

**MATTHEW L ROTH**  
**USER EXPERIENCE DESIGNER**

# LABEL RESEARCH

# Problem: Compare Manage View v. View Manager

- \* **Process:**
- \* Identify General Guidelines:
  - \* 20 characters or less (English)
  - \* Verb/Noun or Noun/Verb
  - \* Actions typically Verb/Noun
- \* Considerations:
  - \* Term meaning
  - \* Term function
  - \* Manage Views implies options to input
  - \* Term effect on user
  - \* Term appearance

# Solution: Presentation, table, and graphics

- \* Compared and contrasted Manage Views v. View Manager by researching the words meanings and implied connotations respectively
- \* Researched differences in appeal both visually and psychologically
- \* Presented findings, guidelines, and recommendations in a team meeting using slides

▪ Manage Views v. View Manager	
	
Manage Views	View Manager
+ <u>Empowers User</u> : User have the ability to control the views them self and possess control	- <u>Aids User</u> : While functionality may be the same, View Manager gives idea of an assistant or controller.
+ <u>More Concise</u> : Exact meaning	- <u>More vague</u> : unclear on what the user is to expect, a step by step tool or a setting change.
+ - Confusing whether multiple or single view	+ allows single or multiple views

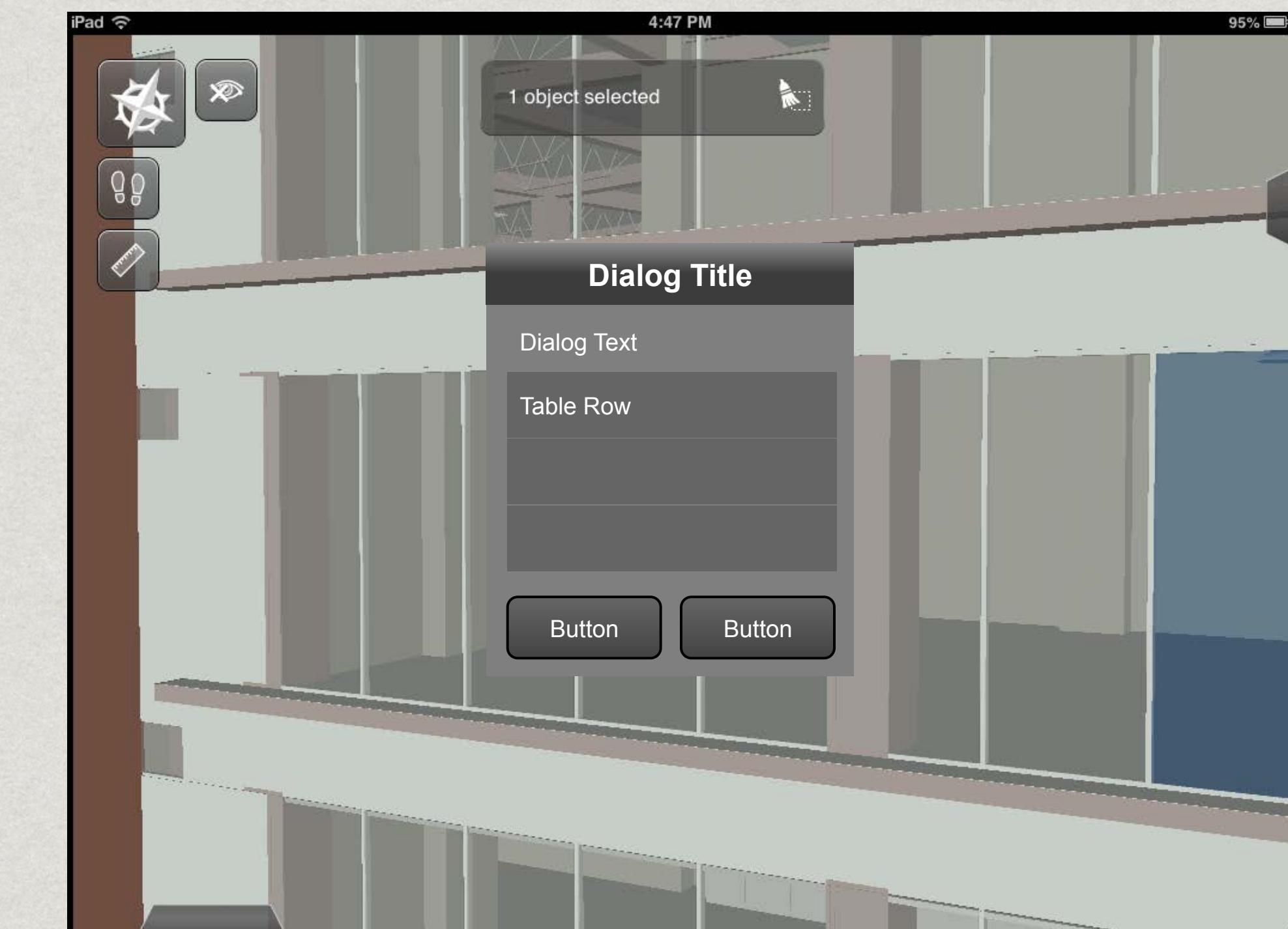
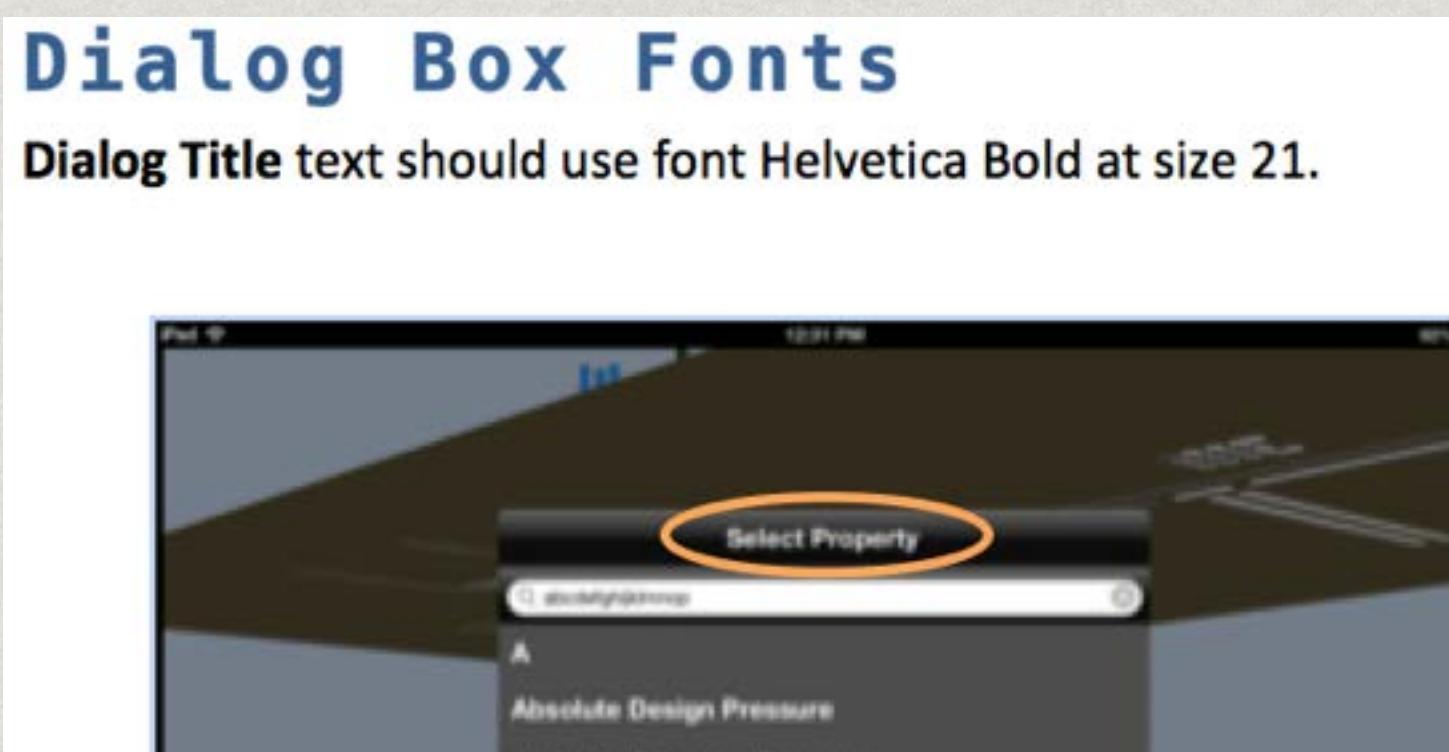
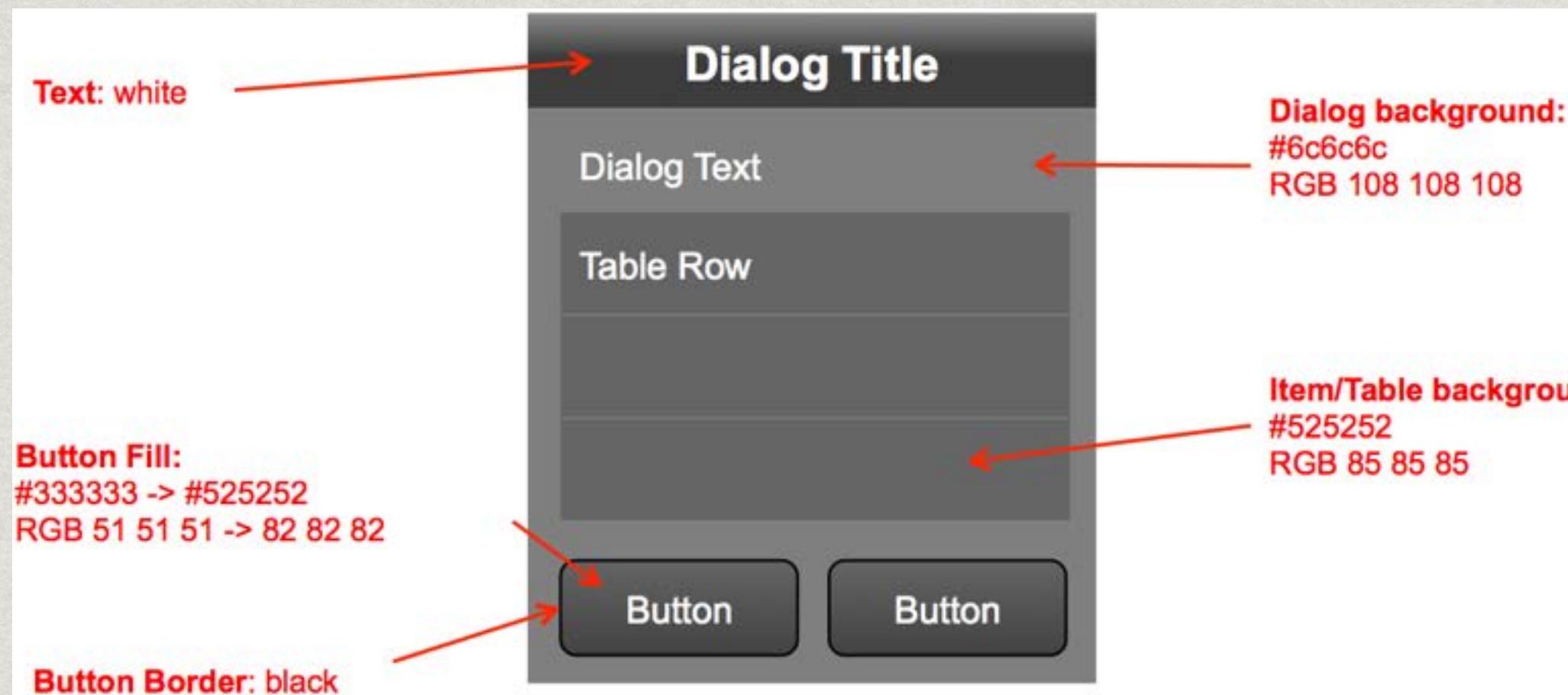
# UX STANDARDS RESEARCH

# Problem: Create in-house design standards

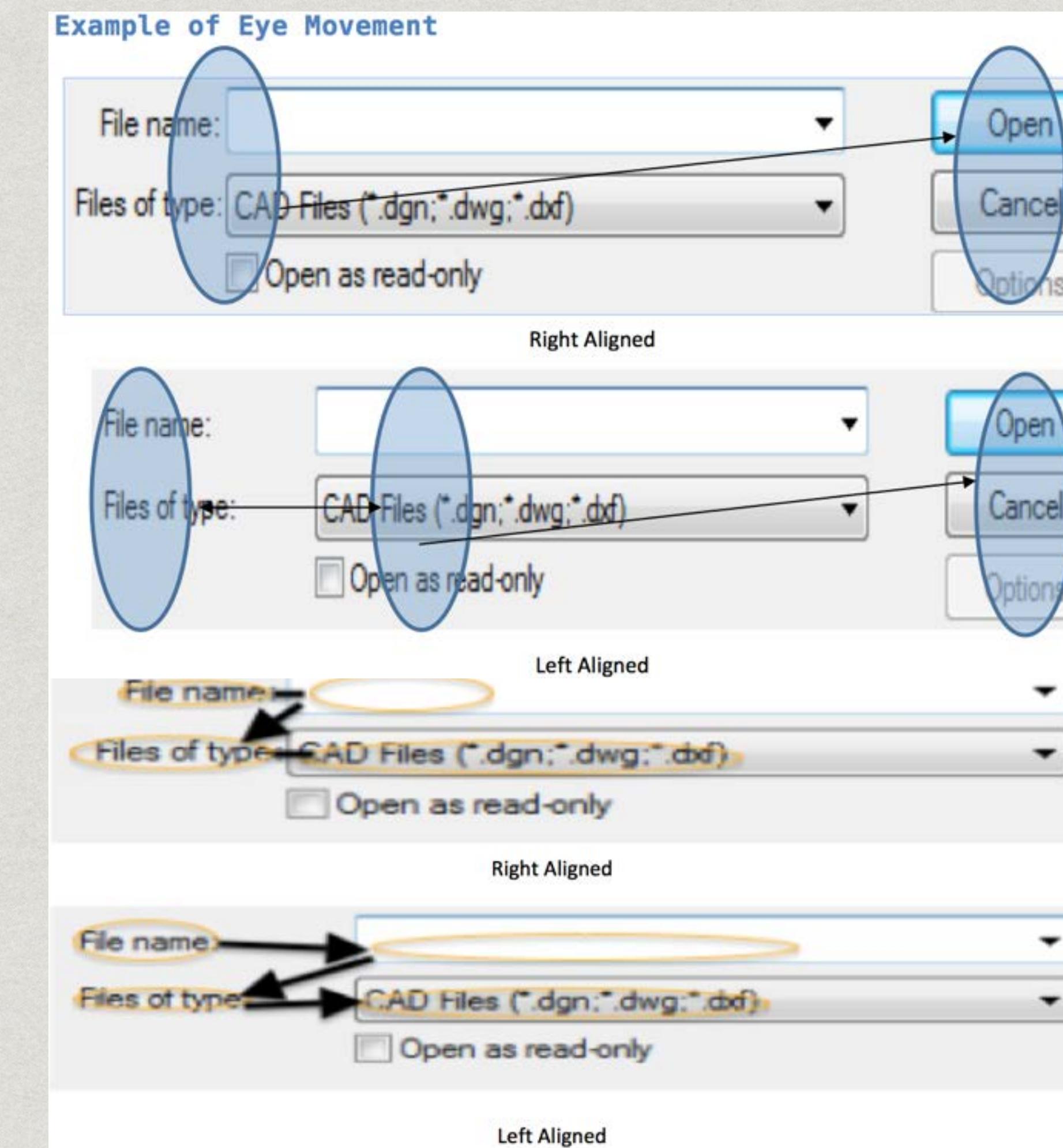
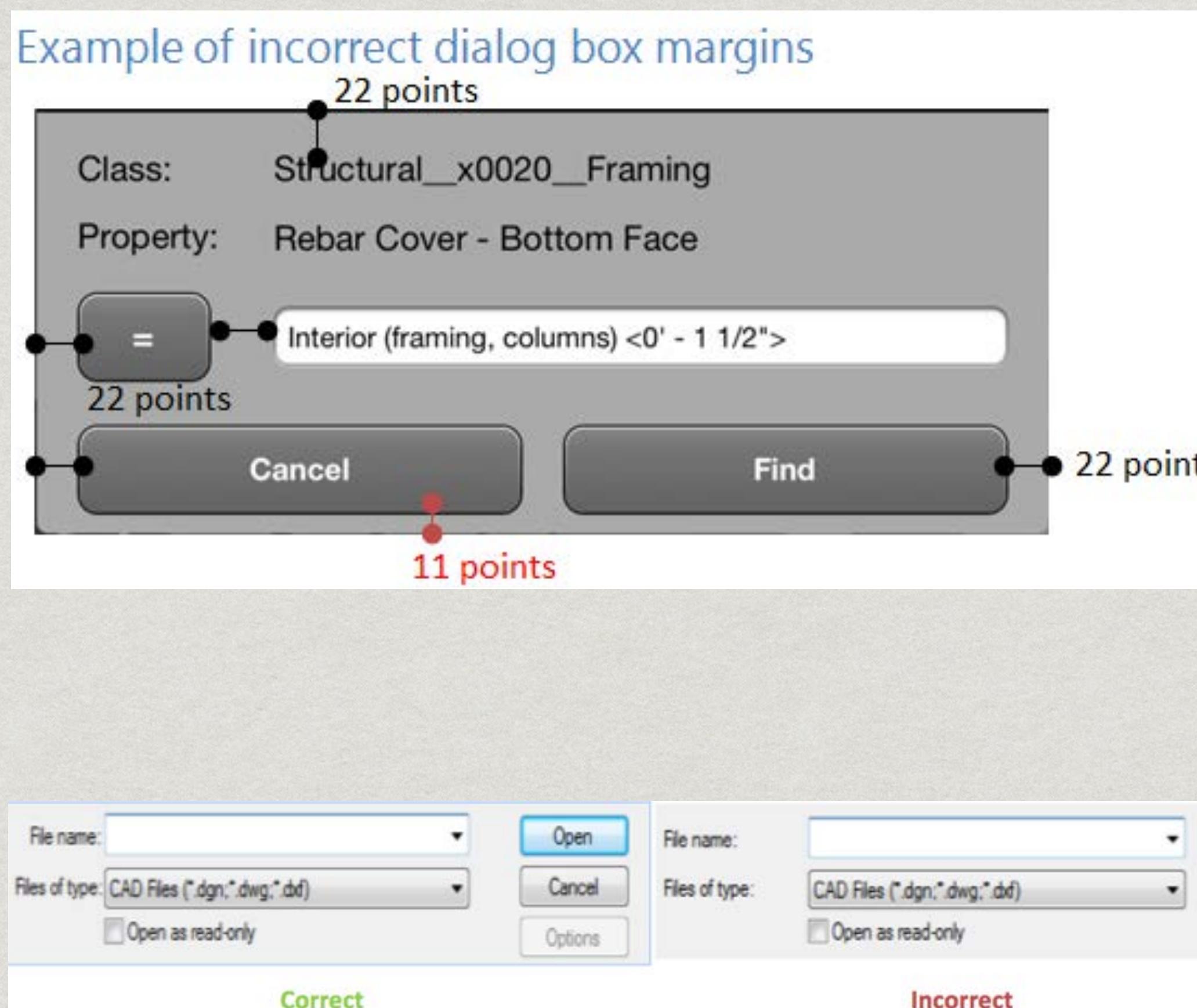
- \* **Process:**
- \* Identify Target Standards:
  - \* Label Colors, Fonts, Alignment, Search on Mobile
- \* Consult Existing References:
  - \* Used Apple's iOS Human Interface Guidelines and respective guidelines from Google and Microsoft
- \* Survey other Apps:
  - \* Looked at common usages across existing apps and compared those to guides



# Solution: Created mockups using PowerPoint and Photoshop to demonstrate these standards



# Solution: Created mockups to show incorrect usage and explanations



# LINKED FILES INTERFACE

# Problem: Create in-house design standards

- \* **Process:**
- \* Researched methods of showing files and links
- \* Sketched different interactions and interfaces
- \* Selected few sketches and created mockups using Photoshop and PowerPoint
- \* Presented and user tested each mockup and refined based on the feedback



# **Solution:** Final end product implemented as a segmented control

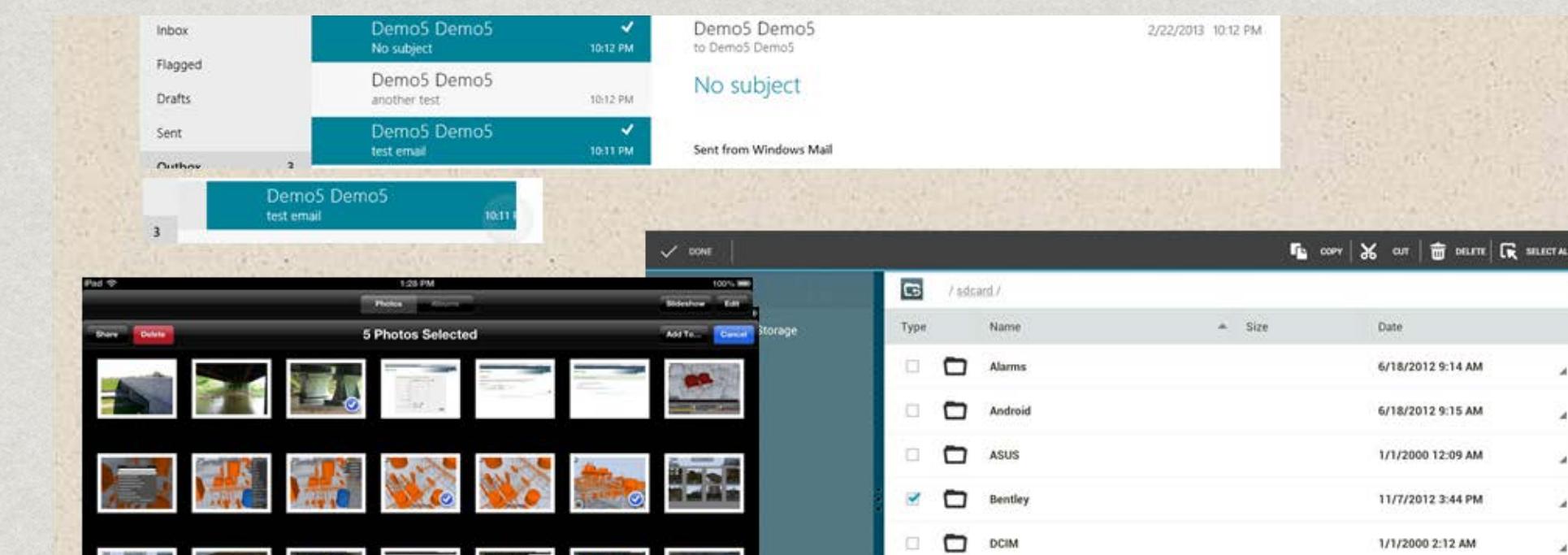


# CROSS PLATFORM LIST EDITING

# Problem: Create cross platform method of list editing

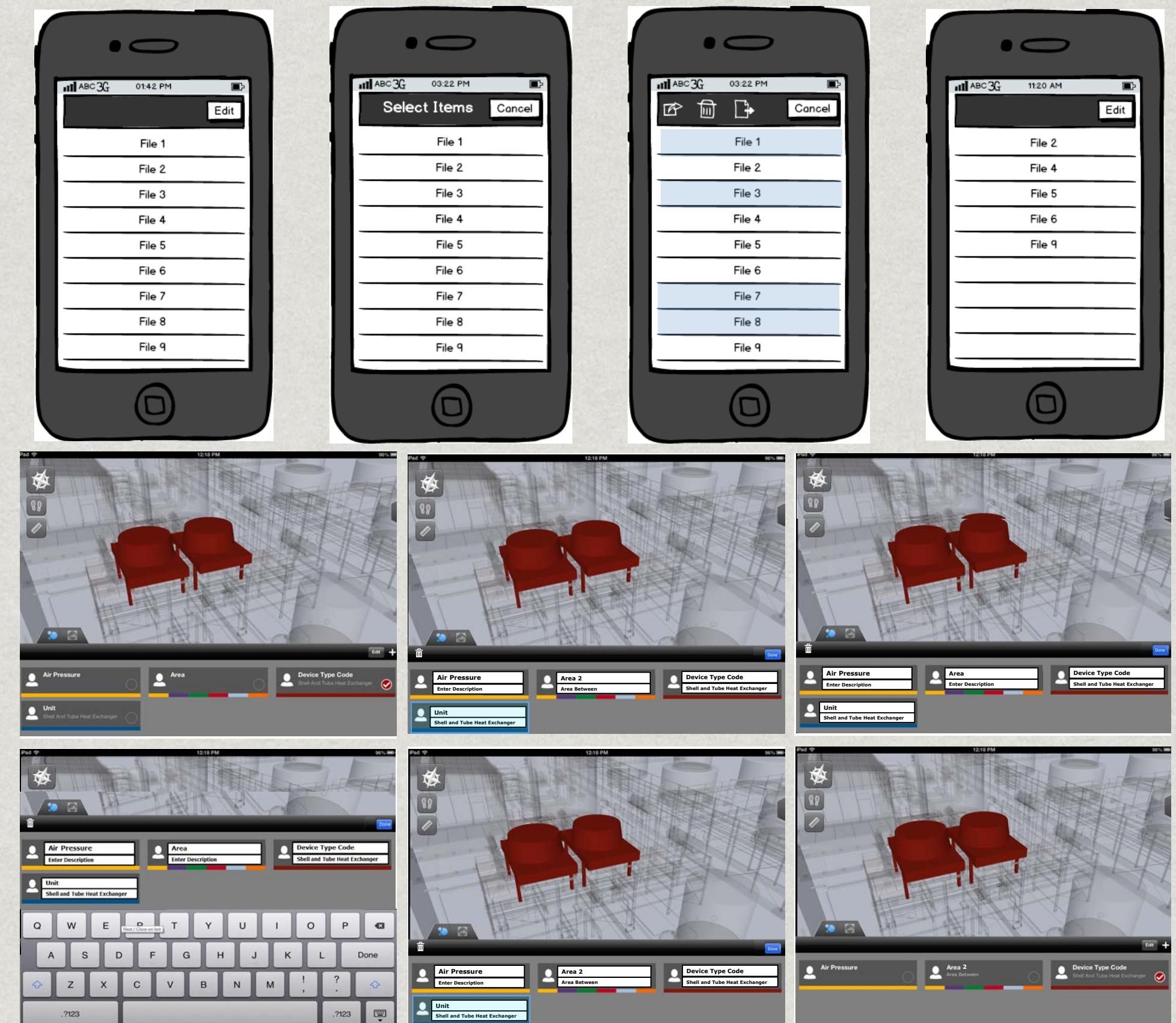
- \* **Process:**
- \* Researched methods of list manipulation across platforms in existing applications
- \* Presented examples of existing cross platform applications
- \* Presented list editing across apps with different functions by creating mockups using PowerPoint and Photoshop
- \* Presented selection methods across platforms and applications by creating mockups with PowerPoint and Photoshop

	iOS	Android	Windows
Hold to select		X	X
Swipe to select			X
Swipe to delete	X		
Swipe up for options			X
Edit mode	X	X	X
Checkbox select	X	X	



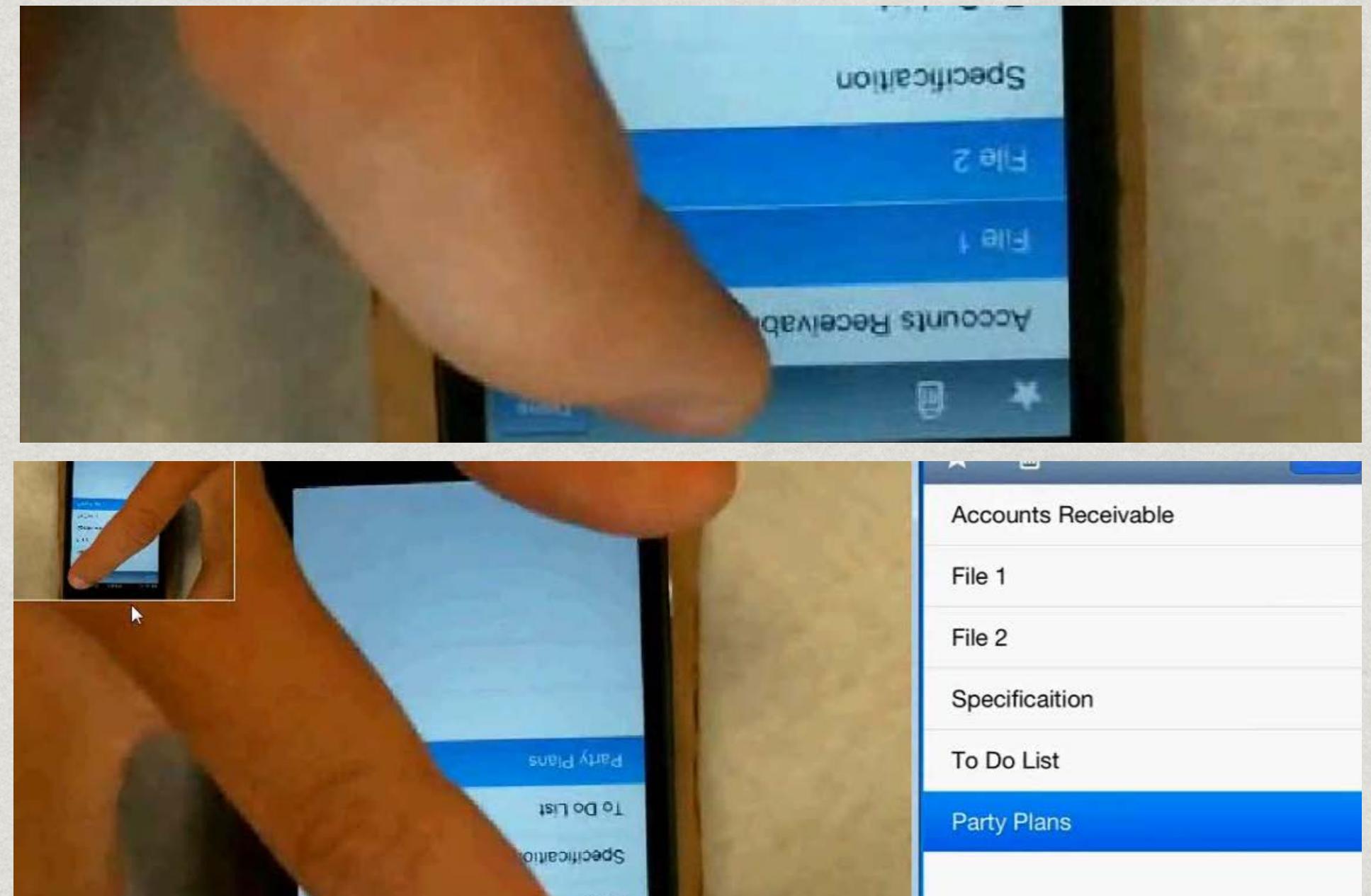
# Solution: Design

- \* Process:
- \* Incorporated research to make a uniform method using common elements
- \* Created a paper prototype of an interface of the method determined to be universal and user tested to get quick feedback
- \* Created mockups and wireframes of workflow using Balsamiq on the second iteration of the workflow and Indigo Studio on the subsequent iteration



# Solution: Testing/Validation

- \* **Process:**
- \* Created a Lab/script to test the functionality of the method
- \* Rapid prototype / paper prototype using Balsamiq wireframes and Indigo Studio
- \* Ran usability labs to observe interaction and usability of method designed using wireframes exported to a linked PDF
- \* Ran final usability lab with high fidelity prototype written in native code with ten people

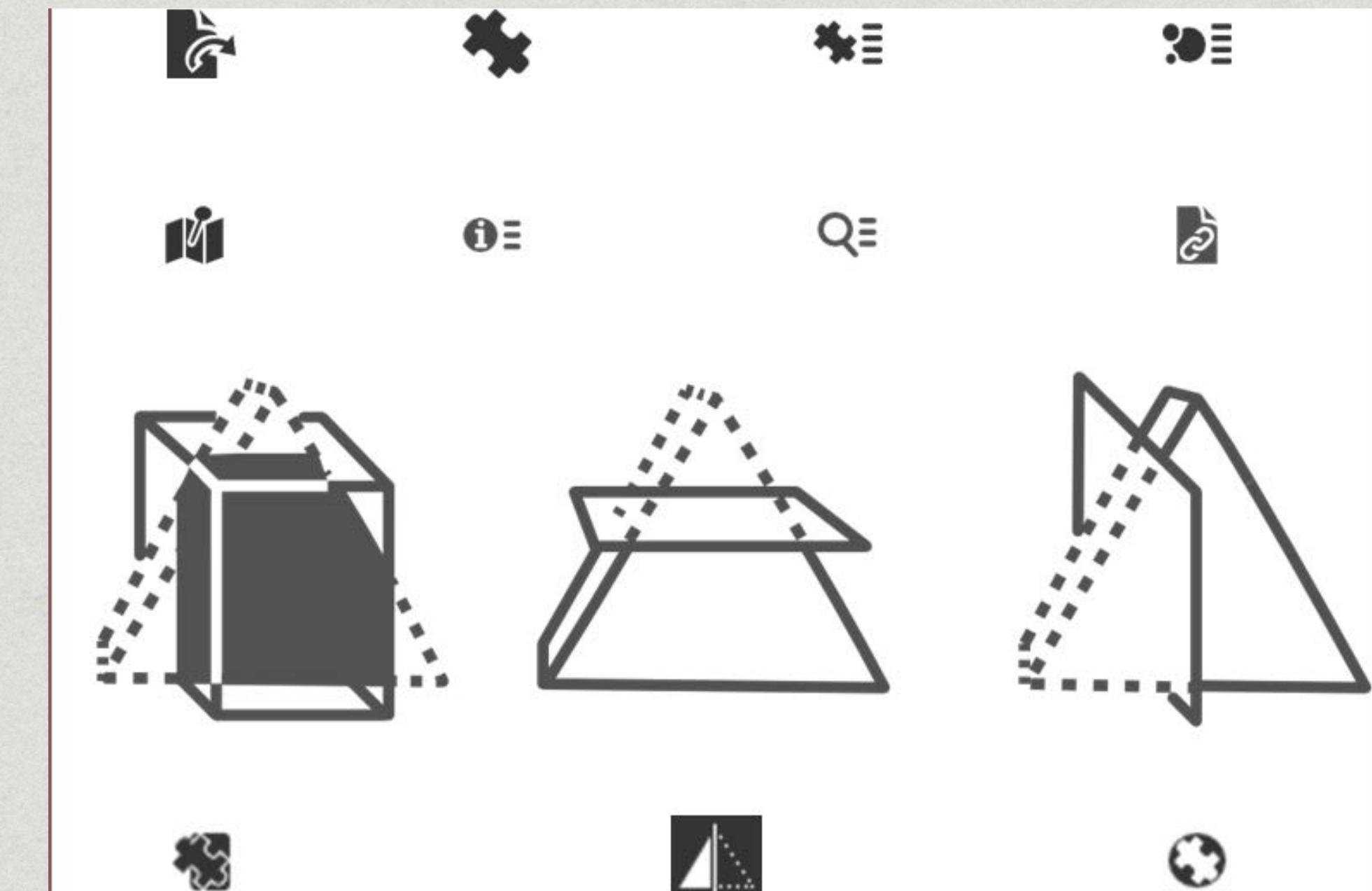


# ICONS

# Problem: Need flat icons to represent different functions and vocabulary

- \* **Process and Solution:**

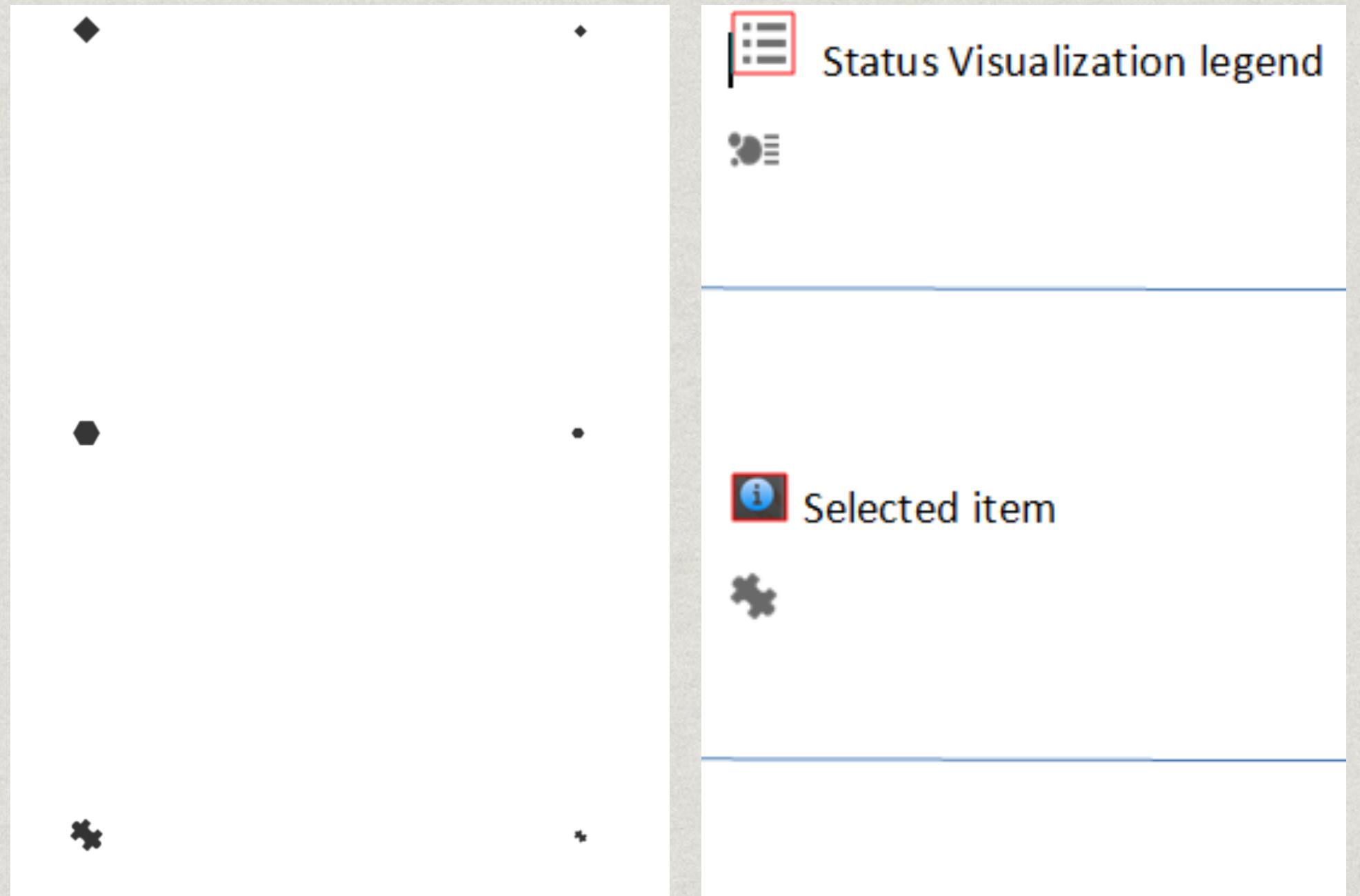
- \* Created vector graphics to create icons using Inkscape and Illustrator
- \* Research naming conventions
- \* Designed within parameters as only 24 pixels and 1 color flat
- \* Researched different ways of representing functions through icons
- \* Utilized sketching
- \* Researched and designed vocabulary for icons
- \* Resized icon and made appropriate adjustments



# Solution: Testing/Validation

- \* **Process:**

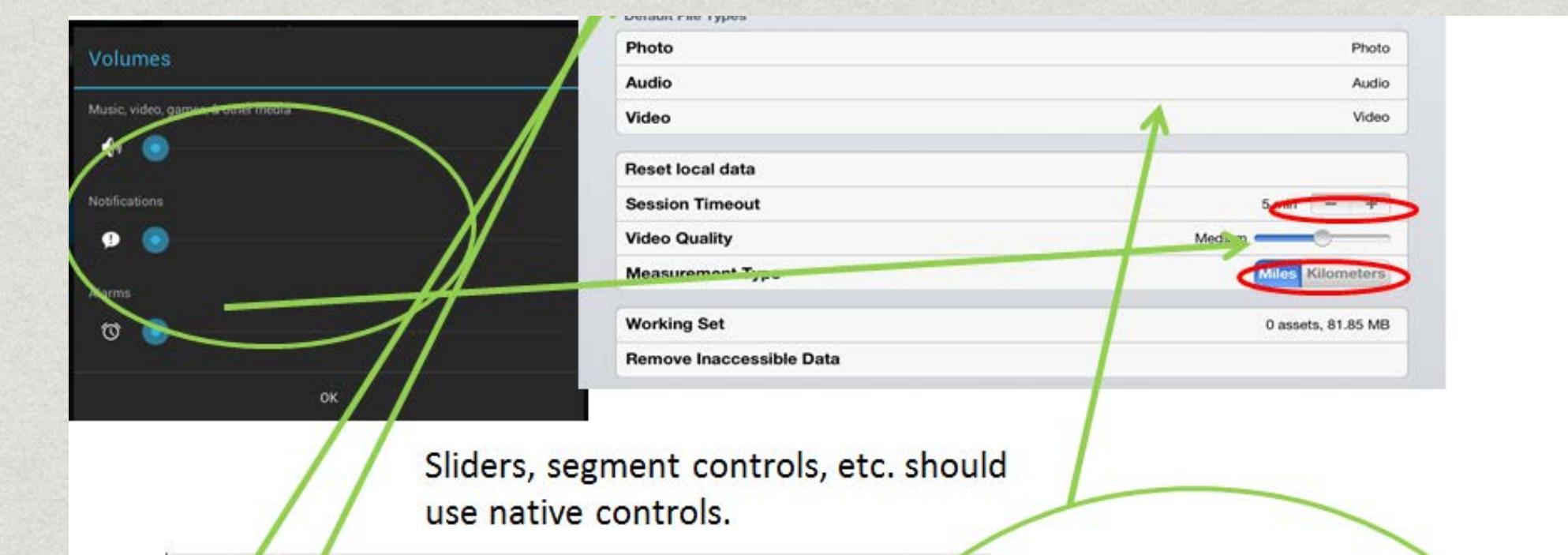
- \* User tested see if icons are recognizable as the objects created using .png images of the icon
- \* Tested users' assumptions of an icon's meaning
- \* Iterated icons based on feedback from users
- \* A/B Tested the scalability of shapes/icons



# BENTLEY APPLICATIONS TO ANDROID

# Problem: Need to find elements that require platform specific redesign

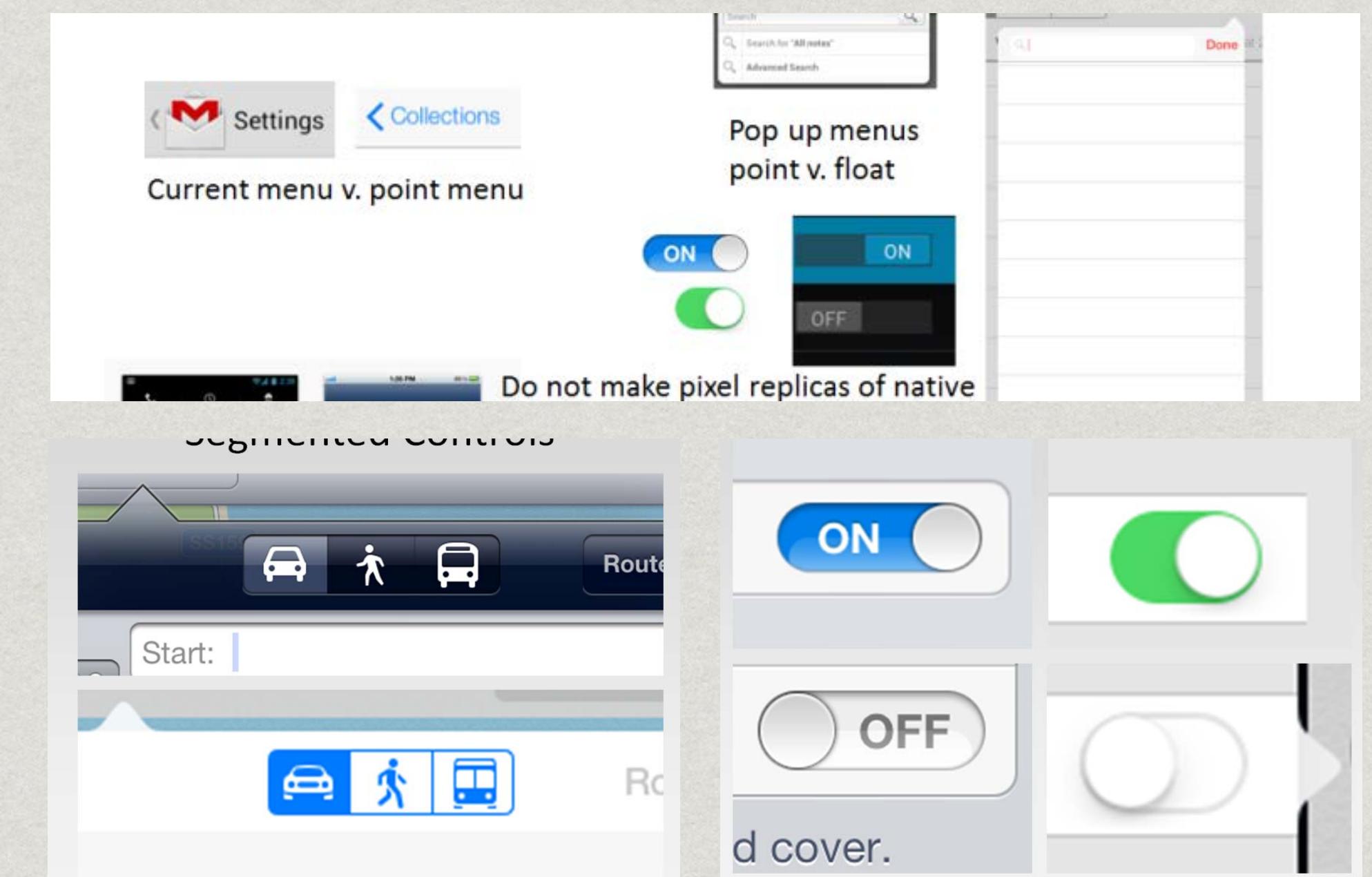
- \* **Process and Solution:**
- \* Researched which elements to change to make an iOS designed application to native android
- \* Highlighted and presented platform specific changes
- \* Researched methods for creating generic cross platform adaptations



IOS 7

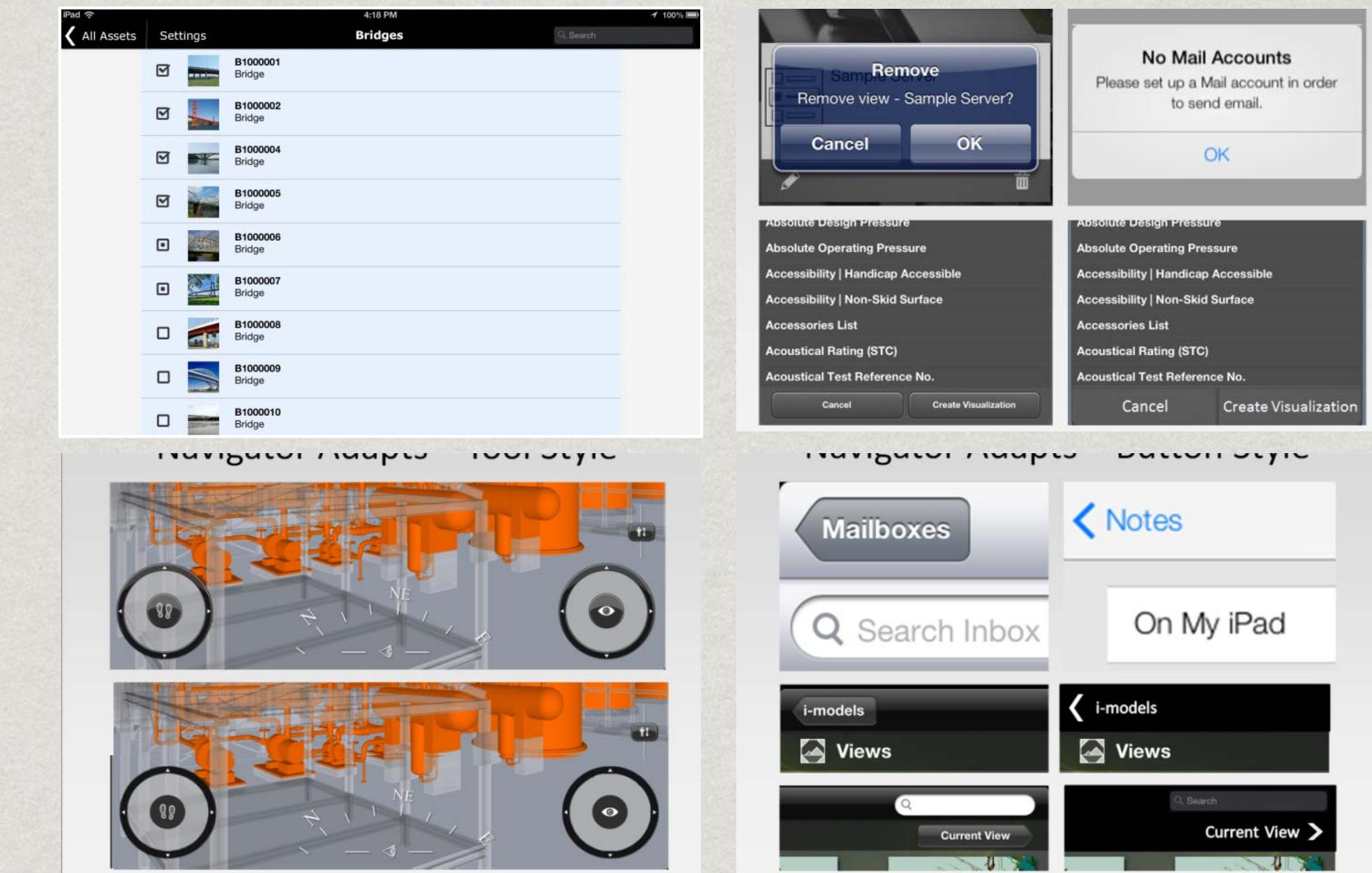
# Problem: Recognize changes from iOS 6 to 7

- \* Process:
- \* Researched and documented:
  - \* Changes to iOS 7
  - \* Similarities of iOS 7 to Android
- \* Noted changes from iOS 6
- \* Created mockups of differences



# Solution: Sample changes

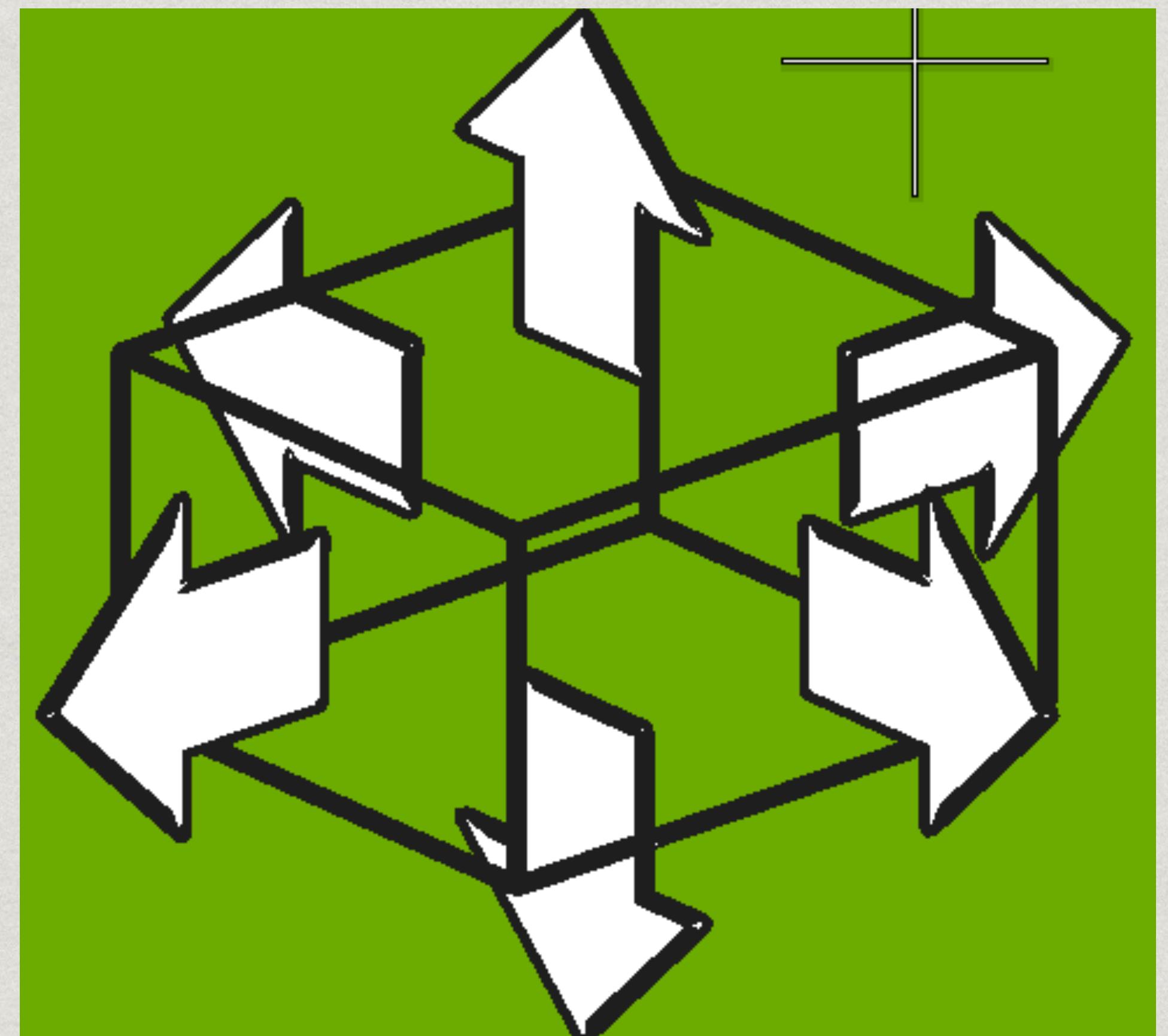
- \* **Process:**
- \* Researched elements that would need to be changed in iOS 7 currently in the apps
- \* Made mockups of examples in Photoshop and PowerPoint



# 3D SELECTION TOOL

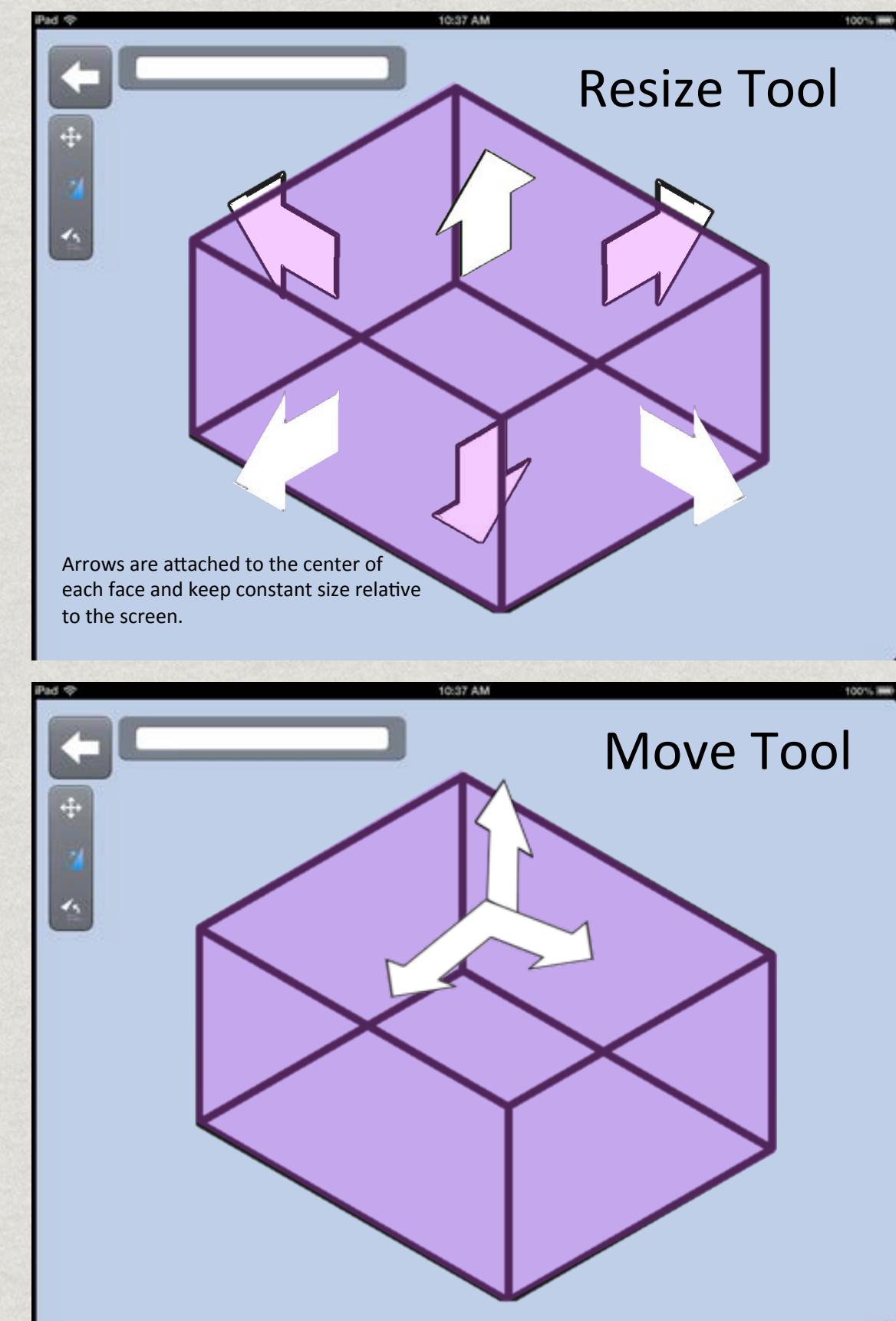
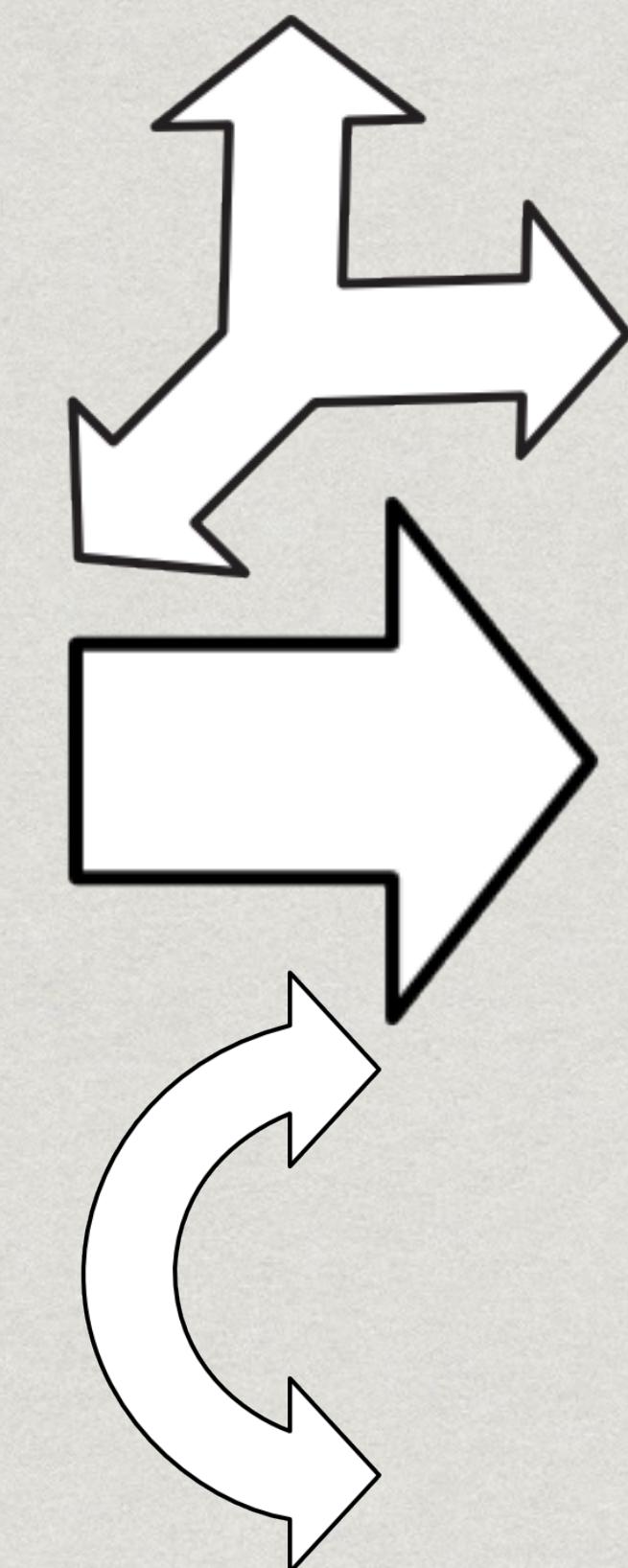
# Problem: Create an interaction for manipulating a 3D selection

- \* **Process:**
- \* Research different applications that use widgets to alter 3D objects
- \* Compiled lists showing all examples
- \* Microstation Drawing of resize tool



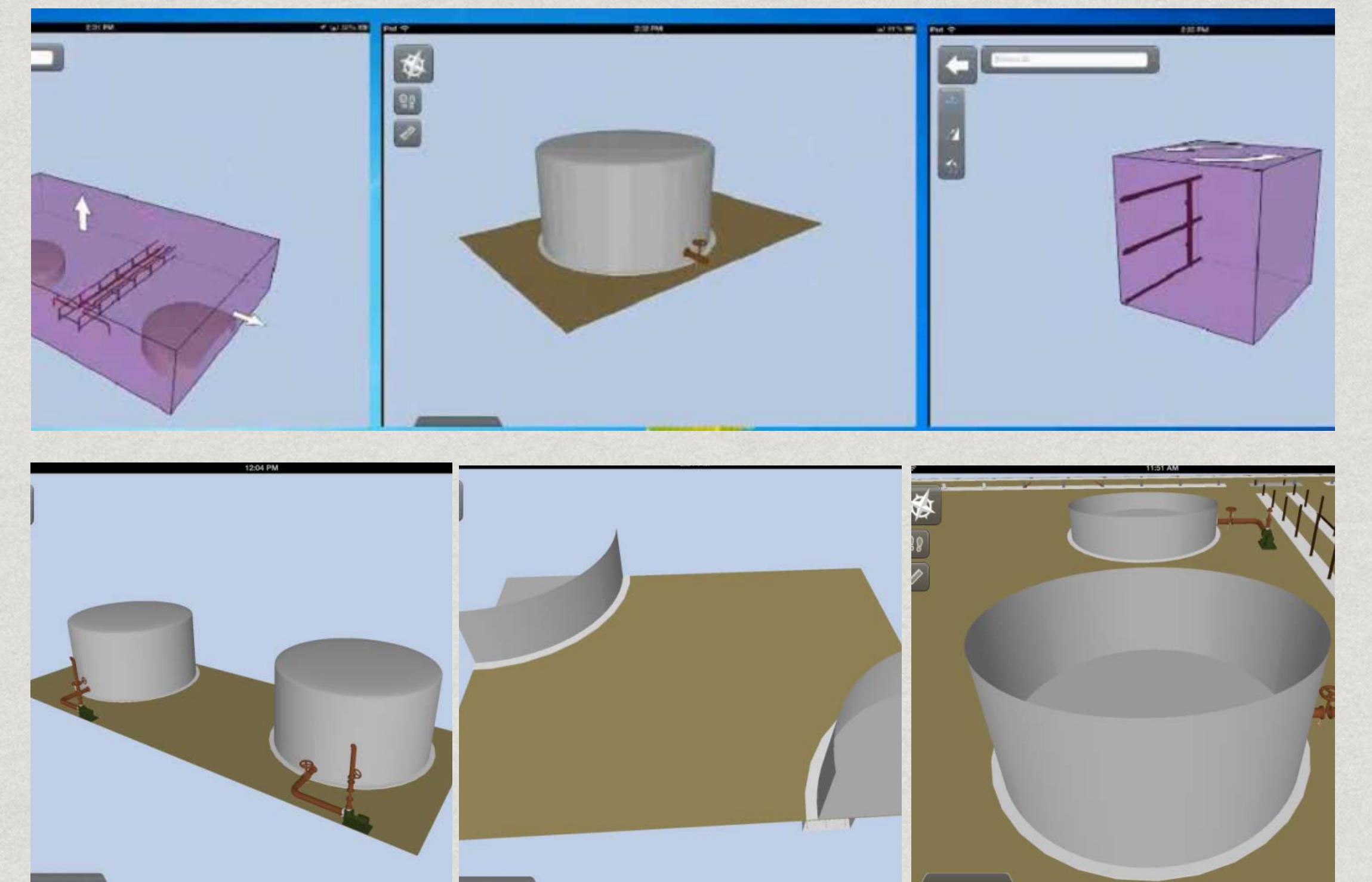
# Solution: Redesigned manipulation

- \* **Process:**
- \* Represented different views at different box sizes and angles/perspectives
- \* Sketched and mocked up different manipulation interactions
- \* Deigned new control widgets/icons



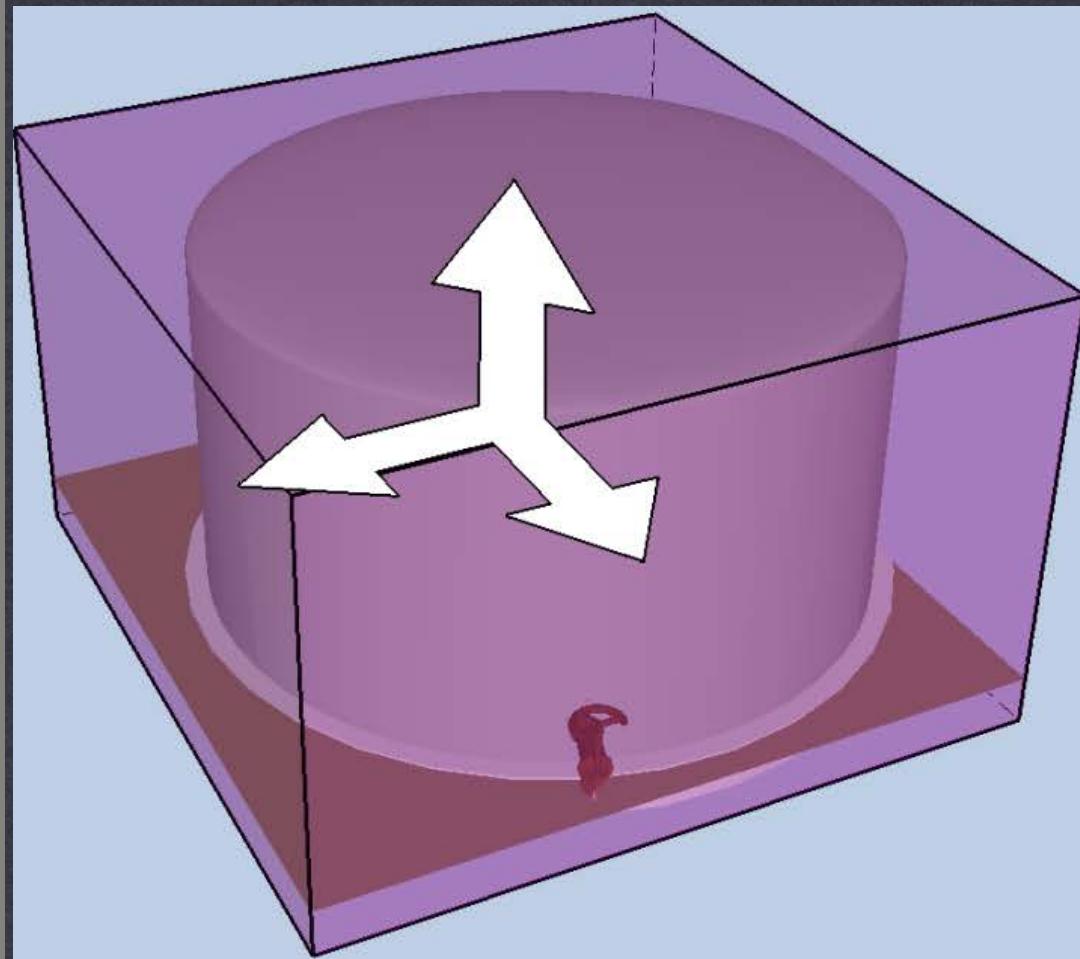
# Solution: Navigator Section Tool Labs

- \* **Process:**
- \* Created lab script to test all three section tools
- \* Recorded interactions with Reflector to record screen interactions
- \* Conducted the lab on seven participants

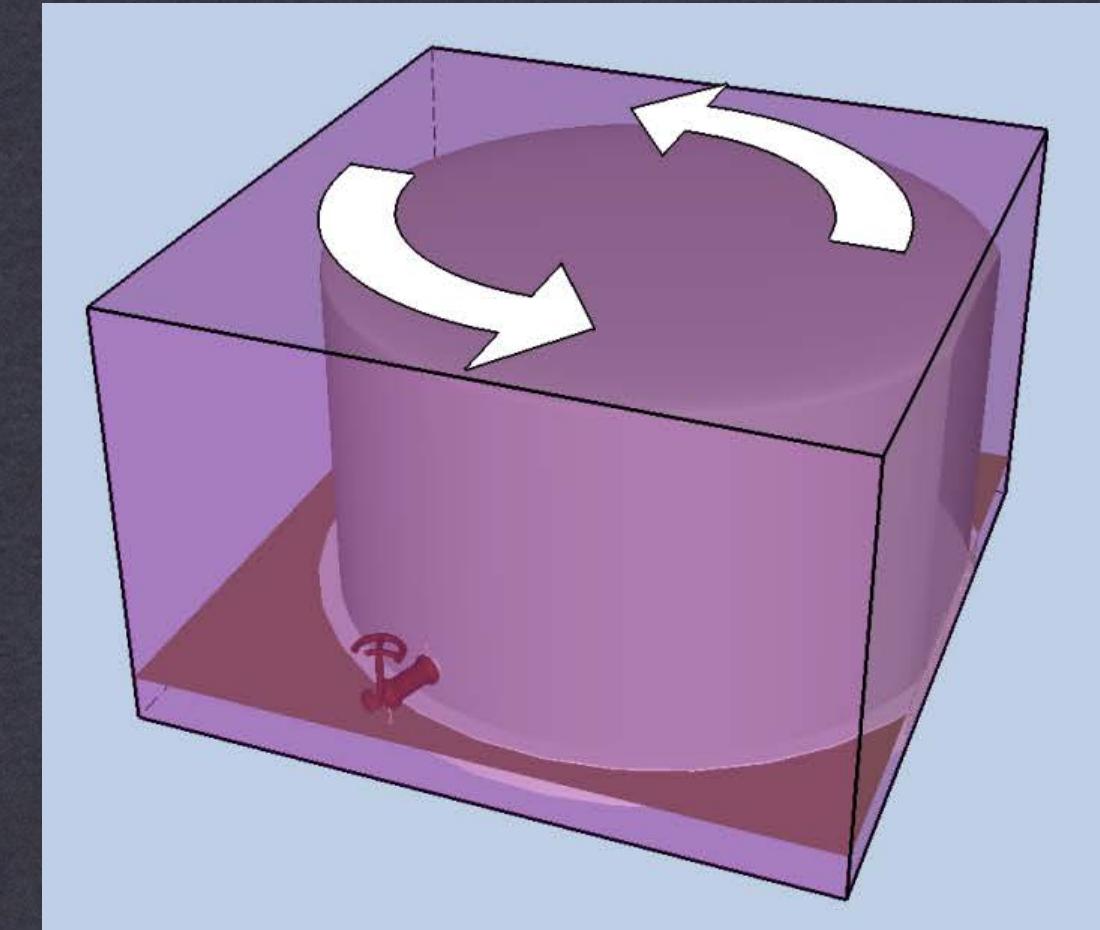
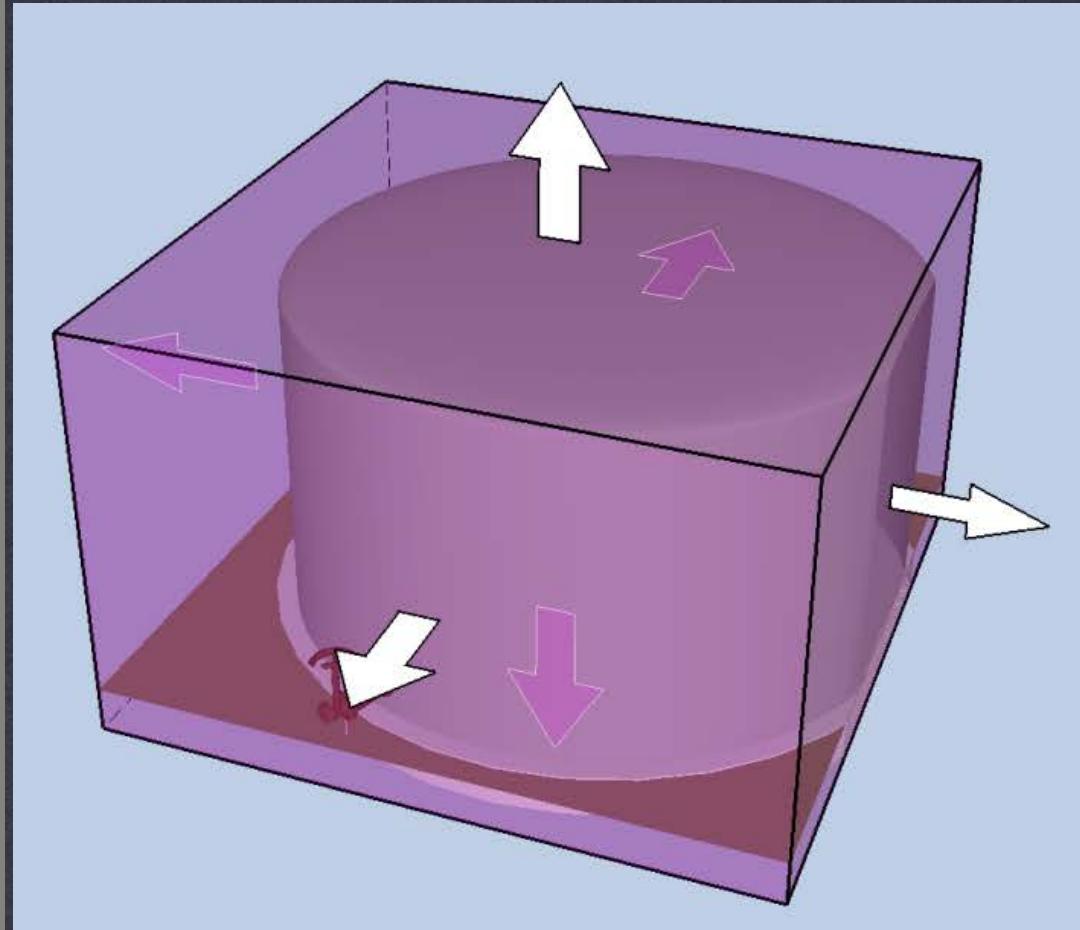




## BENTLEY NAVIGATOR



Name  
Section 00



## BENTLEY FIELD SUPERVISOR

Par. Storage Tank  
ST-T001

**Design Geometry**

**Diameter**  
15000 mm

**Height**  
8000 mm

**Roof type**  
Dome

**Roof height**  
725 mm

WORK IN RELEASED PRODUCTS

# STARTUPS

# Problem: Language learning

- \* **Process:**
- \* Followed Lean Startup Method
- \* Created personas of potential customers
- \* Researched assumption requirements by interviewing potential customers
- \* Created Mockups and wireframes using PowerPoint and Indigo Studio and tested with potential customers

# Solution: Agent Lang

- \* An educational game series to teach adults new language through gameplay
- \* Pilot language: English -> Swedish
- \* Game play: Casual Role Playing / Adventure Game
- \* Tasks: Simulate real life tasks in a foreign country



**Agent Lang**

# Problem: SNCF's Use case to foster innovation inside the company

- \* **Process:**
- \* Followed Lean Startup Method
- \* Created personas of potential customers
- \* Bodystorming
- \* Researched assumption requirements by interviewing potential customers
- \* Created mockups and wireframes using PowerPoint and Indigo Studio and tested with potential customers



# **Solution:** Game platform to make innovation fun and engaging

- \* Provide a S.M.A.R.T Solution
  - \* Specific, Measurable, Agreed, Realistic, and Timely
- \* Unite workers from different sections of company for better collaboration
- \* Encourages employees to be a part of the company rather than just ones job title



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