MyNewMedia Dynamic Content Channels

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# Motivation

Today there are an innumerable amount of options for content creators to deliver their work to the public. The advent of free sites like Youtube and Soundcloud and the rise of grassroots podcasters have allowed people to break down the previously impenetrable barrier of entry that came with radio and television. Our media now comes in the form of streaming video and audio, embedded into pages or delivered via RSS feeds. But, as with any new media, there are some growing pains.

Average users, particularly from the later generation, are not used to the number of options available to them, which can quickly become overwhelming as they search for new content that suits their interests. Additionally, it is time consuming and frustrating to keep track of content updates when there could be dozens of content sources a user needs to watch.

The proposed site “MyNewMedia” will solve this issue. It allows content creators a single location to manage their content, while consumers will find their favorite sources organized into easy to use, subscribed channels that can notify them of any update, no matter what site it originated from. “MyNewMedia” will aggregate the content a user produces by embedding the audio, video, images or text hosted elsewhere onto the channel homepage. When a user subscribes to a channel, they will have access to all of this content in one location. Searching for content will also be made much easier. Each homepage will act as a gateway to any hosted content.

# Functionalities

The following is a list of proposed functionalities for the “MyNewMedia” site.

## Secure User Database

The most basic requirement is to allow users to create secure, persistent accounts. Initially, there will not be any need to hold sensitive information, but security will be a high priority in any case. Each user will have a list of subscriptions associated with their account, as well as a list of created channels. A user may also enter profile information, although this will not be required. The user must create an account and log in before any subscriptions or channels can be created. One goal is to integrate user accounts with Facebook, in order to make account creation as simple as possible.

## Channel Functionality

The main draw of “MyNewMedia” will be the ability to create and maintain content channels as a way to streamline content to consumers. Each user will have the ability to create as many channels as they desire. Once a channel has been created, the user can name it as they wish and provide a description.

Content can be provided simply by adding a new link to a content list, which will automatically embed the content into the channel homepage, and notify any subscribed users of a change. The team is also investigating the ability to hook into an existing external account, such as Youtube, and dynamically add the links to the channel homepage when new external content is added. Each user will also have a dashboard that displays their subscribed channels and any updates that are available. Users will not be required to create an account to view a channel homepage, but an account is required to subscribe.

## Auto-Subscribe Icons

In order to allow content creators to expand their audience as easily as possible, “MyNewMedia” will allow users to generate HTML image links that link back to their channel homepage and, when clicked, will add a subscription once a user has either logged in or created an account. These images can be added easily to any existing page, forums or feeds and will give users an easy way to grow their audience. A non-image link will also be available.

## Channel Search

The ability to search channels and content is an essential function. Because “MyNewMedia” will be aggregating content on numerous sites, a powerful search will ensure that it remains the go to site to find any kind of content.

## Additional Functionality

In addition to the essential functionality detailed above, the team has also discussed some more intelligent functionality that can be included. The first is a tag and recommendation system. The database will contain rich information about user activity, and this can be queried to provide recommended channels to a user based on what other users with similar subscriptions liked. A tag system that allows users to enter their own descriptions can provide similar functionality, as well as make searching for content easier.

Also discussed was a badge system. People respond well to rewards, especially online, so creating badges that can be awarded after a user performs a certain action can be great encouragement. Users will be rewarded for using the site in different ways, such as creating a channel, uploading content, or subscribing to a number of channels. It’s a fun way to get users acquainted with what “MyNewMedia” is capable of.

# Implementation Strategy

Although the project is in the beginning planning stages, the team has a good idea of how to move forward. “MyNewMedia” will primarily be web-based, although it will be designed in a way to make the creation of a mobile app relatively simple. Because there is no need to host any content, a lightweight database can be used to hold user account and channel information. The team will be approaching the work by dividing it into two sections: the sever-side and the client-side.

## Server-Side

The back-end will be built using the MySQL database, which is an excellent free database that is easy to set up and deploy. We plan on making liberal use of stored procedures to handle as much of the business logic as possible so the front-end clients have a light computational load.

## Client-Side

Using new technologies like HTML5 in addition to the typical CSS should make the website design simple. The goal is to use as little code on the client-side as possible. PHP will be used as a scripting language. The team also has experience with MVC architecture tools such as Oracle ADF and ASP.Net if the need for a more robust toolset arises.

# Technical Challenges

## Creating a database

We will have to create a database that not only stores the information, but is easy to use and maintain in the future. We will also have to learn how to set up a non-local server so the site can actually be implemented upon our project's completion.

## Using different media

The goal of our site is to unite different types of media in a useful manner, and our challenge is to not only unite the media in a viewer-friendly manner, but to create code for every type of media we wish to use.

## User Recommendations

Once the basis of the site has been constructed and preferably populated with information, we would like to implement the previously mentioned recommendation system. This will demonstrate our programming ability to create a database that can use logic and think for itself.

# Team

## Zachary Merrill – Team Lead

Zachary has been programming since he was in grade school and is excited to begin his official career in the field. After working with the Kiewit Quality department developing the SharePoint sites and reporting tools for three years, he moved to Gallup, where he is having a blast creating a huge new system for their Selection department using the Oracle ADF environment. Zachary is fluent many modern languages including Java, C#, C, Perl as well as some academic ones, like Lisp and Prolog. In his spare time he likes to program video games and phone apps.

## John De Los Reyes

John has been programming since he was in high school and will be graduating with a double major in Computer Science and Mathematics. John's interests are math, web development, video games, eating ice cream, and watching foreign movies. He is experienced with the following languages: Java, Perl, XHTML, CSS, C, classic ASP, and ASP.NET in C#. John also works for Baldwin Hackett & Meeks, Inc. (BHMI) as a software engineer intern, where he is developing useful software.

## Stephanie Koesters

Stephanie began programming early in high school at PKI summer camps for web and Flash development, and has created small one-page websites for a hobby. She has worked in with object-oriented languages that are useful for game programming, but is primarily interested in web-based languages such as PHP, HTML, CSS, Javascript, etc. She works on a portion of Union Pacific's website, where she has interned at for a year. Admittedly not "fluent" in any language, she can adapt and relate languages to others.