Operational Concept Description (OCD)

LiveRiot Video Editing System and social networking enhancement

Team 04

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Mitra, Alok   IIV&V

12/08/2013
## Version History

<table>
<thead>
<tr>
<th>Date</th>
<th>Author</th>
<th>Version</th>
<th>Changes made</th>
<th>Rationale</th>
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<tr>
<td>09/25/13</td>
<td>Team04</td>
<td>1.0</td>
<td>• Tailored from IICSM OCD Template</td>
<td>• To summarize and present the analysis of current system</td>
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<td></td>
<td></td>
<td></td>
<td>• Section 1 added</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>• Section 2 added</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Section 3.1 added</td>
<td></td>
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<tr>
<td>10/10/13</td>
<td>Ye Tian</td>
<td>2.0</td>
<td>• Section 1.2 – Status of OCD updated</td>
<td>• Add new operation concept to the existing system</td>
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<td></td>
<td></td>
<td></td>
<td>• Section 3.2, 3.3, 3.4 added</td>
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<tr>
<td>10/19/13</td>
<td>Ye Tian</td>
<td>2.1</td>
<td>• Section 1.2 – Status of OCD updated</td>
<td>• Narrow the requirement scope to what we are working on in order to avoid scope creeping</td>
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<td></td>
<td></td>
<td></td>
<td>• Section 2.3 – System boundary and environment changed to make it more precise</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Section 3.2.1 – Some capability goals which don’t belong to our app deleted</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Section 3.3.2 – Business flow out of our scope deleted</td>
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<tr>
<td>12/08/13</td>
<td>Ye Tian</td>
<td>2.2</td>
<td>• Few update</td>
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</table>


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1. Introduction

1.1 Purpose of the OCD

This document provides, in detail, the shared visions and goals of the stakeholders of the LiveRiot Video Editing System and social networking enhancement. The success-critical stakeholders of the project are LiveRiot, as the project owner; musicians, fans and venues, as users; members of CSCI 577a Team 04, as developer.

1.2 Status of the OCD

The status of the OCD is currently at the under-construction version number 2.1 in the Exploration Phase. The scope has been narrowed to social networking enhancement since another team is working on video editing part of this project. Currently the choice of this system’s maintainer has not yet been decided. The most likely option is that LiveRiot will maintain it themselves.
2. Shared Vision

2.1 Overview of the system

Table 1: The Program Model

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Initiatives</th>
<th>Value Propositions</th>
<th>Beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Developers</td>
<td>• Develop an online live music shows editing and sharing system</td>
<td>• Create a platform for high quality videos</td>
<td>• Musicians</td>
</tr>
<tr>
<td>• LiveRiot</td>
<td>• Manage high user traffic</td>
<td>• Increase exposure of unsigned artists</td>
<td>• Venues</td>
</tr>
<tr>
<td>• Venues</td>
<td>• Provide assistance to monetize live shows</td>
<td>• Decrease piracy</td>
<td>• Fans</td>
</tr>
<tr>
<td>• Fans</td>
<td>• Create working campaign</td>
<td>• Maintain musicians’ control over their art</td>
<td>• Record labels</td>
</tr>
<tr>
<td>• Musicians</td>
<td>• Pattern musicians with venues and record labels</td>
<td>• Enhance communications between musicians and fans</td>
<td></td>
</tr>
<tr>
<td>• Record labels</td>
<td>• Develop websites and apps with social functions</td>
<td>• Increase attendance to venues</td>
<td></td>
</tr>
<tr>
<td>• Third-party E-commerce Service Providers</td>
<td>•</td>
<td>• More cooperation between venues and record labels</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Costs</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Development costs</td>
<td>Decreased:</td>
</tr>
<tr>
<td>• Maintenance costs</td>
<td>• Piracy</td>
</tr>
<tr>
<td>• Hardware costs (recode devices)</td>
<td>Increased:</td>
</tr>
<tr>
<td>• Web services costs</td>
<td>• Attendance at venues</td>
</tr>
<tr>
<td>• Marketing campaign costs</td>
<td>• Musicians’ control over their art</td>
</tr>
<tr>
<td></td>
<td>• Exposure of unsigned artists</td>
</tr>
<tr>
<td></td>
<td>• Quality of live show videos</td>
</tr>
</tbody>
</table>
2.2 Benefits Chain Diagram

Assumptions:
1. Fans would like to upload, edit videos on LiveRiot.
2. Musicians would like to communicate on LiveRiot and social websites.
3. Venues and musicians would use LiveRiot to improve their business.

Figure 1: Benefits Chain Diagram
2.3 System Boundary and Environment

![Diagram showing the system boundary and environment with services and internal infrastructure listed.]

Services provided:
1. Social Sharing Service
2. Video in-app playback service
3. Social Interaction Service

Internal Infrastructure:
1. Cocoa Touch Framework
2. Ruby on Rails 3.0
3. Facebook iOS Framework
4. Twitter API
5. Tumblr API

Figure 2: System Boundary and Environment
3. System Transformation

3.1 Information on Current System

3.1.1 Infrastructure

1. Server side
   1) Operating system: Linux version 3.8.11-ec2 (gcc version 4.4.3 (Ubuntu 4.4.3-4ubuntu5.1))
   2) Database: PostgreSQL v 9.2.
   3) Web Server: written in Ruby on Rails and run on Amazon utilizing EC2 and S3
   4) Video Editor: Node.js and Express
   5) Digital Signal Processing: Faust

2. Client side
   1) Apps: video record app, audio record app
   2) Operating system: iOS
   3) Database: Sqlite
   4) Development platform: Mac OS

3.1.2 Artifacts

1. User Manual
   Teach and guide the user how to use the product
2. Functioning Software System
   The video recording app and website
3. System and Software Architecture Description
   Object-oriented analysis and design (OOA&D) of the system being developed
4. Email notification system
   Notify users when they create account and when new message come to them
5. Social video app template
   Third-party video app templates
3.1.3 Current Business Workflow

Figure 1: Current Business Workflow Diagram

3.2 System Objectives, Constraints and Priorities

3.2.1 Capability Goals
Table 2: Capability Goals

<table>
<thead>
<tr>
<th>Capability Goals</th>
<th>Priority Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>OC-1 Social function: The system is capable of sharing videos to famous social media, such as Facebook and Twitter.</td>
<td>Must have</td>
</tr>
<tr>
<td>OC-2 Featured videos lists: The app is capable of listing videos with features provided by LiveRiot server.</td>
<td>Must have</td>
</tr>
<tr>
<td>OC-3 Video tagging: The app is capable of tagging videos captured by fans and venues for effective searching.</td>
<td>Should have</td>
</tr>
<tr>
<td>OC-4 Video searching: The system is capable of searching for bands by genre, location, keywords and band name.</td>
<td>Should have</td>
</tr>
</tbody>
</table>

3.2.2 Level of Service Goals

This section is not applicable because clients didn’t specify any level of service goals.

3.2.3 Organizational Goals

OG-1: Provide a platform for concert videos with high quality audio
OG-2: Increase venues’ attendance
OG-3: Decrease piracy of musician works

3.2.4 Constraints

CO-1: App: App will be provided on iOS appstore
CO-2: Server: Website will be held on Amazon EC2 and written in Node.js
CO-3: Database: The backend database must use PostgreSQL
CO-4: Operating system: The system will run on Linux

3.2.5 Relation to Current System

Table 3: Relation to Current System

<table>
<thead>
<tr>
<th>Capabilities</th>
<th>Current System</th>
<th>New System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roles and Responsibilities</td>
<td>Fans used video record app to record videos and upload them to LiveRiot.</td>
<td>There aren’t any new roles in the enhanced system.</td>
</tr>
<tr>
<td>User Interactions</td>
<td></td>
<td>Fans use video record app to record videos, upload them to LiveRiot, watch their own and others’ videos and share them on social websites like Facebook and Twitter.</td>
</tr>
<tr>
<td>Infrastructure</td>
<td></td>
<td>Using the same infrastructure to support the web interface and iOS app.</td>
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3.3 Proposed New Operational Concept

3.3.1 Element Relationship Diagram

![Element Relationship Diagram](Figure2.png)

Figure 2: Element Relationship Diagram
3.3.2 Business Workflows

![New Business Workflow Diagram](image)

Figure 3: New Business Workflow Diagram

3.4 Organizational and Operational Implications

3.4.1 Organizational Transformations

There won’t be any significant organizational transformations since there was already such a video record app for fans and the whole system is just going through some enhancement.

3.4.2 Operational Transformations

- Fans will need to adapt to the new user interface of video record app, since iOS has been upgraded to a new version.
- After watching a video or reading the summary, fans can choose to share it to social websites (Facebook, Twitter).
- There will be featured video lists for fans, whose features (Top 10, newest) are fixed.
- Fans will be able to view their videos on both the website and the app.
- Searching for videos by tags, attributes (band name, genre, location and keywords) rather than going to various musicians’ pages to watch videos.