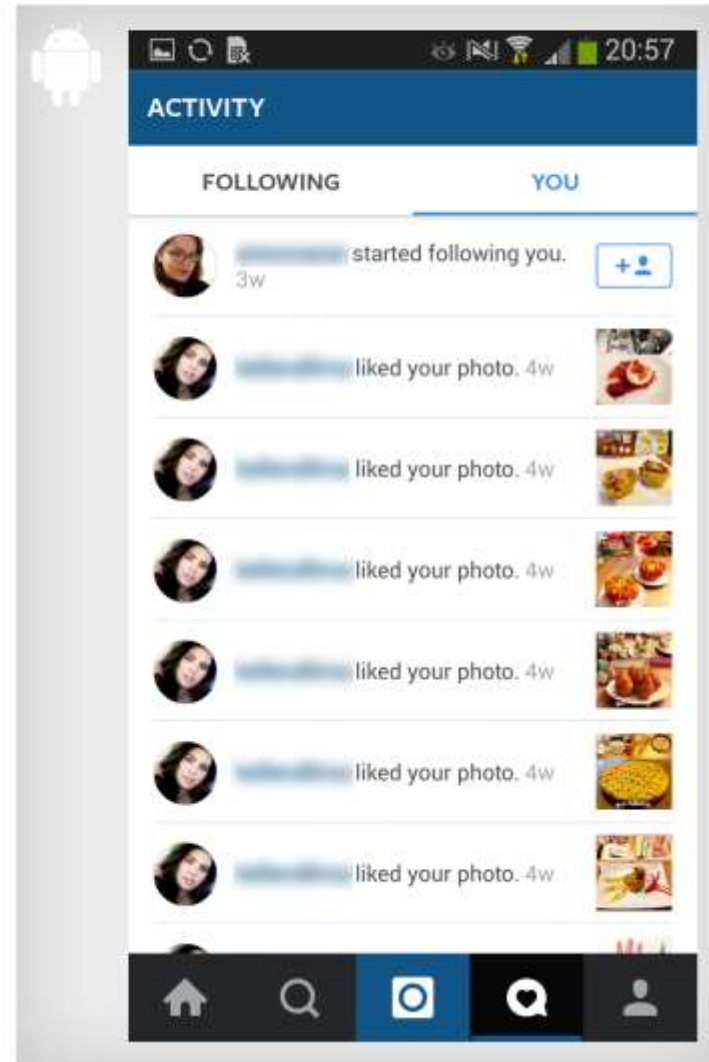




## iOS vs. Android Differences



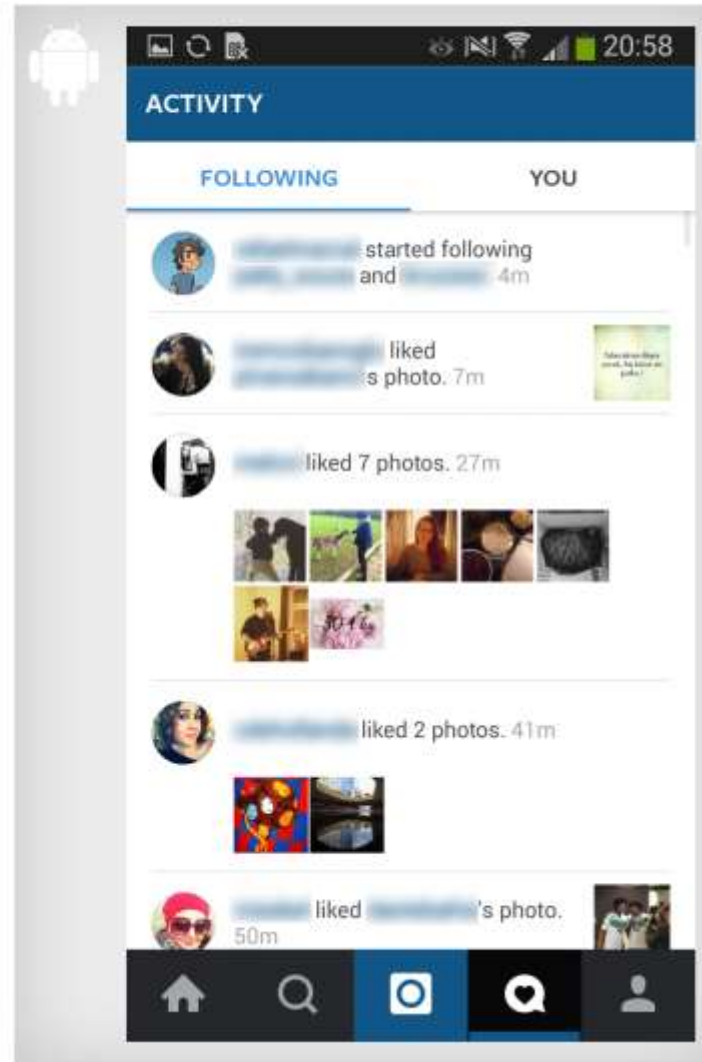
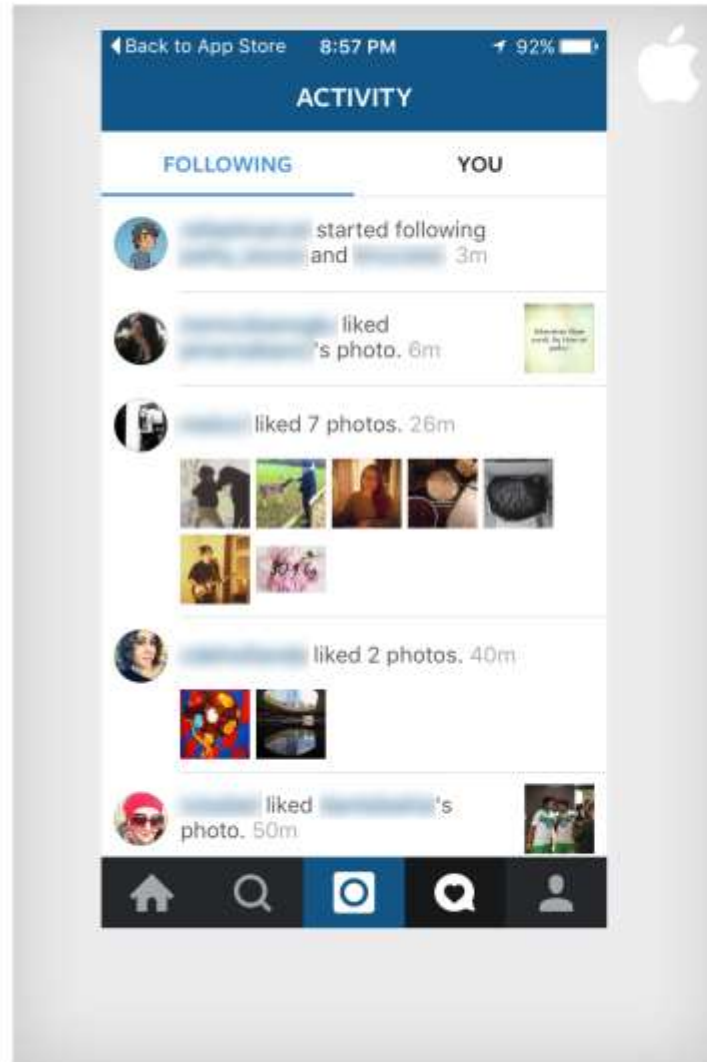
Instagram



# iOS vs. Android Differences



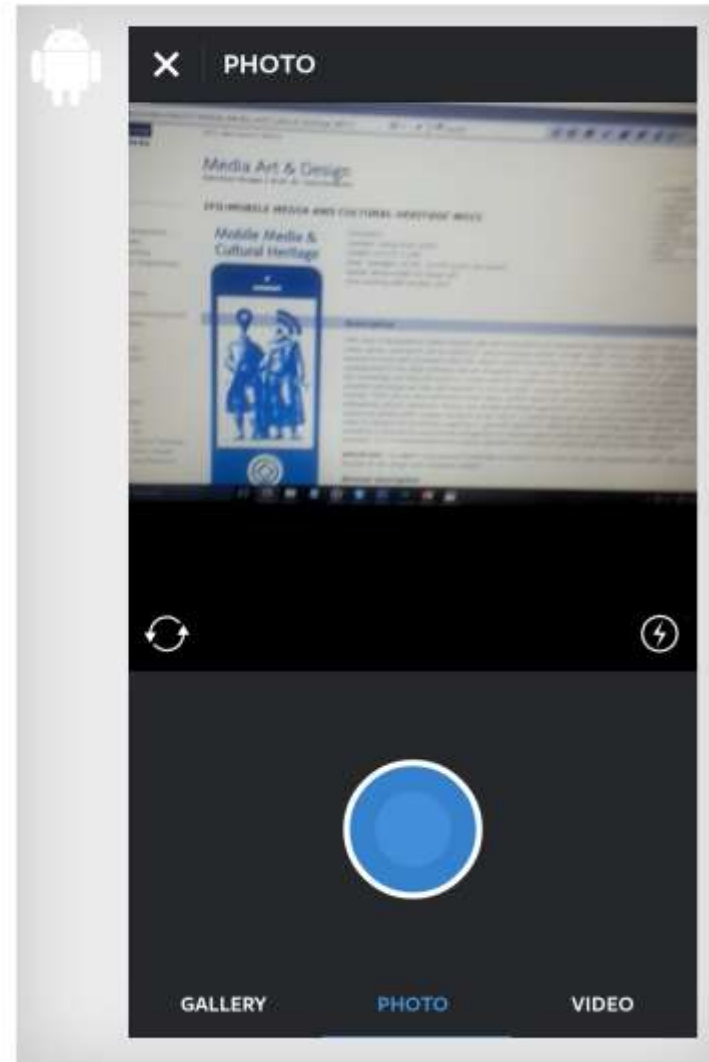
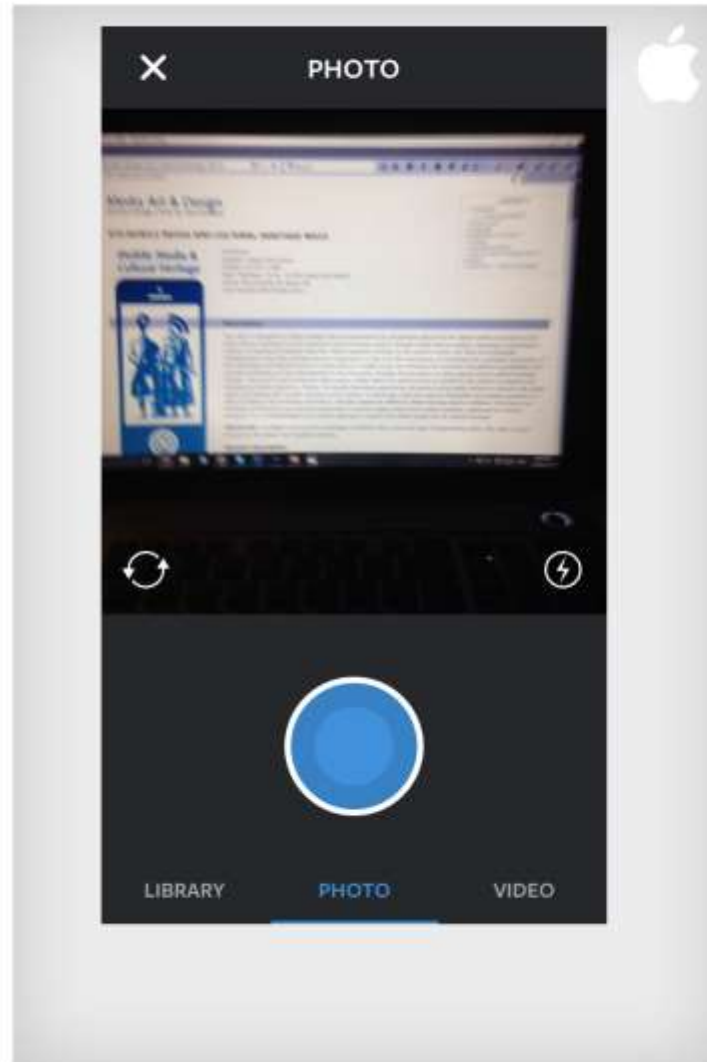
## Instagram



# iOS vs. Android Differences



Instagram



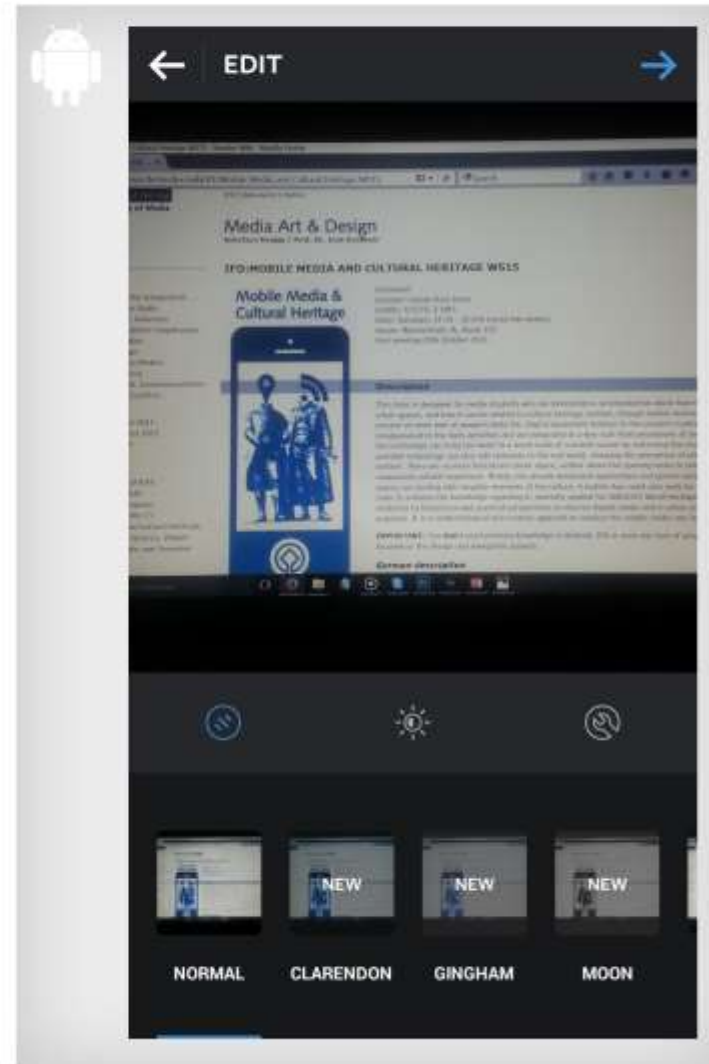
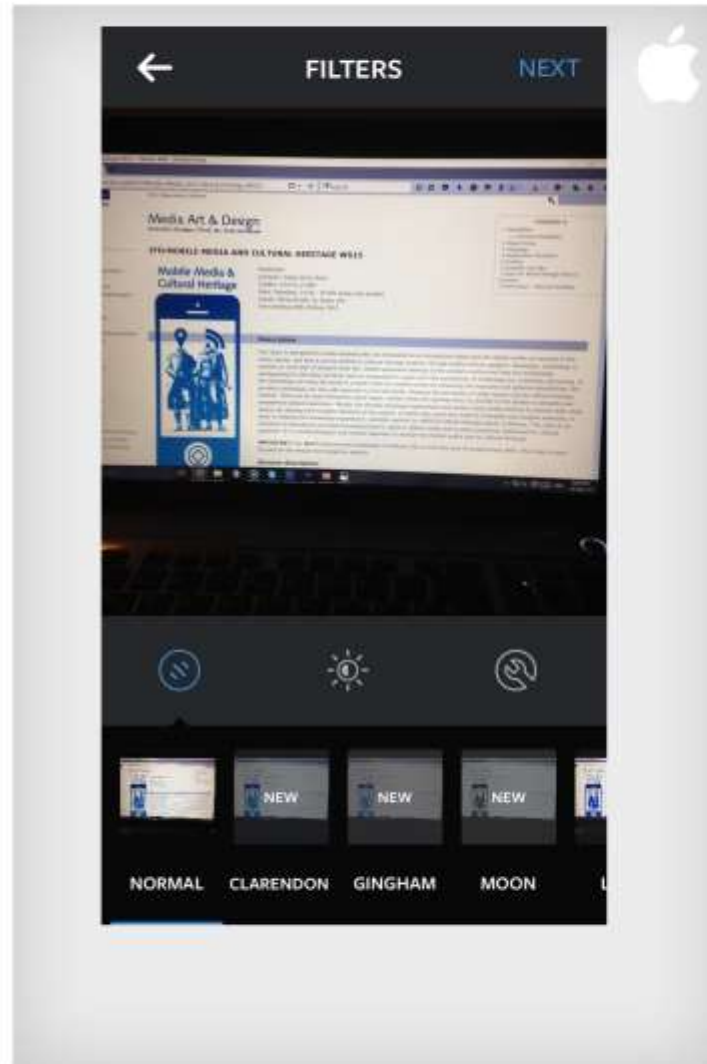


iOS vs.  
Android

Differences



Instagram

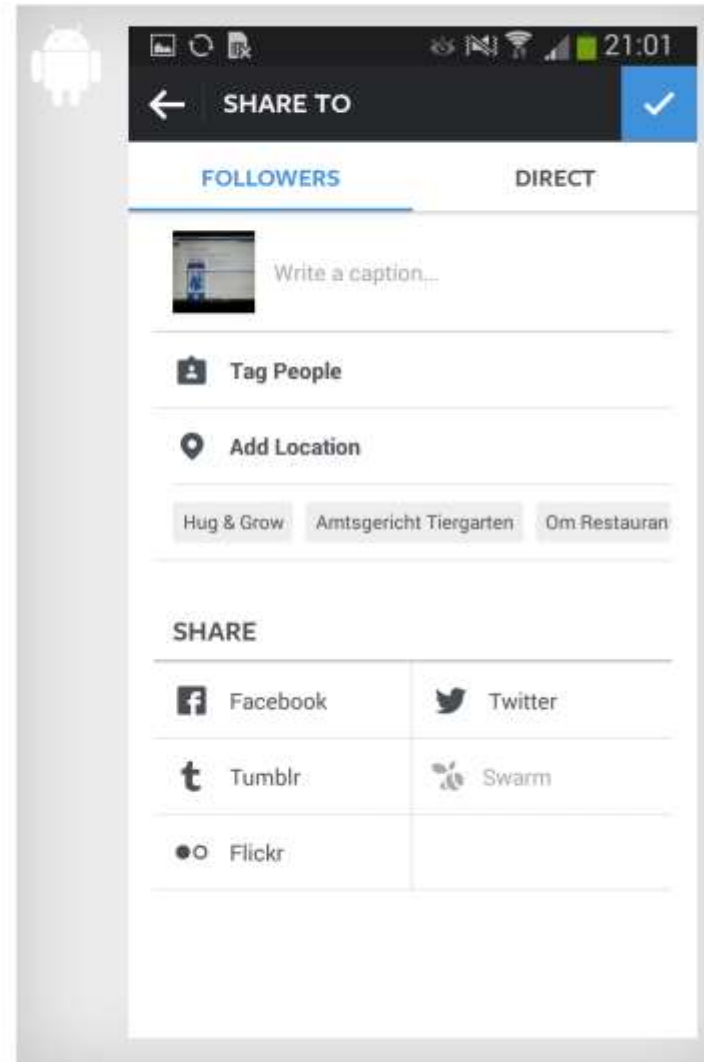
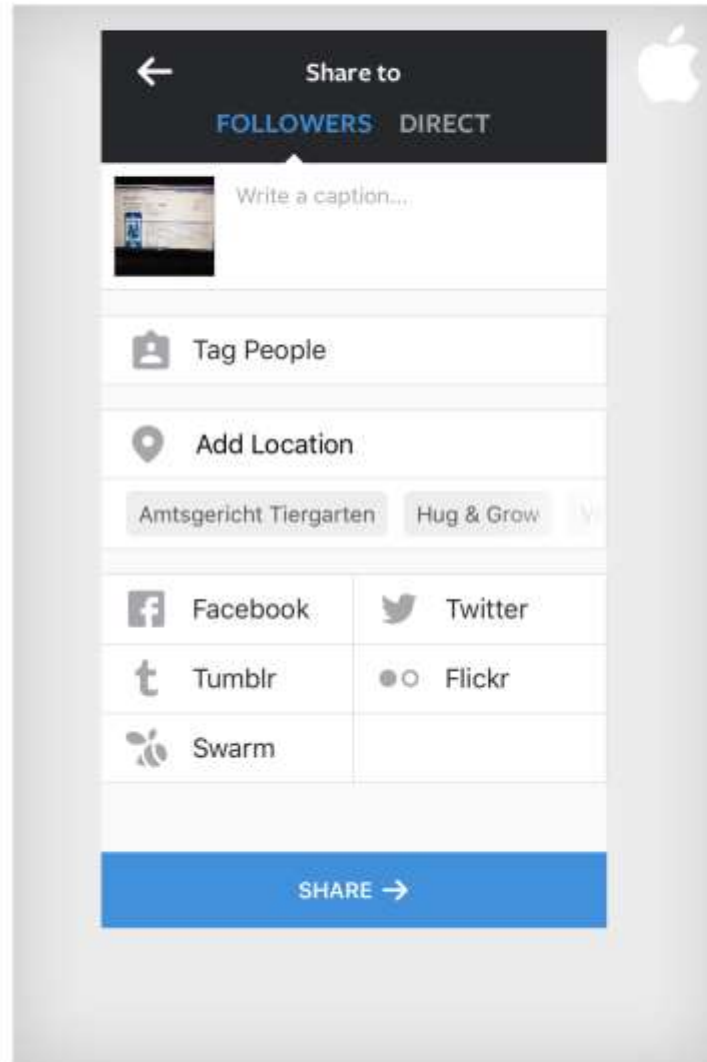


# iOS vs. Android

## Differences



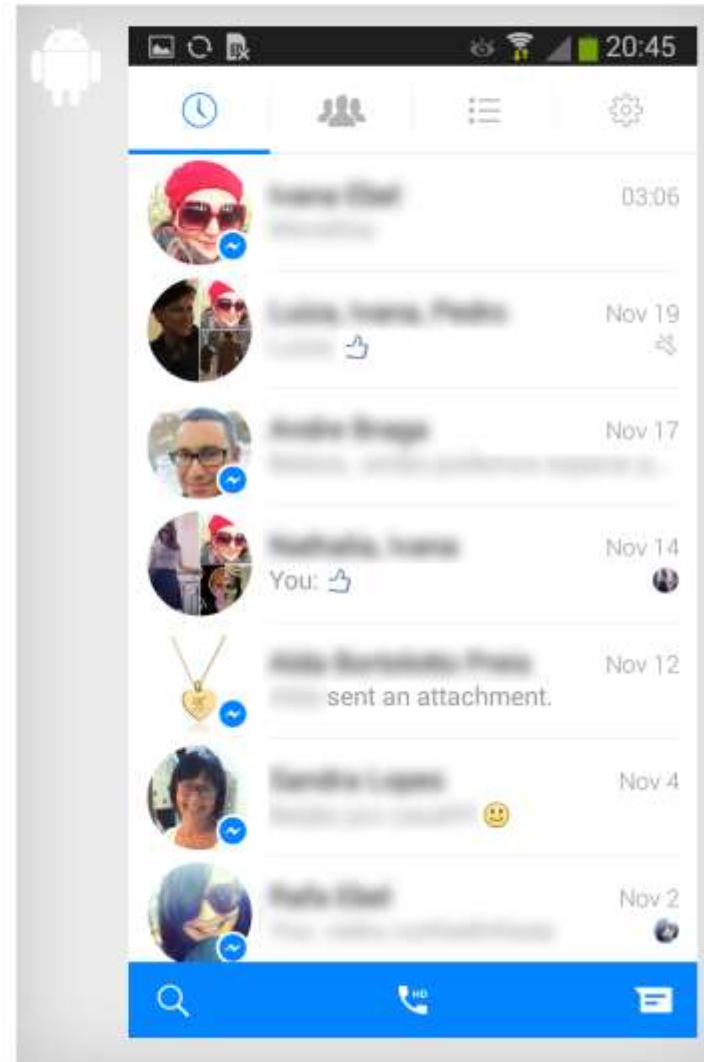
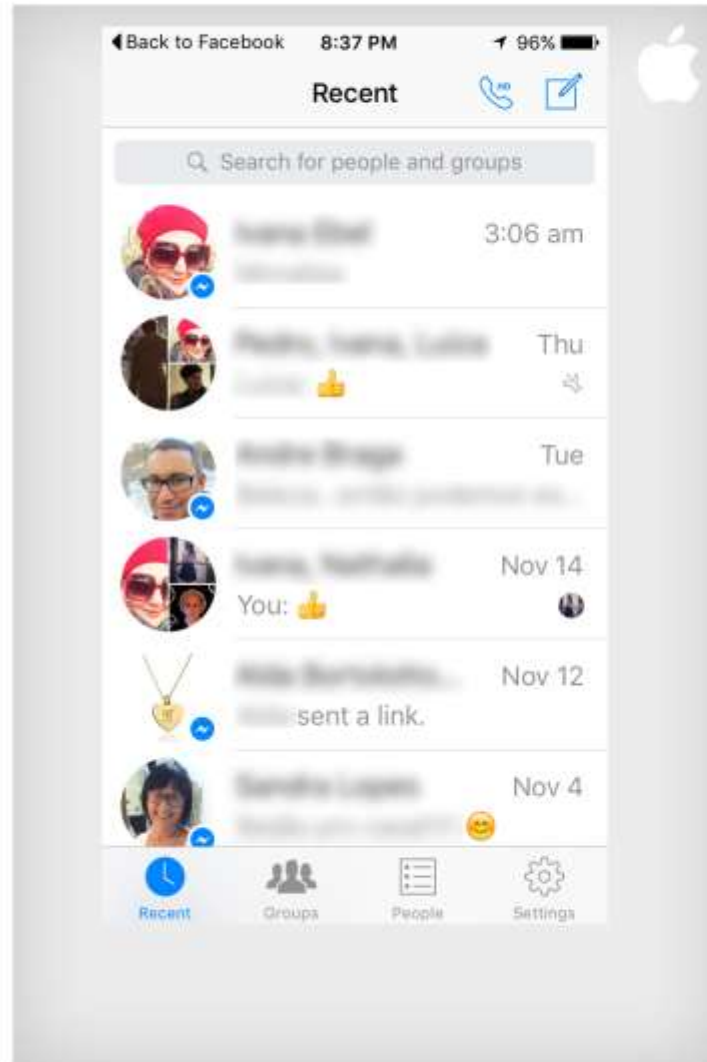
Instagram



# iOS vs. Android

## Differences

### Facebook Messenger

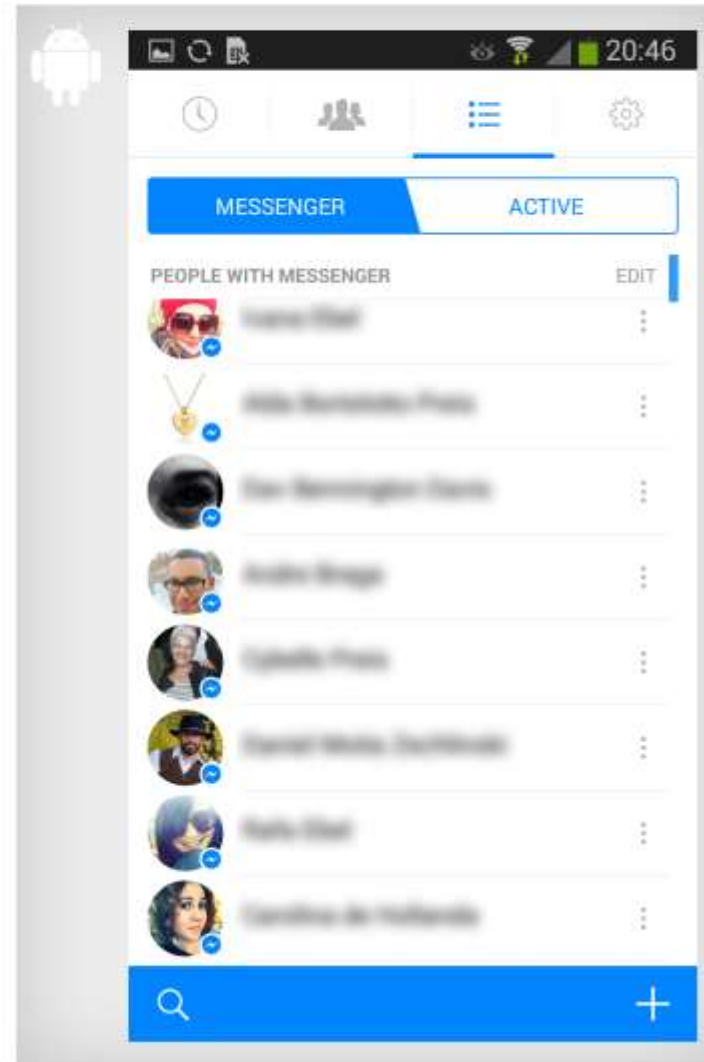
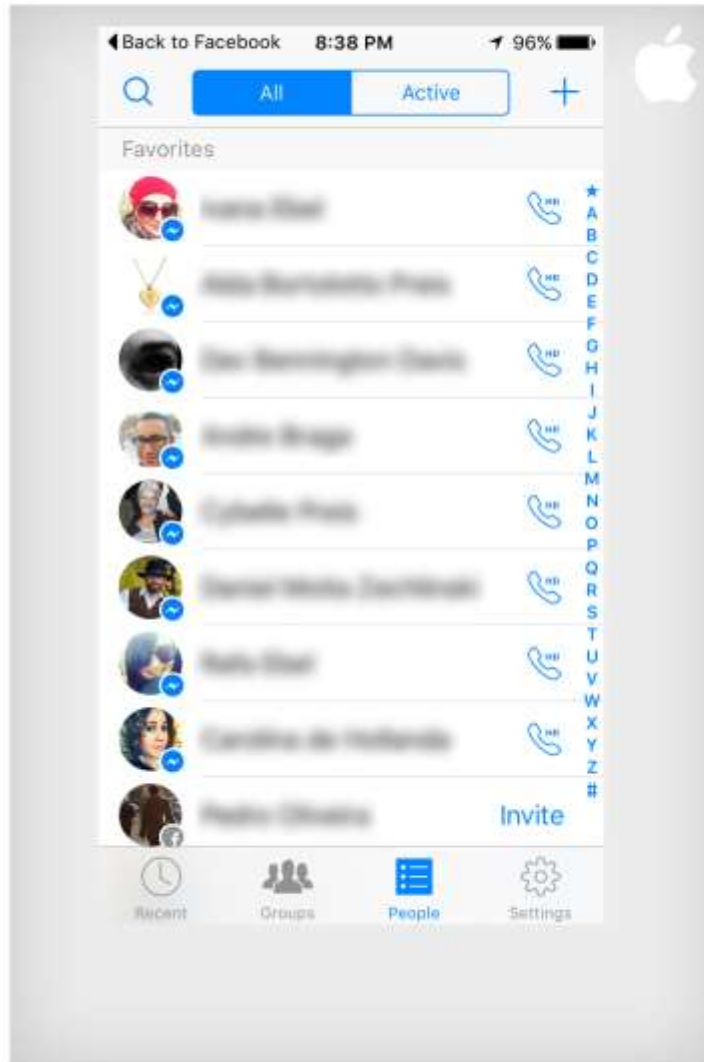


# iOS vs. Android

## Differences



### Facebook Messenger

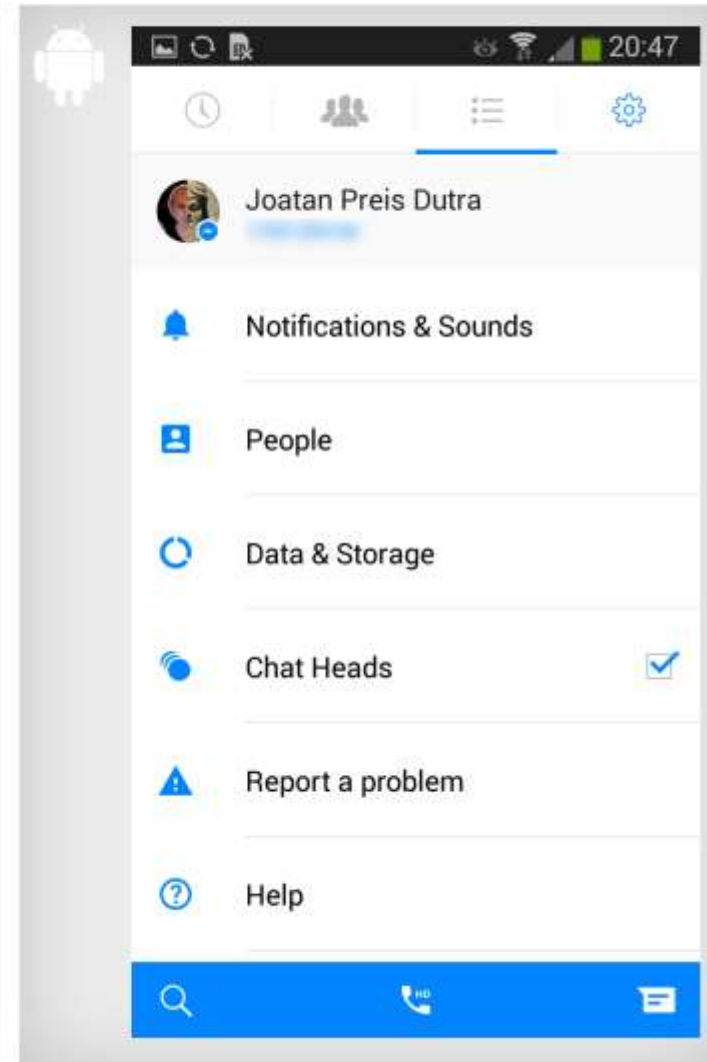
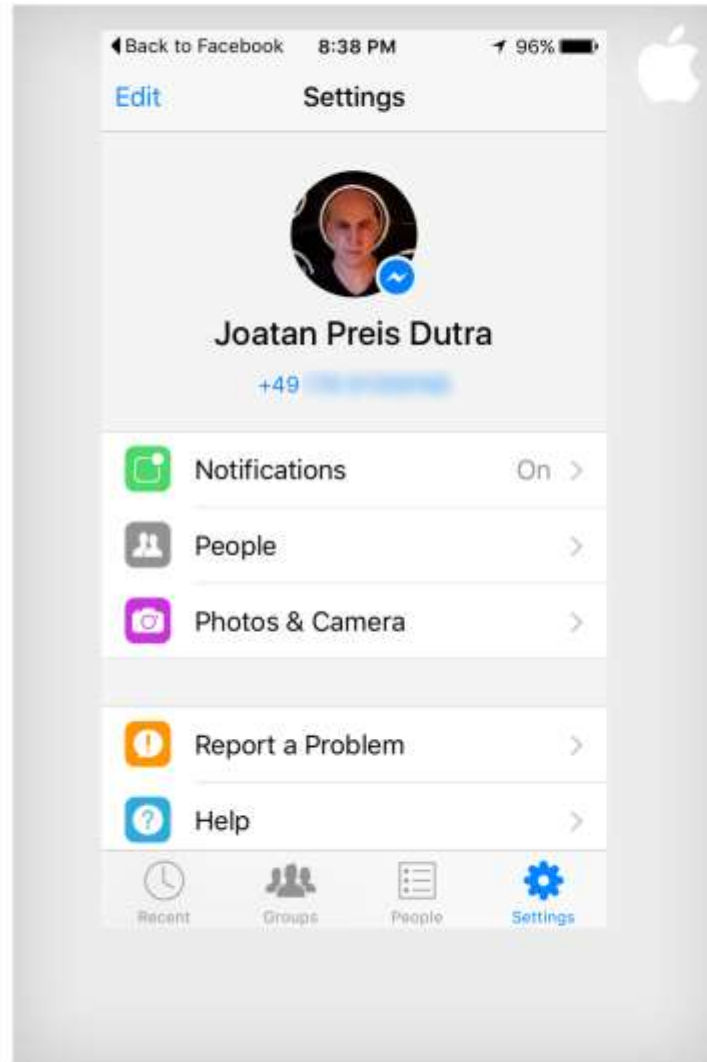




## iOS vs. Android

### Differences

#### Facebook Messenger



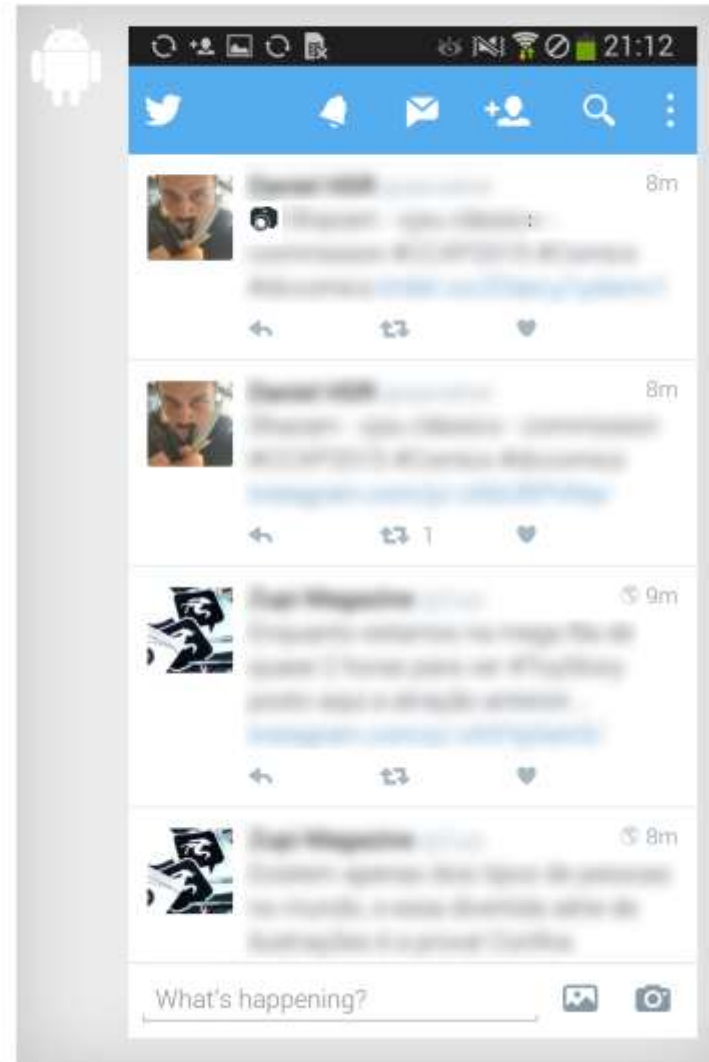
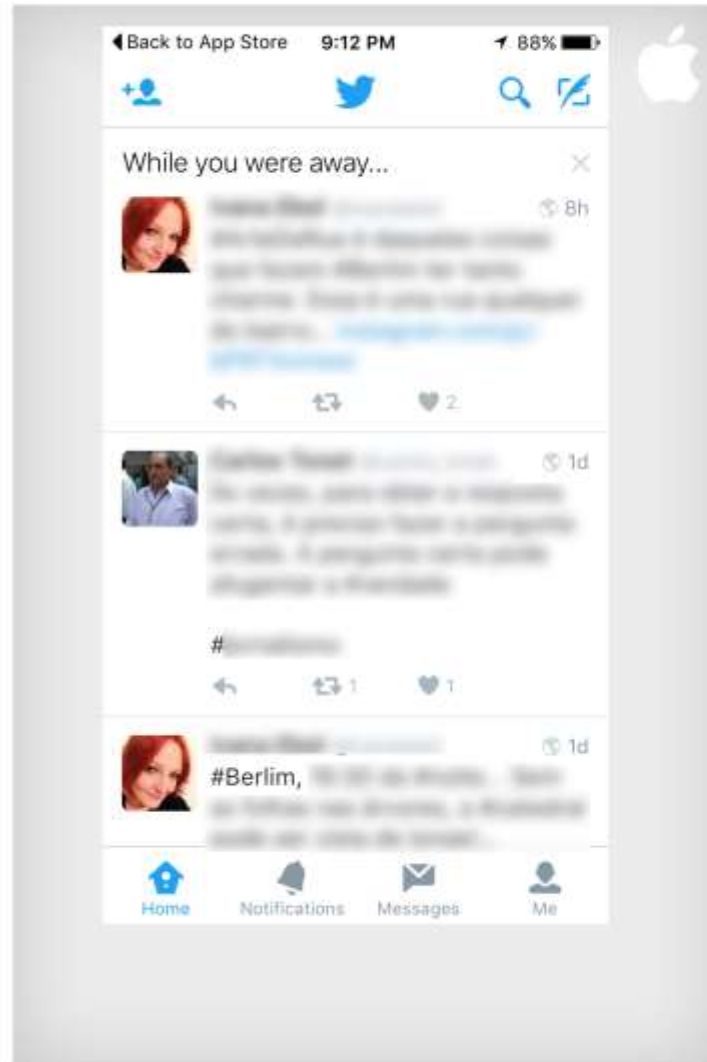


# iOS vs. Android

## Differences

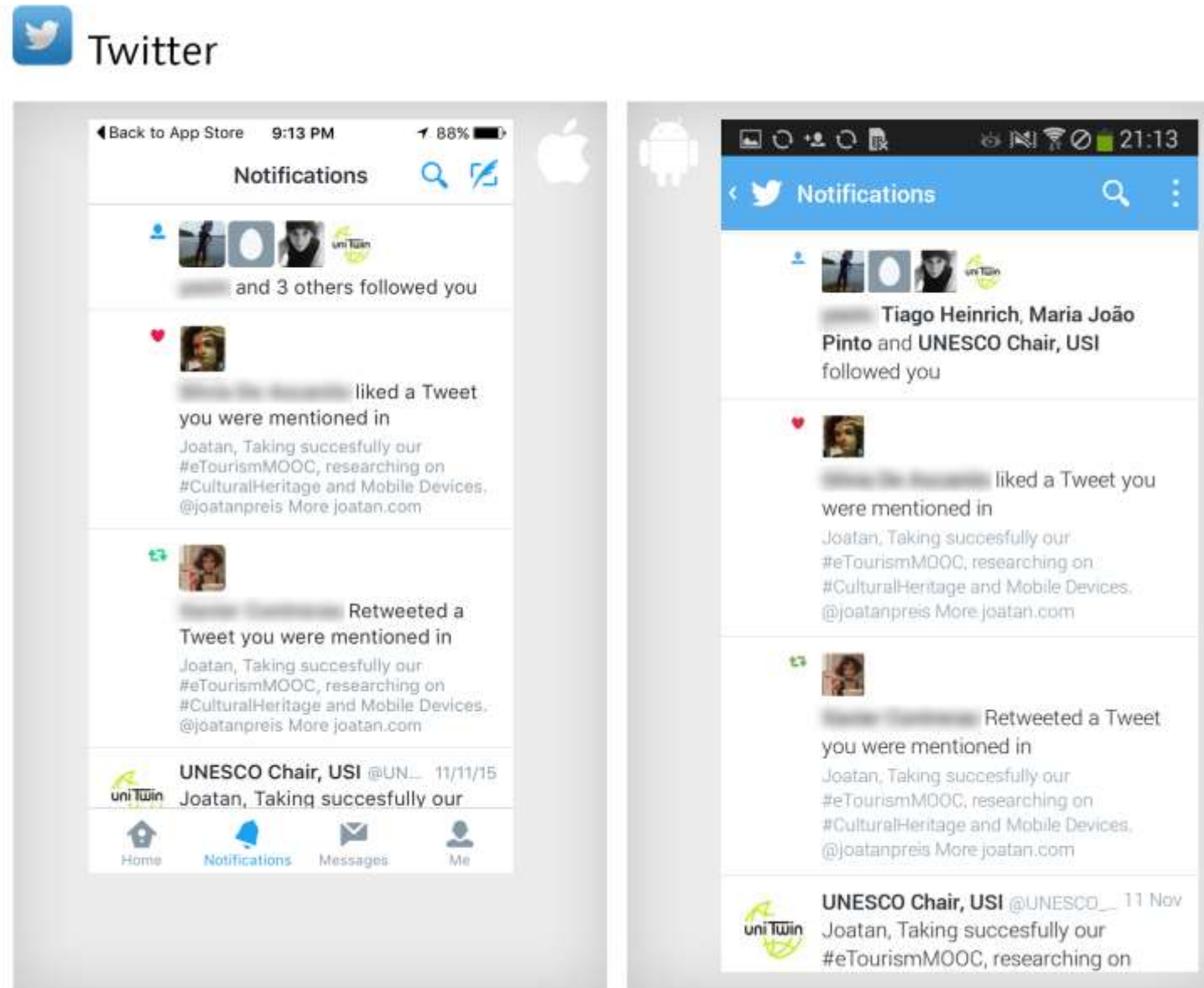


Twitter

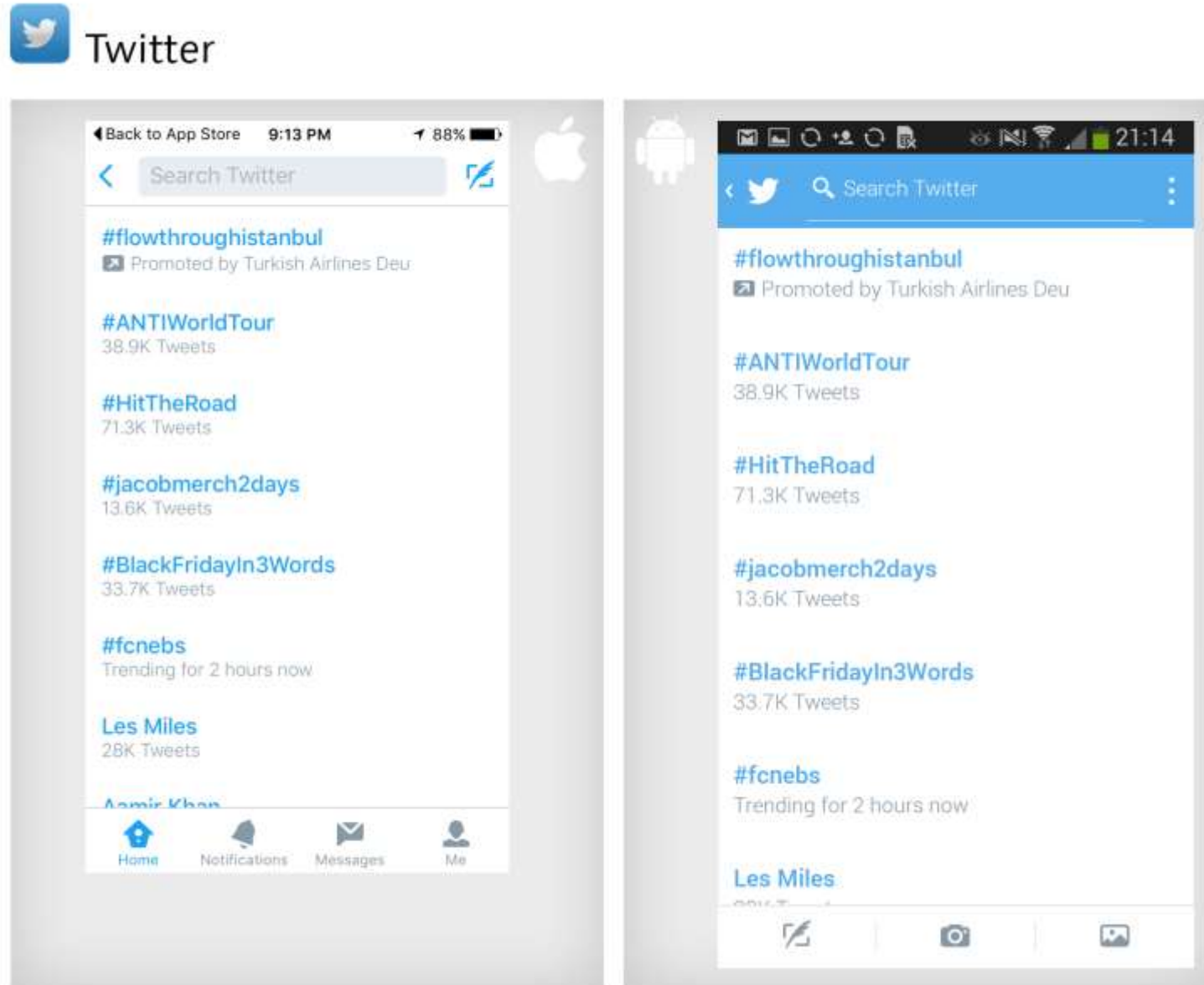


# iOS vs. Android

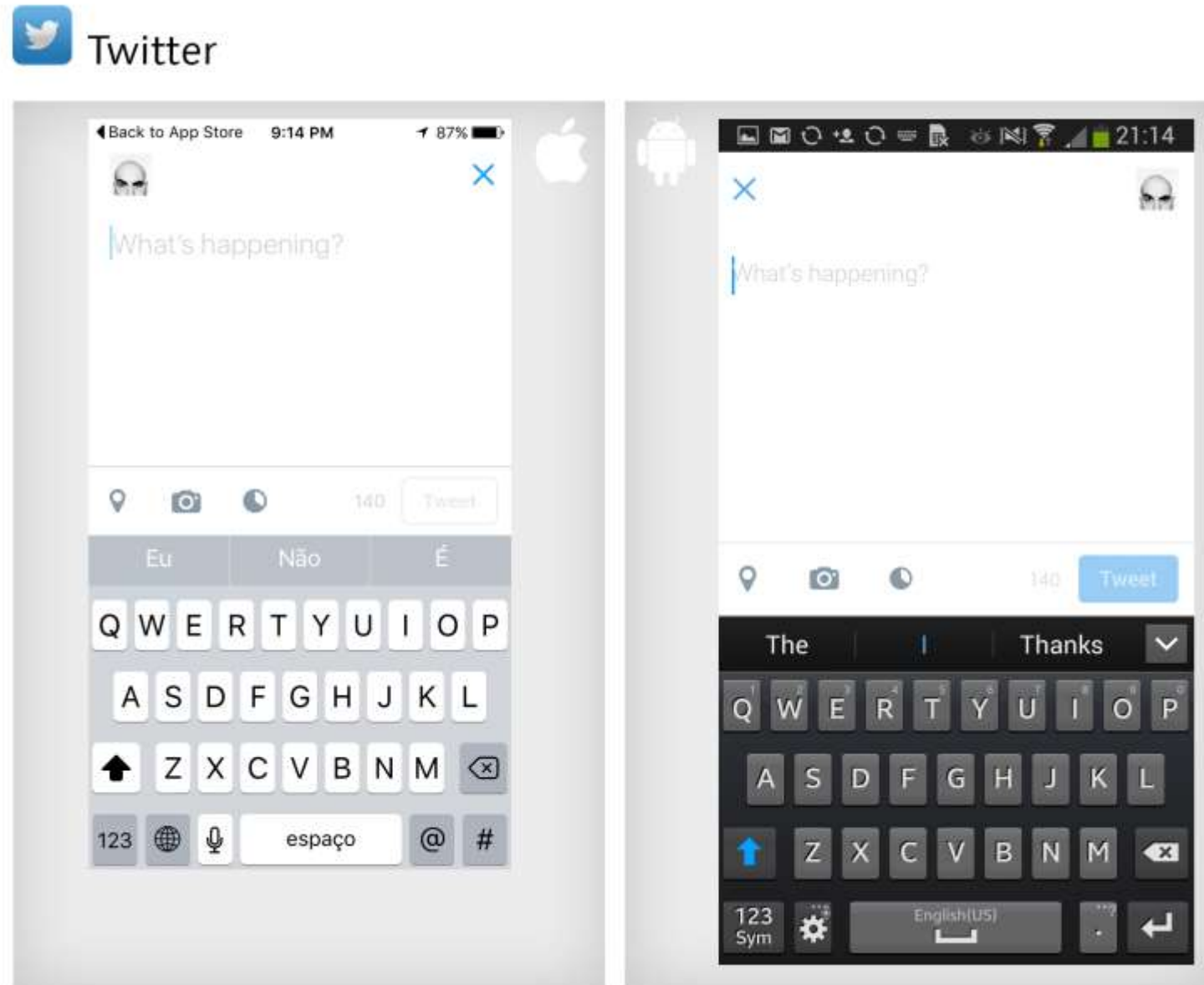
## Differences



## iOS vs. Android Differences

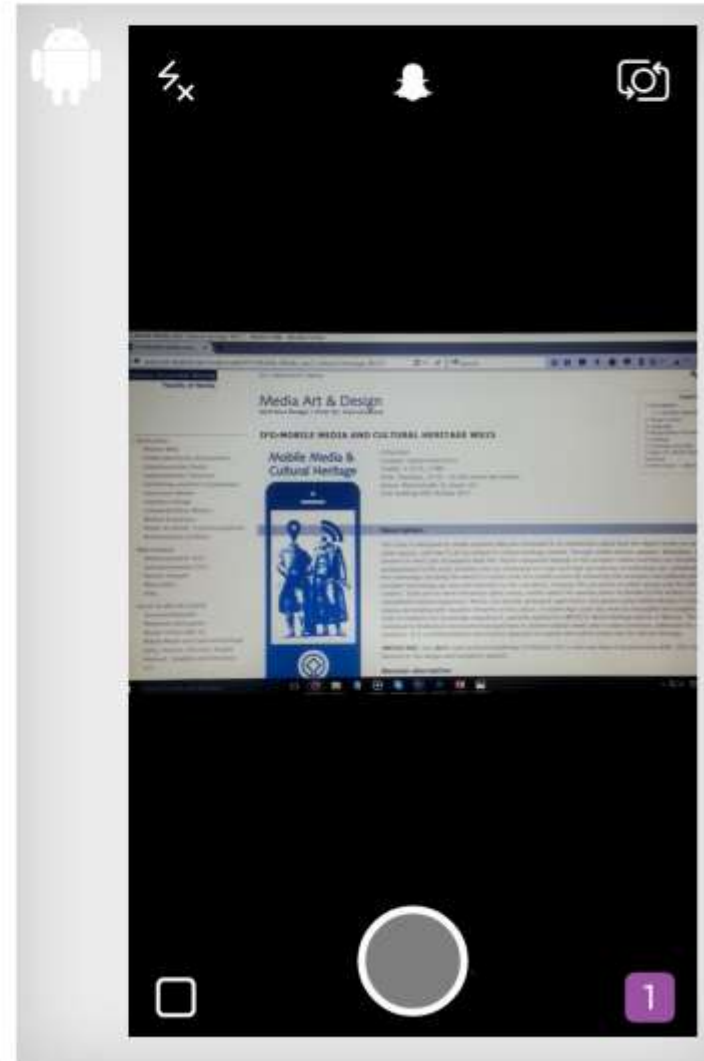
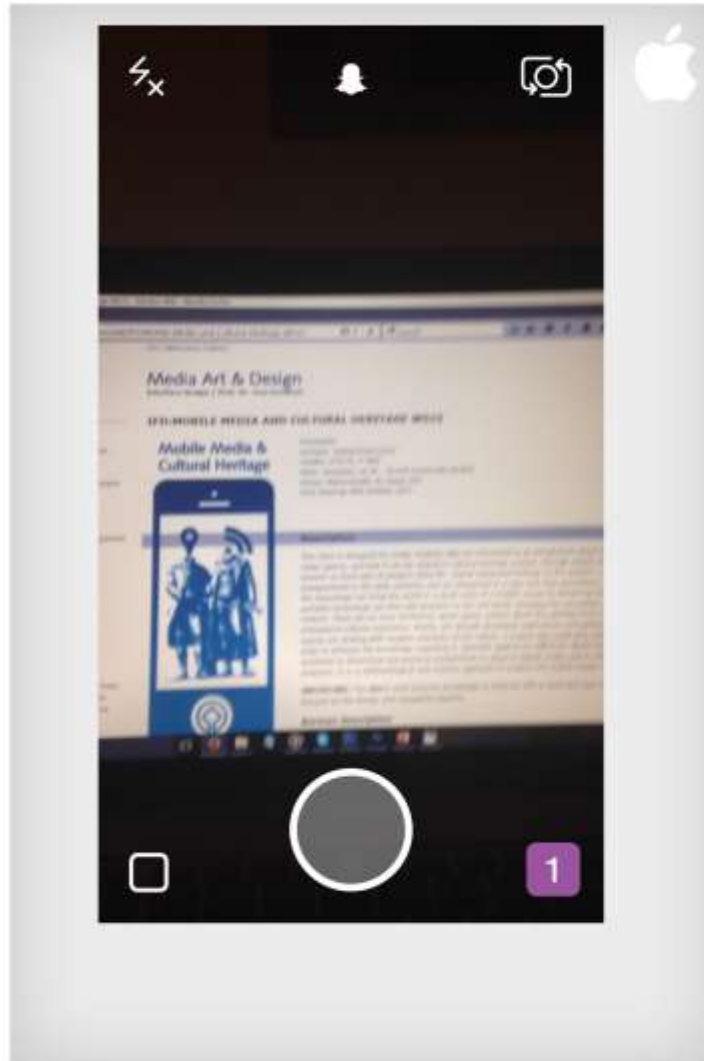


# iOS vs. Android Differences





# iOS vs. Android Differences





## iOS vs. Android

### Differences

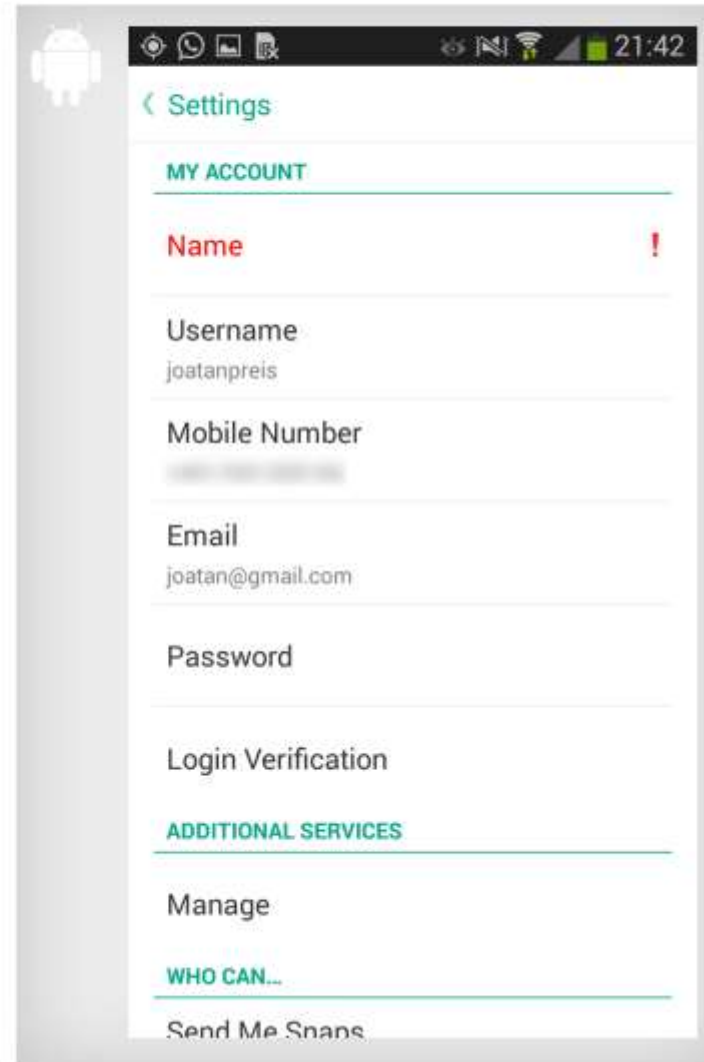
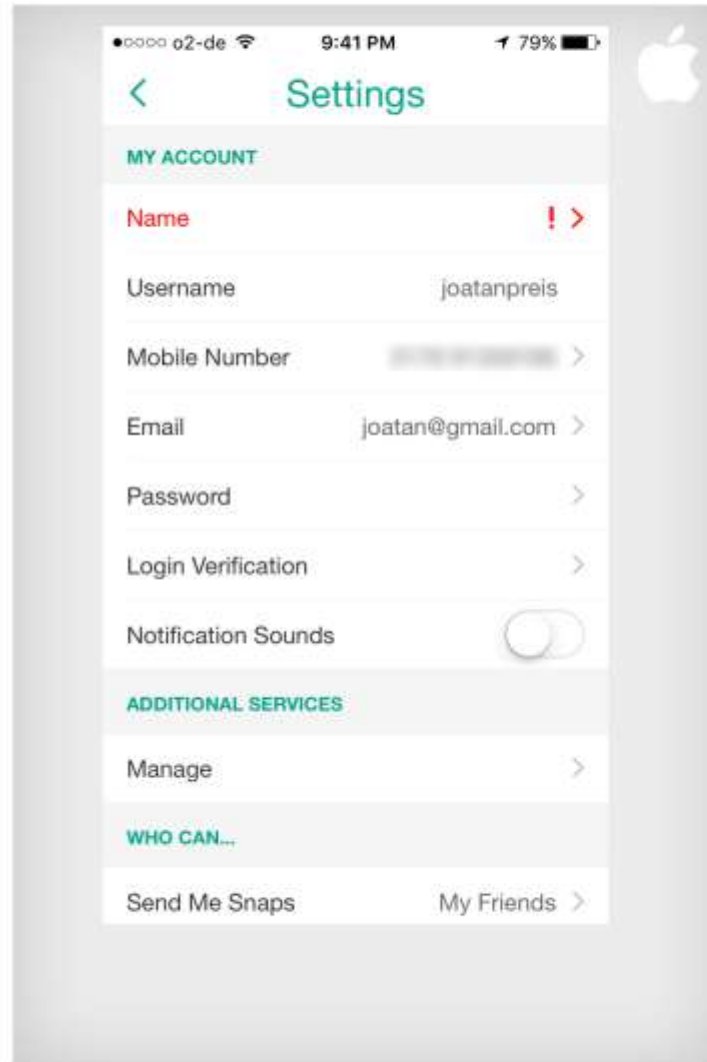


# iOS vs. Android

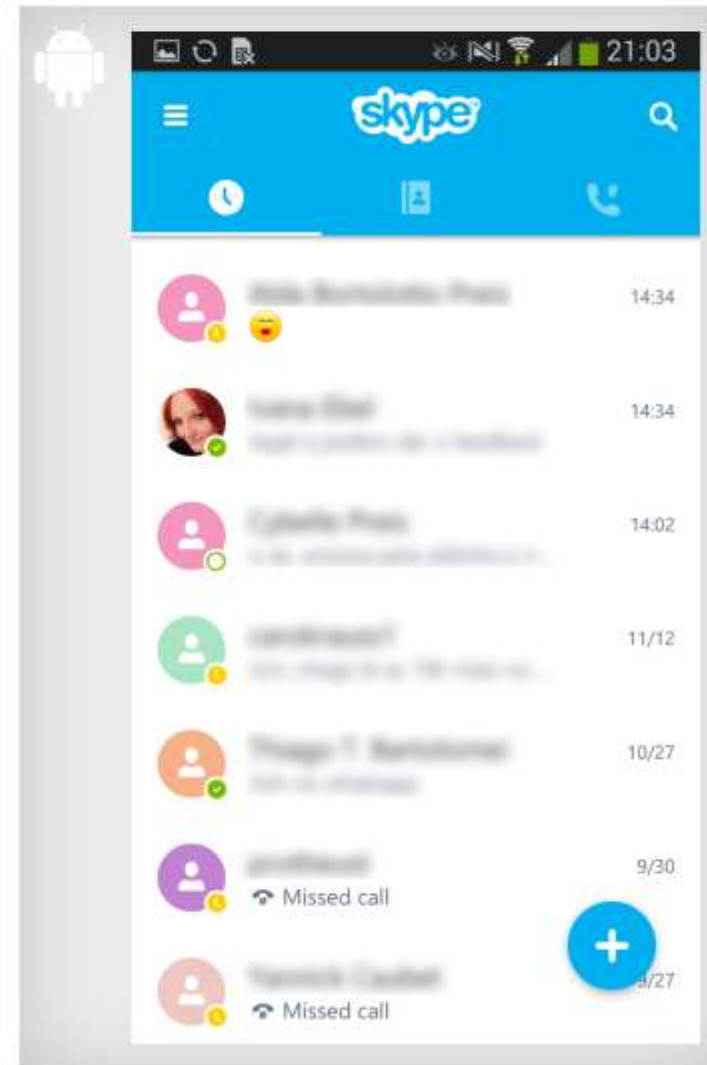
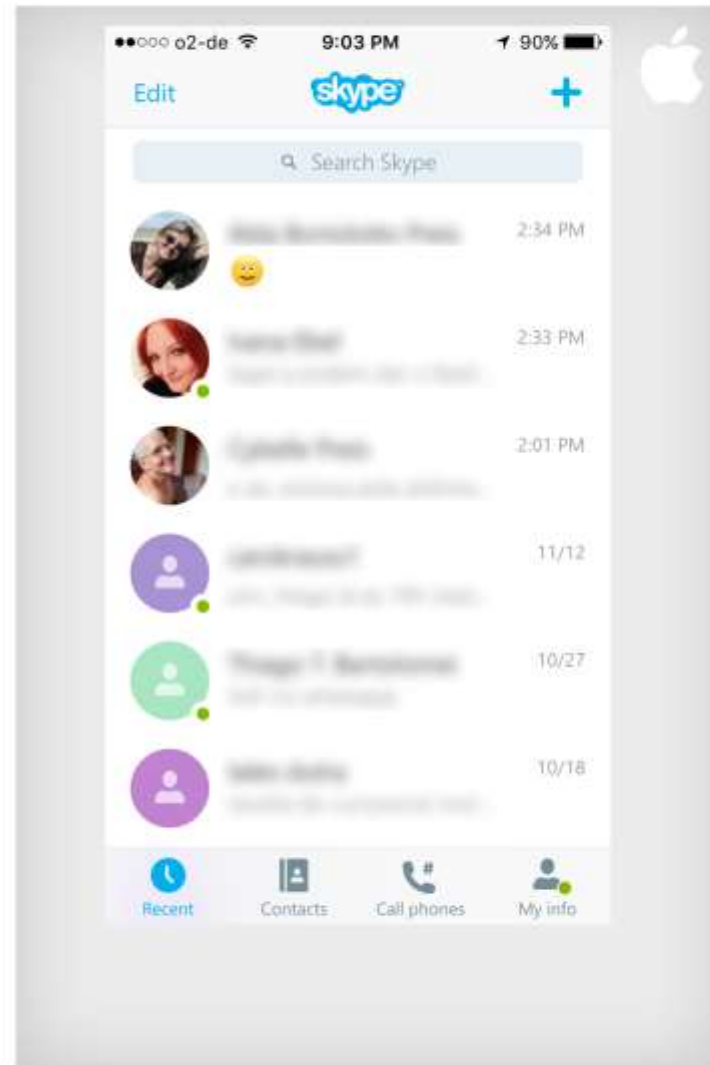
## Differences



### Snapchat

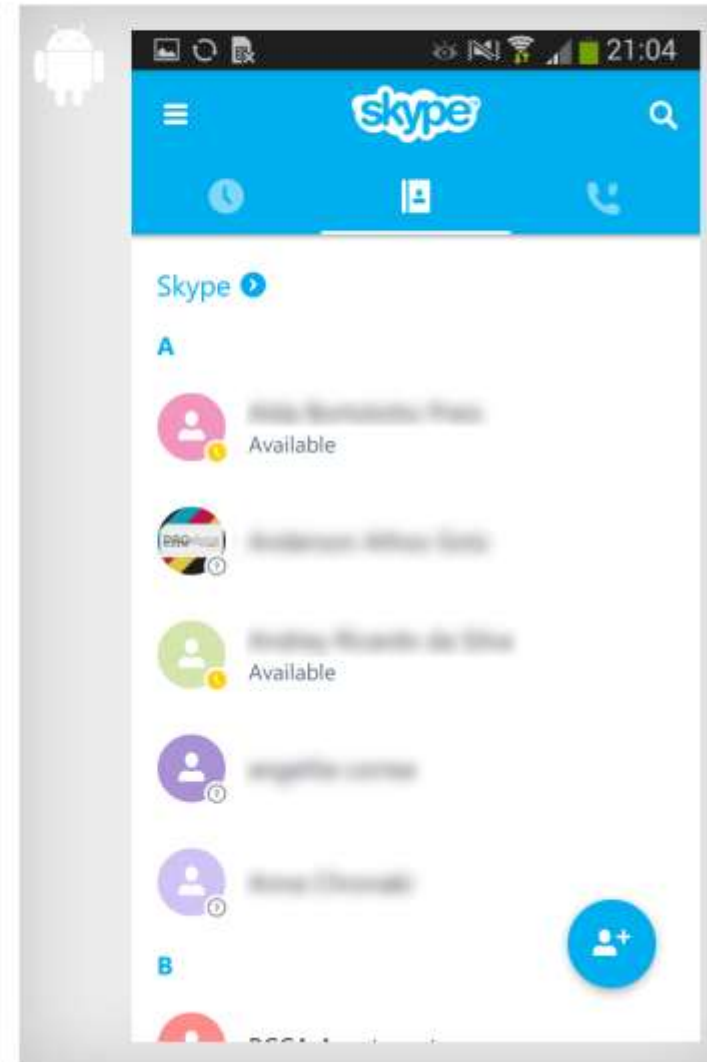
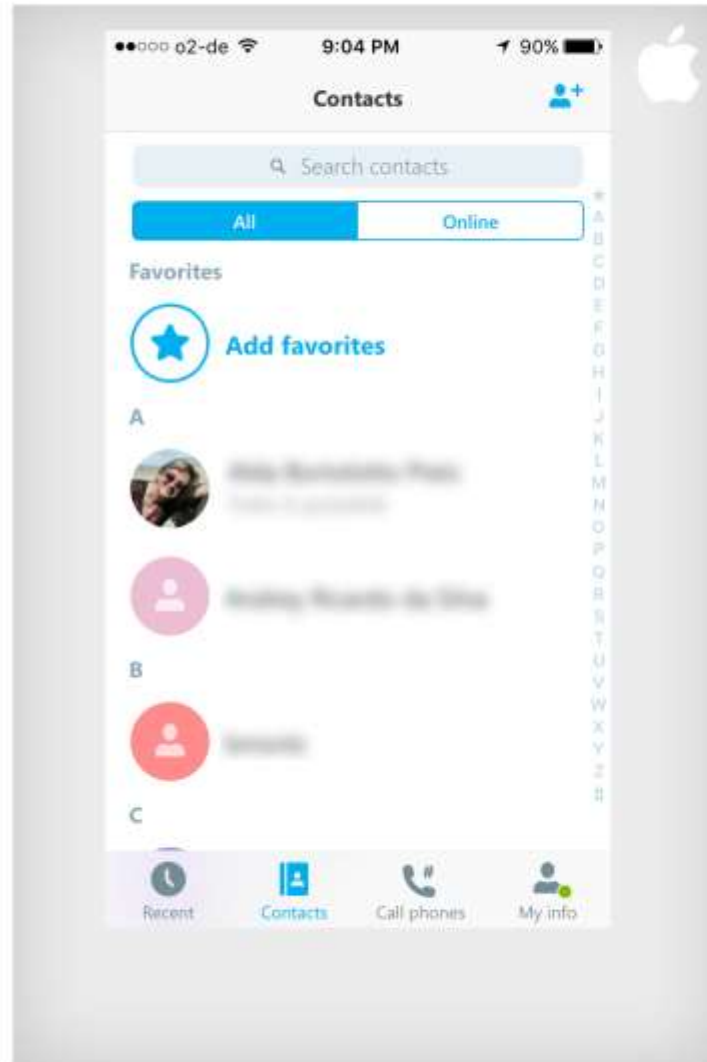


## iOS vs. Android Differences



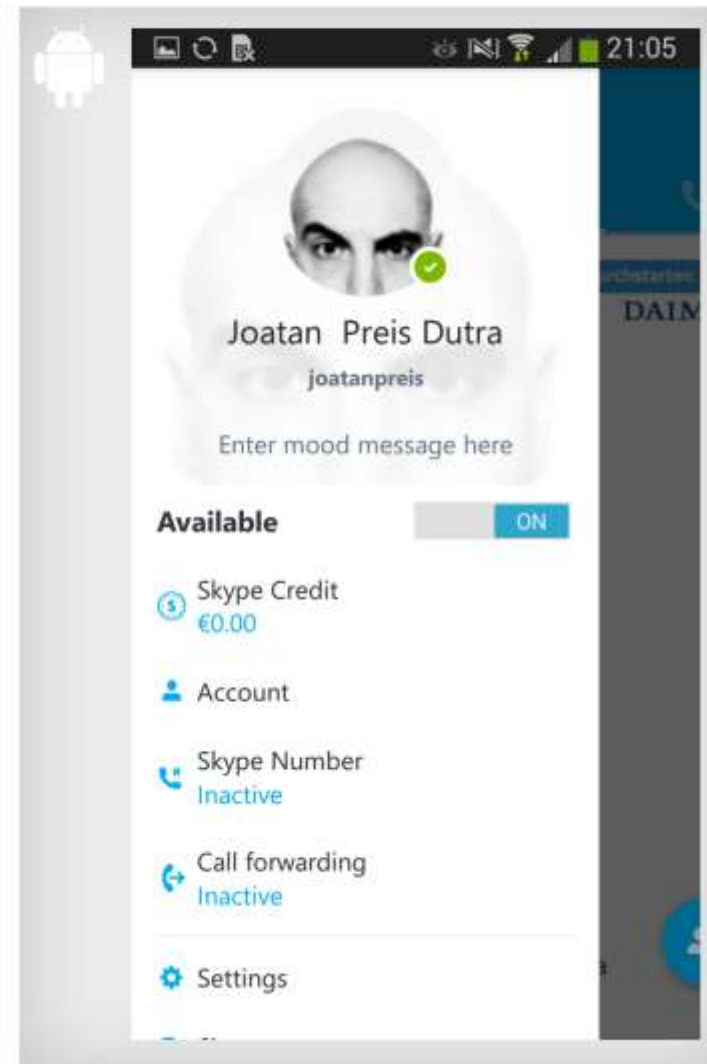
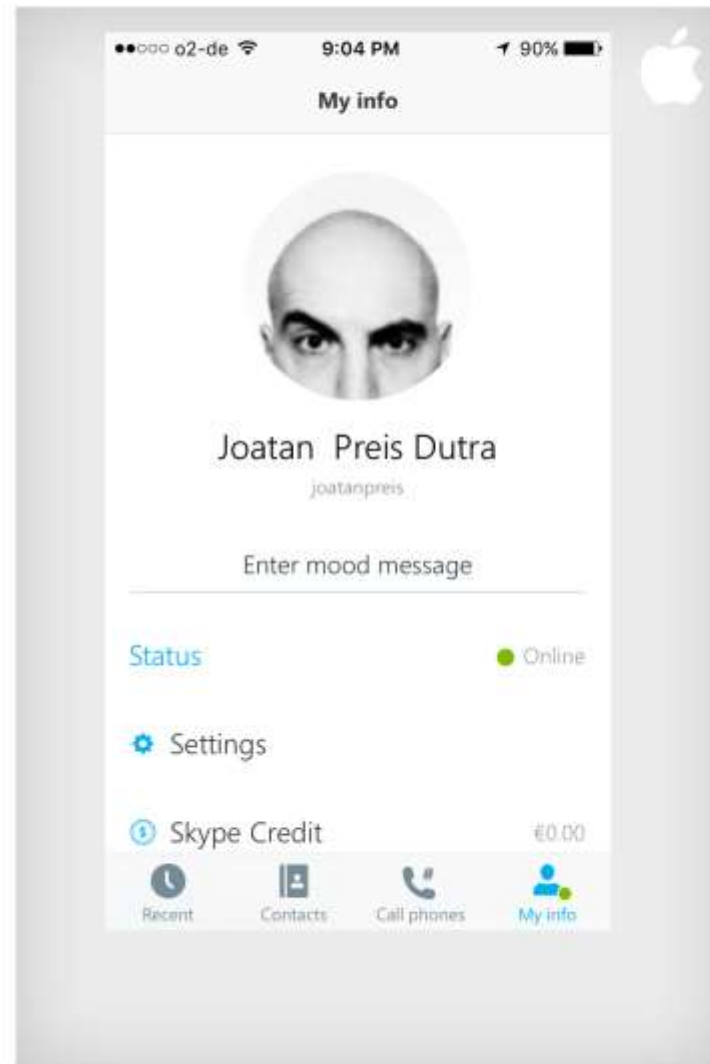
## iOS vs. Android

### Differences



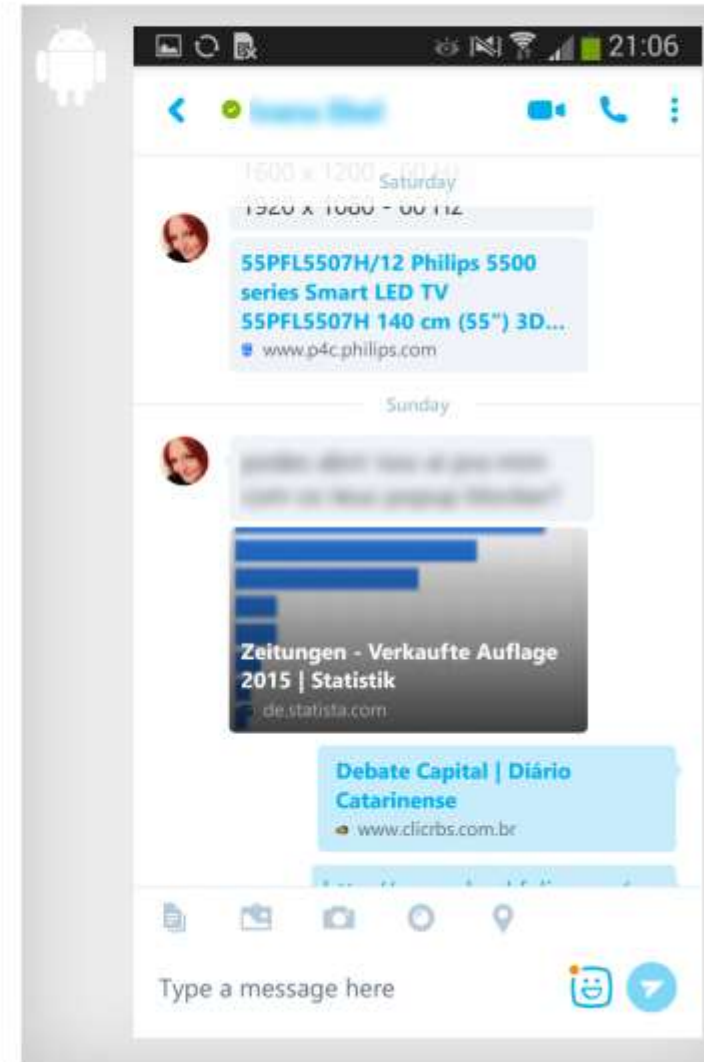
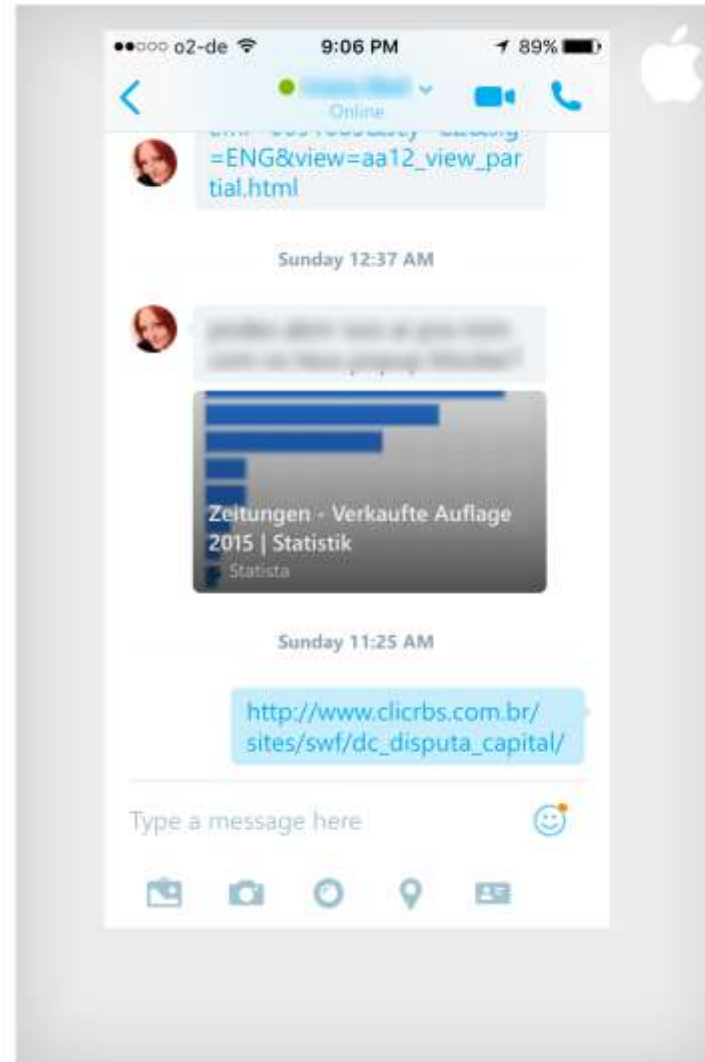
# iOS vs. Android

## Differences



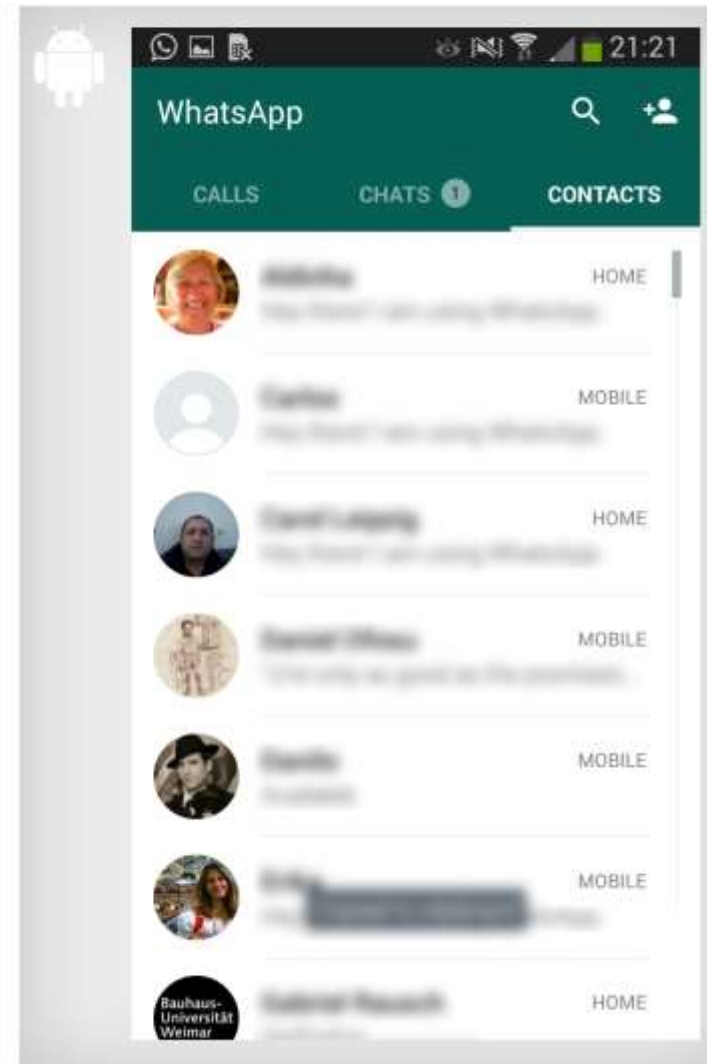
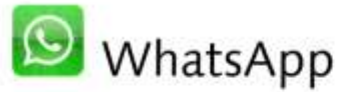


# iOS vs. Android Differences



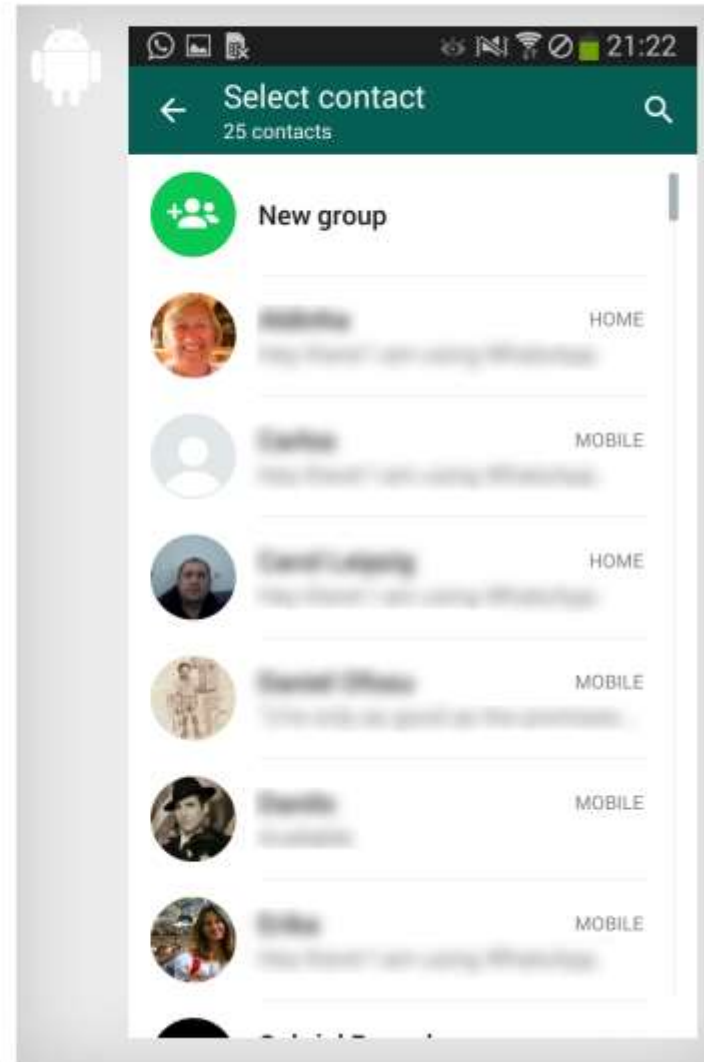
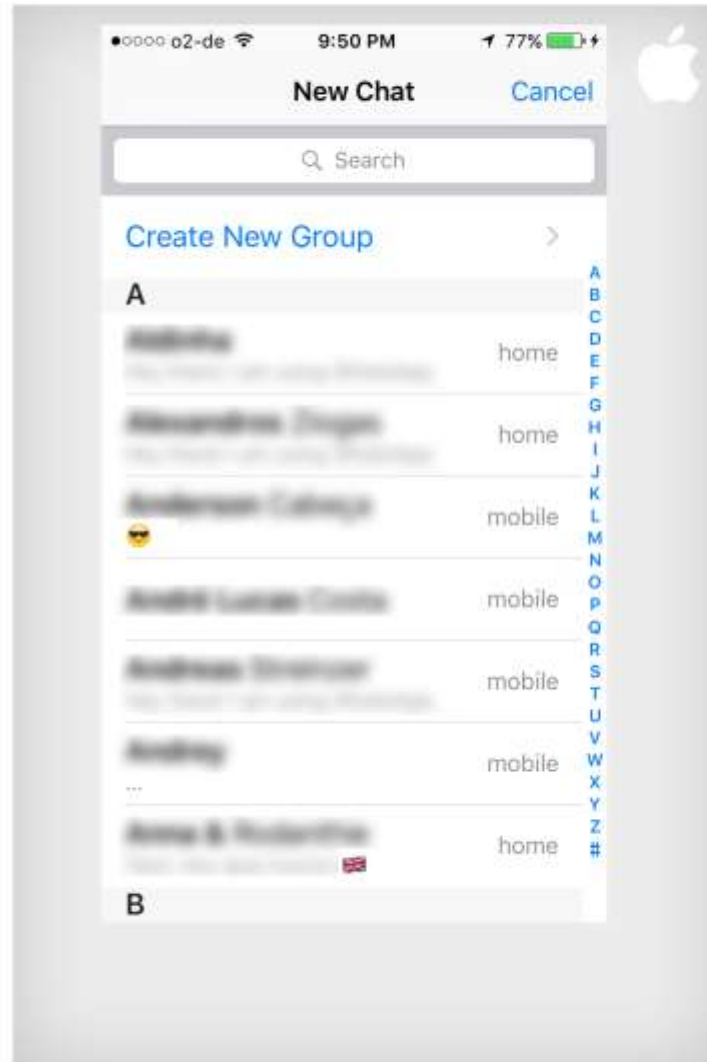
## iOS vs. Android

### Differences



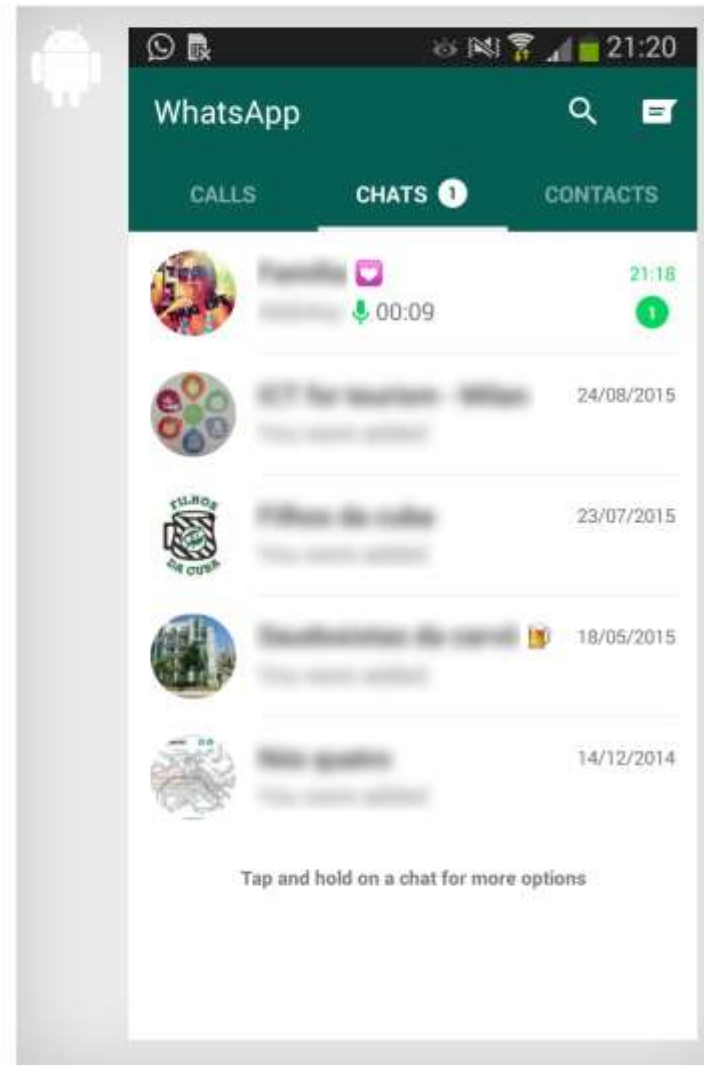
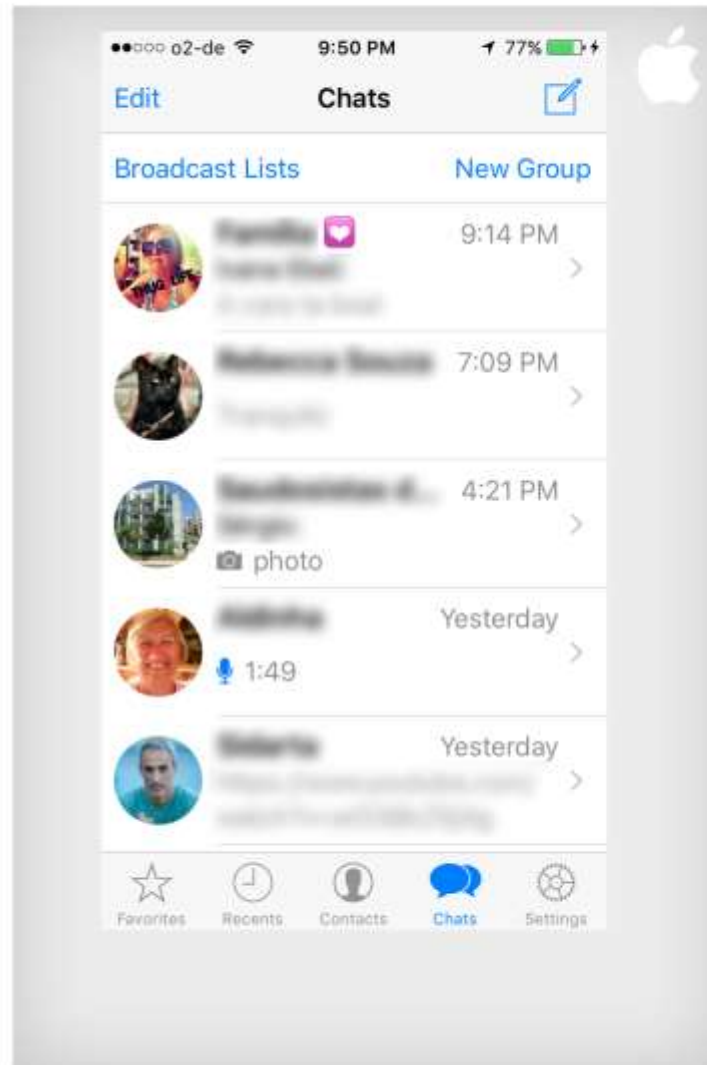
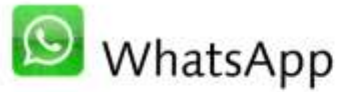
# iOS vs. Android

## Differences



# iOS vs. Android

## Differences

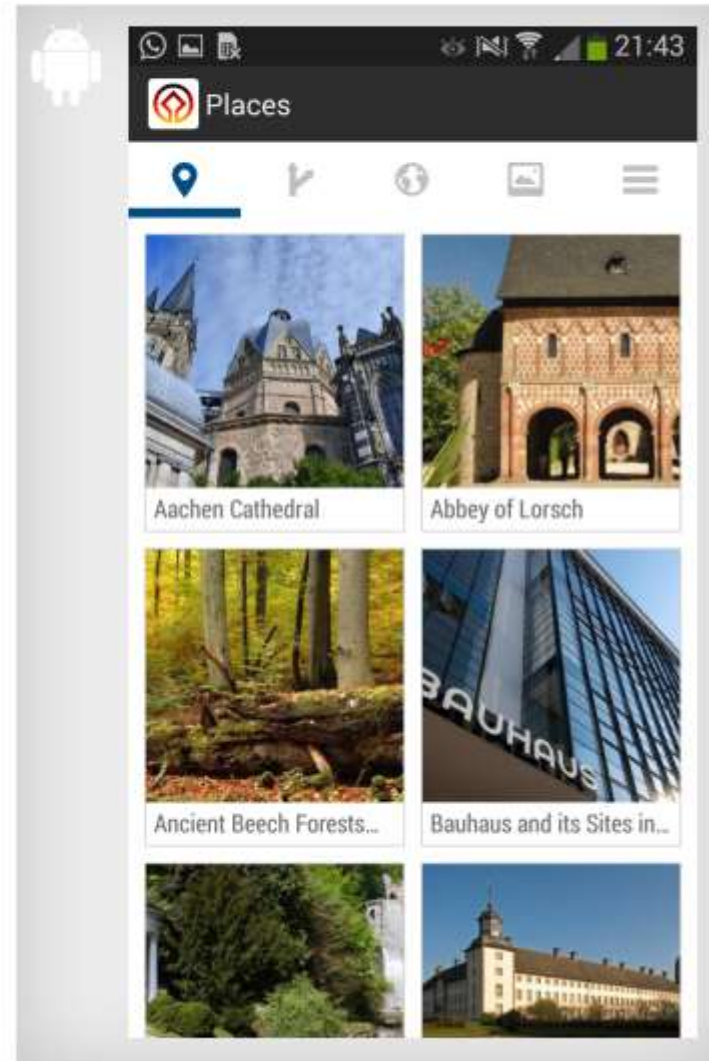
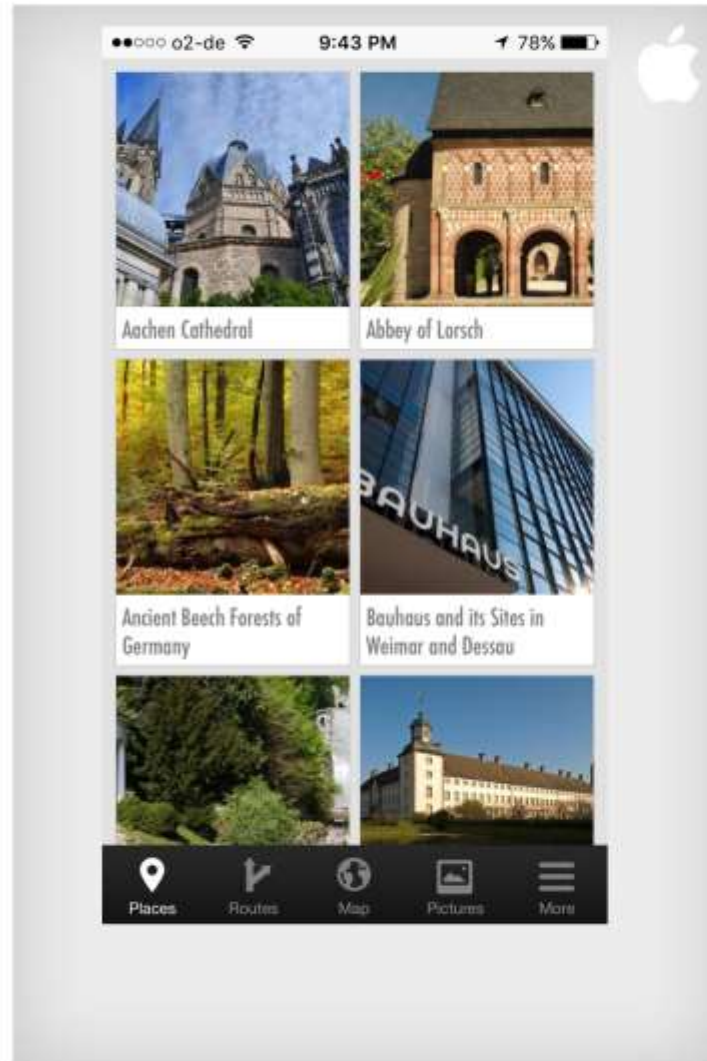




iOS vs.  
Android

Differences

## Welterbe - Guide to Germany

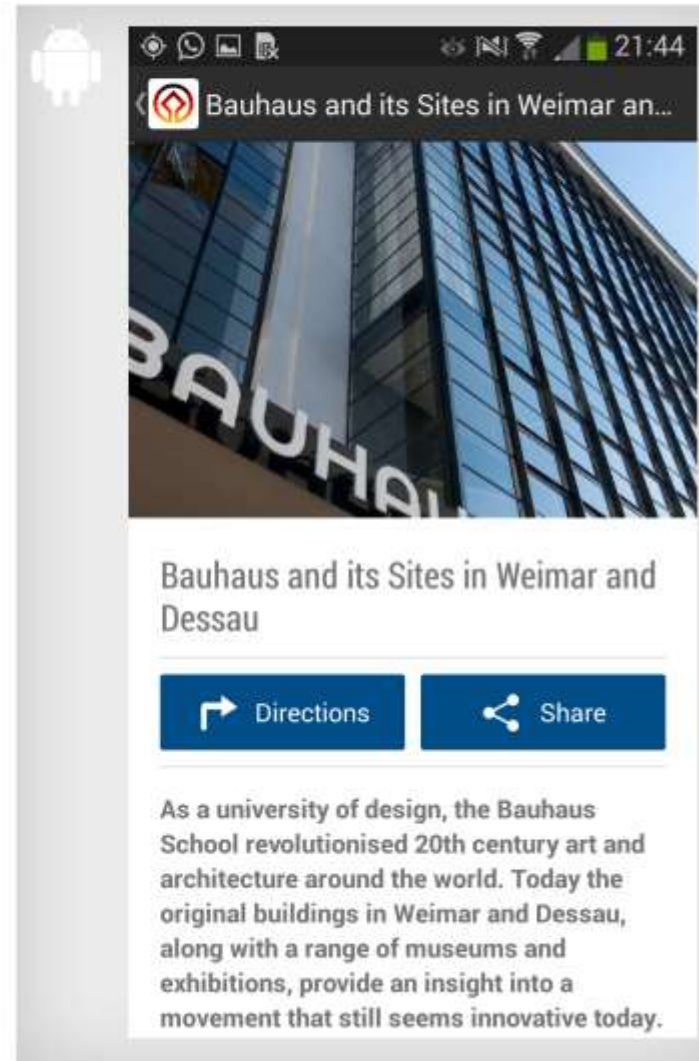
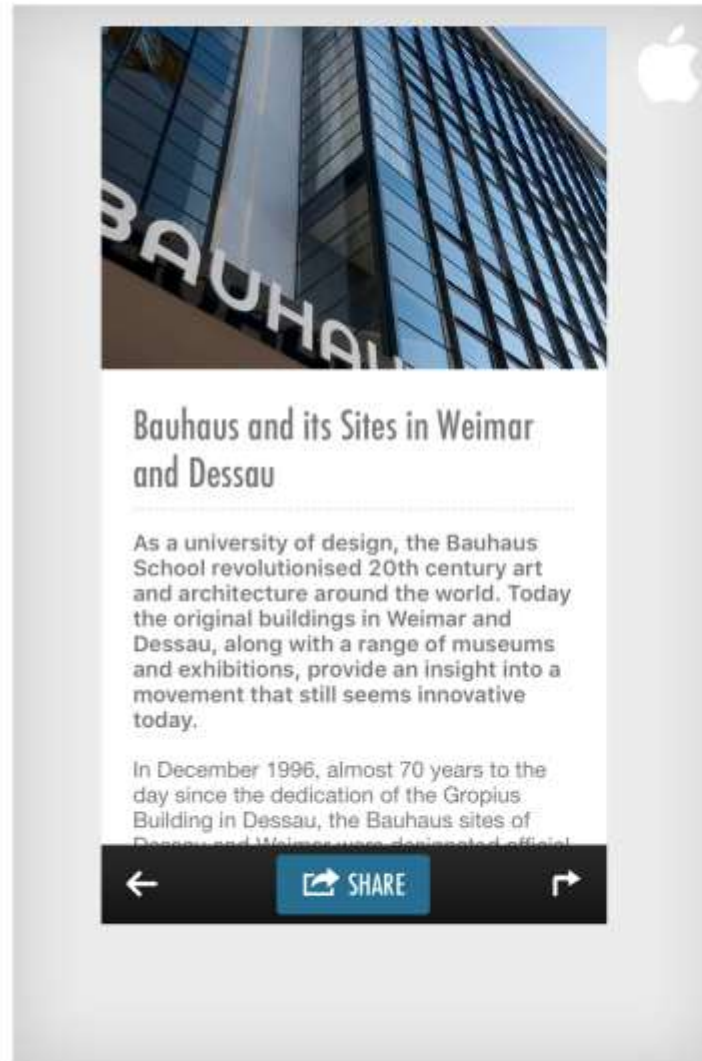




## iOS vs. Android Differences



### Welterbe - Guide to Germany

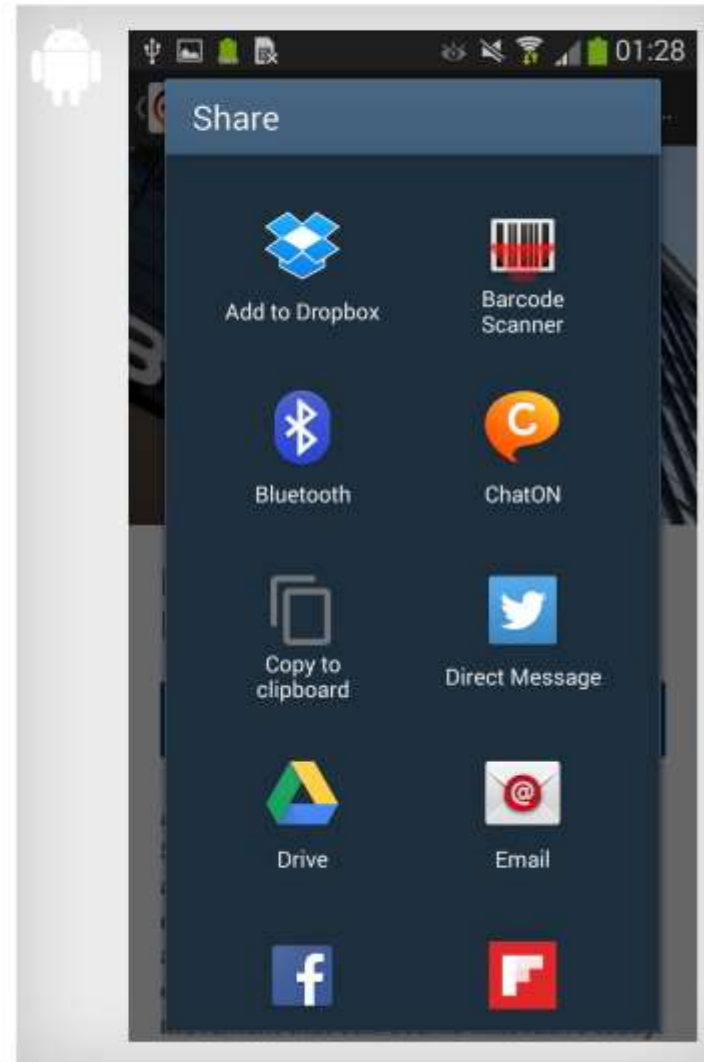
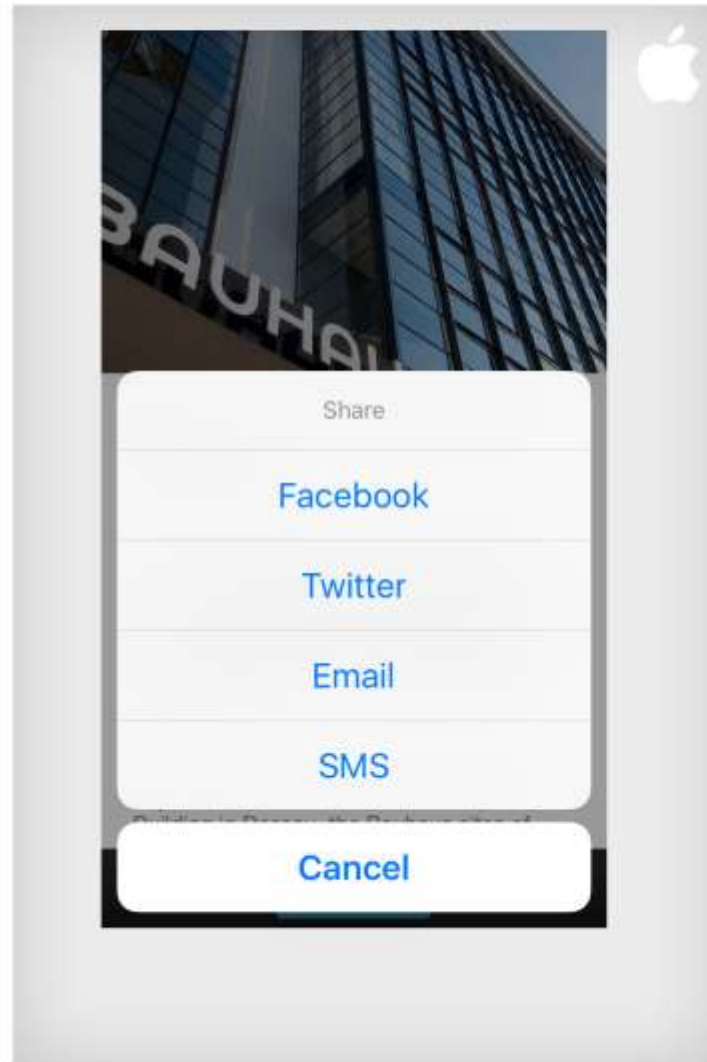


iOS vs.  
Android

Differences



Welterbe - Guide to Germany

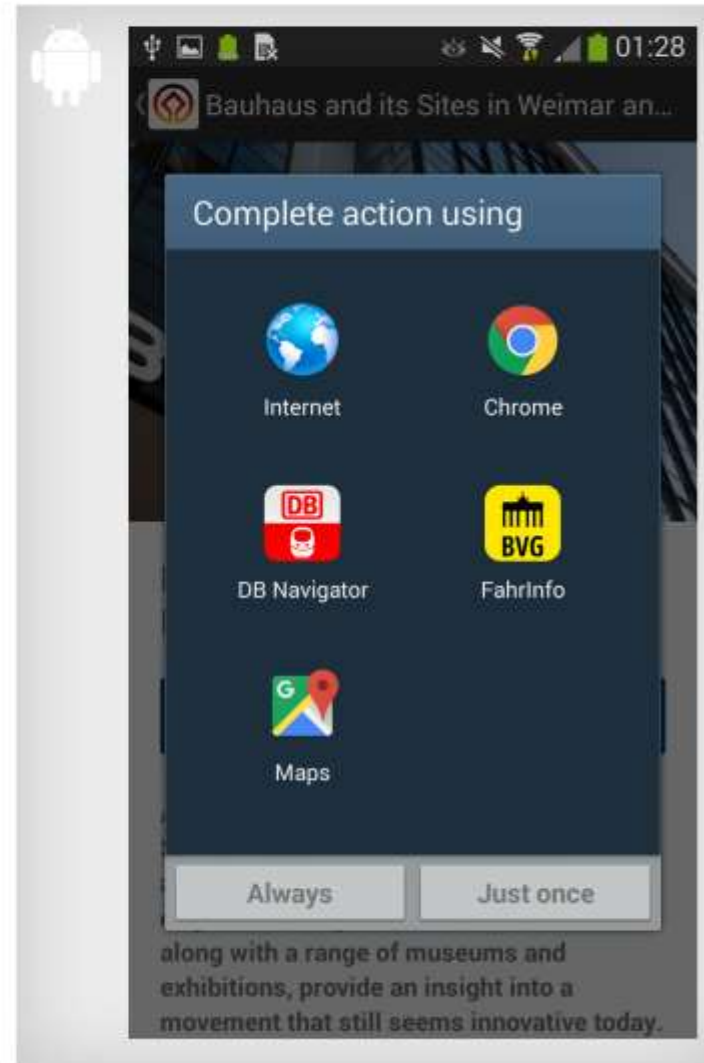
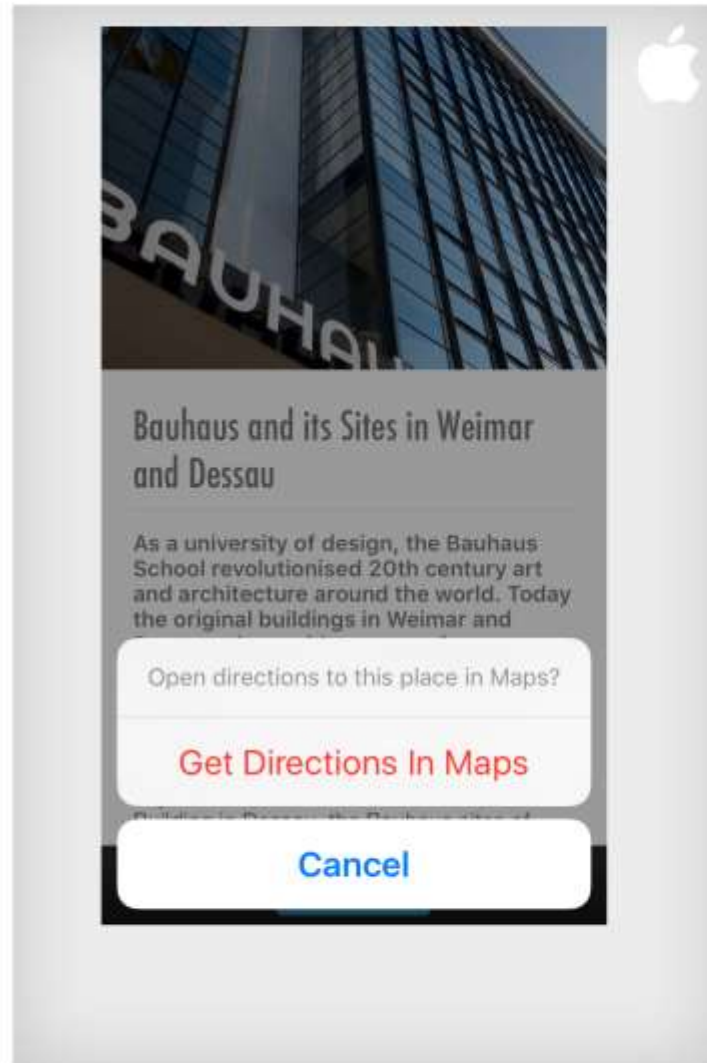


iOS vs.  
Android

Differences



## Welterbe - Guide to Germany



# iOS & Android

Which one is better?

It is just a matter of taste





# WHS Apps in Germany





# Apps for UNESCO WHS in Germany



27 dedicated Apps (\*+2)  
for 19 places (of 37)

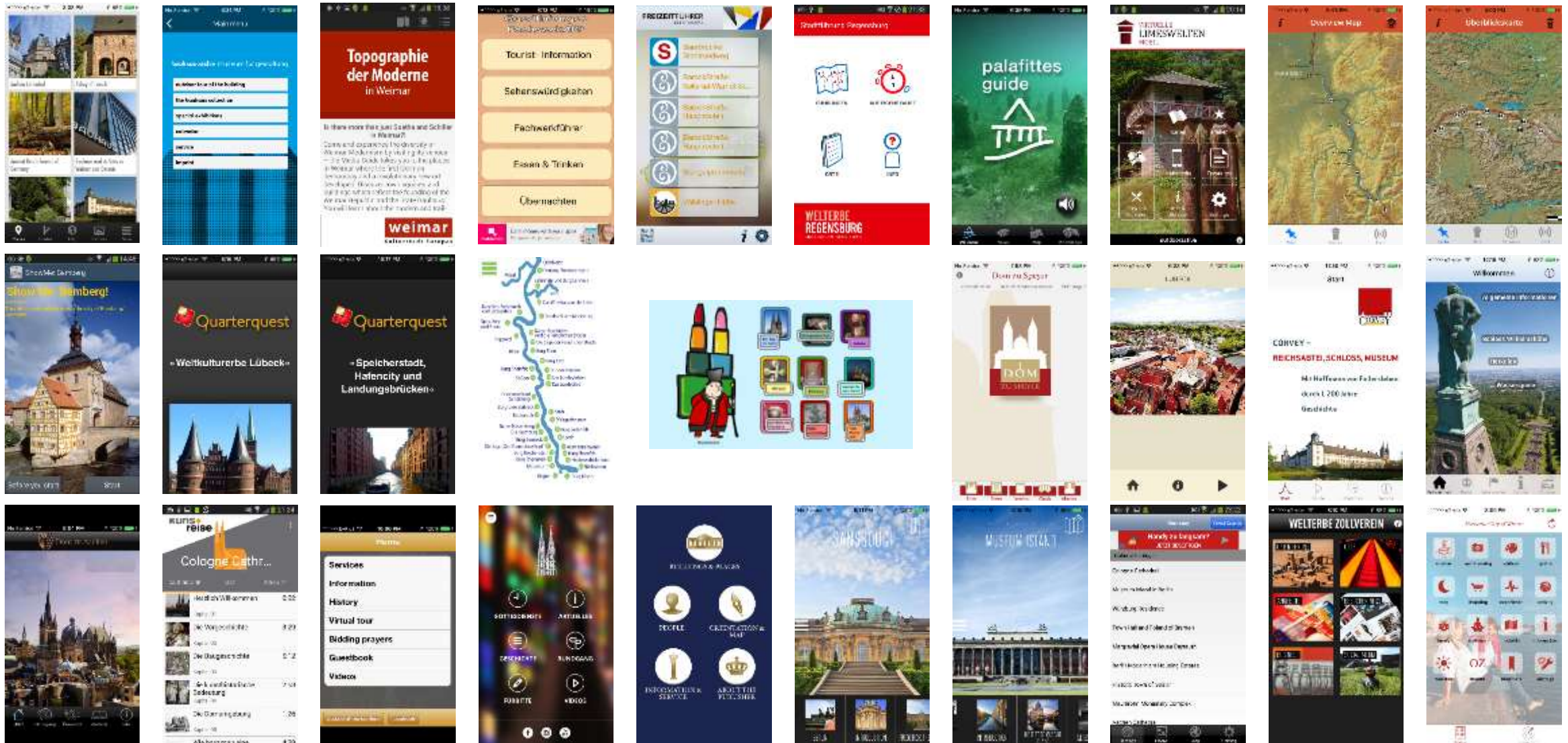
= only 51% of the WHS  
have a dedicated App

\* On official App markets, using the search words:  
"UNESCO", "World Heritage", "Welterbe" and the official  
names of WHS in English and German. Are excluded on  
this count the Apps "UNESCO Welterbe" and "World  
Heritage in Germany" which deals with 100% of WHS in  
Germany





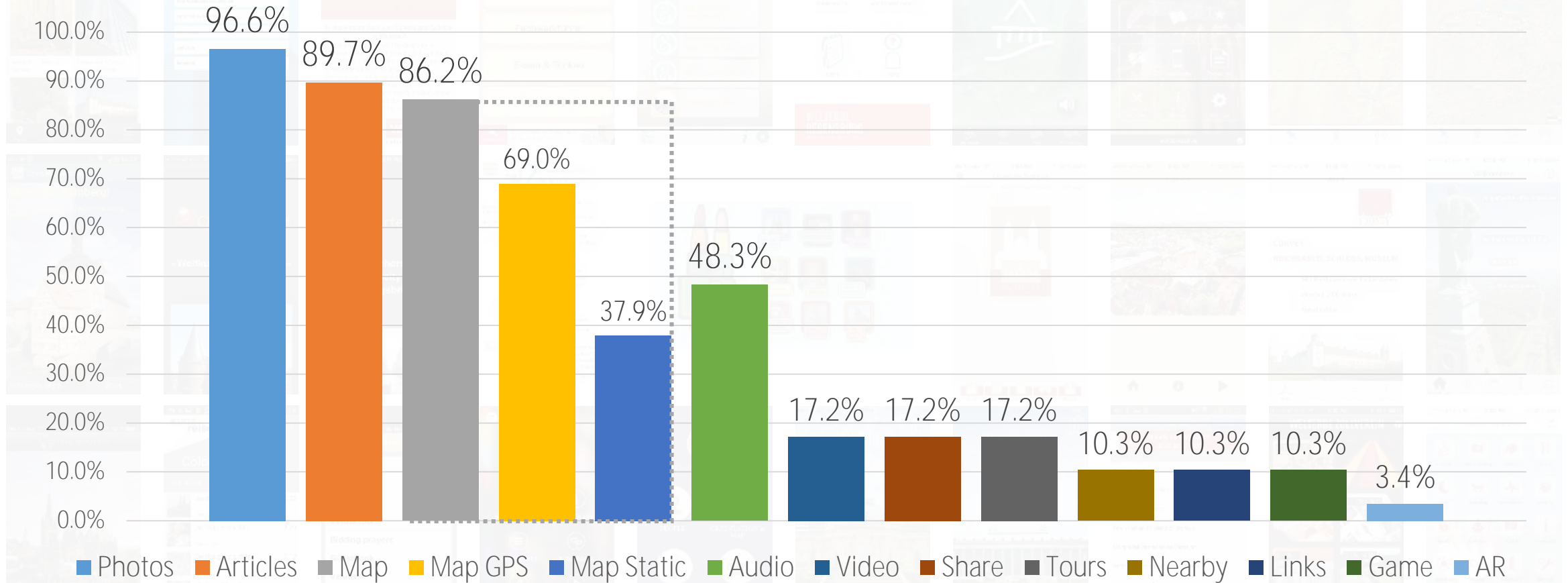
# Apps for UNESCO WHS in Germany





# Apps for UNESCO WHS in Germany

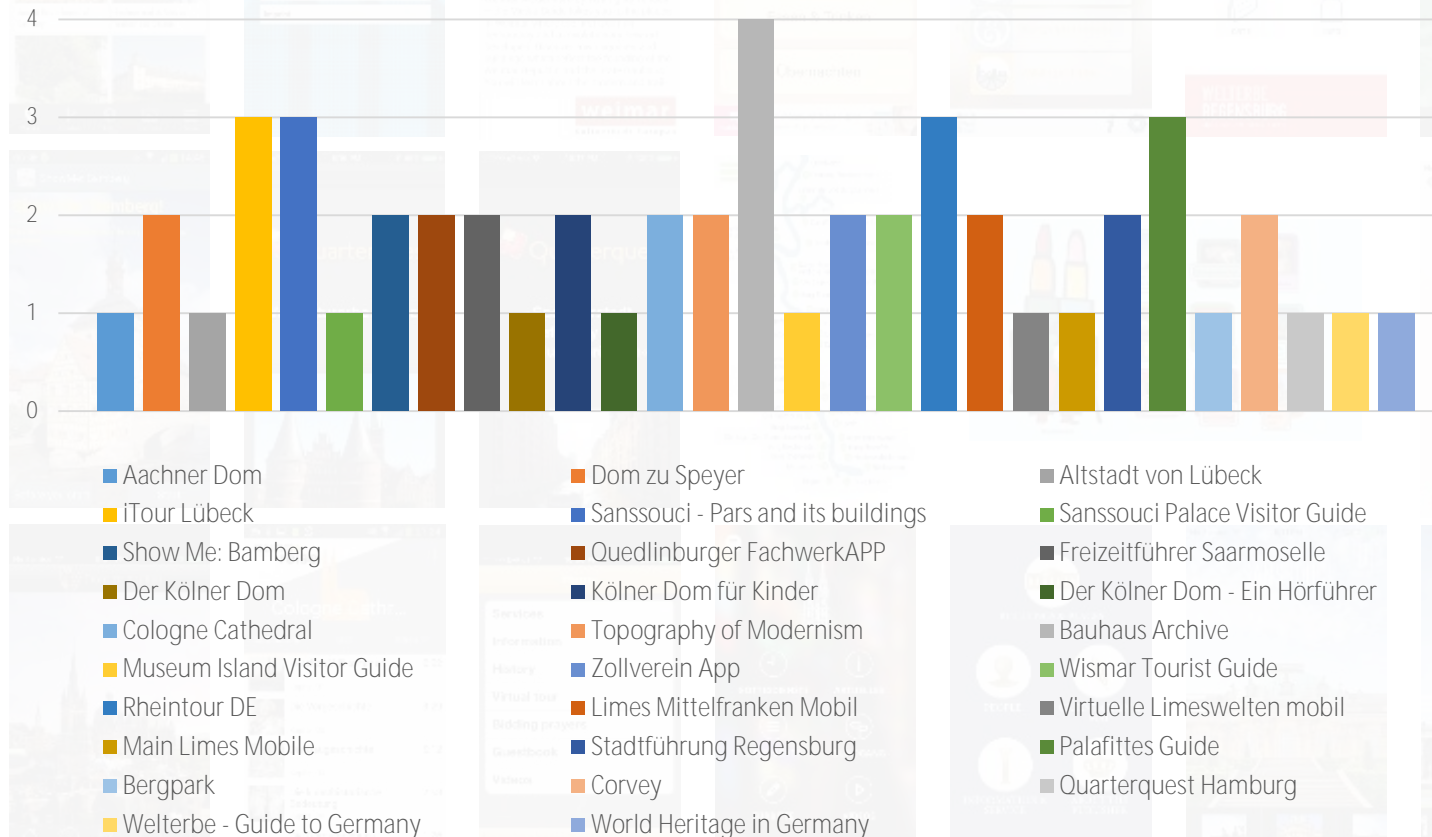
## Quantitative Overview





# Apps for UNESCO WHS in Germany

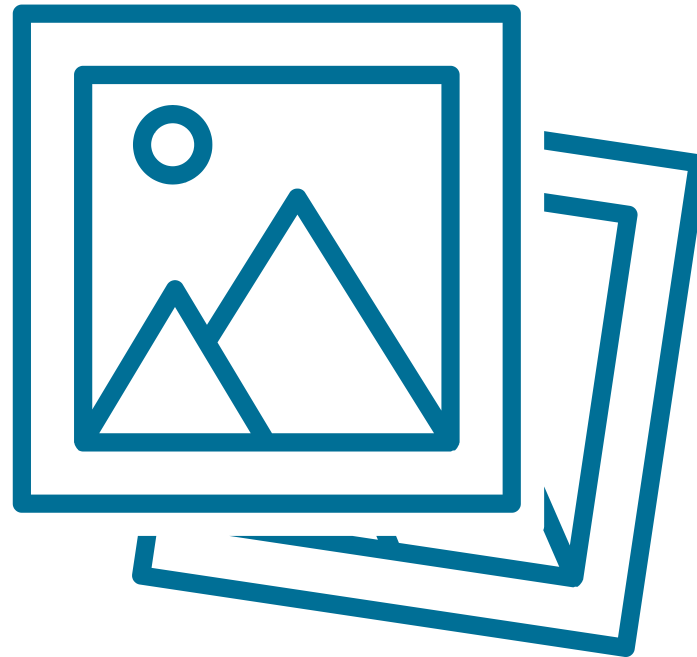
# of Clicks/Taps to achieve WHS info



- 1 Tap = 12 Apps (41,3%)
- 2 Taps = 12 Apps (41,3%)
- 3 Taps = 4 Apps (13,7%)
- 4 Taps = 1 App (3,4%)

1 to 2 Taps = 82,6%

## Overview: Photos / Gallery







## Overview: Photos / Gallery ■ Welterbe



### Bauhaus and its Sites in Weimar and Dessau

As a university of design, the Bauhaus School revolutionised 20th century art and architecture around the world. Today the original buildings in Weimar and Dessau, along with a range of museums and exhibitions, provide an insight into a movement that still seems innovative today.

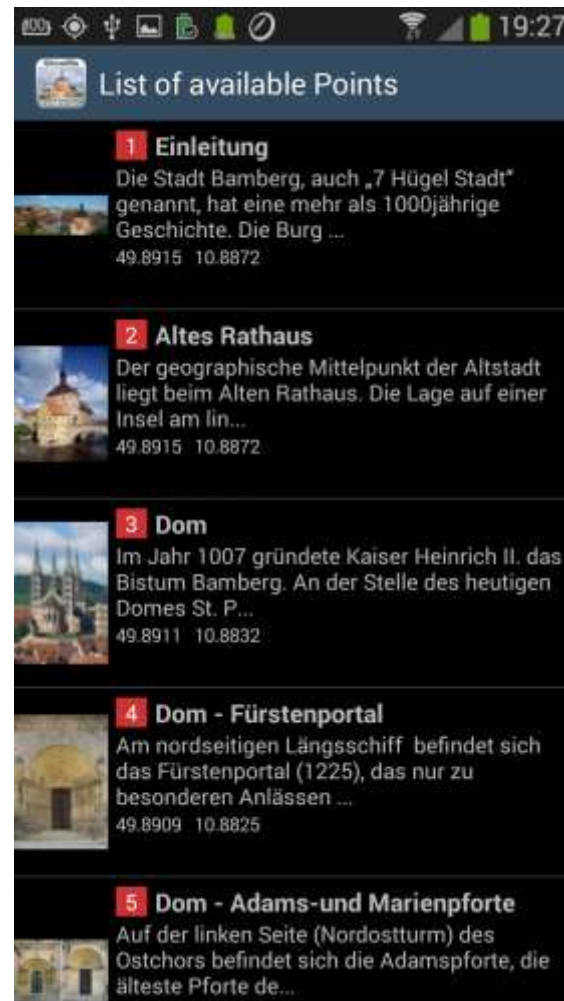
In December 1996, almost 70 years to the day since the dedication of the Gropius Building in Dessau, the Bauhaus site was





## Overview: Photos / Gallery

### ■ Show Me: Bamberg!







## Overview: Photos / Gallery ■ Corvey



05 Klosterkirche



Barocker Hochaltar der Abteikirche  
© Fotograf Peter Knaup

05 Klosterkirche



Wiederhergestellte Ausstattung von 1675 in der Abteikirche  
© Fotograf Peter Knaup

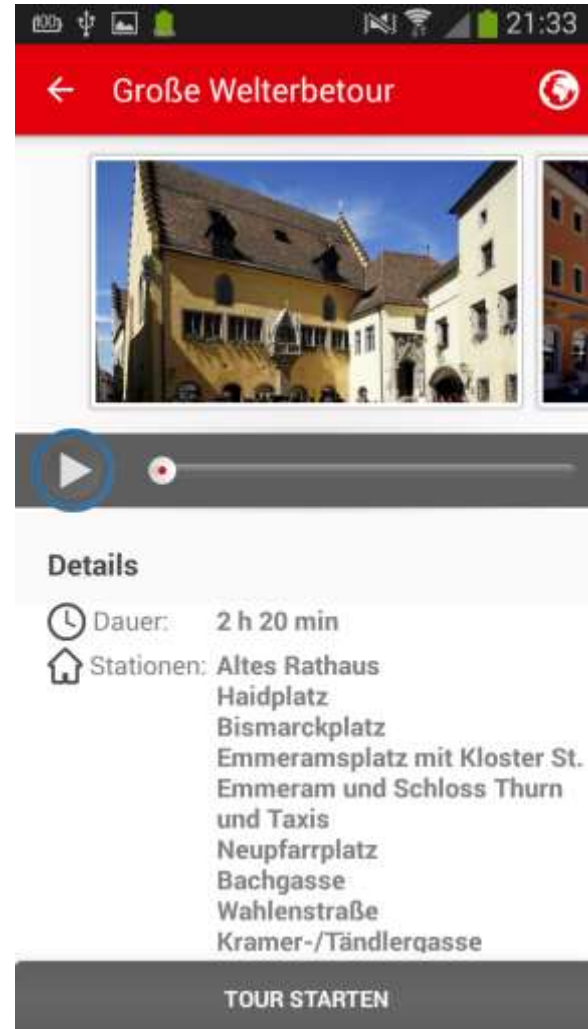
05 Klosterkirche





## Overview: Photos / Gallery

### ▪ Stadtführung Regensburg





## Overview: Photos / Gallery

### ■ Wismar Tourist Guide





## Overview: Articles / Text





## Overview: Articles / Text

### ▪ Welterbe



#### Bauhaus and its Sites in Weimar and Dessau

As a university of design, the Bauhaus School revolutionised 20th century art and architecture around the world. Today the original buildings in Weimar and Dessau, along with a range of museums and exhibitions, provide an insight into a movement that still seems innovative today.

In December 1996, almost 70 years to the day since the dedication of the Gropius Building in Dessau, the Bauhaus sites of



seen from the masters' houses and the Dessau-Törten estate. In the historical Bauhaus Canteen you can enjoy a generous breakfast or lunch sitting on the Marcel Breuer-designed stools. In the Studio House, former student rooms, some remodelled according to their original design, can be rented as single or double guestrooms.

#### PART OF UNESCO ROUTE



Visionaries and pioneering thin... >



Gropiusallee 38, 06846, Dessau-Roßlau, Deutschland



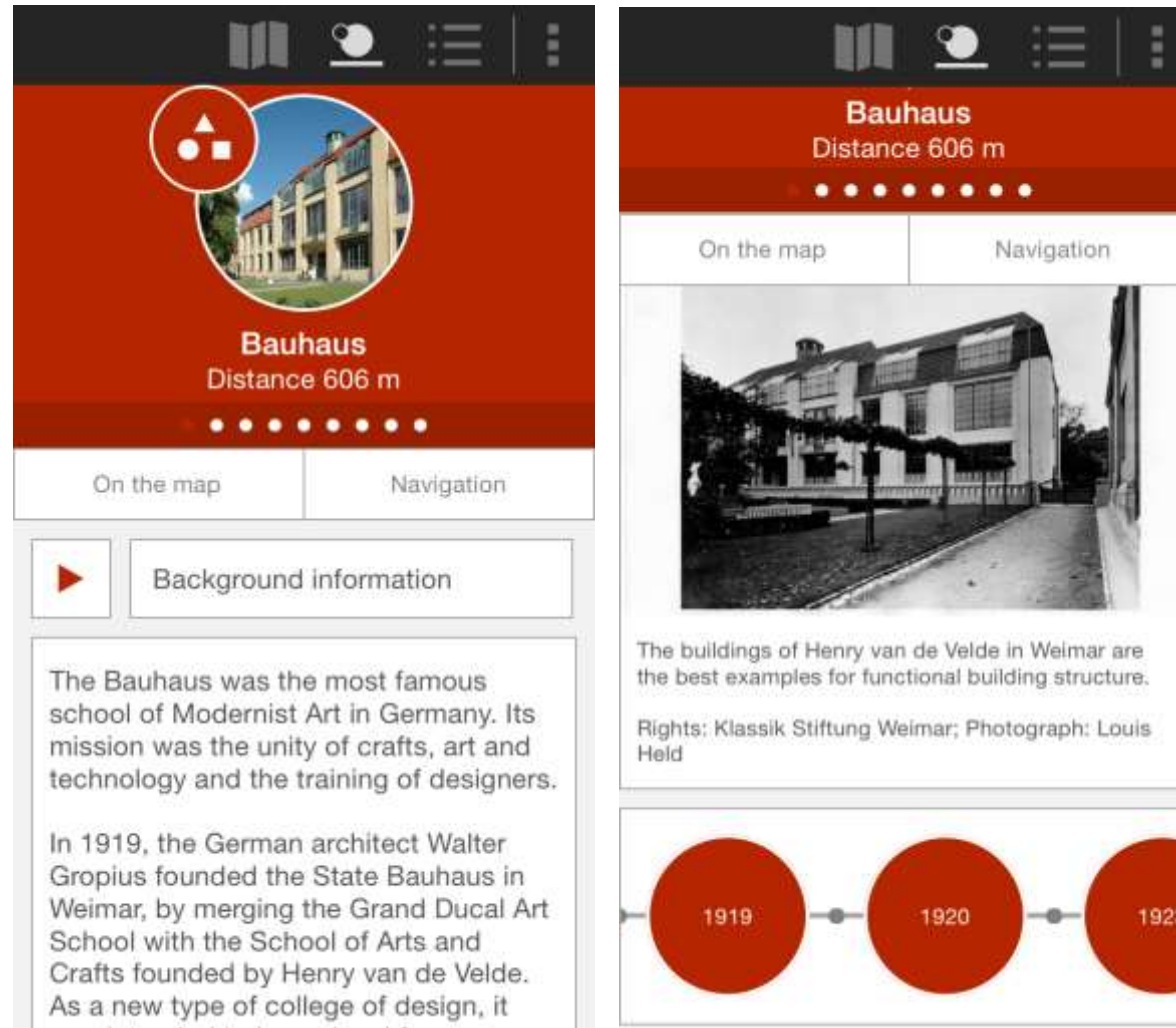
+49 340/6508250





## Overview: Articles / Text

### ■ Topography of Modernism





## Overview: Articles / Text

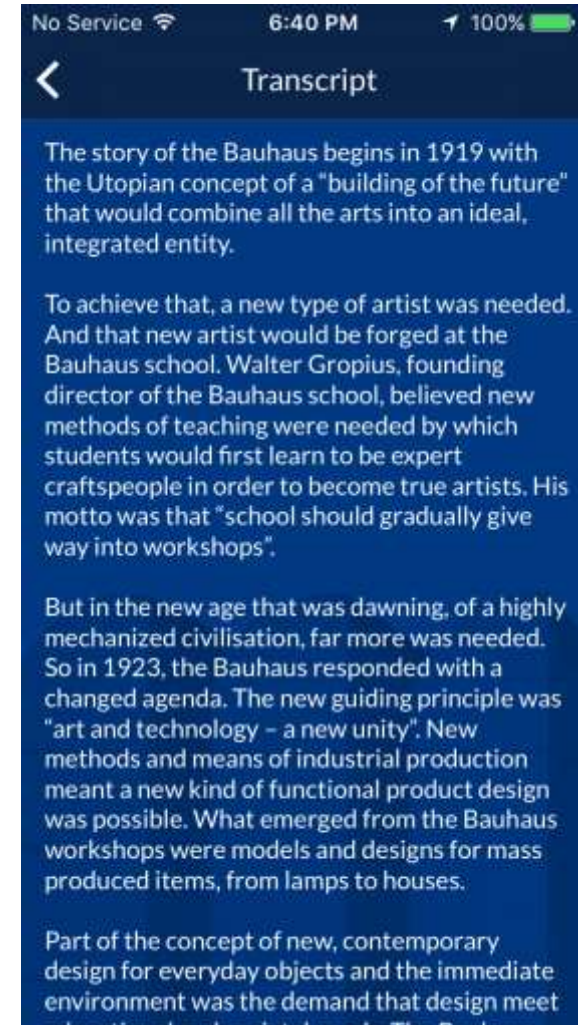
### ▪ UNESCO-Welterbe Zollverein App







## Overview: Articles / Text ■ Bauhaus Archive







## Overview: Articles / Text ■ Aachner Dom



## Overview: Maps

- Aachner Dom





## Overview: Maps ■ Welterbe



### Classical Weimar

For centuries, Weimar in Thuringia was at the centre of intellectual life in Germany: the city experienced its heyday in the early 19th century when it was home to no fewer than three of Europe's leading intellectuals – Goethe, Schiller and Herder. The Classical Weimar ensemble is testimony to the enlightened, courtly but also civic culture of the period around 1800.

A new era of tolerance, education for the masses and Humanist views: Weimar

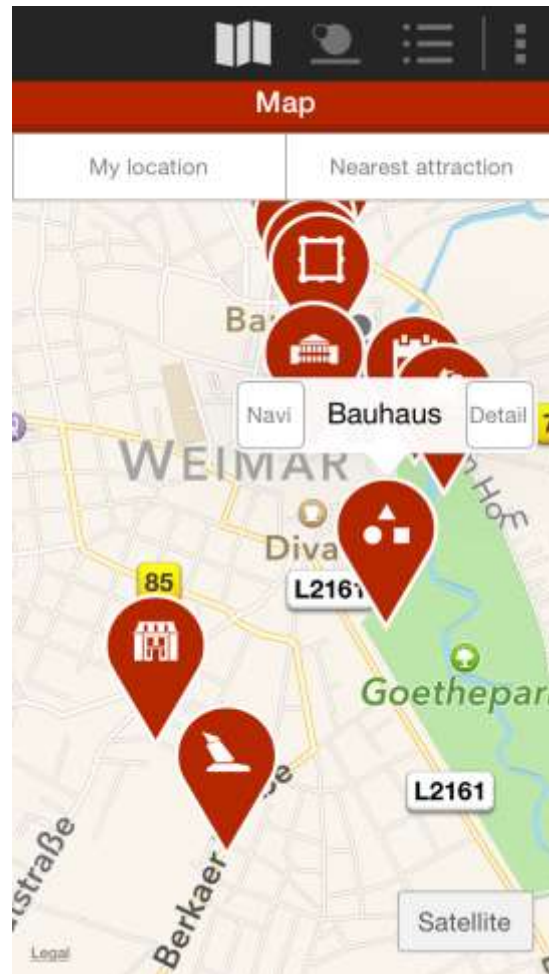
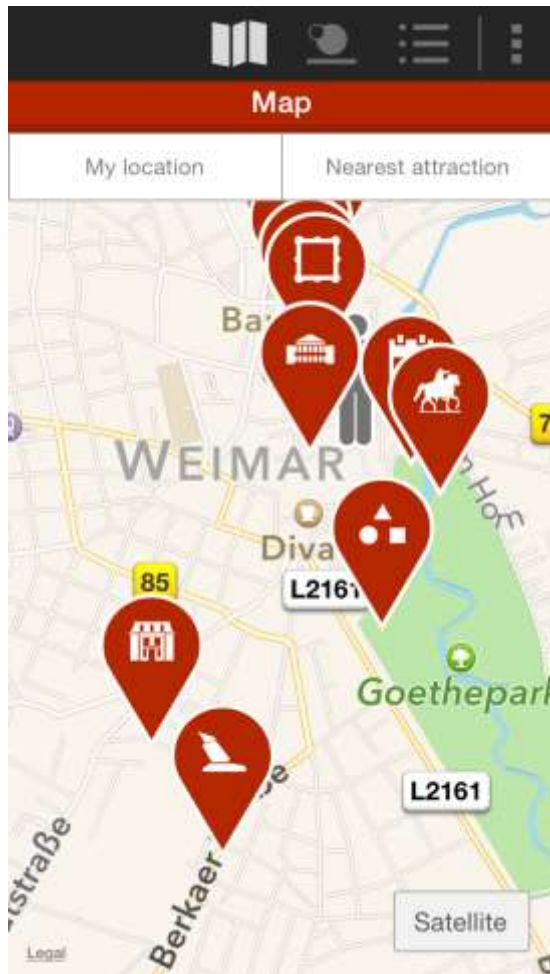






## Overview: Maps

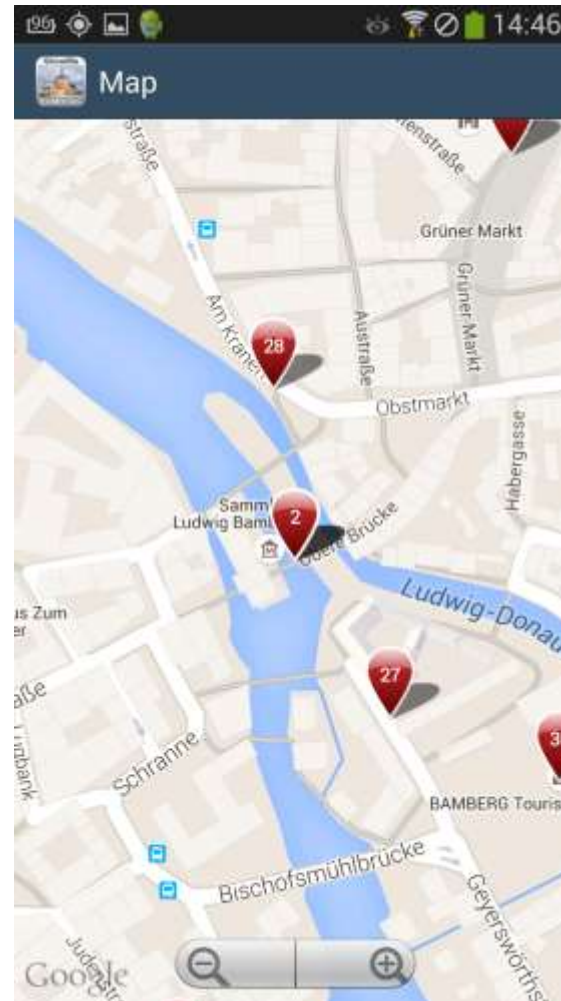
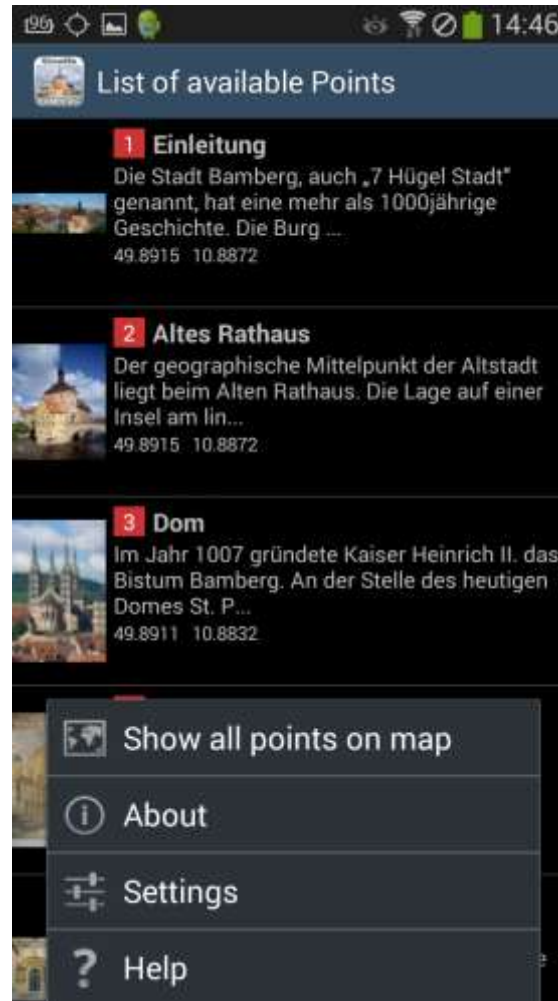
- Topography of Modernism





## Overview: Maps

- Show Me: Bamberg

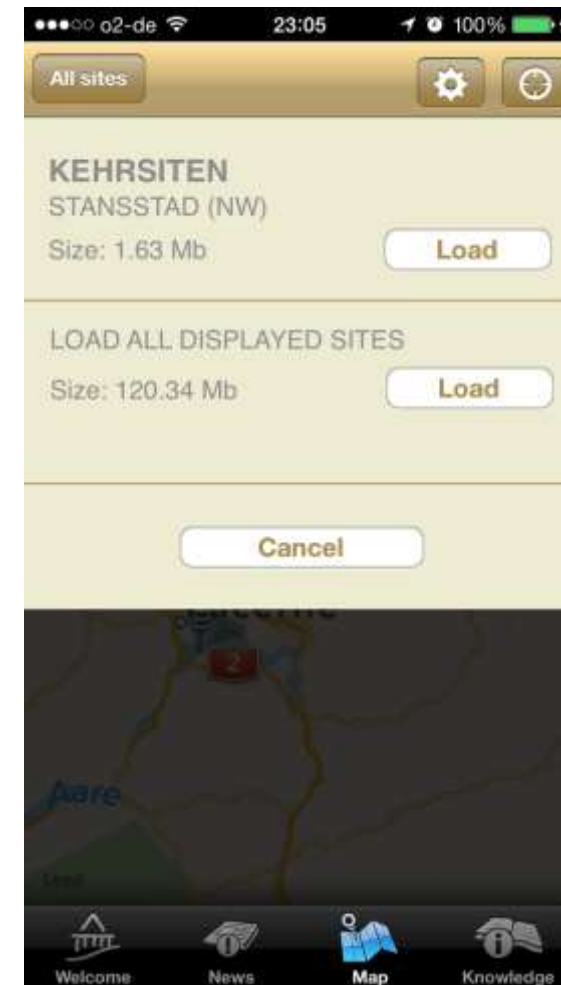
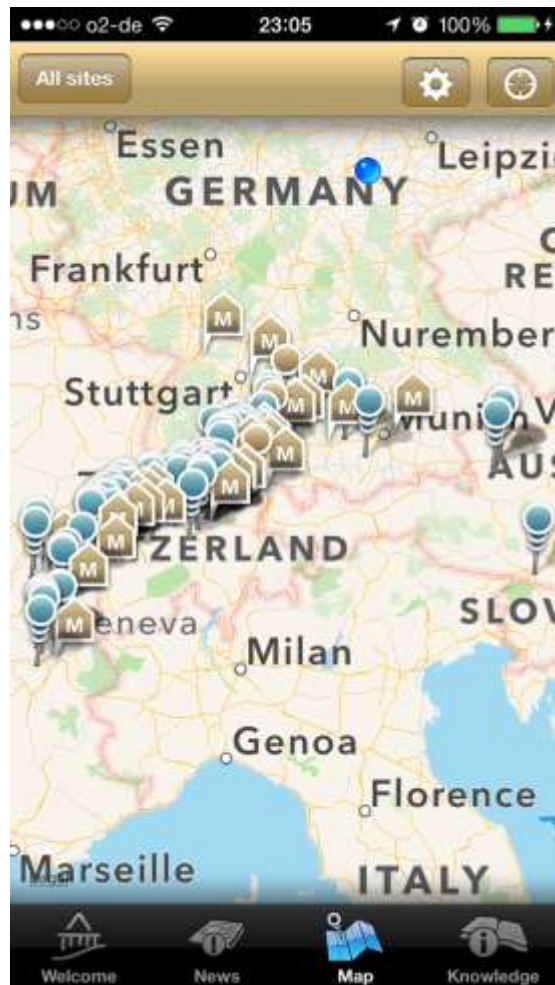






## Overview: Maps

- Palafittes Guide





## Overview: Maps

- Sanssoussi – The park and its buildings

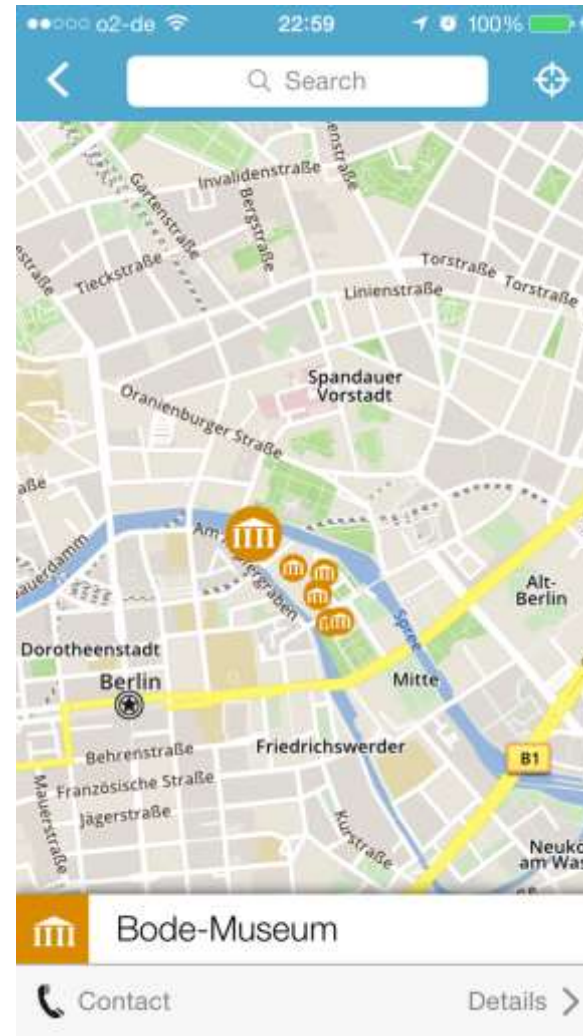
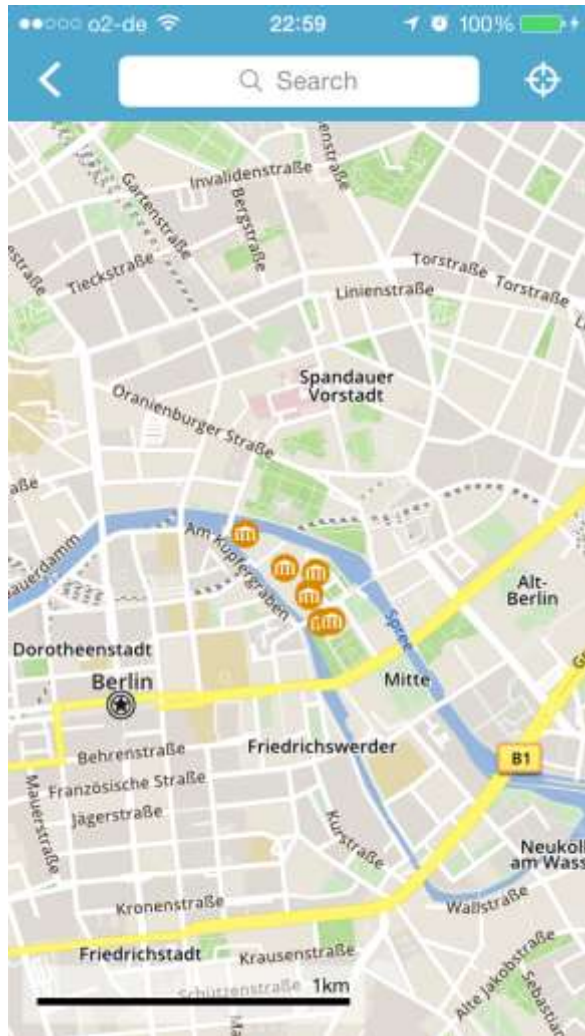






## Overview: Maps

- Berlin Travel Guide Triposo (\* *not on WHS list*)





## Overview: Maps

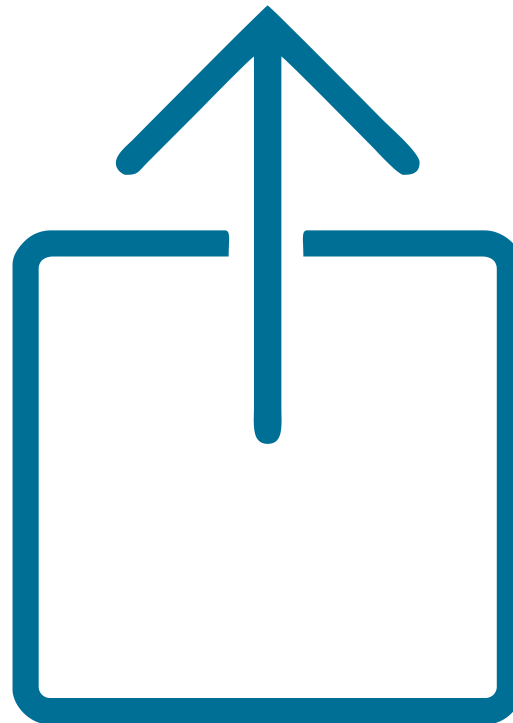
- Berlin City Guide TripAdvisor (\* *not on WHS list*)





## Overview: Participation

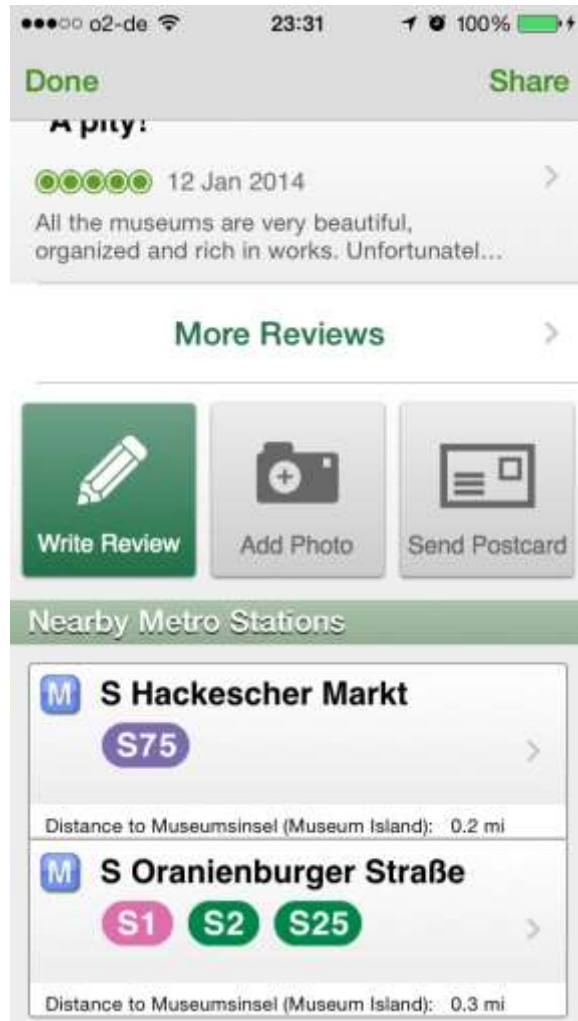
- Berlin Travel Guide Triposo (\* *not on WHS list*)





## Overview: Participation

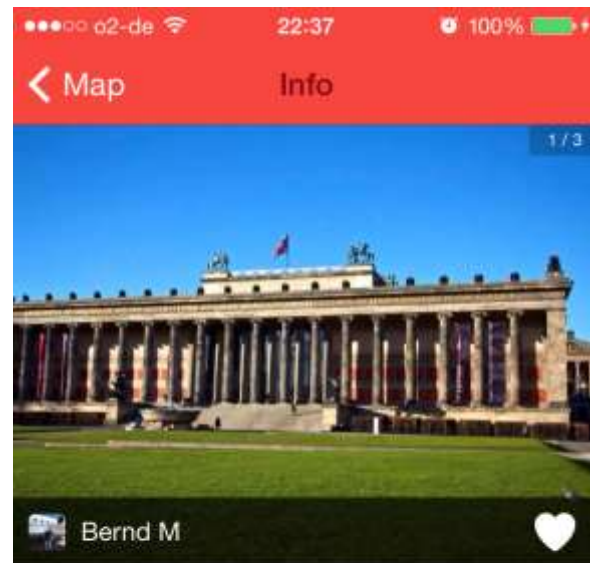
- Berlin City Guide TripAdvisor (\* *not on WHS list*)





## Overview: Participation

- Berlin Travel Guide Ulmon (\* *not on WHS list*)



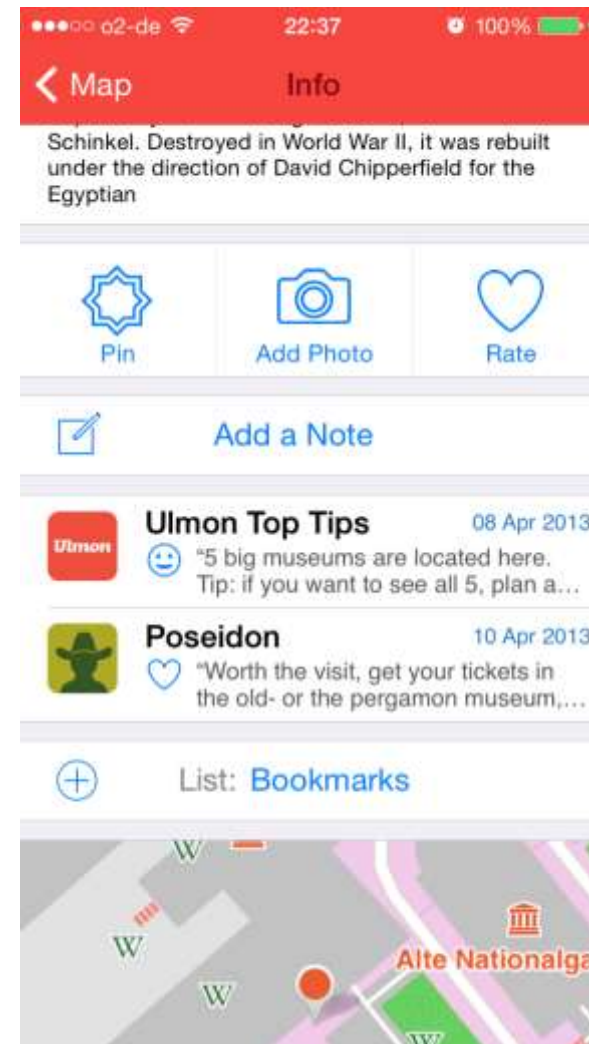
### Museumsinsel

Tourist Attraction

Mitte, Mitte

Museum Island (German: Museumsinsel) is the name of the northern half of an island in the Spree river in the central Mitte district of Berlin, Germany, the site of the old city of Cölln. It is so called for the complex of five internationally significant museums, all part of the Berlin State Museums, that occupy the island's northern part:

The Altes Museum (Old Museum) completed on the orders of Karl Friedrich Schinkel in 1830. The Neues Museum (New Museum) finished in 1859 according

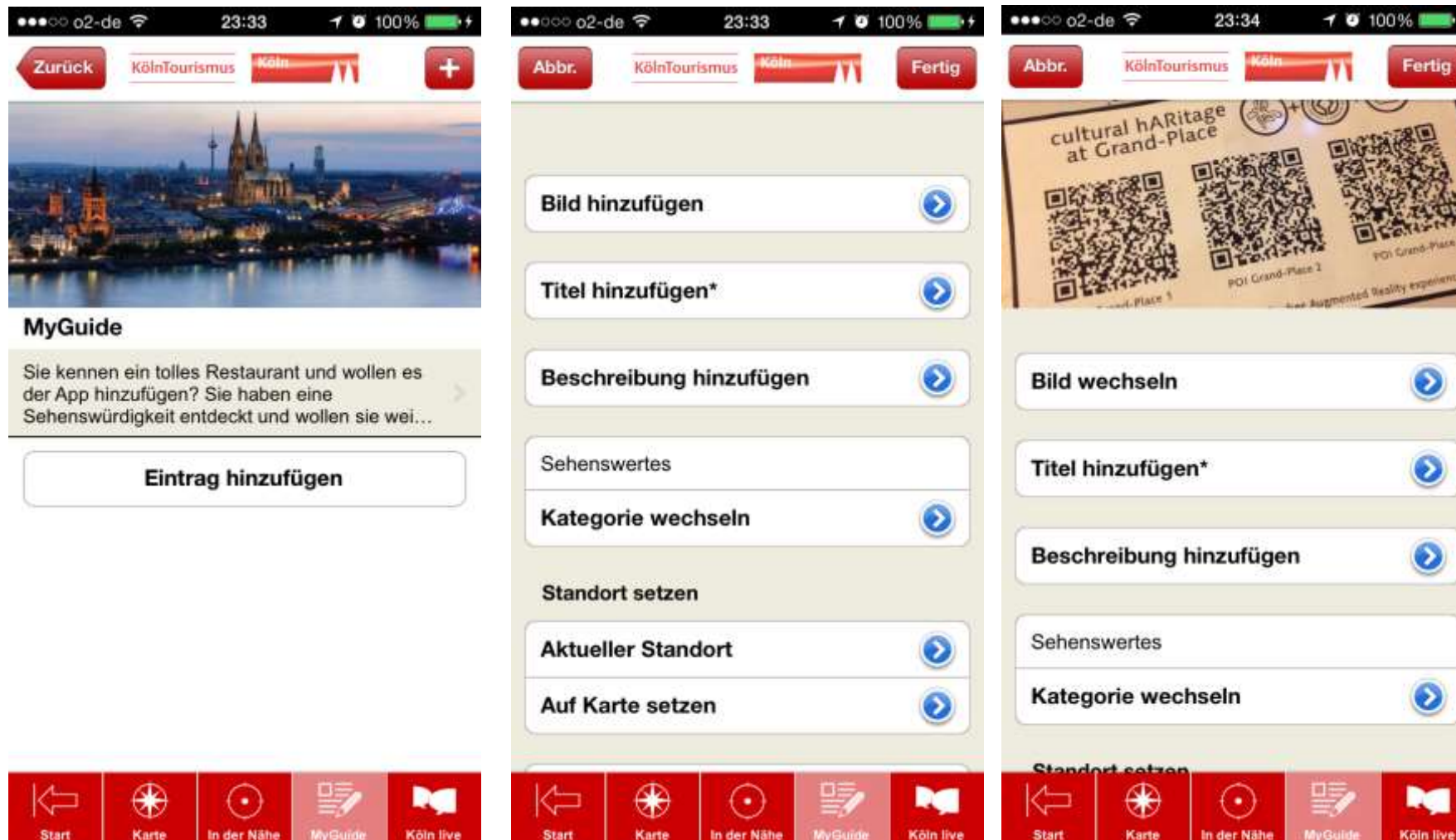






## Overview: Participation

- Cologne Guide Tourias (\* *not on WHS list*)







## Overview: Participation

- Eisenach CityGuide (\* *not on WHS list*)



# Overview & Tips



# Overview



What makes a good example? It can be based on known heuristics principles and UI guidelines from the selected OS (iOS and Android).

There are several heuristics available (Nielsen, Weiss, Nielsen, Gerhardt-Powals, Scheiderman, Weinschenk), and it is a matter to choose which one could be applied better to achieve the desirable results.

# Heuristics

## User Control and Freedom

- Application has marked exit
- Application support undo and redo
- User can control interaction
- User knows where he is in, where he can go and how he get there in application
- User understands how many steps he will go to reach his goal and his current

Based on Nayebi, F., Desharnais, J.-M., & Abran, A. (2013a). An Expert-Based Framework for Evaluating iOS Application Usability (pp. 147–155). IEEE. <http://doi.org/10.1109/IWSM-Mensura.2013.30>



# Heuristics

## Error correction

- When something went wrong, application tells the user: what happened, why it happened and how to fix it
- Required fields are made obvious with visual indications
- Back button/gesture turns to previous view and the data is not lost

Based on Nayebi, F., Desharnais, J.-M., & Abran, A. (2013a)

# Heuristics

## Accommodation

- Application speaks user's language
- Relevant metaphors are used when needed
- Interface is suitable for the user's task and skill level

Based on Nayebi, F., Desharnais, J.-M., & Abran, A. (2013a)

# Heuristics

## Simplicity

- Minimalist or view what is relevant for the need
- Different colors are used for different purposes
- Size of graphics is considered for response time impact
- Used of colors is limited (3-4)
- Application's purpose is understandable at the first sight

Based on Nayebi, F., Desharnais, J.-M., & Abran, A. (2013a)

# Heuristics

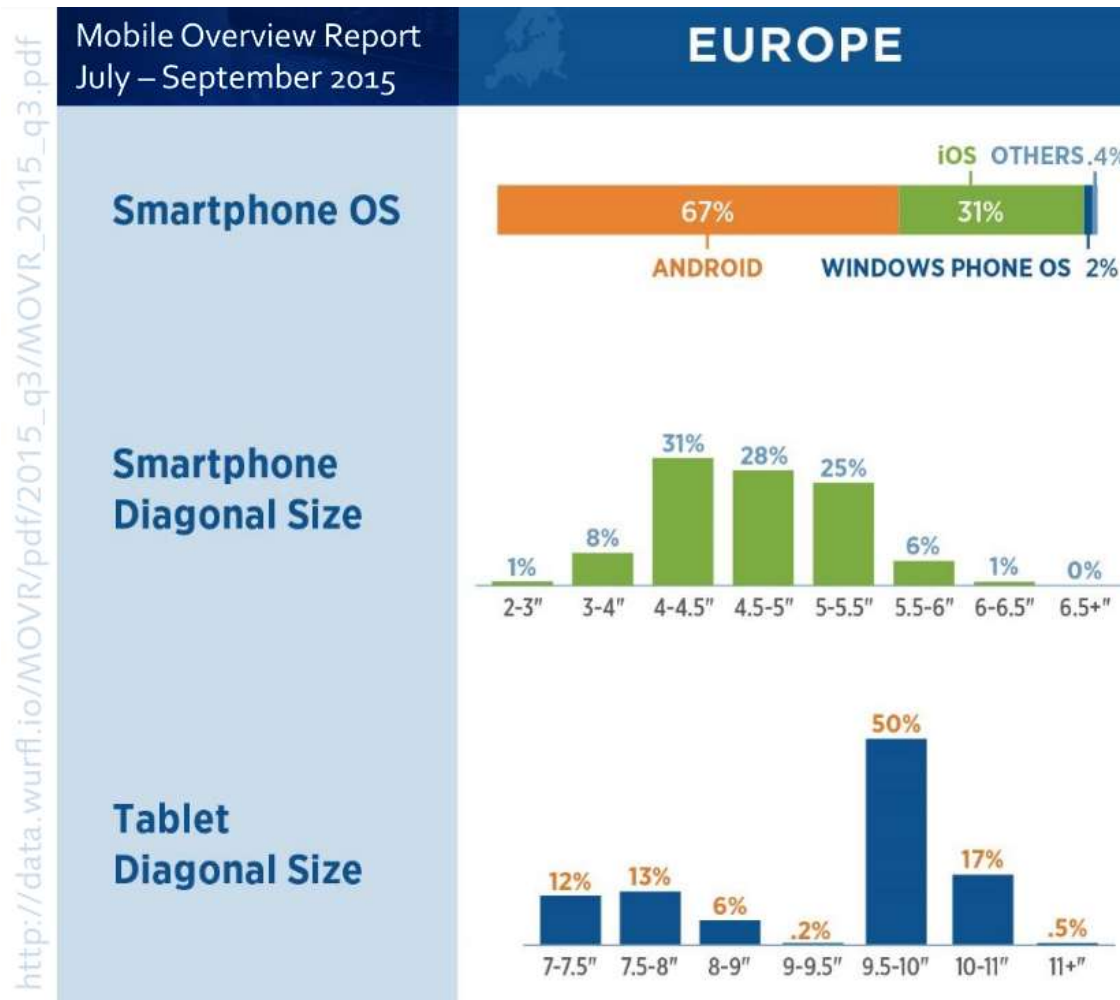
## Aesthetics

- **Similarity** - when objects look similar to one another, and can be perceived as part of a group or pattern.
- **Continuation** - when the eye is compelled to move from one object another.
- **Closure** - when an incomplete object or a space that is not completely filled can be perceived by the user as a whole when he adds the missing information.
- **Proximity** - when elements are placed close together, and can be perceived as belonging to a group
- **Figure and ground** - Figures (forms, silhouettes, and shapes) are differentiated from background.

Based on Nayebi, F., Desharnais, J.-M., & Abran, A. (2013a)



# Mobile OS in Europe (July - September 2015)



## Diagonal Size:

- 31% 4 - 4,5"
- 28% 4,5 - 5"
- 25% 5,5 - 6"

Source: [http://data.wurfl.io/MOVR/pdf/2015\\_q3/MOVR\\_2015\\_q3.pdf](http://data.wurfl.io/MOVR/pdf/2015_q3/MOVR_2015_q3.pdf)

## Designing for 4 to 5,5 Inches, Portrait & One-Thumb

Retrieved and Modified from Wroblewski, L. (n.d.). LukeW | Defining Mobile: 4-5.5 Inches, Portrait & One-Thumb. Retrieved November 25, 2015, from <http://www.lukew.com/ff/entry.asp?1944>

When designing mobile software, we need some clarity. What kind of devices are we talking about and how do people interact with them?

Text entry on a small device can be difficult.

Where possible, and where it is appropriate to the application, the user should be offered a selection option rather than be made to enter text.

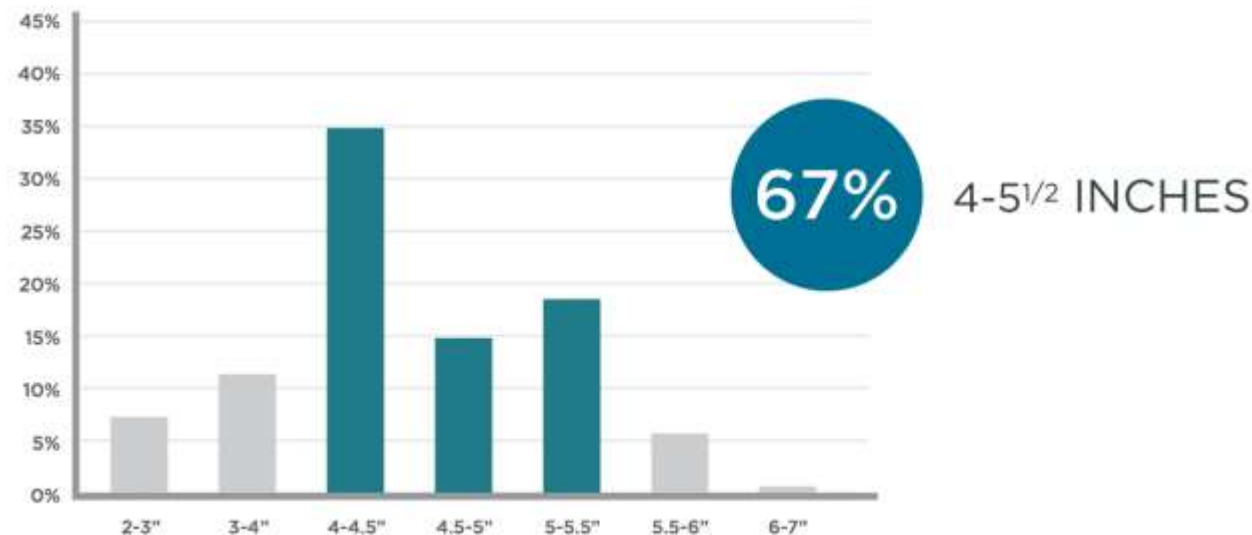
Finding the best solution will require both thought and user testing.

# Designing for 4 to 5,5 Inches, Portrait & One-Thumb

Retrieved and Modified from Wroblewski, L. (n.d.).

67% of smartphones range between 4 and 5,5 inches and 94% of the time they're used in portrait orientation. Note this data is based on Web browsing but native app numbers are unlikely to change the majority of use to landscape.

Global Avg. Smartphone Diagonal Size

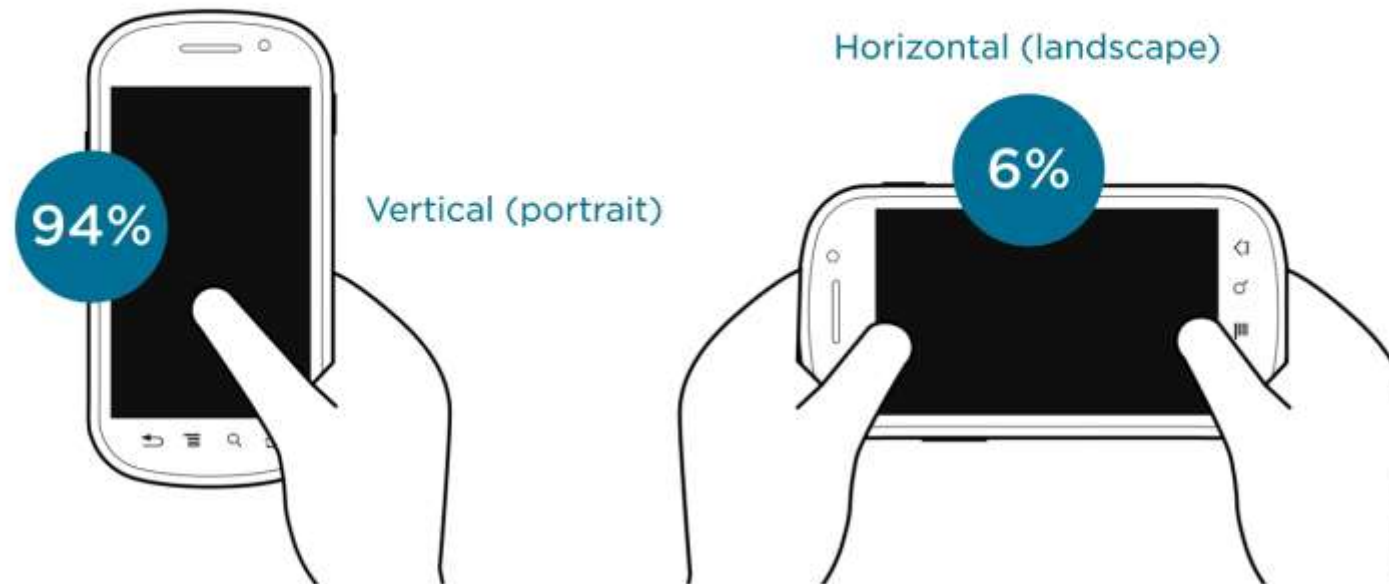


# Designing for 4 to 5,5 Inches, Portrait & One-Thumb

Retrieved and Modified from Wroblewski, L. (n.d.).

When in landscape mode, most interactions (72%) rely on just one thumb as Steven Hoober's [1,300+ observations](#) of smartphones in use illustrated.

## Global Smartphone Orientation



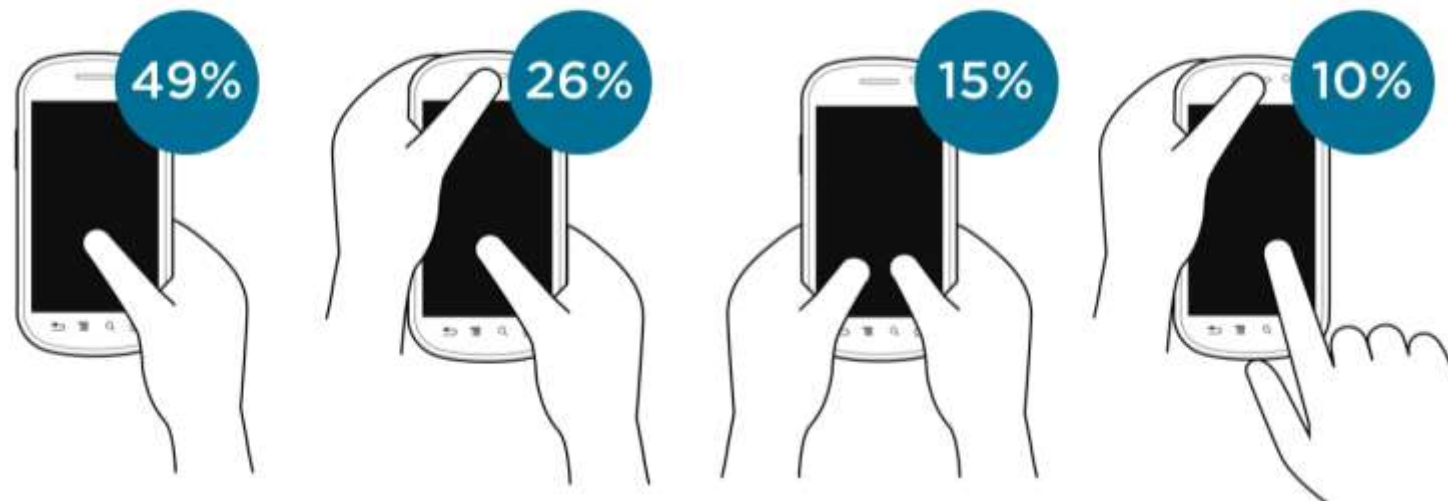


# Designing for 4 to 5,5 Inches, Portrait & One-Thumb

Retrieved and Modified from Wroblewski, L. (n.d.).

So when designing for mobile today, it's worth considering a 4-5,5 inch smartphone, in portrait (vertical) orientation, being used with [one-thumb](#). Of course, there many variants as well but making sure your mobile experiences [work well in this context](#) is a great baseline to start from.

## Smartphone Posture

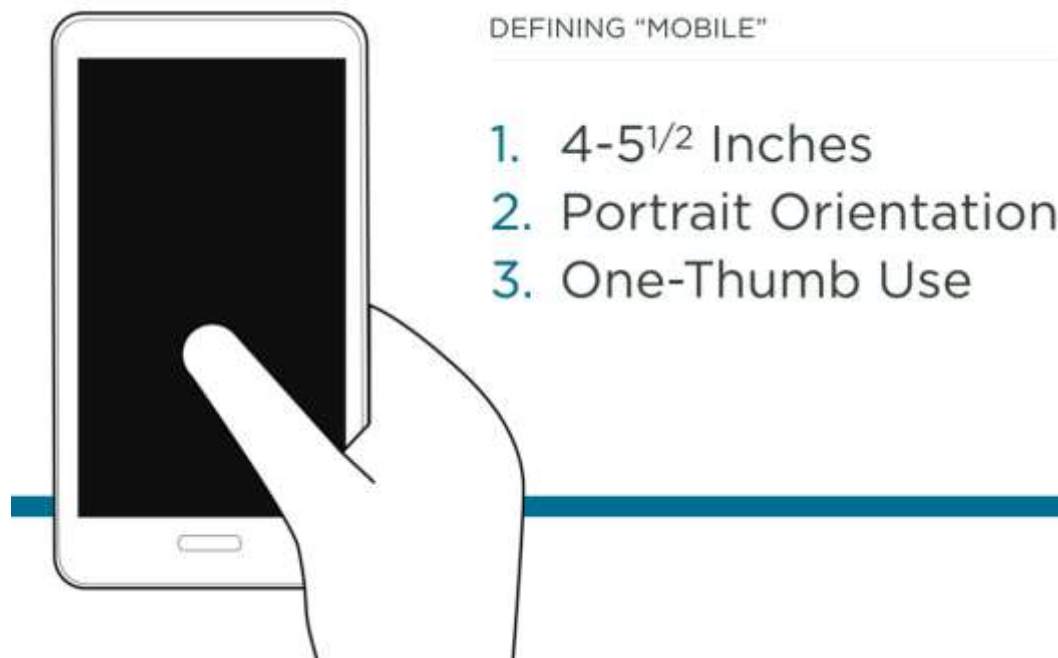


# Designing for 4 to 5,5 Inches, Portrait & One-Thumb

Retrieved and Modified from Wroblewski, L. (n.d.).

A few examples of how this baseline can inform design decisions and testing:

- [Designing for Thumb Flow](#)
- [Testing One-Thumb Mobile Use](#)



# Prototype Tips

## UI Design Guidelines for Handheld Devices

(Stone & Open University, 2005, p. 384) (adapted from Weiss, 2002, pp. 66–70)

- **"Select" versus "Type"**

Text entry on a small device can be difficult. Where possible, and where it is appropriate to the application, the user should be offered a selection option rather than be made to enter text. Finding the best solution will require both thought and user testing.

# Prototype Tips

## UI Design Guidelines for Handheld Devices

(Stone & Open University, 2005, p. 384) (adapted from Weiss, 2002, pp. 66–70)

- **Be consistent**

Ensure that the same terminology is used within an application and that the same terminology is used between handheld applications. In the absence of guidelines, try to borrow ideas from applications that have been well designed and have a high degree of usability.



# Prototype Tips

## UI Design Guidelines for Handheld Devices

(Stone & Open University, 2005, p. 384) (adapted from Weiss, 2002, pp. 66–70)

- **Consistency between platforms**

While the same terminology can be used between handheld applications, you will need to think carefully when adapting an application from a desktop to a handheld device. It is not necessarily the case that terminology that works for a desktop will work for the smaller screened handheld device.

# Prototype Tips

## UI Design Guidelines for Handheld Devices

(Stone & Open University, 2005, p. 384) (adapted from Weiss, 2002, pp. 66–70)

- **Design stability**

In the event of, say, a connectivity failure, the system should allow the user to pick up from where he or she left off when the connection is restored. For example, if the user is completing some sort of form and a wireless connection goes down, the data in the fields from previously should not be lost and have to be reentered.

# Prototype Tips

## UI Design Guidelines for Handheld Devices

(Stone & Open University, 2005, p. 384) (adapted from Weiss, 2002, pp. 66–70)

- **Provide feedback**

The system should support the user with feedback regarding what the application is doing. Feedback in relation to, say, the use of an application or navigation within it could be provided via an assigned information key.

# Prototype Tips

## UI Design Guidelines for Handheld Devices

(Stone & Open University, 2005, p. 384) (adapted from Weiss, 2002, pp. 66–70)

- **Forgiveness**

The UI should be tolerant of user errors and provide an Undo function by, where feasible, a specially designated Back key.



# Prototype Tips

## UI Design Guidelines for Handheld Devices

(Stone & Open University, 2005, p. 384) (adapted from Weiss, 2002, pp. 66–70)

- **Use metaphors**

Real-world metaphors in line with the size of the display should be used. For example, while a desktop metaphor would be inappropriate for a cell phone, the use of an address book for storing telephone numbers would be okay.

# Prototype Tips

## UI Design Guidelines for Handheld Devices

(Stone & Open University, 2005, p. 385) (adapted from Weiss, 2002, pp. 66–70)

- **Clickable graphics should look clickable**  
If a graphic is clickable, then it should have defined borders and the graphic should have high contrast with the background color. Conversely, graphics that are static should not appear to be clickable.

# Prototype Tips

## UI Design Guidelines for Handheld Devices

(Stone & Open University, 2005, p. 385) (adapted from Weiss, 2002, pp. 66–70)

- **Use icons to clarify concepts**  
Icons should be meaningful and representative of the concepts they are meant to convey.

# Prototype Tips

Most Important:



Be **CREATIVE** and  
**LOGICAL**

and try something  
**NEW!**

Image retrieved and modified from <http://estudioimg.files.wordpress.com/2012/05/two-sides-of-brain.png>



# App Project





# App Target: City with World Heritage Site





# App Target: Suggestion – Weimar & Weimarpedia.de



+



Map:  
Geo-Location



Articles:  
Encyclopedia Style



Gallery:  
Different Media /  
Participatory



Materials:  
for Teachers



## App Target: Suggestion – Bauhaus 100 years



+



years of  
bauhaus

<https://www.bauhaus100.de/en/index.html>





# Target Groups:

## Teenager Students & Adults & Older Adults





# Target Groups:

## Teenager Students & Adults & Older Adults

General needs when visiting Weimar



- Find P.O.I. and information
- Research articles
- Create content



- Find P.O.I. and Information:
  - 94% - sightseeing
  - 79% - restaurant and cafés
  - 65% - museums and exhibitions
  - (...)
  - 35% - UNESCO WHS



# Target Group A:

## Adults & Older Adults Tourist Visitors

Data collection in Weimar with app. 400 participants (only tourists). April/May 2013.

### Age:

- 26% 50-59 years
- 21% 60-69 years
- 19% 70 +
- 15% 40-49 years

### Booking on hotels:

- 39% online
- 28% phone
- 13% in weimar
- 9% mail



Source\*:

Gesellschaft für  
Wirtschaftsförderung,  
Kongress- und Tourismusservice



\* By e-mail <dietrich@weimar.de>



# Target Group A:

## Adults & Older Adults Tourist Visitors

### Traveling with:

- 57% couples
- 14% alone
- 9% groups
- 8% friends

**Average stay:** 3,2 nights

### Duration of stay:

- 70% up to 3 nights
- 27% 4 – 7 nights
- 3% 8 nights and more



Source\*:

Gesellschaft für  
Wirtschaftsförderung,  
Kongress- und Tourismusservice



\* By e-mail <dietrich@weimar.de>





# Target Group A:

## Adults & Older Adults Tourist Visitors

### Top ten activities:

- 94% sightseeing
- 79% restaurant and cafés
- 65% museums and exhibitions
- 58% strolling around
- 54% regional food and drinks
- 53% shopping
- 47% guided tours
- 35% UNESCO World Heritage
- 33% Theatre
- 26% relaxing



Source\*:

Gesellschaft für  
Wirtschaftsförderung,  
Kongress- und Tourismusservice



\* By e-mail <dietrich@weimar.de>



## Target Group B: Tennager Students



### Age:

- +- 13-16 years
- Secondary Education age (Gymnasium, Realschule, Hauptschule, etc)

### Traveling with:

- Groups

### Duration of stay:

- Normally 3 days of activities



## Target Group B: Tennager Students



### Activities:

- Guided tours on museums and point of interest in Weimar
- Collecting information from the guide and tours
- Fulfillment of pre-defined activities with Teacher.  
(questionnaires, content research, photo production, etc)
- Creating media (articles, photos, etc)



# Presentation Format: Pecha Kucha

*PechaKucha*<sup>TM</sup>  
20 X 20  
IMAGES SECONDS

Image: <http://bentographics.com/site/wp-content/uploads/2015/12/PechaKucha-log.gif>



# Presentation Dates:

13.06 Students' Prototype Presentations – **Adults'** Group



20.06 Students' Prototype Presentations – **Teenagers'** Group







# App Project Consultation

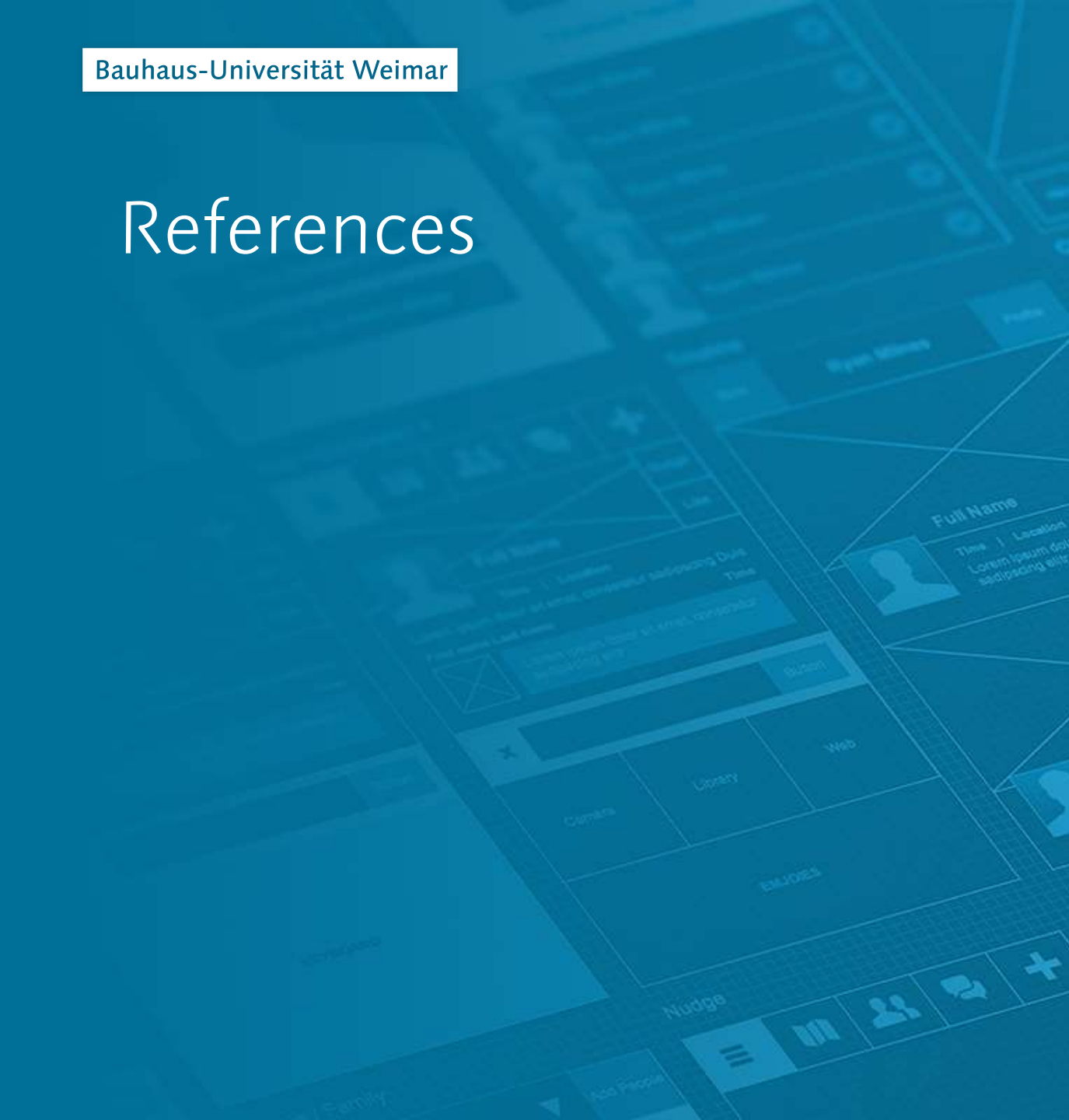
23.05

- **After the course “MMD 7 – Writing and References”** (+ - 1 hour)
- Around 5 minutes per student
- Optional, not mandatory
- **Order of attendance based on the “first come, first served” basis on**

[http://www.uni-weimar.de/medien/wiki/IFD:MobileMediaDesign-SS16#Project\\_Consultation](http://www.uni-weimar.de/medien/wiki/IFD:MobileMediaDesign-SS16#Project_Consultation)

(for those interested, write your name on this list)

# References



# References

- Apple - iPhone 5 - **Loving it is easy. That's why so many people do.** (n.d.). Retrieved May 22, 2013, from <http://www.apple.com/iphone/>
- Design | Android Developers. (n.d.). Retrieved May 22, 2013, from <http://developer.android.com/design/index.html>
- Frommer, D. (n.d.). These are the 25 most popular mobile apps in America. Retrieved from <http://qz.com/481245/these-are-the-25-most-popular-2015-mobile-apps-in-america/>
- HTC One V Overview - HTC Smartphones. (n.d.). Retrieved May 22, 2013, from <http://www.htc.com/www/smartphones/htc-one-v/>
- iOS 9 vs Android 6.0 Marshmallow: comparison of interfaces | AppleApple .top world news. (n.d.). Retrieved November 25, 2015, from <http://appleapple.top/ios-9-vs-android-6-0-marshmallow-comparison-of-interfaces/>
- iOS Human Interface Guidelines: Designing for iOS 7. (n.d.). Retrieved November 30, 2013, from <https://developer.apple.com/library/ios/documentation/UserExperience/Conceptual/MobileHIG/index.html>
- Johnson, J. (2013, January 11). Android vs. iPhone - Differences in UI Patterns and Design. Retrieved May 21, 2013, from <http://www.slideshare.net/jeremy/android-vs-iphone-differences-in-ui-patterns-and-design>

# References

- Kantar: Windows Phone-Wachstum geht weiter - mobile-studien.de. (n.d.). Retrieved November 30, 2013, from <http://mobile-studien.de/2013/06/kantar-windows-phone-wachstum-geht-weiter/>
- McKibben, J. (n.d.). iOS and Android Design Guidelines Cheat Sheet | Kinvey Backend as a Service Blog. Retrieved May 22, 2013, from <http://www.kinvey.com/blog/2765/ios-and-android-design-guidelines-cheat-sheet>
- Nayebi, F., Desharnais, J.-M., & Abran, A. (2013a). An Expert-Based Framework for Evaluating iOS Application Usability (pp. 147–155). IEEE. <http://doi.org/10.1109/IWSM-Mensura.2013.30>
- Native, HTML5, or Hybrid: Understanding Your Mobile Application Development Options - developer.force.com. (n.d.). Retrieved December 3, 2013, from [http://wiki.developerforce.com/page/Native,\\_HTML5,\\_or\\_Hybrid:\\_Understanding\\_Your\\_Mobile\\_Application\\_Development\\_Options](http://wiki.developerforce.com/page/Native,_HTML5,_or_Hybrid:_Understanding_Your_Mobile_Application_Development_Options)
- Newswire | Nielsen Tops of 2012: Digital | Nielsen. (n.d.). Retrieved May 22, 2013, from <http://www.nielsen.com/us/en/newswire/2012/nielsen-tops-of-2012-digital.html>
- **O'Sullivan, C.** (n.d.). A Tale of Two Platforms: Designing for Both Android and iOS - Envato Tuts+ Web Design Article. Retrieved November 24, 2015, from <http://webdesign.tutsplus.com/articles/a-tale-of-two-platforms-designing-for-both-android-and-ios--cms-23616>

# References

- **O'Sullivan, C.** (n.d.). A Tale of Two Platforms: Designing for Both Android and iOS - Envato Tuts+ Web Design Article. Retrieved November 24, 2015, from <http://webdesign.tutsplus.com/articles/a-tale-of-two-platforms-designing-for-both-android-and-ios--cms-23616>
- Schmidt, H. (2012, November). Google-System Android knackt 50-Prozent-Marke in Deutschland. *Focus*. Retrieved from [http://www.focus.de/digital/internet/netzoekonomie-blog/smartphones-google-system-android-knackt-50-prozent-marke-in-deutschland\\_aid\\_852168.html](http://www.focus.de/digital/internet/netzoekonomie-blog/smartphones-google-system-android-knackt-50-prozent-marke-in-deutschland_aid_852168.html)
- Stone, D. L., & Open University. (2005). *User interface design and evaluation*. Amsterdam; Boston, Mass.: Elsevier : Morgan Kaufmann.
- The 10 Most Frequently Used Smartphone Apps. (n.d.). Retrieved November 29, 2013, from <http://mashable.com/2013/08/05/most-used-smartphone-apps/>
- Windows Phone Dev Center. (n.d.). Retrieved May 22, 2013, from <http://developer.windowsphone.com/en-us/design/>
- Wroblewski, L. (n.d.). LukeW | Defining Mobile: 4-5.5 Inches, Portrait & One-Thumb. Retrieved November 25, 2015, from <http://www.lukew.com/ff/entry.asp?1944>

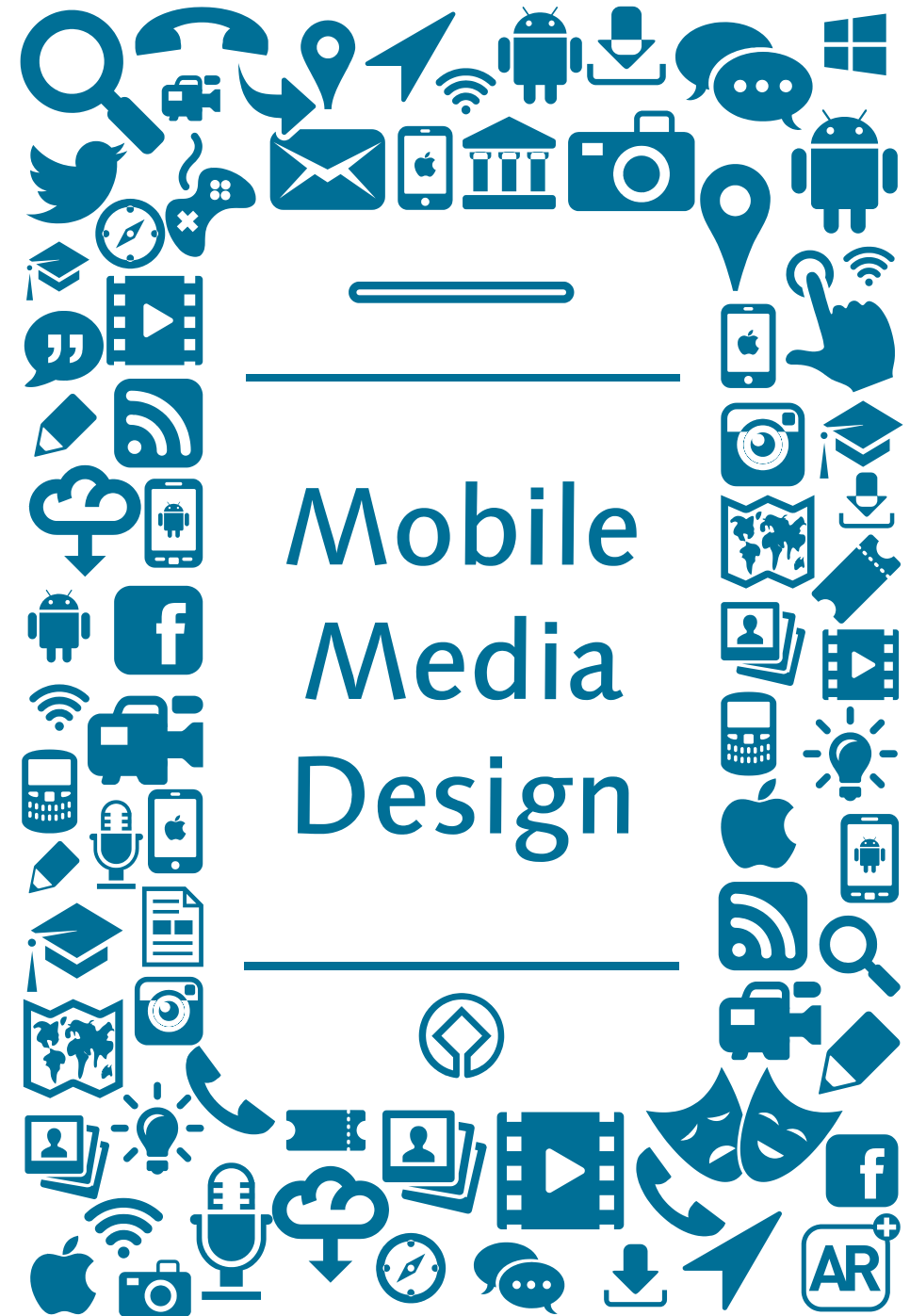


# Thank You!

10 min break



# Mobile Media Design



# 05. Mobile Guidelines

Faculty of Art & Design  
Chair of Interface Design

Joatan Preis Dutra  
joatan.preis.dutra@uni-weimar.de



<http://www.uni-weimar.de/medien/wiki/IFD:MobileMediaDesign-SS16>

