

**MICHIGAN STATE**  
**UNIVERSITY**

# Project Plan

## Mobile Smart Video Player

The Capstone Experience

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

# Project Overview

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## Mobile Smart Video Player

- Develop an iOS video player that supports TechSmith's Camtasia Studio functionality
- Video conversion from Camtasia format to iOS video format on server
- Design Server-Client communication for downloading and gathering metadata



# Functional Specifications

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- Video Tagging
  - Bookmarks
  - Hot-spots
  - Captions
  - SmartFocus
- Video Navigation
  - Table of contents
  - Faster playback
  - Resume point
- Online Storage and Retrieval



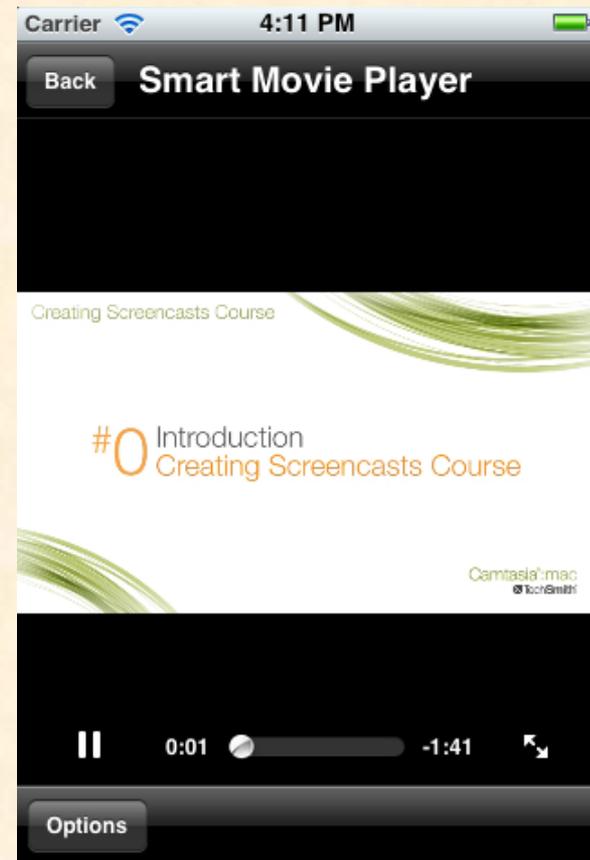
# Design Specifications

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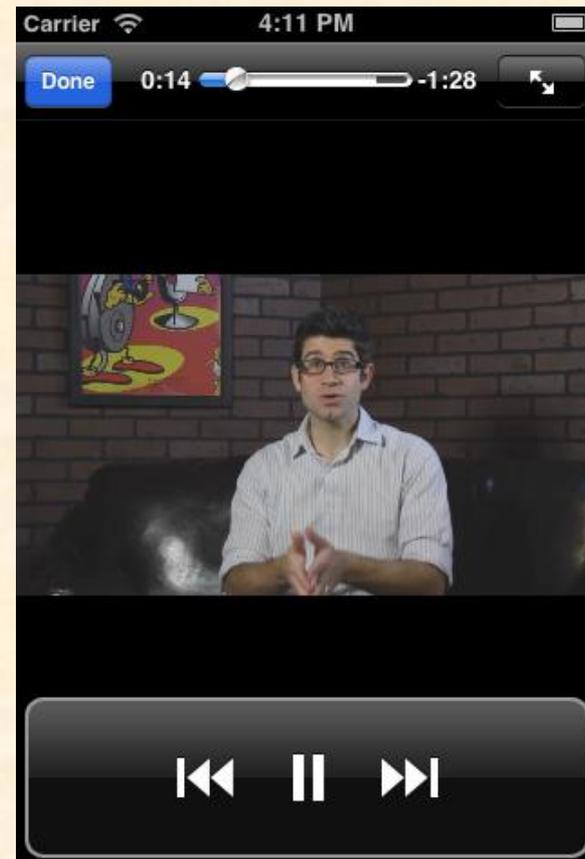
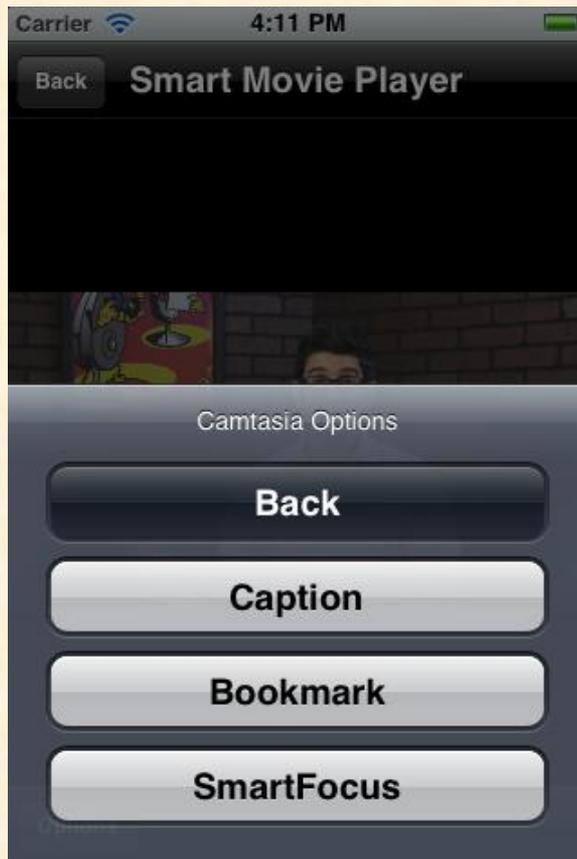
- Integration of table of contents and bookmarks
- Hotspots will be preset and display relevant information
- Timed text captions displayed during playback
- SmartFocus on preset points
- Custom play bar with fast forward functionality
- Option for local vs. crowd-sourced metadata



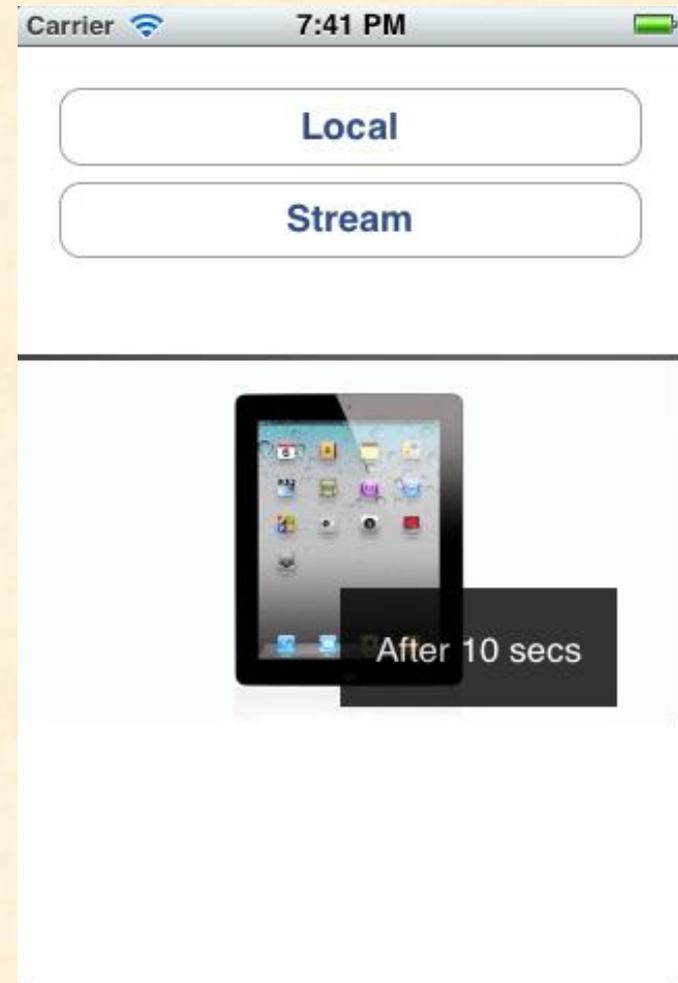
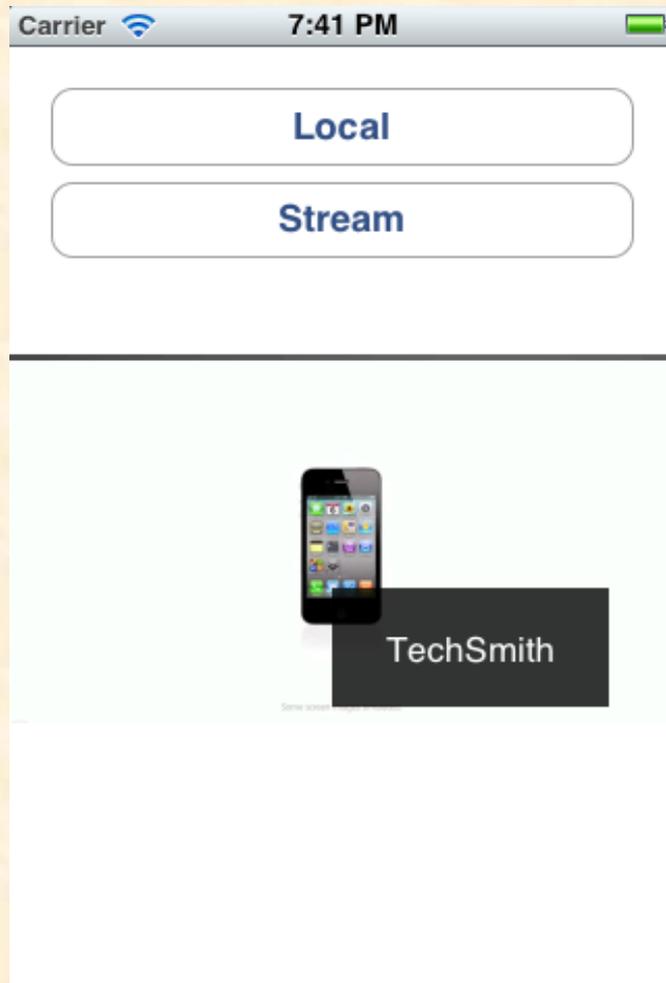
# Screen Mockup: iPhone Interface



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# Screen Mockup: iPhone Interface



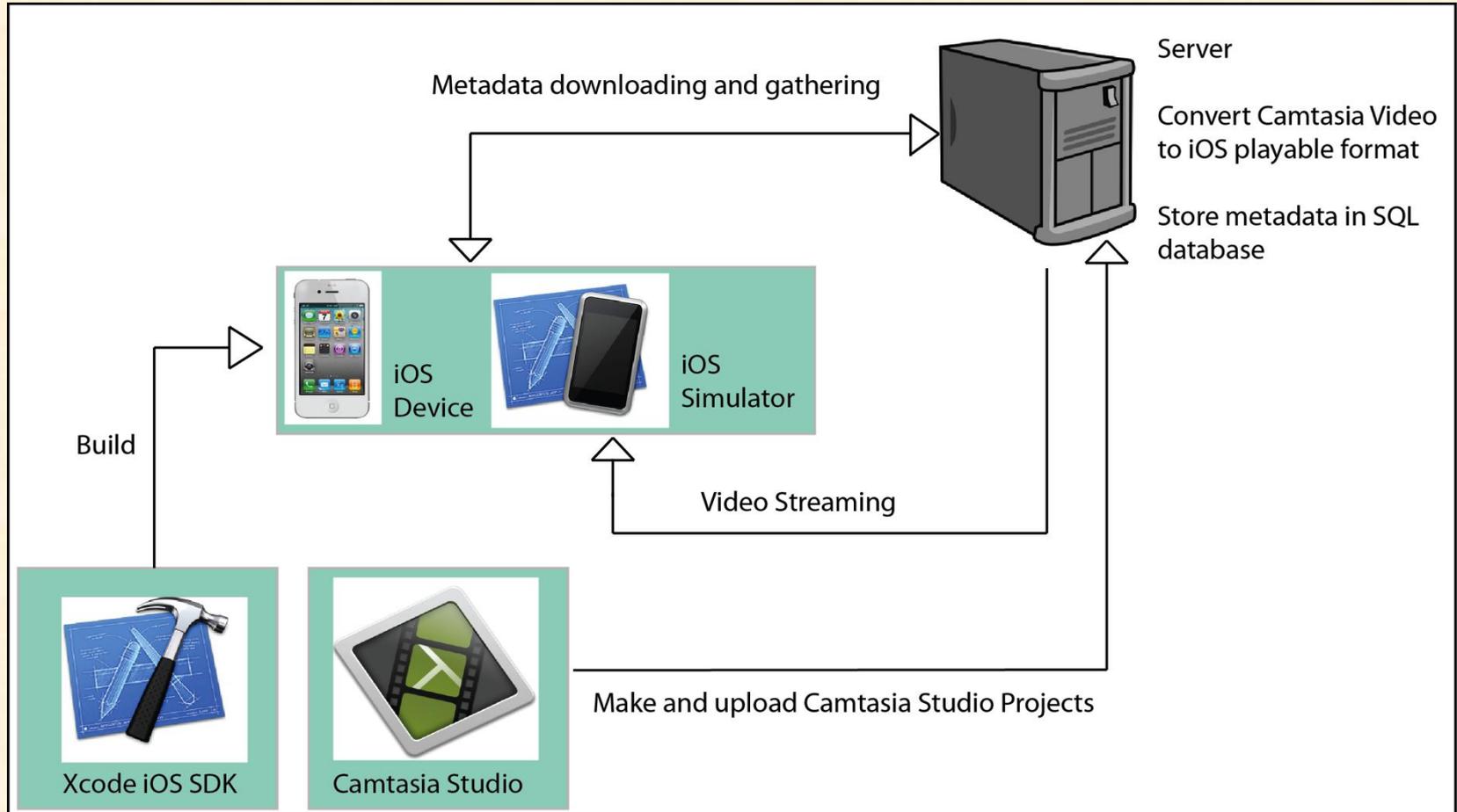
# Technical Specifications

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- Objective C
- Xcode 4 with iOS SDK 5.0
- Camtasia Studio 2 (metadata)
- Web Development (RESTful, XML)
- Database on SQL Server
- Microsoft Server Technology (C#/.NET, ASP.NET)



# System Architecture



# System Components

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- Hardware Platforms
  - iOS devices – iPhone, iPod Touch, iPad
  - Windows Server 2008
  - Windows SQL Server 2008
- Software Platforms / Technologies
  - iOS later than 4.0
  - Crowd-sourcing
  - Online video streaming
  - Video conversion on server



# Testing

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- Play video on iOS, make sure smart features work
- Local and online video playing
- Make sure video conversion on server works
- Successful XML parsing
- Data aggregation on server working
- Successful population of SQL database
- Stable connection from devices to server



# Risks

- Risk 1
  - No programming experience with Objective C
  - Stanford lectures on iTunes; iOS tutorial books; daily practice
- Risk 2
  - Camtasia's video format is not iOS playable
  - We will have to do some research into effective conversion
- Risk 3
  - No experience with client-to-server communication
  - TechSmith provided resources and guidelines, and we are in communication with a previous TechSmith Capstone member
- Risk 4
  - Aggregating data will be mathematically difficult
  - Scott has some experience; we will do research

