

Blacksburg to Guatemala Archive Project

*John Crowson
Ankit Agarwal
Arth Joshi*

Software Requirements and Design Document

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Client: Kimberley Homer; Delegate, Christ Church Blacksburg Sister Parish

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1 Software Requirements, Part I – Application Overview

1.1 Objectives

The primary objective of the Blacksburg to Guatemala Archive Project is to create a medium for cultural exchange between Christ Church, Blacksburg, and their sister parish in San Andres Itzapa, Guatemala. This project will create a website and will allow for these two parishes to remain in close contact following the recent visit of a delegation from Christ Church, Blacksburg, to Guatemala in January 2015. We are completing this project as soon as possible in order to minimize the delay between their visit and the establishment of such a cultural exchange. Both parishes will benefit from our project, satisfying a desire to remain in-touch and embrace cultural differences.

1.2 Business Process

The primary method of communication between the two parishes is currently e-mail, because it is a low-cost solution and both have access to the Internet. However, e-mail is not an effective tool for long-term, public interaction between two large groups. Creating a website is an effective solution. A website will allow for each parish to post photos, stories, and other documents from their recent meeting, as well as from future meetings. Additionally, the website will serve as a medium for cultural exchange, allowing for the sharing of local recipes, stories, and conservation tips. Most importantly, all of the exchanged information will be readily available to members of both parishes, and anyone with an Internet connection.

1.3 User Roles

Users will utilize our website for a variety of reasons. The users directly affiliated with each parish will use our website to post and view information regarding unique cultural ideas and previous interactions. These users will also use provided search functionality in order to locate specific information within the website. A non-affiliated user may find the website from an Internet search. This user may be looking for cultural information, specifically from the Kaqchikel Maya in their Mayan language. We hope some users will use our website as a template for Sister Parish cultural exchanges.

1.4 Interactions with Other Systems

Our website will be using a third-party hosting system. We hope this system will be provided free. We anticipate this being beneficial to our project because of the low-cost of ownership for our client. Our client's only responsibility will be to provide adequate content to make the website useful. A goal for the third-party system is to provide a content management system (CMS), which will provide an easy-to-use interface for content publishing. Additionally, our third-party-system must have a good reputation for server availability, so that our website is consistently available.

1.5 Production Rollout Considerations

We hope that upon public release, our project will be fully functional and meet all stated requirements. Prior to a public release, we will have several incremental private releases, allowing us an opportunity to test aspects of the functionality. These incremental releases will also provide our client the opportunity to observe progress and provide feedback. Our final private release will allow the client to agree to the final product prior to public release.

1.6 Terminology

- Content Management System (CMS) - a computer application that allows publishing, editing and modifying content, organizing, deleting as well as maintenance from a central interface. Such content management systems provide procedures to manage workflow in a collaborative environment.
- Third-party hosting – an external company that provides housing, serving, and maintaining files for one or more Web sites.
- Cultural exchange – a medium between people from two countries that promotes mutual understanding.

2 Software Requirements, Part II – Functional Requirements

2.1 Statement of Functionality

The website will need to be well-designed, fast, and intuitive to use as the website will be used by people with unreliable Internet connections. The website will serve as a medium to document the stories, pictures, ceremonies, recipes, what is alike, and what is different, among the sister parishes of San Andres Itzapa, Guatemala and Blacksburg, Virginia. The

website will need to have a way to add new content to the website as the parishes have new adventures to share. The website will need to have bilingual support, interchanging between English and Spanish, depending on what language the content is provided in. A search engine needs to be implemented to search the content along with a Kaqchikel glossary to look up terms in Kaqchikel.

2.2 Guatemala Requirements

The website needs to be very lightweight in design as Internet connections in Guatemala are not as fast as in the US. The website will need to be intuitive to use and designed with a Spanish speaking country in mind. About half of the users will come from the sister parish in San Andres Itzapa, Guatemala and the website needs to cater to this traffic. The website will have to be rendered in Spanish, when provided Spanish content.

2.3 USA Requirements

Internet speed should not be factor in the United States but the website should be fast to load, nonetheless. The website needs to be intuitive to use, meaning content should be easy to access. The website will have to be rendered in English, when provided English content. The Kaqchikel glossary should be shown if provided by the client to all users.

2.4 Language Support

The website will show the content in the language in which the content is uploaded. The website should be searchable in the language of the user's choosing. The search engine should give the option of selecting what language to search in. A bonus deliverable will be to allow users to translate content in the language of their choosing. For example, a Spanish story could be translated into English upon clicking a link. There are still on-going discussions on how this would work with Kaqchikel, as the language is not well supported by online translation tools. However, English and Spanish should be translated such that no meaning is lost between the languages. A Kaqchikel glossary also needs to be implemented to allow users to look up terms they might not understand.

2.5 Content Rendering

The website needs to render high quality pictures and videos to be consumed in an intuitive manner. The loading needs to be fast, as explained

earlier. The website needs to have the ability to show more than one content source at a time. For example a photo could accompany a recipe or story. The website needs to have the ability to display any given content.

2.6 Contact Us Page

The client wishes users of the website could contact the parishes for additional details. However, spam attempts are a concern to the client. As a result, the website needs to have a safe and secure protocol for users to get in touch with the client. The contact us page should implement a captcha or similar safeguard from people sending in spam.

2.7 Scope

The scope of this project will consist of multiple two week long phases, with deliverables due at the end of each phase. Currently this project is split up into 5 two week long phases.

2.8 Phase 1: Website hosting and tools identified (due 2/19/15)

In this phase the client will approve of the website hosting and tools they would like to use.

The first part of this phase will consist of the developers finding a website development tool that will be easy for the client to maintain in the future. It is also important that this website development tool also has the right templates to meet the needs of the client.

In the second part of this phase the developers will identify the content management system (CMS) that would be easy for the client to use to upload their content to the website. The CMS is supposed to be adaptable and maintainable in the future.

2.9 Phase 2: Website design implemented (due 3/5/15)

In this phase the client will approve of a website design and layout. By the end of the phase the client and the developer will know what the website will look like and how the content will be arranged through the website.

2.10 Phase 3: Content publishing (due 3/19/15)

Phase 3 of the project will be heavily client dependent, because at this phase we will start publishing content through the selected CMS. The website will be populated with all the necessary content the client desires in the necessary locations.

2.11 Phase 4: Search tool implemented, all deliverables complete (due 4/9/15)

By the end of phase 4 all the deliverables specified in the contract with the client will have been completed.

In this part of the project is implementing a search feature, where the user can search through the website for articles based on the search text. For example, if the user searches for an article on Guatemalan agriculture, the search feature should show the user a list of articles that talk about this topic.

2.12 Phase 5: Potential bonus features implemented (due 4/23/15)

The last phase is more of an experimental/bonus phase, where we will try to add bonus features like language translation for the articles. For example, if an article is written only in English, the translation feature will also render the article in Spanish and possibly Kaqchikel.

2.13 Performance

The website should load within ten seconds on all types of Internet connections. This is vital to the usability of the website as a large part of the users will be from Guatemala where Internet speeds are not the best. The website needs to load the photos and videos in a respectable amount of

time. The website should not hang at any point as this will result in a terrible experience for users. Users should also be able to upload new content in a reasonable amount of time, the whole process taking less than ten minutes. This way the whole process will be seamless and new content can be added, to be enjoyed with ease by users.

2.14 Usability

The website should have a simple UI, where the articles for each category are easily visible and accessible (see Figure 1). Since many of the people using the website are novice Internet users, it is vital that navigation around the website requires the minimum number of clicks. The UI should be simple such that things should only be visible unless they are absolutely necessary. Too much clutter could derail the user from the focus of the content.

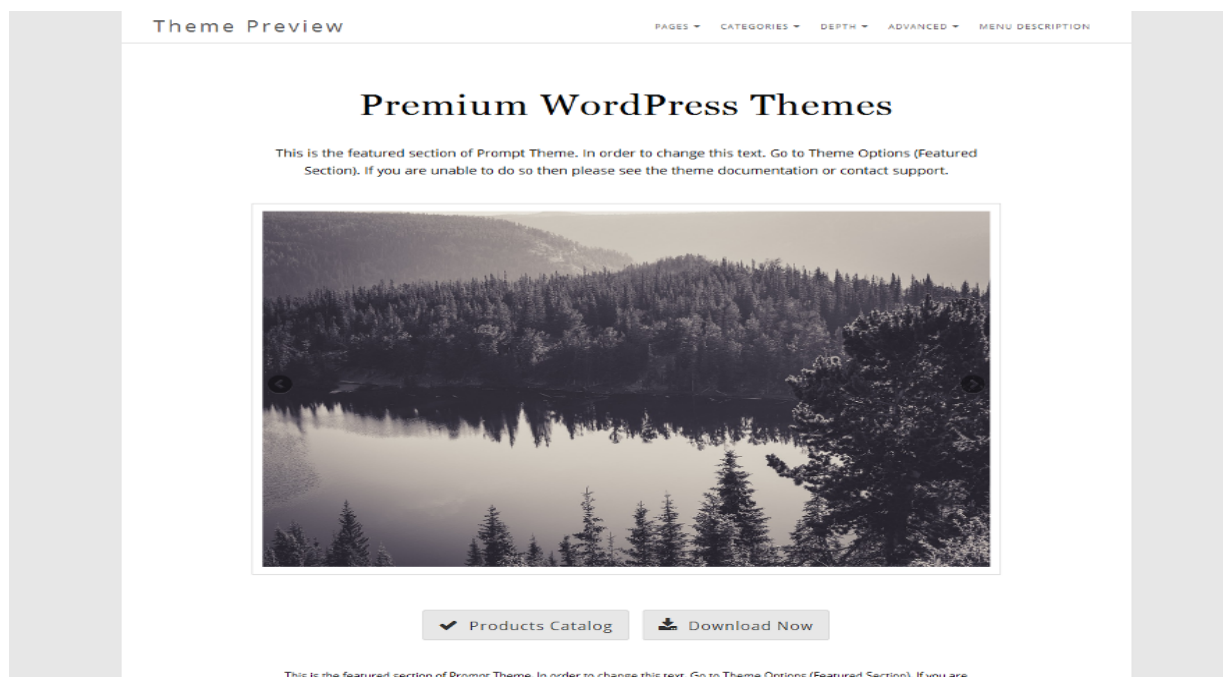


Figure 1: Sample website design showing a simple user interface with large feature image preceding the text content of the page.

4 Software Design, Part I – Introduction

4.1 Purpose

This software design document describes the architecture and system design of the Blacksburg to Guatemala Project website.

4.2 Scope

The Blacksburg to Guatemala Project website will allow users to exchange cultural information between parishes while facilitating frequent contact and mutual understanding. More details explaining the goals, objectives, and benefits of this project can be found in the software requirements objectives section of this document in section 1.

4.3 Overview

The software design document is intended to translate the software requirements previously defined into a representation of software components, interfaces, and data necessary for the implementation of our website. This document is divided into several sections that include a system overview, system architecture and design, component design, and human interface design.

5 Software Design, Part II – System Overview

The website will be well designed and intuitive so that a broad audience can utilize it such that only modules absolutely necessary will be displayed. It will provide a medium to document stories and pictures from recent interactions, as well as ceremonies, recipes, and what is alike and what is different among the sister parishes of Blacksburg and Guatemala. The website will enable users to add and view content in multiple languages, utilizing bilingual support. A search engine will allow searching of content along with a Kaqchikel glossary to look up terms in the native Kaqchikel language.

For further details regarding the functionality of the website, see the **functionality requirements section of the software requirements document, located on page 6.**

6 Software Design, Part III – System Architecture

6.1 Architectural Design

There will be numerous modules to the website involving posting, viewing, and searching. Firstly, there will be a medium where the parish can upload new content. This will consist of a user interface where the parish can add text, images, videos, or links. Another aspect will be specifying what language the content should be displayed in: English, Spanish, or Kaqchikel. This content will then be able to be viewed as blog posts from the home page. The content will be shown in the specified language. The photos and videos will be inline with the accompanying story. Readers will then be able to comment or get in touch with the posting parish. This needs to be designed in a way that spam is limited. The last module to be added to the website will be a search engine. The search should be through the content, based on the specified language. Users should be given a list of matching results that they can explore. These systems will work together as a whole, as a chain of events is created. The parish first uploads content to the site which is viewed by numerous viewers who comment back about their reflections.

6.2 Decomposition Description

The uploading module will allow the parish to submit text and/or photos, and videos with captions. The home page will display the uploaded content to users. Users will also be given the opportunity to express their feelings via comments/contact-us pages. Figure 2 shows the workflow of the website.

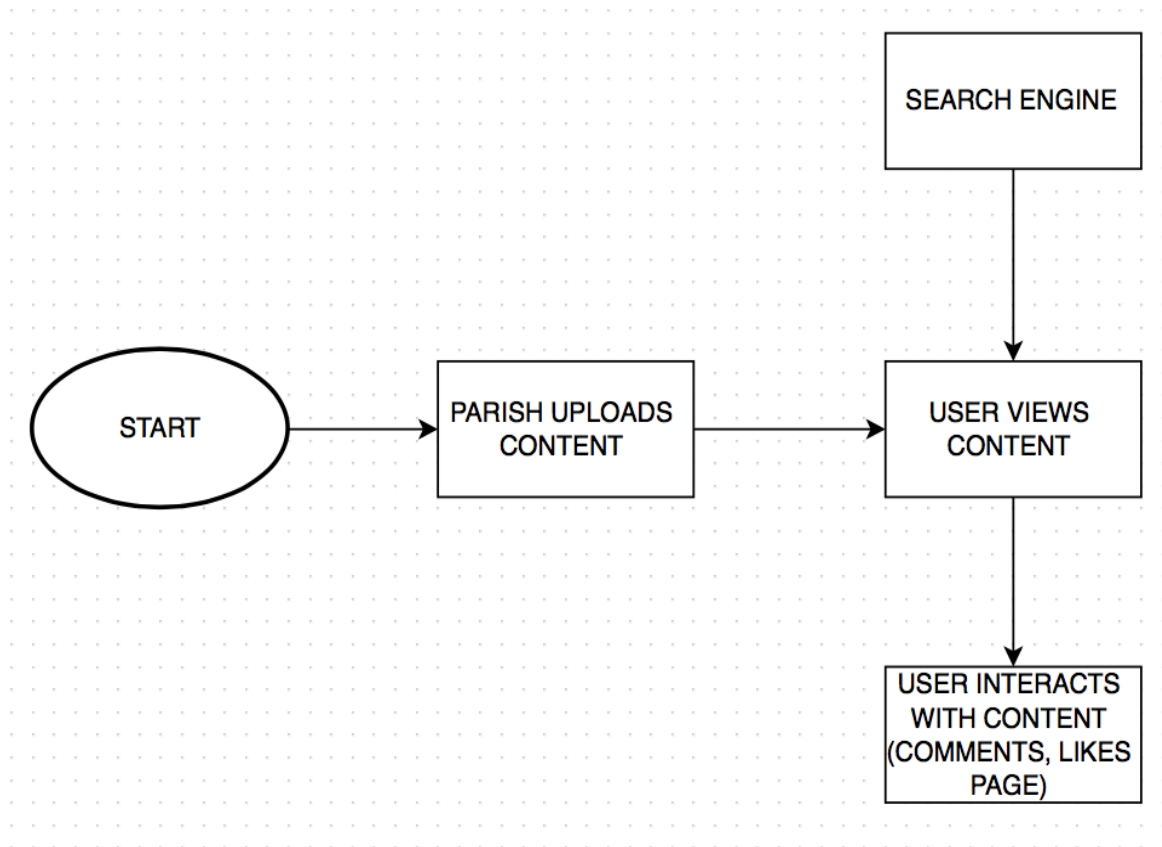


Figure 2. Flowchart shows the workflow of the website, where once the parish uploads the content, the user views the content, and then the user can comment.

6.3 Design Rational

The architecture was selected in part because of the requirements listed in section 1. A huge focus was ease of use and speed of the website as users will come from Guatemala as well as the United States. The design described in section 3.1 will be lightweight and very simple to use on a daily basis.

Other options that were considered were designing the website to be less of a blog and more of a newspaper style website. This option was not chosen, as it did not offer the most intuitive user interface.

7 Software Design, Part IV – Data Design

7.1 Data Description

The majority of data the website deals with will be the stories that the parishes will want to upload. These will consist of text, images, and videos. The data will have to be stored by the website for immediate access when required. This will be done by using WordPress tools to store images and videos. They will be organized based on the date they were uploaded to the website.

7.2 Data Dictionary

Image: Pictures will be uploaded by parishes as a supplement to text or standalone with captions. These pictures will have to be easily accessible to users, taking minimal time to load.

Text: This is the majority of data the website will process. This will include stories the parish wants to upload. The parish will specify what language the content is in, and the website will display the text in the specified language.

Video: Parishes will upload videos as a supplement to text, or standalone with captions. These videos will have to be easily accessible to users, taking minimal time to load.

8 Software Design, Part V – Component Design

The parishes use WordPress to upload content onto the website. After the content is updated, the summary of the post appears on the front page of the website. Here the user can either search for an article using the search engine, or they can click on a post on the homepage. After the user clicks on a post, they can see the rest of the text, pictures, and videos that are associated with the post.

9 Software Design, Part VI – Human Interface Design

9.1 Overview of User Interface

The main goal of this website is for the user to see what the parishes post. The website will contain a button for the parishes to post and update the content on the website. The users can then click on these posts and go through the content on each post. The front page of the website provides the users with a summary of the posts, and when the user clicks on the summary they are directed to the complete content page. Here the user can see all the pictures, videos, and text that are part of the post. There will also be a search bar, which the user can use to identify posts of interest. The user can comment on the posts and provide feedback.

9.2 Screen Images

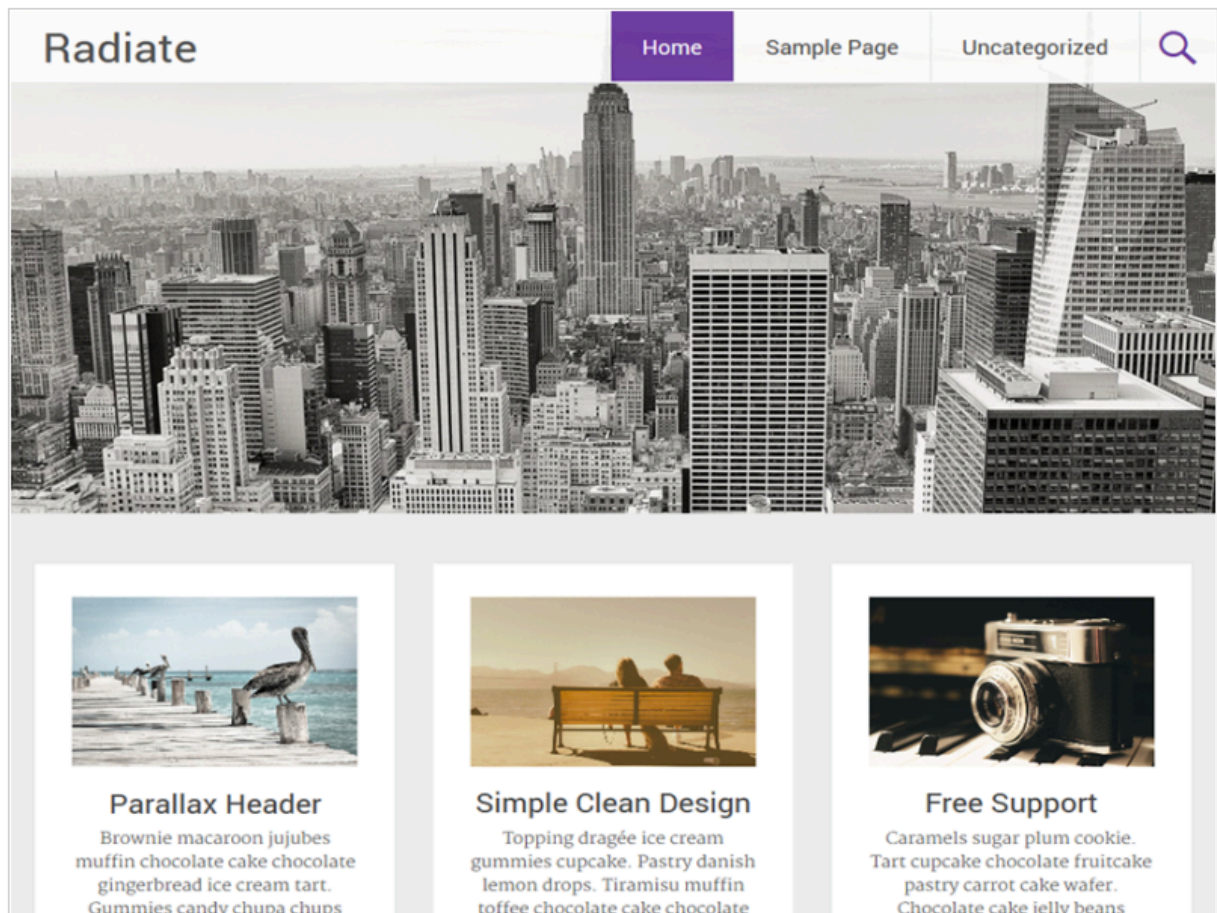


Figure 3. The top part of the screen shows featured articles to the user; the bottom three segments show the most recent articles the parishes have posted. The search bar on the top right corner lets the user search through all the articles in the database.

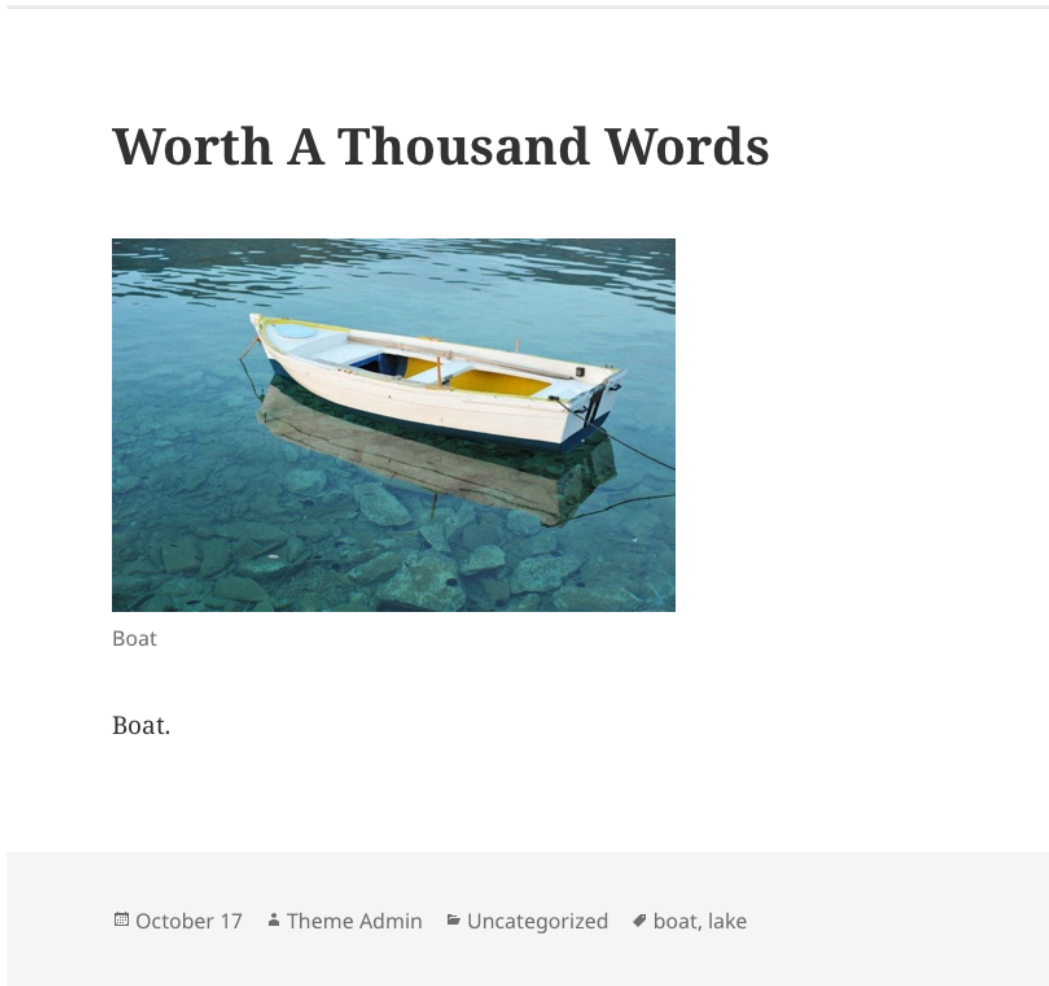


Figure 4. This is a sample article, which contains a title, picture with a caption, and text. The article is also tagged (Ex. boat, lake), which helps the user with search.

9.3 Screen Objects and Actions

The content management system is set up through WordPress. People with admin privileges can add content to the website, when they log into

WordPress. The user can press the search button on the top right corner to search through the database to find articles of interest.

10 Implementation – Introduction

10.1 Purpose

The purpose of the implementation needs to be focused on reliability and speed. The website implementation needs to be accessible at all times in a swift manner. There has to be an easy way to add content to the website, consisting of stories, images, and videos. The website also has to be intuitive so the content can be enjoyed by readers.

10.2 System Overview

The implementation will be broken into small parts. The first phase consist of determining website hosting and the tools needed. The second part is to implement a website design that is intuitive and easy to use. The third aspect is to develop a service for content to be published to the website. Lastly, a search tool needs to be implemented.

10.3 System Description

The website hosting will be chosen with cost and reliability in mind. The website needs to be up 24/7 and fast. The design will be implemented in a way that is easy to understand and navigate. The content submission process will be implemented in a way that is easy to use. The search tool will offer bilingual support.

10.4 Assumptions and Constraints

The assumption is that each phase will take two weeks to complete. The first phase might take less than two weeks but the additional time should be devoted to the search aspect. The bilingual support constrains the way we can implement the website. We need to make sure we can support English, Spanish, and Kaqchikel.

10.5 System Organization

The flow of the website will start with the content being uploaded to the website. This could include text, pictures, or videos. The second aspect will be a reader viewing the story or the picture the parish has uploaded. The next aspect will consist of users being able to respond to the story. This will be done either through comments or a contact us page.

11 Implementation – Management Overview

11.1 Description of Implementation

The implementation will be a phased approach. The first part will be to implement how the parishes upload their stories to the website. Next, users need a way to express their opinions through a contact us page or commenting feature. Lastly, a search engine will be added to search through the content.

11.2 Points-of-Contact

Role	Name	Contact Number
Project Manager	John Crowson	703-587-8357
Quality Assurance	Arth Joshi	703-625-1425
Head of Website Programming	Ankit Agarwal	703-395-2068
Client (Blacksburg Parish Contact)	Kimberley Homer	540-231-9521

Table 1. Refer to this table to get in touch with team

11.3 Major Tasks

The implementation will be a phased approach. The first major task is to decide a website hosting service and sign up for a website. The next aspect is to come up with a design that would be ideal to display stories. The next major task will be to implement a way for the parish to upload their stories

to the website. Furthermore, users need a way to communicate with the parish. Lastly, a search feature will be implemented.

11.4 Implementation Schedule

- Completed no later than 2/19/15: Website hosting and tools identified
- Completed no later than 3/5/15: Website design implemented
- Completed no later than 3/19/15: Content publishing (client dependent)
- Completed no later than 4/9/15: Search tool implemented, all deliverables complete
- Completed no later than 4/23/15: Potential bonus features implemented

11.5 Security and Privacy

The website will need to be secure to protect the parishes. A large part of the security focus will go to how users communicate with the parish. Spam needs to be eliminated as the parish clearly specified they do not want to waste time with spam. The implementation will need to have a way to block out spam from users.

12 Implementation – Support

12.1 Hardware, Software, and Facilities

Most hardware needed to implement our project will be made available by WordPress.com. We will use their servers to host the website. This service is provided free by Wordpress.com, but includes certain account restrictions. The only additional required hardware is a personal computer with an active connection to the Internet in order to develop the website. Group members will use their own computer for this requirement.

We will be using WordPress, a blogging software that allows simple website to be created. WordPress is free and open-source. It also includes content management system software based on MySQL. We will use WordPress with version 4.1.1, released in February 2015. The CMS software will allow us an

environment to develop custom features of the website. The provided template theme will also be altered.

Limited facilities will be required because developers will only require a desk to complete the project. Each developer has access to their own residence and Virginia Tech campus, if need be.

12.3 Personnel

The implementation team will be comprised of three developers, each with experience in web design and using WordPress. See section 11.2 for a complete table of everyone involved in the project. All tasks required to complete the deliverable will be distributed evenly amongst each developer. It is estimated that developers will spend a minimum of 20 hours on their assigned tasks.

12.4 Outstanding Issues

The implementation team is unsure about WordPress' ability to create bilingual content translation. Specifically, is there a WordPress plugin that can perform language translation automatically? This could be an important tool for users of the website.

12.5 Implementation Impact

The implementation impact will fall primarily on the infrastructure of WordPress.com. There will be no impact on the computers that will be used for implementation by the developers.

12.6 Performance Monitoring

Performance monitoring will be made available through tools provided by WordPress.com. These tools include a dashboard with an overview of the system's status. The dashboard will not provide confirmation that the implementation is successful, however.

13 Implementation – Requirements by Site

13.1 Site Name/Requirements

The website requires the following items in order to function as designed:

- Hardware Requirements: Computer with Internet connection, to update content on the website
- Data Requirements: All the content that needs to be uploaded will have to be provided upon completion of the website.
- Data Updating: A Team/Person will be required to upload content using WordPress.
- Procedures: Standard WordPress procedures will be used to upload content to the website, stated in the WordPress Developer Documentation.

13.2 Risks and Contingencies

The website will be supported in three languages, English, Spanish, and Kaqchikel. It will be possible that there will be articles that do not have translations. A contingency for this situation would be to provide a translating tool, which will translate the articles into all three languages.

Another risk is relying on WordPress, because if their database/system goes down, then so does the website. There is no real contingency for this situation, but the likelihood of something like this happening is extremely low, and even if an outage occurs, the systems should be back up immediately.

13.3 Implementation Verification

To ensure that the implementation is properly executed, thorough tests will be done to eradicate all bugs possible. These tests comprise of usability tests given to numerous people including the client. The client will go through the implementation throughout the development phase, to make sure the website is being developed according to her specifications.

13.4 Acceptance Criteria

- An appropriate WordPress template will be used, approved by the client.
- The tool to upload content will be designed to be as simple as possible, and approved by the client.
- All the content provided by the client will be uploaded to the website.
- All the links on the website should work as specified.
- All the tabs on the website should work as specified.
- The website will be supported on all major web browsers.
- A possible mobile friendly version of the website will be available.

14 Prototyping

14.1 Introduction

Prototyping will demonstrate the major aspects of the website. The home page, article detail page in English and Spanish, search page, and articles with multimedia will be included. We decided to prototype by creating sample stories on the website to show how one will be able to access the content.

14.2 Home Page

The home page will show the most recent stores with a side bar to show the search bar and categories. As you can see in the following picture, an image will be shown as the featured image. More pages could be added to the navigation bar to enhance functionality.

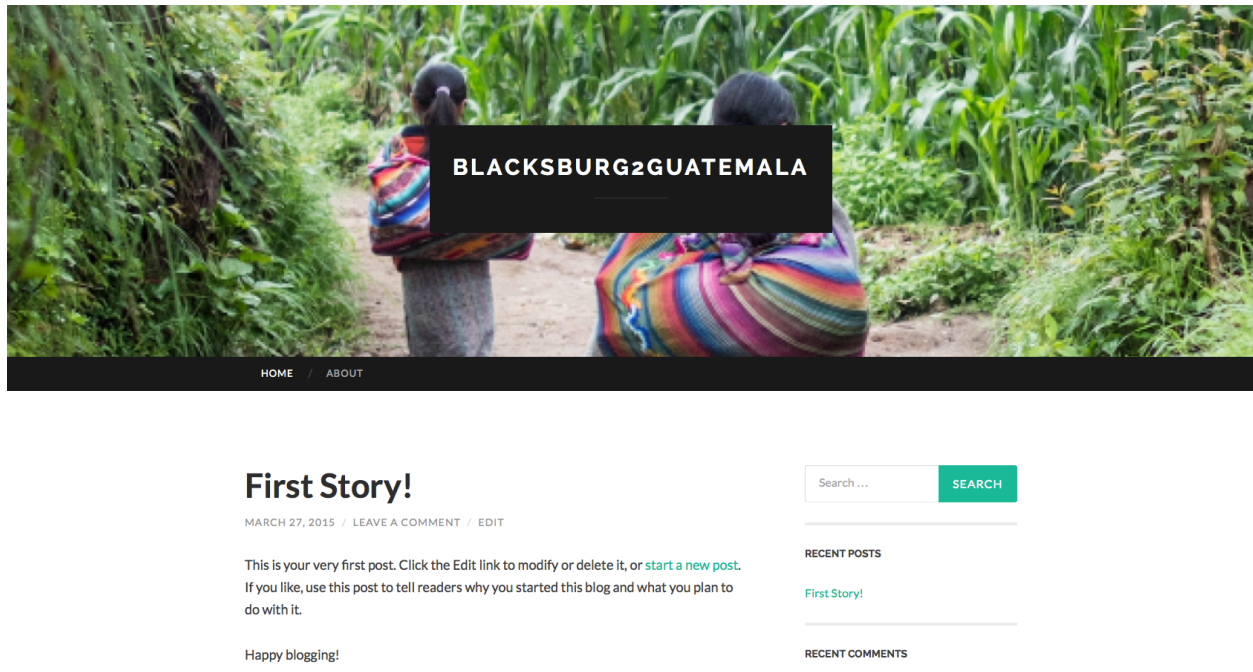


Figure 7. Home page prototype shows header with the title of the blog with a feature image in the background. It has a menu bar right underneath the feature image and below that are the list of stories from most recent to least recent. On the right is a search bar with the title of the stores listed below it.

14.3 English Story Page

The story page will show the content in more detail. The side bar will still exist to allow for searching and navigation. The page will also allow have a section to leave replies as seen in Figure 8.

The image shows a screenshot of a blog post. The main content area on the left features a post titled "First Story!" dated "MARCH 27, 2015" by "CCBLACKBURG". The post text reads: "This is your very first post. Click the Edit link to modify or delete it, or [start a new post](#). If you like, use this post to tell readers why you started this blog and what you plan to do with it." Below the text is a "Happy blogging!" message and a "Share this:" section with buttons for "Press This", "Twitter", "Facebook", "Google", "Reblog", and "Like". The post is categorized as "Uncategorized".

On the right side, there is a search bar with a "SEARCH" button. Below it are sections for "RECENT POSTS" (listing "First Story!"), "RECENT COMMENTS", "ARCHIVES" (listing "March 2015"), and "CATEGORIES" (listing "Uncategorized").

At the bottom of the post, there is a "Leave a Reply" section with a text input field labeled "Enter your comment here..."

Figure 8. English story page shows a sample story written in English. The right side contains a search bar along with categories one can click on. Also at the bottom of the post is an area where users can leave replies.

14.4 Spanish Story Page

This page will be similar to the English story page but will be displayed in Spanish. If a story is written in Spanish, the story will be displayed in Spanish by default.

The site allows for content to be displayed in Spanish. We are looking into readers being able to comment in Spanish and translate the written text into the other language (English to Spanish/Spanish to English).

Mi Primera Historia Española!

MARCH 27, 2015 / LEAVE A COMMENT / EDIT

Lorem ipsum dolor sit amet, appareat laboramus consequat ad pro, ne duo posse dicta malorum. In has dolore essent feugait, ceteros offendit epicurei nec ad. Homero populo vituperatoribus et sit, et duo urbanitas deseruisse quaerendum. Audire facilis ne cum, tamquam utroque vel te.

Ei pro ancillae eloquentiam, pro veri principes eu. Tollit indoctum occurreret nec et. Sed no fugit nulla nemore, graeci salutatus laboramus ei vel. Ex his blandit lobortis. Ei qui quando detraxit.

Sed an solet nullam mnesarchum, nominati scribentur ad qui, noster maluisset ex pro. Ex nostrum dissentias omittantur vim, vix at eripuit albucius. Sit tincidunt scriptorem comprehensam in, aequae mediocrem repudiare at mei. Fuisset perpetua at qui, at evertitur voluptatum nec. Iusto urbanitas disputationi no sea, vidisse consetetur reformidans vix ad, mel ex dicant democritum argumentum. Rebum iuaret iudicabit an eam.

Ei fastidii electram sea, modus incorrupte an vis. Eos ne idque sanctus. Ad porro scaevola usu. Placerat invidunt appellatur sea et. Eum eu quot eirmod ullamcorper, suavitate appellatur sed ne. Vim an mundi eligendi, offendit democritum nec ne.

Vix altera tibiue eu. Quo laudem pertinacia ea, labitur molestiae conclusionemque in his, unum facilisi ad nam. Illum perpetua eum ad, et vide epicuri defniebas sea, eu est laudem eruditi meliore. Vis rebum discere neglegentur ea.

RECENT POSTS

[Mi Primera Historia Española!](#)

[First Story!](#)

RECENT COMMENTS

ARCHIVES

[March 2015](#)

CATEGORIES

[Uncategorized](#)

Figure 9. Spanish story page is very similar to the English page but rendered in Spanish. It also lets you leave replies at the bottom of the page and has a search bar on the right side.

14.5 Multimedia Story Page

This page shows a story with images. The image will be clickable to view at full resolution. The client can embed more than one image/video.

First Story!

MARCH 27, 2015 / CCBLACKBURG / EDIT



This is your very first post. Click the Edit link to modify or delete it, or [start a new post](#). If you like, use this post to tell readers why you started this blog and what you plan to do with it.

Happy blogging!

Share this:



Be the first to like this.

Uncategorized

RECENT POSTS

[Mi Primera Historia Española!](#)

[First Story!](#)

RECENT COMMENTS

ARCHIVES

[March 2015](#)

CATEGORIES

[Uncategorized](#)

Figure 10. Multimedia story page shows a sample story with a picture above the content. As always, replies can be posted at the bottom. A search bar is on the right.

14.6 Search

This page will allow users to search through content. Stories will be searchable by their title, the content inside, of them, or tags they are given while being created.

SEARCH RESULTS FOR: FIRST STORY

First Story!

MARCH 27, 2015 / LEAVE A COMMENT / EDIT

This is your very first post. Click the Edit link to modify or delete it, or start a new post. If you like, use this post to tell readers why you started this blog and what you plan to do with it. Happy blogging!

Figure 11. Search page shows a sample search result. Once a search is initiated, a list of stories will be shown based on their titles and content.

14.7 Extensions Planned

- Translation between the languages.
- Glossary to look up Kaqchikel terms
- More pages across Navigation bar for additional content

15 Testing

15.1 Usability Testing

We made a WordPress website for our project, which is a website created using online tools, to make viewing and uploading blog posts much simpler. Since our project is a website built on an online platform we could not run unit tests, so we determined that usability testing would be the most appropriate form of testing.

In our tests we asked multiple users to complete tasks on our webpage, like viewing a story, uploading content, searching for stories, and leaving a reply on a story. These usability tasks showed us whether the webpage was simple to use, whether our website layout was appropriate for the task, and what changes were needed to improve the experience for people when uploading content and viewing content on the webpage.

15.2 Usability Tasks

The first and most important task we performed was asking a user to upload sample content to the webpage. We asked the user to go to the WordPress website and add a story to the page.

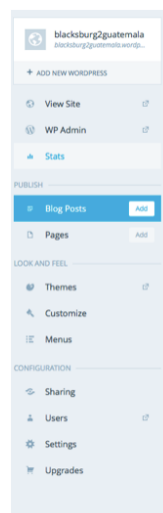


Figure 12. The side menu on the WordPress page, shows the publisher options for website settings, blog post management, look and feel settings, and configuration settings.

The figure above shows the side panel to the publisher and it has an Add button next to the blog posts option. This was pretty intuitive to the user, and the user was easily able to create a story to the page. This helped us determine whether WordPress was a reliable tool to use, or if we should have moved on to a different tool.

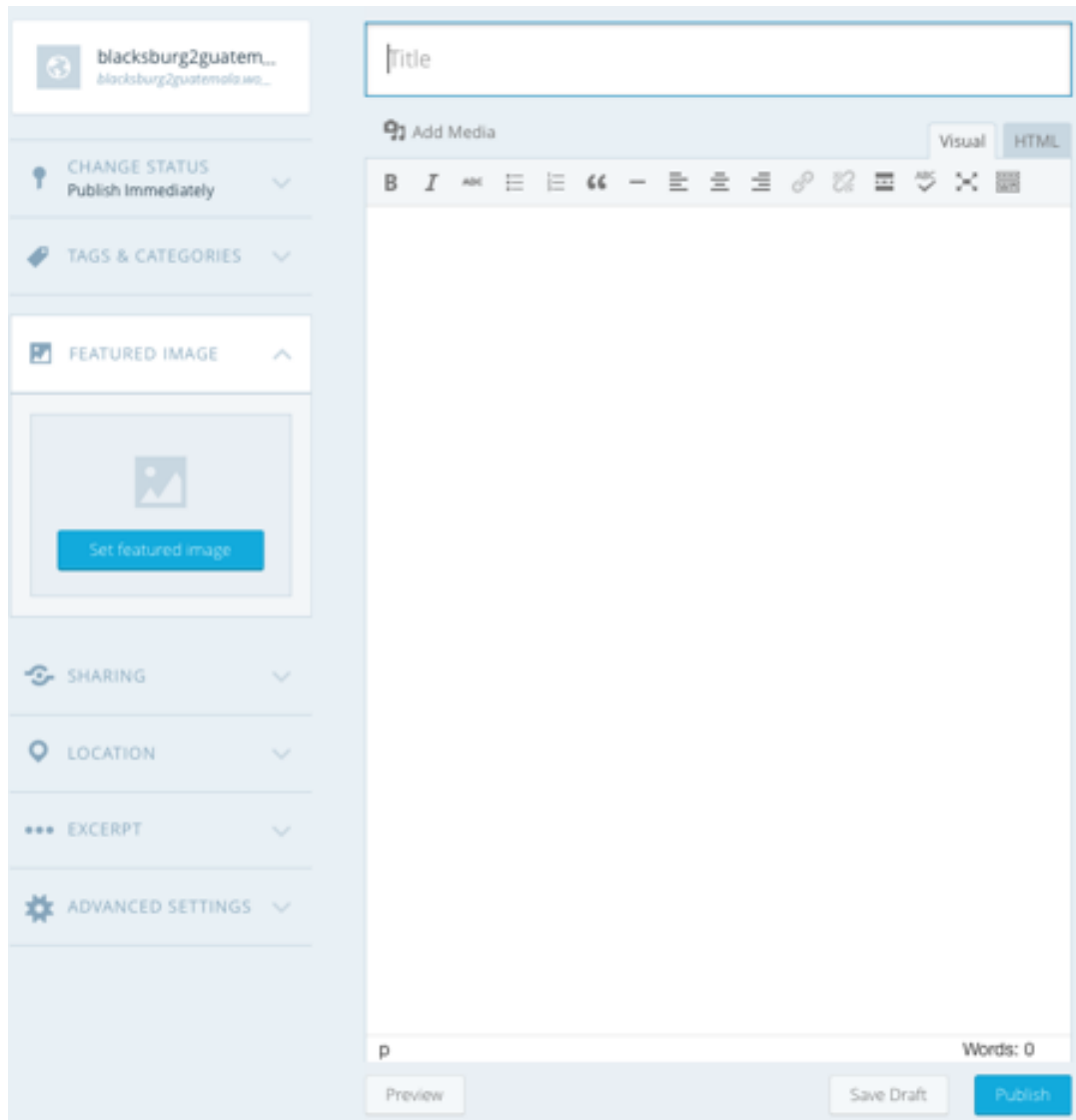


Figure 13. This figure is what is shown to the publisher after they hit the Add button. It gives the user an easy to understand user interface for adding content to the webpage.

The screen illustrated in Figure 13 was clear to the user. They knew exactly how to add the title to the story, and how to add text to the story. The only difficult part was adding an image embedding into the story. WordPress gives the user an option for uploading a feature image and adding images to the story. The feature image is added to the header of the story, while images added in the text editor are embedded into the story. Resizing the photos in the story can be tricky, but the users indicated they could get it with practice.


The second task we gave to the user was to see how easy it is to view stories on the webpage. We gave the user the link to the webpage, and asked them to view a story. They were able to view the story by clicking on the title. The text in the title even turned green when the user hovered their mouse over it. The users could also click on the “recent posts” tab in the menu on the right. Overall the user thought the navigation around the website was relatively simple to use. This further confirmed our choice of using the WordPress tool.

The next task for our users was to search for a story in the WordPress website. The users tried to search for stories by either entering the title of the story or any text in the story. The search on WordPress works like that of any other website. The users were able to search for stories easily.

The last task we gave users was to leave a comment or reply on the story. The users could either press the “leave a comment” button in the front page or go to the story and leaving a comment on the bottom of the story.

Leave a Reply

Enter your comment here...

 **ccblackburg**: You are commenting using your WordPress.com account. 
([Log Out](#) / [Change](#))

Notify me of new comments via email. Post Comment

Figure 14. The figure shows the text box that is placed on the bottom of every story for users to leave comments and replies. Once the user is done with his or her comment, they can press the post comment button to publish it to the story.

One thing that did not make sense to users was the ability to leave a comment on a story from the front page, because that doesn't guarantee the user has read the story. People could possibly spam a story with comments, or post comments that might be irrelevant to the story.

The usability tasks helped us learn a lot about how the users would interact with the webpage, and whether WordPress was the ideal tool for this task. Our usability tests showed us that the users found it fairly intuitive to complete tasks using the WordPress tool.

15.3 Security/Privacy Testing

Security was a primary concern to the client, as spam and hacking attempts should be avoided. The client wants an easy and simple way to talk to their readership without having to deal with spam from marketing campaigns. Another focus of the client was security in that only the parishes should have access to posting content. We designed specific solutions to meet the client's needs.

15.4 Secure Posting

We restricted posting access to the website to just the parishes involved. This way, outsiders can only view the content and cannot delete/post new stories. The parishes will have to login using the following login page with their given usernames/passwords.

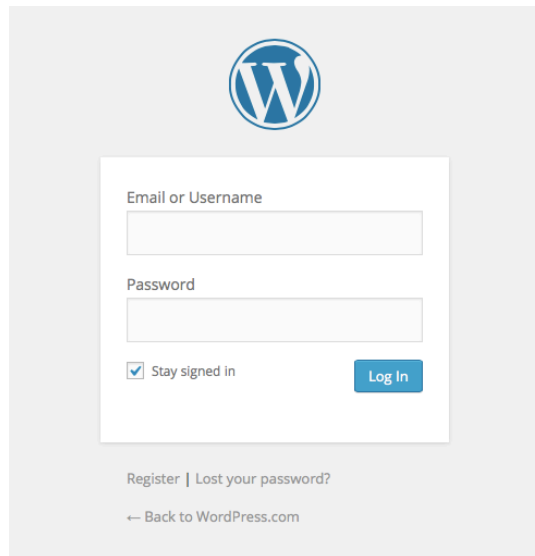


Figure 15: This is the login page for Wordpress that the parishes will use. Without signing in here, the website will be read-only.

We have tested this login to make sure only the parishes could publish new content. We can assure the client that no unauthorized changes will be made to the website.

15.5 Preventing Spam

We were faced with a problem as the client wanted interaction with the readers but did not want to get exposed to any spam. We incorporated the standard WordPress commenting platform to provide users the ability to respond with the content.

Leave a Reply

Enter your comment here...

Fill in your details below or click an icon to log in:

Notify me of new comments via email.
 Post Comment

Figure 16: This shows the standard commenting window on the website where users can interact with each other and express their thoughts.

We require users to specify their email and name to prevent spam. In our testing this worked pretty well. However, some users decided that putting a fake email was the easiest way to post a comment. Also, in our testing we found that this would not prevent robots from spamming the website. We believe adding a captcha to the commenting interface would help prevent these kinds of attacks.

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