Creo Media Application Requirements Specifications

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Contents

1. DOCUMENT INFORMATION 3

1.1 HISTORY 3
1.2 FILENAME & LOCATION 3
1.3 REFERENCED DOCUMENTS 3

2. INTRODUCTION 4

2.1 PURPOSE 4
2.2 DOCUMENT CONVENTIONS 4
2.3 INTENDED AUDIENCE AND READING SUGGESTIONS 4
2.4 PROJECT SCOPE / MARKET AUDIENCE 4

3. OVERALL DESCRIPTION 5

3.1 DESIGN AND FEATURES 5
3.1.1 Home page 5
3.1.2 User information 5
3.1.3 Content Creation 5
3.2 UI DESIGN 6
3.2.1 Home/Main page 6
3.2.2 User information 6
3.2.3 Content creation 7
Other pages on the site should follow the same basic template: 8

4. TECHNICAL IMPLEMENTATION 9

4.1 FRONT END 9
4.2 BACKEND 9

5. REVENUE / MARKETING MODEL 11

5.1 ACCOUNT PRICING 11
5.2 ADVERTISEMENTS 11
5.3 AFFILIATES / SPONSORS 11
5.4 PROMOTION 12
5.5 EXPANSION 12
5.6 DIFFERENTIATION 12
5.7 POTENTIAL 13

6. TEST PLAN 14

6.1 PURPOSE 14
6.2 OBJECTIVE AND SCOPE 14
6.3 ENVIRONMENT 14
6.4 SUMMARY OF ALL TEST CASES 14
6.5 COMMON PREREQUISITES 14
6.6 LIST OF TEST CASES 14

7. OTHER REQUIREMENTS 15

7.1 APPENDIX A: GLOSSARY 15
7.2 APPENDIX B: ANALYSIS MODELS 15
7.3 APPENDIX C: ISSUES LIST 15

1. Document Information

1.1 History

Author	Date	Version	Remarks
Tong Zou	June 21, 2009	1.0	initial draft

1.2 Filename & Location

Creo.doc

1.3 Referenced Documents

Title	Date	Version	Author

2. Introduction

2.1 Purpose

Creo in Latin means to create. This web application is designed to create, collaborate and share media content in the forms of videos, music and pictures to people worldwide. It is designed to do this all in the 'cloud' meaning that there's no installation necessary. The purpose of this document is to outline the required technical components that would be required to implement this application.

2.2 Document Conventions

2.3 Intended Audience and Reading Suggestions

This document is intended for front end and back end developers of this web application, as well as anyone interested in the business of how the idea works.

2.4 Project Scope / Market Audience

This web application is designed to be easily accessible for all users and targets several key markets.

The market audience is separated into several categories:

- For consumers (regular users): The emphasis is on simplicity and high availability. Emphasize the importance of creating montages and family moments for the casual user. More tech oriented people can create video blogs and video resumes easily as well.
- For business: emphasize the quality and professionalism. Emphasize easy creation of ads that targets their audience and commercials that they could easily embed in their webpage.
- For photographers/producers: Emphasize the availability of tools to them, there's a wide variety of custom transitions and effects they can add to their videos/pictures and support for HD videos and DVD making.
- For teachers: emphasize ease of use in developing tutorials, how-to's and educational videos for their students.
- For mobile: Support for iphone, ipad and Android is planned.
- For international: support for Chinese market is planned.
- For social networking: support for blogs, facebook and twitter apps is planned.
- For open source: an open source API for content editing and creation and plugins for open source apps such as Wordpress and Firefox are possible extensions.

3. Overall Description

Creo is meant to be simple, easy and fun. To this end, it should have a web 2.0 / HTML 5.0 style interface that allows for easy embedding of videos and media. For easy usability, any buttons the user interfaces with should be kept to a minimum and the colors kept simple and professional (ie. Black and blue). The logo should be simple yet recognizable. The implementation and execution of this web application would be similar to that of Animoto (http://www.animoto.com) and One true media (http://www.onetruemedia.com). If it is possible to implement the design without using Flash / ActiveX, it is preferable since Flash / ActiveX requires a plug-in download which limits accessibility. HTML5 is more preferable, it is not as popular as Flash currently but will be in the future.

3.1 Design and Features

3.1.1 Home page

- There should be a prominent spot for the logo
- There should be space for advertisements and sponsors
- There should be a bar on the top that asks the user to sign up or sign in. Sign up takes them to a user registration page. Sign in replaces the bar with relevant links such as 'My content', 'My account', 'Create content' buttons.
- At the bottom: links to copyright, privacy, TOS, About, Blog, Forum, Help, potential international or mobile app sites.
- Emphasize the appeal towards different markets and the easy steps it is to make a video (3 steps).
- Links to social media sites like facebook, twitter, digg, delicious, tumblr, stumbleupon, reddit, etc.

3.1.2 User information

- 'My content' screen contains all the videos and slideshows that the user has created. It also has content sent from friends and bookmarked users. It has a spot for mobile content uploads.
- 'My account' contains account information, settings, account type, payment information, etc.

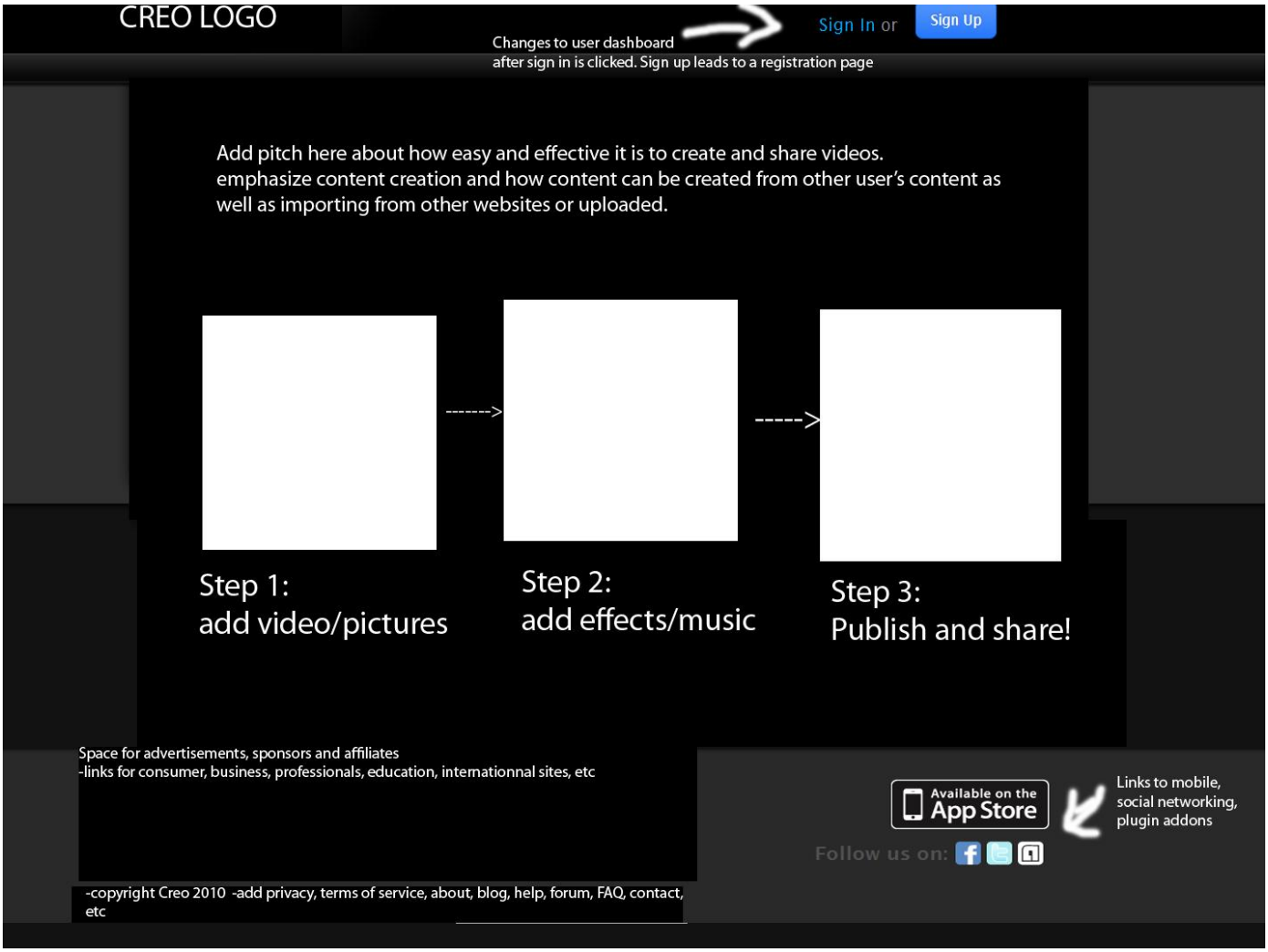
3.1.3 Content Creation

- Content creation consists of three steps. First the user must have a source of picture/videos. From PC, Digital Camera, webcam, phone.
- 1) Add video/pictures: Users can choose to upload supported extensions from PC, browse the collection that other users have uploaded, and/or import from another source (youtube, picasa, flickr, facebook, vimeo, etc)
- 2) Add effects/music: Users can add music from their PC, upload music if they have the copyright. Decide how much music is from video and how much from the mp3. Add effects including splitting and joining videos. Cropping, rotating and zooming of pictures. Adding transitions and effects. Adding text and captions. Slow down or speed up the video.
- 3) Publish and share: Users add a name to their content, place tags and categories, and publish to youtube, video, facebook, twitter, blog, etc or download to PC in addition to maintaining their videos in their account.

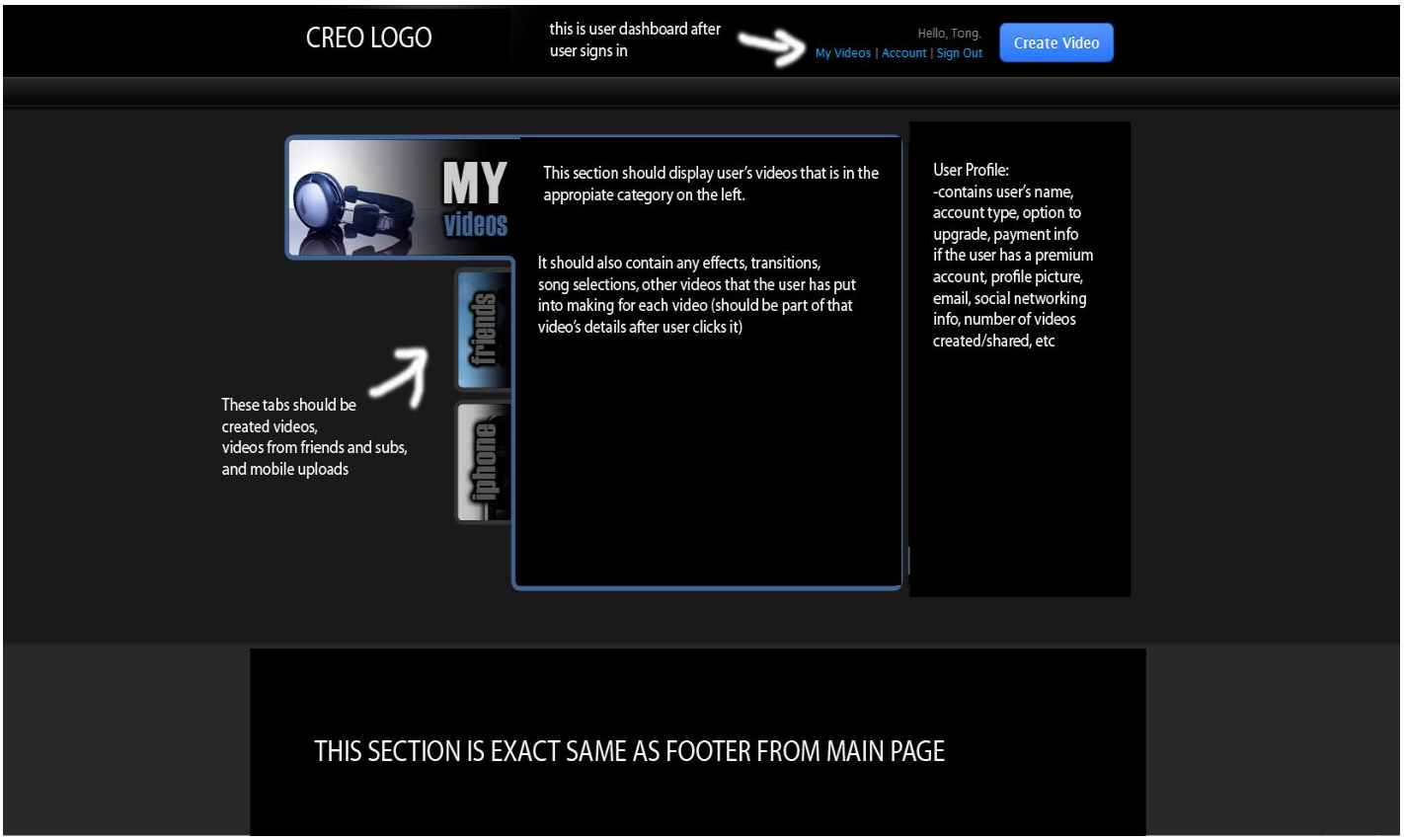
3.2 UI Design

The UI Design should have a layout similar to the following. Note that these are just for the main sections, there are obviously more pages than this on the site.

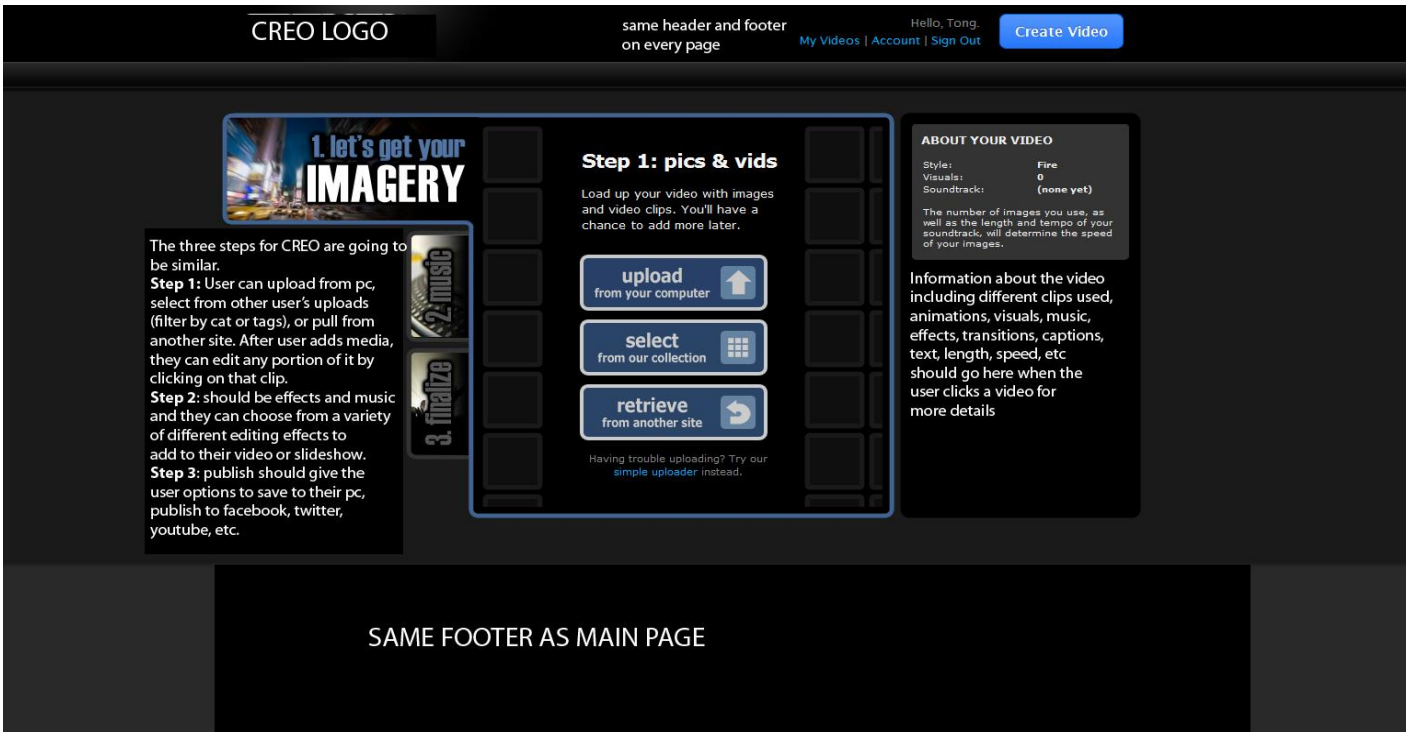
3.2.1 Home/Main page



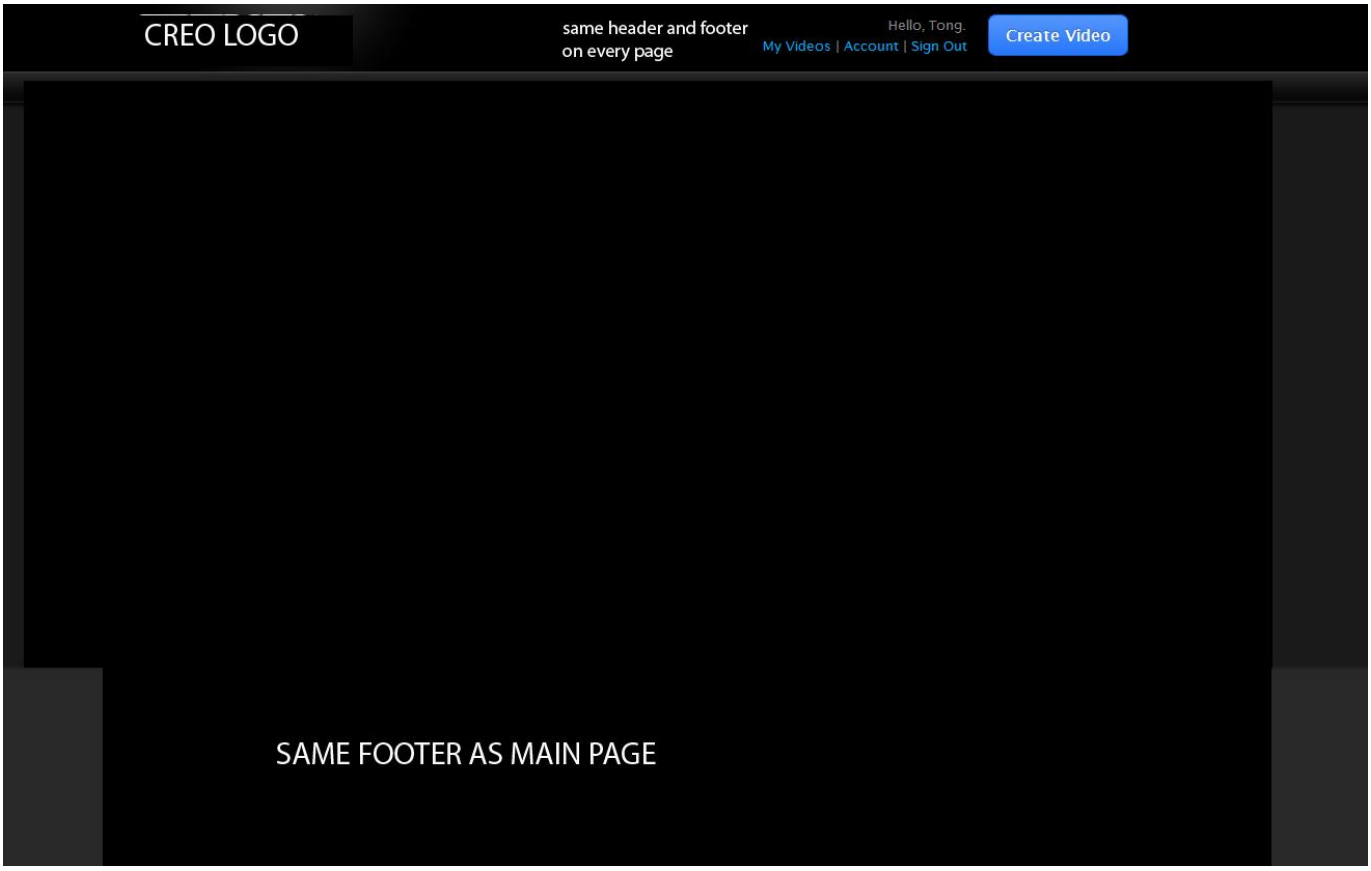
3.2.2 User information



3.2.3 Content creation



Other pages on the site should follow the same basic template:



4. Technical Implementation

4.1 Front end

The front end framework is running on a CMS called PHPMotion (http://www.phpmotion.com/). This system makes it easy for users to share and upload videos. However, much of the functionality (editing videos, uploading contacts, etc) are not present and so the following technologies / add-ons should be looked into:

- Videograbber PLUS + (http://forums.clip-bucket.com/showthread.php?1553-CB-Video-Grabber-plus-plus-is-available) for allowing users to retrieve videos from other websites such as youtube.com and myspace.com
- MassUploader (FTP) (http://wiki.phpmotion.com/MassUploader) allows users to do bulk uploads and conversions of videos
- InviteMyContacts (http://www.getmycontacts.com/) allows users to import contacts from hotmail, gmail and yahoo.
- Kaltura (http://www.kaltura.org/project) is an open source platform that can add video editing capabilities and HTML5 integration.
- Wordpress (http://www.**wordpress**.com*)* is an open source blogging platform that can allow users to video-blog .
- Media-Wiki (http://www.mediawiki.org/wiki/MediaWiki) is an open source content wiki that allows users to create their own tutorials and embed videos inside them.
- Cooliris (http://www.cooliris.com/) provides a fast way for users to browse through videos, given that each user has a Media RSS feed.
- Integrating Google/AJAX applications can be done with Google Web Toolkit (http://code.google.com/webtoolkit/).
- Javascript libraries that can model Flash-like applications such as Shadowbox (http://www.shadowbox-js.com/) or Jquery (http://www.jquery.com) can also be used.
- Gorilla Spot (http://www.gorillaspot.com/platform.php) has a platform to edit videos called Spotmixer
- Movie masher (http://www.moviemasher.com/) has a set of open source video editing tools.

4.2 Backend

The front-end is done in PHP / CSS / JavaScript / AJAX and the database is MySQL. However, PHP is not suitable for processing videos in the backend. For this reason, I suggest looking into the following frameworks, and whichever is best for integrating with the front-end should be used. More powerful programming languages like Ruby, Java (Scala, Groovy) and Python are probably the best way to go.

- Drupal (http://drupal.org/) and Joomla (http://www.joomla.org/) are CMS that could possibly be integrated with PHPMotion.
- Lift (http://liftweb.net/) is a web framework based on Scala which is derived from the JVM platform.
- CodeIgnitor (http://www.codeignitor.com) is an open source web framework that integrates well with PHP.

- Ruby on Rails (http://www.rubyonrails.org) favors convention over configuration and is a web framework based on Ruby.
- Grails (http://www.grails.org) is a high productivity web framework modeled after Rails and uses Groovy which is derived from JVM platform.
- Django (www.**django**project.com/ *)* is a web framework that uses Python.

5. Revenue / Marketing Model

5.1 Account pricing

- Free account: User can create 2 mins worth of clips, have 500mb storage, upload videos <= 100 mb in size, upload .jpg, .avi, .gif, .mpg, .mp3 and .wmv files. There is a brief branding at the end of the video that says "Created using Creo Media".
- Paid account: User can create full length movies, upload in HD, have no storage limit, upload any size and format of videos. There is no branding of the videos.
- Entrepreneur account: Includes paid account features. Users can create premium videos that they believe that they can sell and make money from. The videos must be legally allowed for distribution. They set the price (usually under $1) and Creo receives 10% of the selling price. A trailer of these videos is shown by default. Once a video is sold, the customer receives a full quality high quality version of it (perhaps delivered through a medium like iTunes?) and can also use it in their own video creations.

5.2 Advertisements

- Google Adsense and Adwords
- Valueclick
- Admob
- Admark
- iAd
- Clickbank
- Facebook
- Adbrite
- Affiliateplay
- PayDotCom
- DealDotCom
- Infolinks
- Ebay Partner network
- Amazon affiliate program
- BuySellAds
- Apple rev share

5.3 Affiliates / Sponsors

- Sponsors include video production and video camera companies (Pure Digital, Sony, etc)
- Affiliates can use the API to link people to Creo and earn commission to promote us.

- Podcasts and media providers to stream videos for a fee. Users can watch them with ads inserted for free or buy a subscription which eliminates ads / commercials for a price.

5.4 Other streams of revenue

- For a small fee, users can download the video in any format.
- For an extra fee, businesses can contact Creo to create a professional video/ad for them
- For an extra fee, users who can't stream to a TV can choose to order a playlist of their favorite videos in HD shipped to them on a DVD or Blu-ray instead.
- For a set fee, a user can subscribe to another video user for a fee and experience exclusive content from them (think pay-per-view except on the internet).
- International specific features
- Mobile app downloads

5.5 Promotion

- Social networking is a great way to promote. Myspace, Facebook, Twitter, Youtube etc.
- Search engine optimization (SEO) allows Google and Yahoo to find the website much quicker.
- Getting backlinked from popular blogs and forums.
- Getting high profile sponsors to advocate Creo (Amazon.com, Facebook, etc)
- Purchasing advertisements on Google, Facebook, etc
- Viral marketing campaigns
- Word of mouth
- Pay commission for customers to refer you to other customers and upload videos

5.6 Expansion

- International markets in which technology is evolving such as China would be key markets to expand to.
- Mobile markets for Iphone and Android users are also a substantial key market to expand into. The evolving video technology on mobile phones ensures that this area has lots of growth.
- Social networking applications such as Facebook and Twitter can have separate applications installed which makes use of this web application.
- Open source plugins for software such as Wordpress, Joomla, Drupal, Firefox, etc

5.7 Differentiation

What makes us different than our competitors?

- Animoto.com has a 30 second limit for videos. 10% of their registered user base pays. Creo by contrast has a 2 minute limit which is far more generous. They also produce their videos according to an algorithm. Creo gives users the ability to custom edit their videos however they choose.

- OneTrueMedia is targeted towards producing DVDs, sharing moments with family and creating montages. While that is part of the audience, Creo believes in attracting a far wider audience and instead of DVDs, offers users the option to download their content instead where they can use it to stream to their TVs or burn it themselves without any additional cost.
- Youtube's video editor is quite basic, only adding functions to trim, merge and add music. Creo offers far more customizability.
- Other websites such as digitalfilms.com and moviemakeronline.com offers limited capacity to create films the way the user wants to and doesn't integrate well with social networking.
- Creo uniquely gives users the ability to create content from other user's content. If a user doesn't have the resources to shoot a video or take a picture first hand, they can make a montage or trailer from other user's videos.

5.8 Potential

Why invest in Creo?

- There is not that many cloud based video creation tools and the potential is there for this niche to expand. Animoto only offered their video uploading tools since Aug 2009 and it has expanded exponentially. 700,000 Facebook users were using their application at the peak in April 2008 (they subsequently found investment capital from Amazon.com). 1 million users were registered on their site by Nov 2009 and 10% were paying (as noted above, this could be higher). Professional photographers were using their site and more businesses want a cheap effective way to create ads.
- The iphone as of June 2010 has the ability to shoot videos in HD. What this means is that technology is proliferating and soon users will see HD videos everywhere. Networks are improving and 3G is more widespread. The mobile application segment has huge potential and upside. A side notes that Animoto's iphone application has been downloaded over 300,000 times, indicating the need and popularity of a mobile uploading/sharing service.
- The risks of investing in Creo are relatively low. This web application has huge potential and with an investment as low as $10,000 we could acquire the capital we need. The main areas of spending would be in hardware, programmers, licensing software and promotion. For the alpha testing stage this much is planned. After that, the beta testing stage will be to solicit more feedback from users and more resources will be devoted to the support team from the design team.
- 3D movies in the future?

6. Test Plan

6.1 Purpose

6.2 Objective and Scope

6.3 Environment

6.4 Summary of all Test Cases

6.5 Common Prerequisites

6.6 List of Test Cases

7. Other Requirements

7.1 Appendix A: Glossary

7.2 Appendix B: Analysis Models

7.3 Appendix C: Issues List