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# *Video Tag Portal*

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*Requirements and Research Document (Concept of Operations)*

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### *Revision History*

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## 1.0 Overview

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This document will take a look at the overall process from the gathering of user stories to the actual requirements. There will be stakeholder information as well as the reason for doing such a project. In the document we will discuss the overall design of the product and concept of the results.

### 1.1 Scope

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This document will be a living document and will cover the requirements and user stories gathered from the client. At any moment we may add more requirements or user stories. Some of the research involved will be covered as well as technical details.

### 1.2 Purpose of the System

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We are to make a video tagging system that allows users to tag points in videos with a various number of predefined tags. After tagging a video, the user then has the ability to share the video with his or her friends. The friends then will have the ability to also tag the shared video. The goal of the system is to make videos more socially connectable between friends.

## 2.0 Stakeholder Information

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EchoStar is the main stakeholder in this product. They will gain the rights to the software after it leaves our hands.

### 2.1 Customer or End User (Product Owner)

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Nick Newell will be taking control and maintaining the project after we finish our final design.

### 2.2 Management or Instructor (Scrum Master)

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Nick Newell.

### 2.3 Developers | Testers

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Anudeep Potlapally and Travis Rous

## 3.0 Business Need

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This product will fill a gap in the social networking world, as well as, add a new video experience to the online community. We see that there a strong market for online media and social networking, combining the two in to a convenient application would prove to be successful.

## 4.0 Requirements and Design Constraints

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This software will need to be run through a modern web browser with JavaScript enabled.

### 4.1 System Requirements

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PHP

- Stands for PHP: Hypertext Preprocessor(recursive acronym)
- It is a server side scripting language that is designed for web development.
- Supports cross platform development

HTML5:

- A markup language that is for structuring and presenting content for websites
- Contains many more features than the previous versions of HTML
- Supports cross platform development

JavaScript:

- An interpreted client-side scripting language
- Used to make user interfaces more interactive
- Used to communicate asynchronously
- Used to alter document content that the user sees dynamically

Popcorn.js:

- A JavaScript frame work for editing media in real time
- Able to edit media based on timing of the media
- We use it to control the main functionality of our site by displaying tags at specific times
- Support for YouTube and Vimeo
- Checks media in fractions of a second

Google APIs:

- Google Maps API v3
  - Using the maps API to display the map tags in our application
- Google+ API
  - Added to allow the users to login with google accounts
- YouTube Data API v3
  - Allows the access of the YouTube search
  - Allows users to upload videos to YouTube
  - Allows checks users uploads to YouTube

Facebook API:

- Allows users to login using their Facebook accounts
- Allows users to see the friends that they have on Facebook
- Allows users to view profile pages from facebook

jQuery:

- A feature rich JavaScript library
- Allows for simpler dynamic HTML traversal/modification
- Allows for simpler dynamic animation and Ajax coding
- Multi-browser support

Vimeo:

- A website for hosting videos.

YouTube:

- A website for hosting videos.
- Contains many useful APIs

MySQL:

- Open source relational database management system
- Allows for multi-user access to a number of databases

## 4.2 Network Requirements

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The user needs to be able to get access to the server that is hosting the website. This server is accessible though the internet so you will need to have an internet connection to use or develop the software.

## 4.3 Development Environment Requirements

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The project will need to be deployed on a PHP server and a MySQL server will need to have the tables setup using a .sql script that will be sent with the project. There will need to be a connection between the server and the PHP using a database connection in PHP.

## 4.4 Project Management Methodology

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We are using the Scrum development cycle to manage the project. This consists of almost daily scrum meetings that are less than 5 minutes each. There is a scrum master that is the lead on the project who is really there to keep the team going and on track. There are sprints that range from 2 to 3 weeks. We are using GitHub and Trello to manage our code and progress over time. Trello is like a digital board with task card that are able to be moved from to show the progress we have done in the current sprint and assign some cards to have a higher priority than others to show the significance of each task or what is left for each task at hand.

## 5.0 User Stories

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The general idea of the project is to create a portal to tag videos and then share the videos with friends.

The initial project description given to us is as follows:

*The amount of video content being generated, shared, and consumed is increasing exponentially by the day. However, there doesn't seem to be a good way to flexibly associate user-generated tags with the real-time video to create a social video experience. For example, there is no way to tag your friend, Frank, at the 23 second mark of your Facebook video as he does a handstand on top of Mt. Elbert and then make a comment on his handstand technique. There is also no way to associate a still photo of Frank doing the handstand so that it pops up next to the video in real-time when the video hits 23 seconds in. We lack one place online where everyone can go to watch any video and then make their personal contribution so that subsequent viewers can enjoy a social video experience together. This exists in many forms for still images and is extremely popular. Let's create that place for moving images.*

After the first and second round of questions we came up with the list of user stories.

## 5.1 User Story #1

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Play the videos within a web application

### 5.1.1 User Story #1 Breakdown

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Nick has asked for an embedded browser to play videos from sites like YouTube and Vimeo

## 5.2 User Story #2

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Make the application have the ability to play local videos.

### 5.2.1 User Story #2 Breakdown

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We will need to make a database to store the videos that are uploaded to our application.

## 5.3 User Story #3

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Possible integration with sling.com -- this will be a much later feature if at all.

## 5.4 User Story #4

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The first time viewing of the video should store all the information of the video that is being played.

### 5.4.1 User Story #4 Breakdown

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This will need to be some kind of database that stores the video id and the info that goes with it.

## 5.5 User Story #5

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Design some kind of login system that allows us to know who one's friends are.



### 5.5.1 User Story #5 Breakdown

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To do this we need to choose what kind of login to use. We can manage our own or use a Facebook account to login.

## 5.6 User Story #6

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We need to be able to pause a video at any one moment and place one of many kinds of tags.

## 5.7 User Story #7

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We have a set of predefined Tags to choose from.

### 5.7.1 User Story #7 Breakdown

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The list of tags will be as follows:

- Comment Tag: just a comment(text) at a specified time(like youtube)
- Photo Tag: add a photo to the tag area for some amount of time
- Profile Tag: a social networking link to a point in the video
- Product Tag: used to add a link to a product's web site(a product in the video)
- Location Tag: a link to a map with the location of the video's content

## 5.8 User Story #8

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Need to have the ability to change the list of tags.

## 5.9 User Story #9

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We need to set up a filter system to filter out tags placed on a video.

### 5.9.1 User Story #9 Breakdown

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We would need to not only filter down to friends, but need to filter out some of the friends.

## 5.10 User Story #10

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Mobile Compatibility

### 5.10.1 User Story #10 Breakdown

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We will need to find a way to display the videos, and then we may be able to tag videos from the mobile devices.

## 6.0 Research and Priority Levels

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Ranking of priority in red (1 is low-----5 is high).

After taking in the initial user stories and doing a little research we determined that this project should be possible with the HTML5 and Flash video formats with because they have API support would allow us to make the reading of critical information simpler.(5)

As stated in user story number one we will be hosting a type of proxy website that allows us to navigate to a site with a video and start sharing and tagging it with other people.(5)

In user story number two we need to be able to add support to local videos. This means that there will need to be a database that stores the videos or find another way to save user videos.(3)

User story number three is integration with sling.com, which we don't have access to. Perhaps we will in the future however for now we don't need to worry about this story.(1)

The idea in user story number four is to save the information from videos already viewed this may not help efficiency by doing this however we still need to consider it.(2)

User story number five asks us to create some kind of login system for the website and allow people to become friends with other users on the site. With this story we need to come up with a way to login with something like Facebook, or find a way to link in ones friends. More research will be needed here after there is a good start on the creating of tags.(2)

In user story number six we need to detect when someone has paused the video and then determine the time the video is paused at. With the HTML5 and Flash API's this should be achievable using Popcorn.js.(4)

In user story number seven we need to allow people tagging a video to have a good list of different tags to choose from.(4)

Then in user story number eight we need to be able to manage the list of tags that are given to the users and allow the addition of new tags.(3)

Being able to filter the tags is an important feature described in user story number nine. Here we need to allow users to disable any of the tags that they see on a video.(3)

Then we reach out to mobile devices with an app I user story number ten. Here we need to find a way to display the tags and the video on a very small screen. This may be possible but the videos might become too small to see on the screen with the tags.(1)