

Project Plan

User Generated Video Service for the iPhone

Team 5. Motorola
CSE 498, Collaborative Design

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Project Overview

- Users should be able to upload video and share it through a cable set top box (STB)
- Develop an iPhone Application, allowing users to upload video (and associated metadata), permit buddies to view the video, and be able to update info about the video
- From the STB the user will be able to see the list of videos they are able to view
- The user will then be able to perform several “trick” modes on those videos



Functional Specifications



- VOD server
 - Add/Update/Remove/Get video information
 - Download the video to the server upon upload
 - Manage sessions between the STBs and servers
 - Control the stream between the STBs and servers
 - Be able to “ingest” a video and save to the STB
- iPhone application
 - Capture video
 - Upload captured video to social network
 - Associate videos with any buddies you have
 - Control camera settings at the palm of your hand

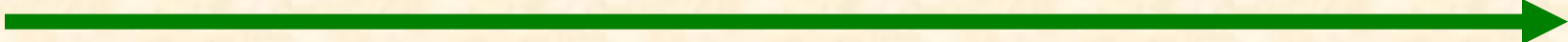


Design Specifications

- VOD server:
 - 4 Interfaces (Stream, Session, AM, Reporting)
 - Use restlet to handle all HTTP requests (extend)
 - Read ADI metadata, but also extend to others
 - “Ingest” videos from channels for a set time period
- iPhone application:
 - Interact directly with social network online
 - Allow users to record, view, upload, and share videos
 - Directly edit video metadata and update accordingly
 - Simple design, easy to navigate



Screen Mockups



Main Menu



Record View



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Screen Mockups

Settings Menu

“My Videos” Navigator



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Technical Specifications



- VOD server:
 - Stream Control
 - Handle all “trick” mode requests (play, pause, ff, and rw) on a video
 - Session Control
 - Create a session between a STB and the server
 - Perform checks on permission, bill paid, video there
 - Delete a session between a STB and server on STOP
 - Asset Manager (AM)
 - Create: Upload a video to the server
 - Read: Get information about the video (metadata)
 - Update: Update video metadata or actual video
 - Delete: Delete the video file and metadata

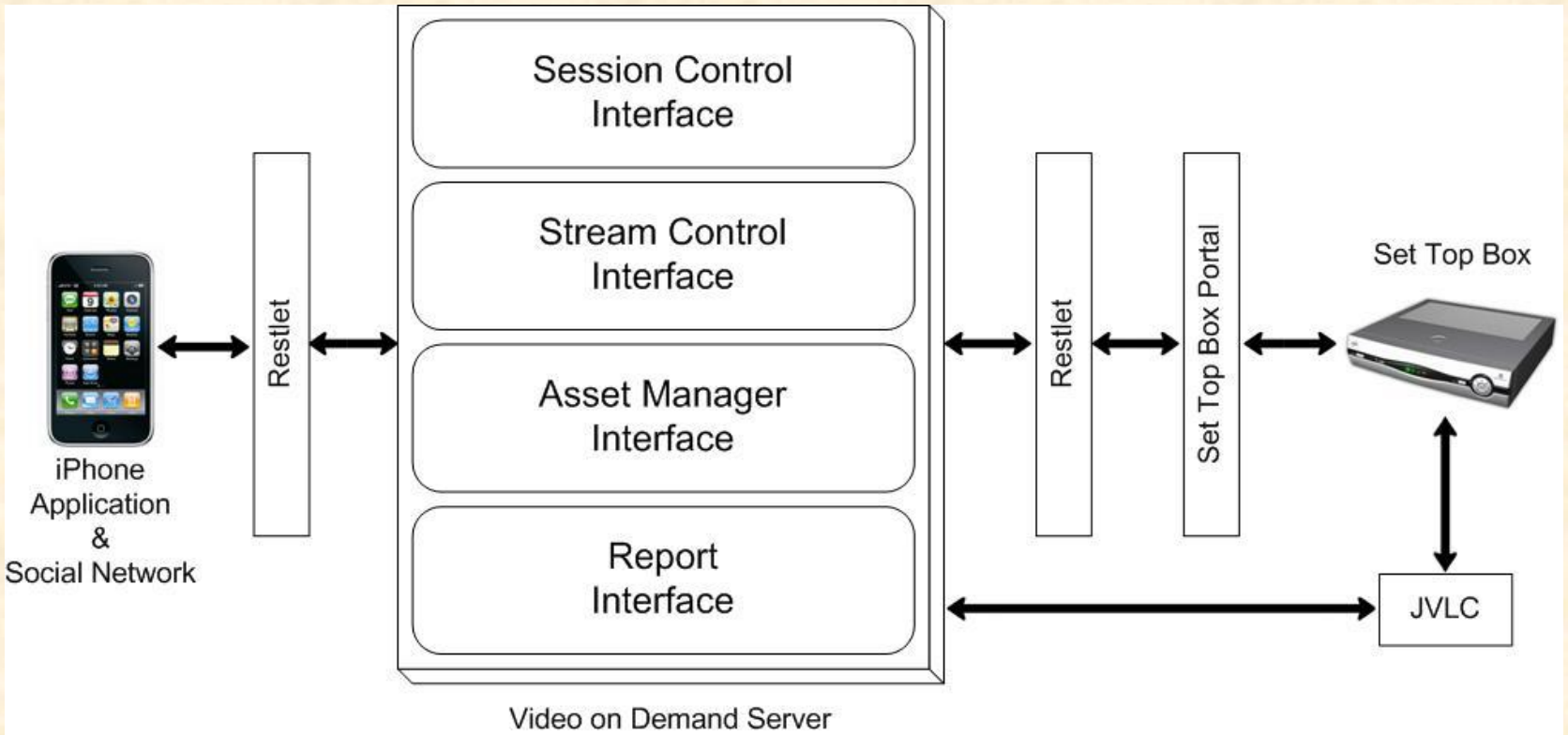


Technical Specifications Cont.

- Reporting Control
 - Used by systems admin to view stats about VOD server
 - Failed video plays, number of plays, etc
- Ingestion
 - Done from the cable headend to essentially record the video from live TV to be watched later
- iPhone Application
 - User interface interacts directly with VOD Server
 - Allows upload, delete, and edit of videos
 - Uses HTTP requests to send and received data



Architecture Illustrated



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System Components



- Hardware Platforms
 - Set Top Box (Motorola VIP 1216)
 - iPhone (3GS)
- Software Platforms / Technologies
 - Java (coded in Eclipse) with RESTful framework
 - Objective-C (coded in Xcode) with iPhone SDK
 - Glassfish application server
 - J VLC

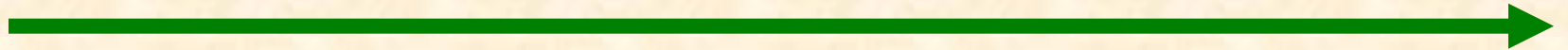


Testing

- Testing (VOD Server)
 - Locally test by running portal on the web
 - Test package in java with several test java clients to simulate user requests (upload, play, stop, etc)
- Testing (iPhone Application)
 - Simulator for user interface only
- Testing (Social Network)
 - Multiple Browsers
 - Firefox 3.5, Internet Explorer 8, Safari 4...
 - Multiple File Types
 - .avi, .mp4, .mov, .wmv...



Risks



- Risks
 - Inherited code
 - Still struggling to understand last years code and what is usable and what to discard
 - New technologies
 - iPhone, Objective-C