

**MICHIGAN STATE**  
**UNIVERSITY**

# Project Plan

## Mobile Web Reporter

The Capstone Experience

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*From Students...  
...to Professionals*

# Project Overview

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- The Mobile Web Reported will allow users to personally create a report and post it on the web for the general public to view.
- The user should be able to search the web for content, show video from the camera and speak on what they see, feel, and hear. All in real time.



# Functional Specifications

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- Start and stop video/audio recording
- Activate camera in parallel with web browser and audio recording
- Be able to switch actively between camera and browser
- Upload final video to streaming websites



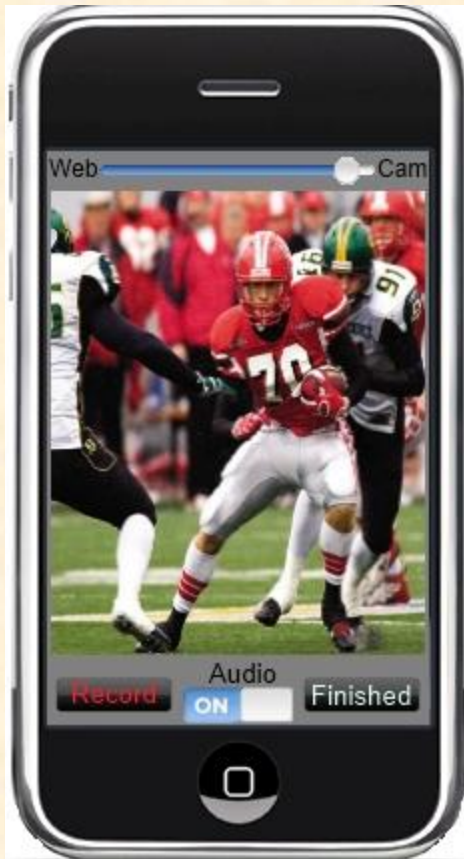
# Design Specifications

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- Record/Pause Video button
  - Record Audio Toggle
  - Web/Camera Slider
  - Finished button
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- Upload Screen has a button for each upload destination



# Screen Mockups



# Screen Mockups



# Technical Specifications

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- Development Environment
  - iOS Requirements: Xcode 4 (Interface Builder, iOS SDK), For on Device Development: Development program/certificate, provisioning profile
  - Android Requirements: Eclipse, Android SDK, Java JDK, For on Device: Motorola USB Driver
- To Upload to Facebook, Youtube, and Screencast.com we need to use the API for each site



# Technical Specifications

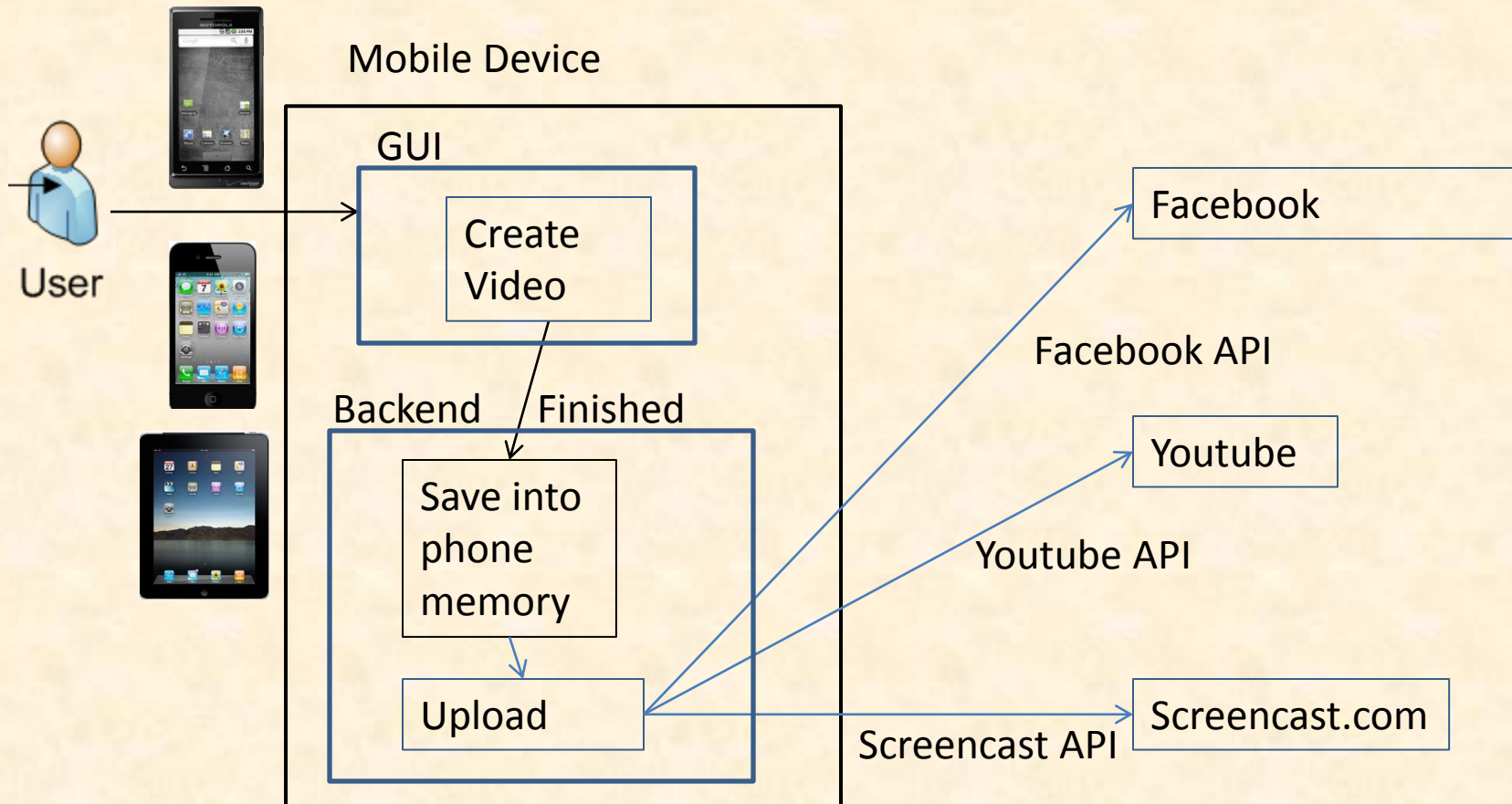
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- Screen Capture
  - Pure Screen Capture on mobile devices is not possible in applications
  - In order to actually implement screen capture there are functions that will capture the individual views on the screen
  - From that the views must be combined into a single image
  - This process is repeated at a rate and the resulting images are combined to make a video





# System Architecture



# System Components

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- Hardware Platforms
  - iPhone
  - iPad
  - Android smartphones
- Software Platforms / Technologies
  - iOS
  - Android OS

# Testing

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- Test each feature individually (each button, Web View, Camera View, Screenshot, Video Screen Capture, etc...)
- Combine features(eg. Web View + Camera View)
- Make sure it works by use with trial videos and uploads.



# Risks

- Screen Capture
  - Capturing a video of what the screen shows is relatively new to mobile platforms and there may not be an established way to do it. We know this was not possible on previous versions of mobile software.
  - Mitigation: Find a way to get pixels and/or screenshot, if necessary can make video frame by frame.
- Multimedia File Combinations
  - This project requires combining a video and audio file into 1 video file
  - Mitigation: Learn AV Foundation for iOS, and MediaRecorder for Android.
- Limited Performance of Mobile Platforms
  - Mobile devices are not as powerful as modern computers, lacking space, processing power, and battery life. This makes programming for speed important.
  - Mitigation: Eliminate unnecessary actions causing less stress on hardware

