Association of Information Technology Professionals

College Student Chapter

2014 AITP NCC Web Project Competition PHASE II

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Project Scope Statement

Project Name:	The New DESRIST Upgrade Project
Prepared by:	KBS Pro
Date:	Nov 15, 2013

1. Executive Summary

The Website Redesign Project is a KBS Pro effort to re-envision, redesign, and develop the existing DESRIST website. DESRIST is a portal for design science research in information systems and technology. It aims to promote an online community by providing community services, knowledge base, directory, and other information and services.

The main goal of the project is to create a website that facilitates user interaction and communication. The website will be open and integrated with many third party services.

This project has a number of objectives, such as improving site usability and organization, improving better user interface design, better functional design, creating a website with a contemporary and consistent look, and updating website through the use of evolving technologies and best practices in website design.

2. Project Objectives

2.1 Overall Objectives:

Redesign DESRIST to meet the following objectives:

1. Provide Resources/Knowledge repository
2. Improve authoring, collaboration, publishing, and usage tracking for Design Science Research in Information Systems
3. Use public authentication services
4. Provide basic member services
5. Use content management system for consistency
6. Integrate with social network resources
7. Make the website mobile device friendly

2. Project Objectives

2.2 Business Objectives:

- Promote the sense of community, community of practice
- Provide open learning resources for the discipline, resource portal
- Promote the annual conference
- Increase Recognition
- Associate with Social Networks, such as LinkedIn and Google+

3. Project Deliverables

Included:

- The Web Application based on Client's Requirements
- User Manual and Technical Documentation for the Web Application

4. Project Milestones

Estimated Schedules

Project Milestone	Target Date (MM/DD/YYYY)
Project Start	10/10/2013
Project Definition and System Analysis	11/15/2013
Develop System and Site Design	01/31/2014
Construction and Implementation	03/07/2014
Create Technical and User Documentation	03/21/2014
Project Complete	04/12/2014

Feasibility Study

1. Overview

In the DESRIST Upgrade Project, the feasibility study phase aims to provide an overview of the site's issues in order to support a request for upgrading the site. KBS Pro will consider alternatives for the project. The recommended alternatives will set a sound basis for web design and implementation of the web application. This feasibility study defines project goals, scopes client requirements, and assesses alternatives to satisfy the Stakeholder. The project team will conduct the feasibility study following the steps illustrated in the Figure 1.

**Figure 1: Feasibility Study Process**
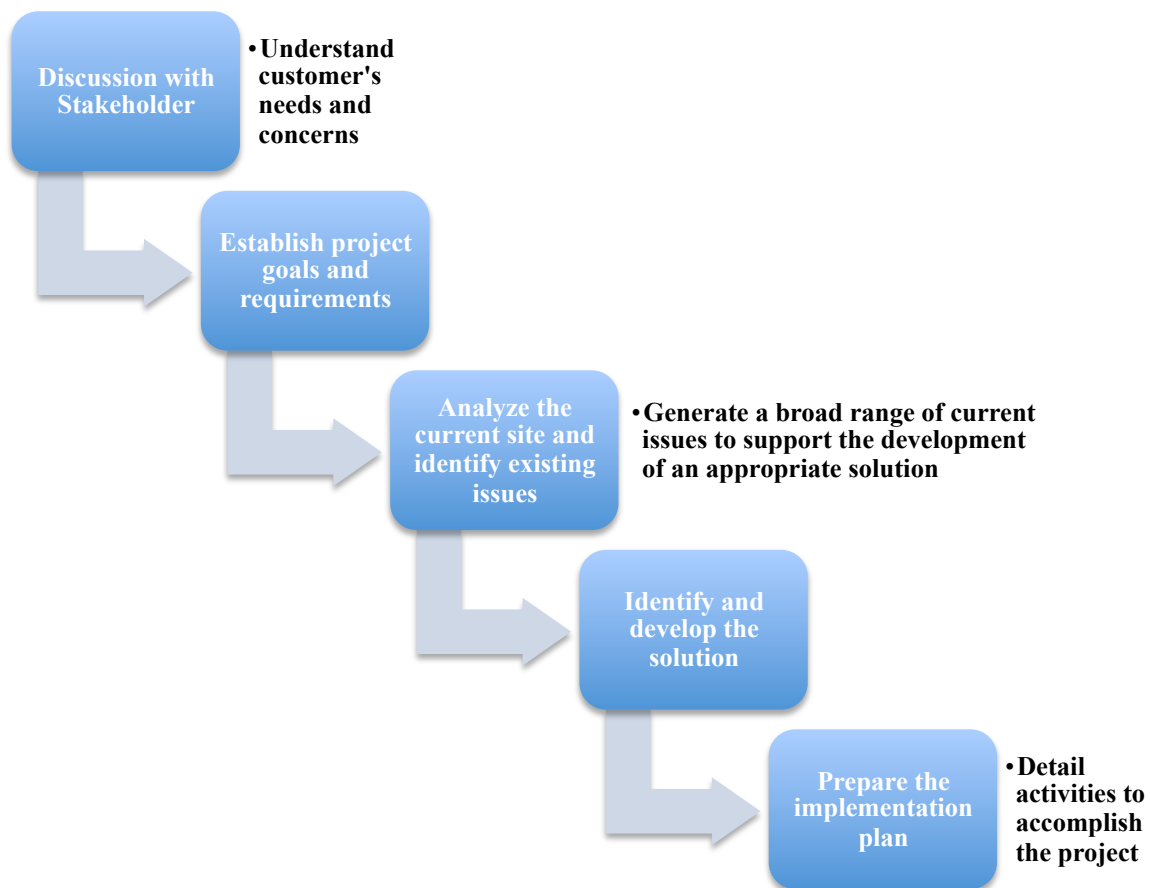
2. Discussion with Stakeholder

KBS Pro met with the client, DESRIST, to identify current issues, potential issues, and project requirements and to shape the feasibility study that effectively addresses their requirements. Through this discussion client described their needs, desires, and concerns.

The client's needs include the following items:

1. Member Services (Profile, Login, Activities)
2. Resources/Knowledge repository: database driven, community driven (post, review, rate) and usage tracking
3. Content management system for consistency
4. Use public authentication services
5. Building a Solution for the Overview Article "Design Science Research in Information Systems", including Paper Authoring, Collaborating, and Publishing
6. Better integration with social networks
7. Mobile device friendly

Figure 2: Project Goals Analysis Hierarchies
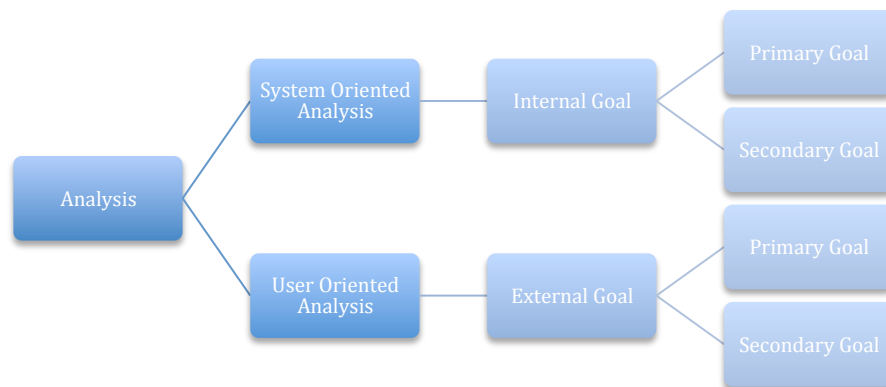
From client's perspective, KBS Pro separates user-oriented analysis and system-oriented analysis (Figure 2) in order to:

- Analyze and optimize functional and non-functional requirements.
- Define functional requirements need to be optimized from the system point of view.
- Identify non-functional requirements need to be suited to the visitor/client needs.
- Establish quality assurance, verification, and validation purposes.

In the user-oriented analysis model, the project team identifies the non-functional requirements by using knowledge about user, environment, interaction characteristics, and nature of the visitors. The user-oriented analysis model goes through the scenarios in site's design, client's perspective, and system user model.

On the other hand, in the system-oriented analysis model, the project team identifies the functional requirements by considering functionality, resources, and other technical detail of the system.

## 3. Feasibility Study based on the Project Objectives

At this stage, KBS Pro uses the Stakeholder Analysis framework and User-centered Design process as guidance. The Stakeholder Analysis structure (Figure 3) proposes a knowledge-based approach to identify and understand Stakeholder's needs and to establish a solution that is suited to the project objectives. It also enables the team to effectively perform system analysis and Stakeholder opinion sampling.

**Figure 3: Stakeholder Analysis**
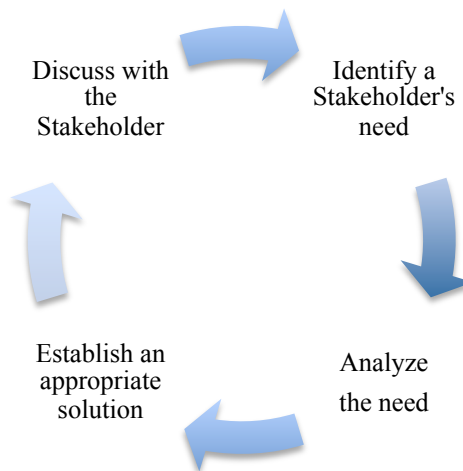
The User-centered Design process (Figure 4) allows the team to consider user's perspective. The processes of user-centered design framework include requirement gathering, needs assessment, design for solution, and usability assessment. However, at this phase, the project team is conducting only assessment and analysis of Stakeholder's and User's Requirements.

Figure 4: User-centered Design Methodology
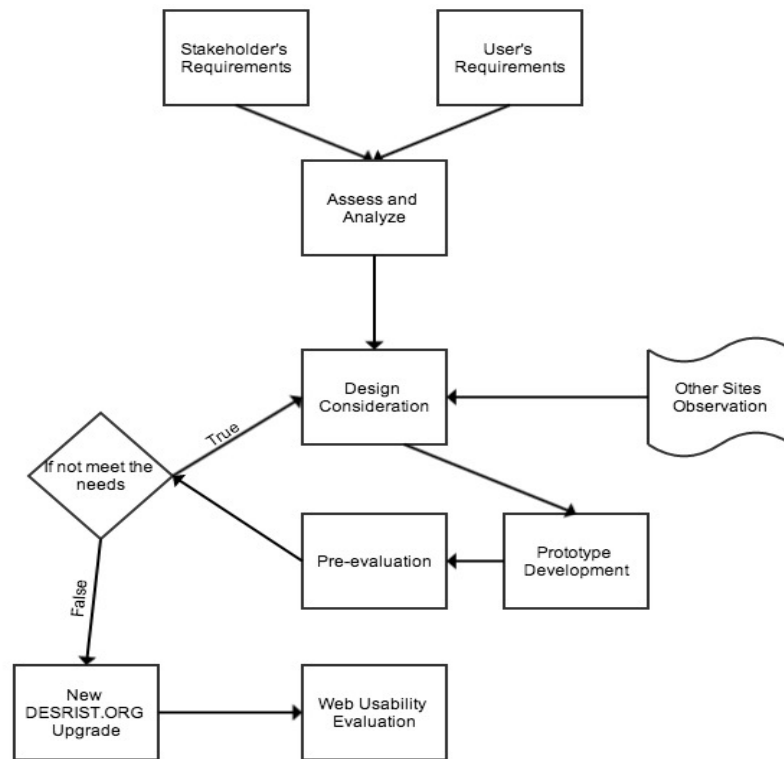
The team conducts system analysis on current design of the website (Figure 5) using two frameworks detailed above and establishes preferred solutions, which are suited the project objectives and requirements. The proposal for the project is to develop the site into a composite web-based Internet application and with better social network integration. Use of public authentication services and mobile supported design also need to be considered as a feature that provides significant services for users.

Figure 5: Current Website Design
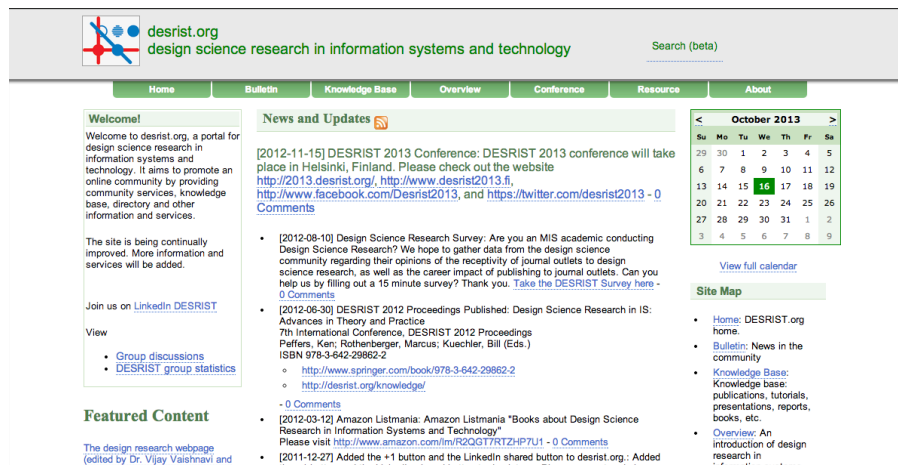
The preferred solutions include the following:

1. **Resources/Knowledge Repository**

   The current DESRIST contains two resource pages, including the Knowledge-base page and the Resource page, separated by types of the resources. The pages are storing the data on their own page, and only web administrators can update the data. To improve updatability and maintainability of the website, the team combines those two web pages into one Resource/Knowledge page, and all Resources/Knowledge content will be stored in databases. The page will allow all members to publish a new resource that is related to the field.

   Database Driven: Maintainability is an important quality attribute. Since the current version of DESRIST is storing its data using the method of page storage management, it's difficult for administrators to maintain the web pages without the files in their computer. Hence, a database-driven web application can help them improve the maintainability of the website.

   There are couple of available database server options, SQL Server and MySQL:

   > **Microsoft SQL Server** – SQL Server provides functionality, feature completeness, and inclusion of GUI tools such as graphical user, administration, and data modeling interfaces.

   > **MySQL** – The crucial advantage of MySQL is speed, and it's often used for small website. Unless a website uses functions, such as Cache Module, that could alleviate a lot of pressure on database, MySQL makes up no performance difference. The free version offers data modeling, code testing, and server management interfaces.

   Community Driven: The Resource/Knowledge page will heavily rely on user generated content.

   Internal Usage Tracking: A usage tracking system is used to monitor usage of the content in the website for statistical purposes. For example, the website provides users the ability to sort the content by rating, most views, and most discussed. This tracking system will track users' activities, such as editing the Overview article, commenting and rating on resources, and publishing a new resource. Additionally, the usage tracking system can record users' login history as it is demonstrated on the figure 6.

Figure 6: Usage Tracking Diagram
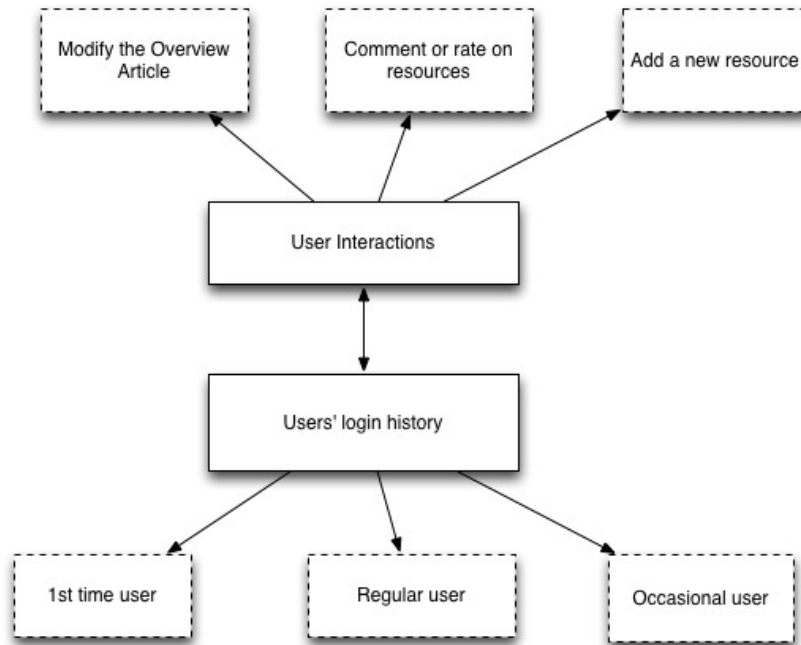
2. **Building a Solution for the Overview Article "Design Science Research in Information Systems", including Paper Authoring, Collaborating, and Publishing**

The current website contains the Overview article in a PDF file, which makes it impossible for users to have more interaction than just viewing. The new upgraded version of DESRIST will let users to have more interaction with the help of public document hosted on a cloud service such as Google Docs. The Google Documents List Data API allows the website to manipulate general operating system file management tasks including upload and modifying permissions (Figure 7). The Overview article will be stored in Google Docs format in its server and be provided a viewing permission for all users and editing and uploading permissions to login users. The users will play a crucial role in effectively correcting and enhancing resources.

Figure 7: Google Docs Case Model
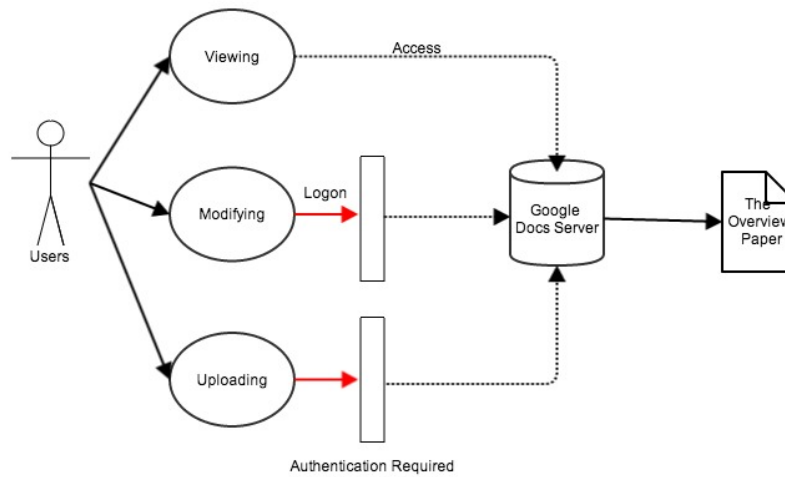
Data Synchronization: With Google Docs, DESRIST eliminates a document inconsistency problem that occurs during updating a document on the server at the same time.

3. Use of Public Authentication Services

DESRIST will provide alternatives for users to choose whether they want to sign up with the website or use a 3rd party account. KBS Pro considers using the following authentication services:
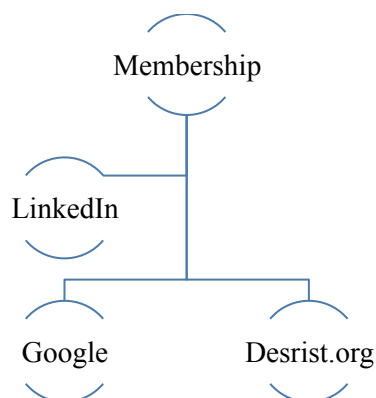
- LinkedIn
- Google

The web application requires all users to login with a Google, LinkedIn, or Desrist account in order to access protected services (Figure 8). The great benefits of using public authentication services are that these services will let users get access to the web application without having to handle users' account login information.

Figure 8: Authentication System
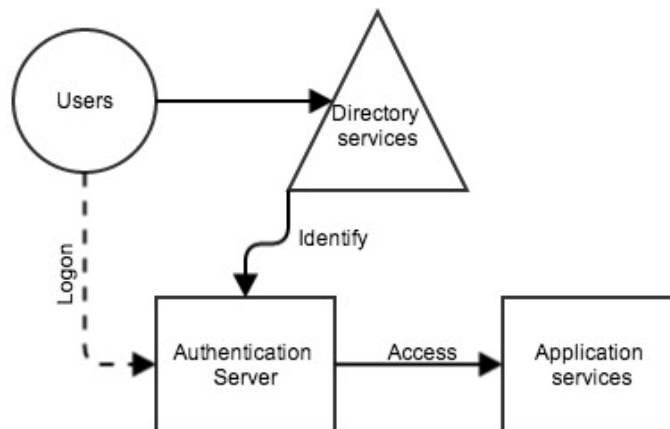
4. Member Services

DESRIST will provide membership options for users (Figure 9), including public authentication services like Google, and DESRIST will provide such services itself. Membership services consist of user profile, activities, comments, and ratings. Users are required a login to update content sites with privileged access and the status of membership. All types of membership will have same privileges to view, blog, and edit the content of the website, except for activities that connect to other websites.

Figure 9: Membership Structure

User's Profile: KBS Pro creates a profile page for every member. In the case of LinkedIn and Google users, the profile page is automatically filled out with user's information, such as name, contact, and company stored by the other service. Either LinkedIn or Google provide Member Profile plugin, which is an API

authentication model, to pull profile data and display it on the website. Figure 10 illustrates how Google API works.

**Figure 10: Google Sign-In for Server-Side Applications
(Retrieved from https://developers.google.com/+/)**
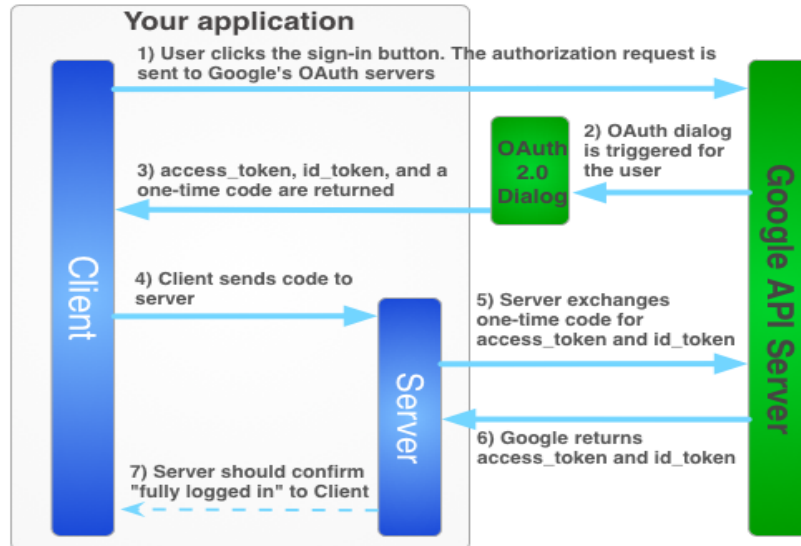
User's Review and Rating: Members will be able to review and rate on contents and resources of the website.

5. **Content Management System for Consistency**

Content Management System (CMS) provides the maintainability and consistency that allow web administrators can easily manage content on the website. DESRIST will have bloggers who are permitted to publish, edit, and modify content. CMS allows these bloggers who might be non-technical users to update text and images easily, without needing any computer programming skills. The figure 11 illustrates how CMS interact with administrators and users.

Figure 11: CMS Architecture
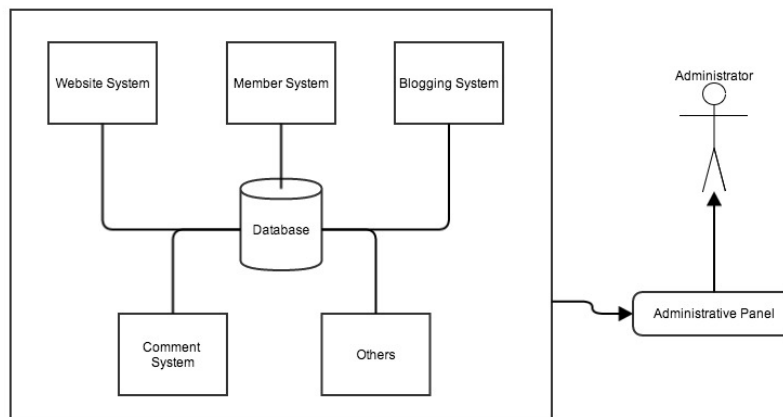
Some of the reasons for using a CMS are:
- No licensing fee
- Update to CMS are automatically distributed
- Incorporate many features that enhance usability
- Search engine optimization

There are many efficient and effective CMS templates such as WordPress for PHP and Orchard for ASP.NET. These two providers are the most well-known Content Management System for each of the languages.

WordPress is a free and powerful content management system. It can be used as a platform for blogging and is optimized for publishing and changing content.

Orchard is very powerful ASP.NET development tool. It provides the rapid application development model, which allows to the team to build a web application much faster. The Orchard CMS is built on existing frameworks and libraries.

The main task of the website is to efficiently and effectively guide users to the content and functionalities of the system. Since information architecture and navigation is complex, especially information portals like DESRIST, KBS Pro will analyze and designs the website structure. In the website structure analysis, the team defines a structure for the website, which suites to the way of how users use the website.

6. Better Integration with Social Networks

With the use of public authentication services, the website will provide features for members to have social interaction on social networking websites. Common features include signing in, sharing interactive posts, accessing to people and profiles, and content recommendations.

Sign In: as it is mentioned in the Use of Public Authentication Services section, DESRIST provides alternatives for users to choose whether they want to sign up with the website or use a 3rd party account.

Mash up 3rd Party Activities into the Website: 3rd party companies such as LinkedIn provides API to allow website users to access to read and interact with 3rd party activities.

Sharing Interactive Posts: Interactive posts provide an easy and convenient way to allow users to share the website or posts with their connection to the social networking website.

People and Profiles: with this feature, DESRIST has no need to handle user's account login information.

Content Recommendations: content recommendations combine search with social data to greet visitors with additional relevant recommended content on the website.

7. Mobile Supported Design

There are a number of Orchard themes that supports browsers on mobile devices. KBS Pro will consider available options in the next phase (Design phase) and choose the most suitable one for DESRIST. The figure 12 is an example for a mobile supported theme.

Figure 12: VuLu Theme for Orchard CMS
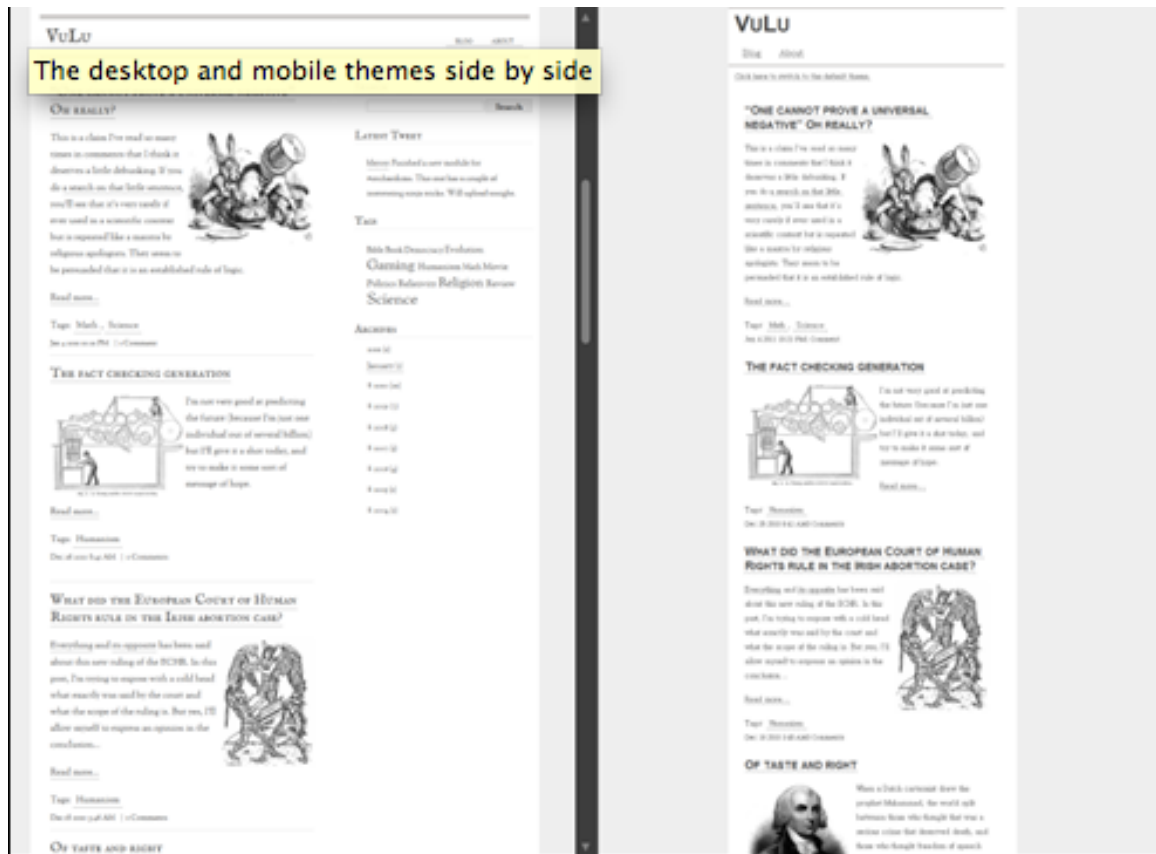
Interview Questions for Stakeholder

1. Goal of the project

Question: What is the goal of the website?

Answer:

- Portal for the DESRIST knowledge and community
- Promote the research method
- Establish community
- Resource gateway
- Promotion and archival of the conference

Question: What aspects of your website that made you not satisfied with?

Answer: Lack of participation, resources need to be continually updated/added – not database driven, weak integration with other resources.

Question: Are there any aspects of your website that you think it need to be improved?

Answer:

- Provide Resources/Knowledge repository
- Improve authoring, collaboration, publishing, and usage tracking for Design Science Research in Information Systems
- Use public authentication services
- Provide basic member services
- Use content management system for consistency
- Integrate with social network resources
- Make the website mobile device friendly

Question: Is there anything on the current website that needs to be removed?

Answer: No.

Question: Is there anything on the current website that must stay intact?

Answer: Conference information, news and updates, and DESRIST paper.

2. Purpose of the website development

Question: What are the most important factors of the new website?

Answer: Sense of community, web 2.0, participation, collaborative filtering, resource repository, database driven, easy management, and multiple users.

Question: What is the target demographic of your website? Are there any specific sections or industries we have to focus on?

Answer: Anyone interested in DESRIST, including faculty, researcher, students, and IT professional who is interested in research.

3. Desired functions

Question: What kind of resources do you want to include? How would you like to manage those resources?

Answer: Resources include books, websites, communities, courses, articles, journals, etc. use a database to manage, through web interfaces. Added/reviewed by users.

Question: We ensured each page and blog post is sharable by including relevant Social Media share buttons. Which social media would you like to?

Answer: Google+ and LinkedIn.

Question: Where is the Overview article hosted? How can it be edited and posted?

Answer: This paper will be edited in Google Docs and published by Google Docs; integrated/wrapped under desrist.org – two editors will collaborated on the paper itself.

4. Desired improvements

Question: Do you have any style preferences for the new website?

Answer: Keep the current theme with minor changes.

Question: What are the major sections of the website – main menu items?

Answer: Home, about, resources, overview paper, and conference.

Question: What can users do? How do authenticated users interact with the website?

Answer: Add/suggest resources, comment/review/rate resources, discussion of the paper, search and communicate with other users, add profile info.

5. Technical requirements

Question: Will you require responsive design (adapts automatically to mobile devices)?

Answer: Yes.

Question: Where is the website hosted? What are the system features?

Answer: Currently hosted by a commercial hosting company on a Windows server. Also, it needs to support ASP.NET and SQL Server.

Question: Do you need a CMS?

Answer: Maybe, as long as it is easy for content update and used by multiple users, and serve members.

Database System

Database system will be used for various tasks such as manipulating data on DESRIST. As it is mentioned earlier, KBS Pro is considering two options for database server: MySQL and SQL Server. Once a database server is picked, it will help website administrators maintain the website by managing the content, news updates, and resources of the website. One of primary services of the website is to provide resources to users and allow them to create and modify resources. The Database system is needed in order to implement this task because it consists of the development of a web-based data access system, which allows users access to the database system in real time. With use of database system, DESRIST can provide database-driven features, including admin login, content/information manipulation, and storing content in a table.

1. Website administration

Administrative tools in the website will help uphold DESRIST's consistency level. For instance, website administrators will be involved in activities of the website, including updating content, resource, news, and update and maintaining a service level through content management system (CMS). Administrative tools will help enforce a consistent design centered around services and information that is relevant to users.

Administrative activities involve the following subjects:

Administration Login: The administrative login is a method for user identification that will grant access to the administrative panel of the website. The administrative panel consist of administrative tools that allow the user to customize the website.

Administrative Tools: Website administrative tools that are included with CMS provide a web interface for managing the configuration setting of DESRIST. In order to use a particular administrative tool to customize the website, the user's credentials must have a particular authorization. For example, users who are assigned Author role will have Write and Modify permissions to allow them to manipulate their own blogs. User roles will be described more in detail in the Tables section.

Website administrative tools include:
1. Content management – enables users to create, modify, and delete blogs, blog posts, comments, and etc.
2. Queries – allow users to create a query for a specific task, such as to display specific information on a web page

3. Modules or Plugins – are an extension for CMS that provides particular feature to users
4. Themes – are a template for CMS that users can customize a layout of the website

2. Tables

The structure of the data in the database will be identified in Phase III (Project Design). At this stage, the team identifies tables to store essential information for the web application, including the following:

Website Content Handled by Content Management System (CMS)

CMS allows administrators to modify and retrieve data in database through an administrative panel. The administrator can retrieve recorded content detail, members' profile, and website's appearance setting. The administrator can modify website's appearance, content, members, and others in the database through administrative panel. CMS serves the following data:
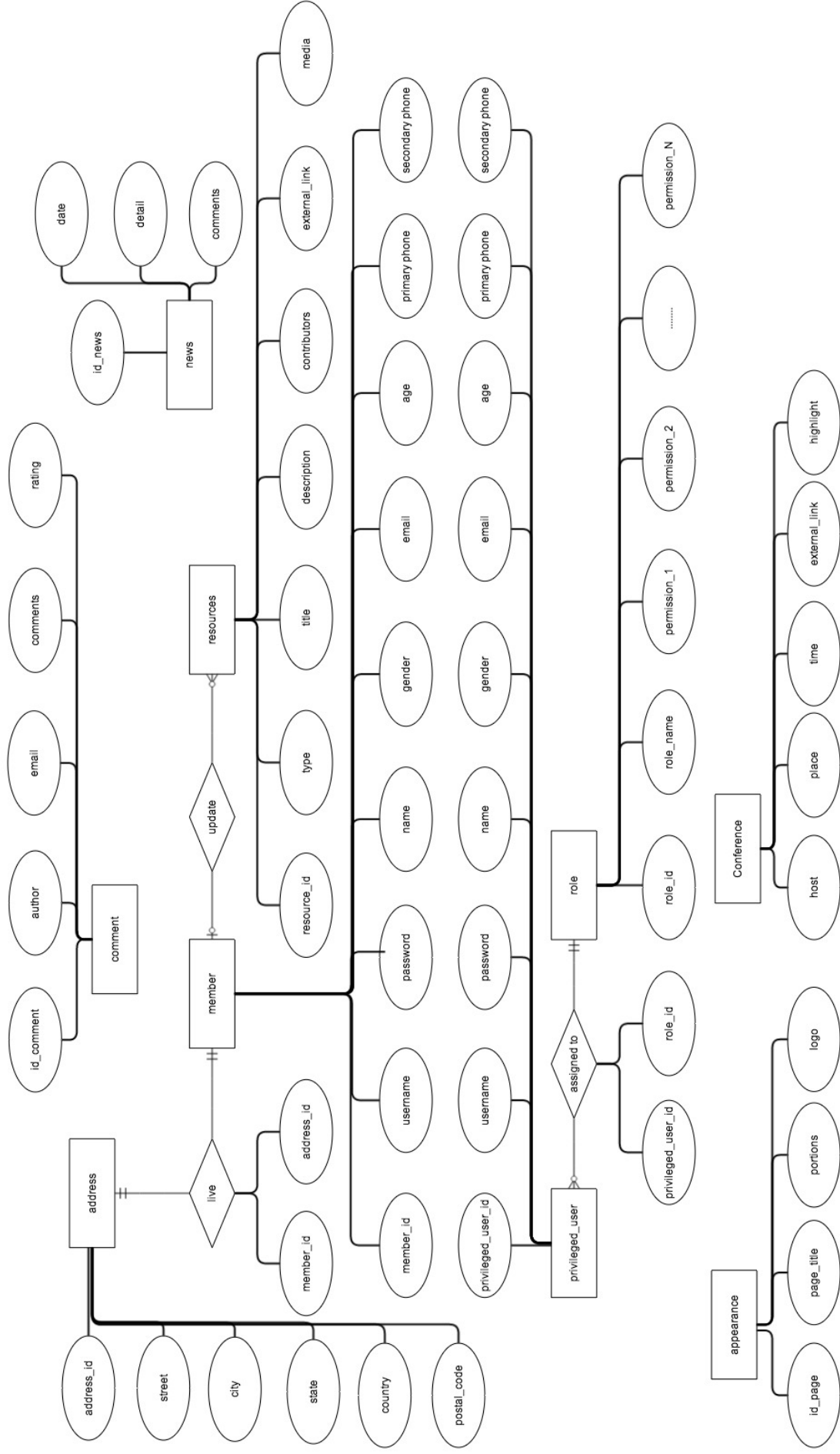
1. Web pages – is responsible for webpage appearance modification related functions, such as changing font and colors of each webpage sections, changing logo picture, and changing banner picture.
2. Page content – is responsible for content modification related functions, such as content definitions and types. Page content includes audio, blog, calendar, document, external media, video, and etc.
3. Member system – is responsible for member related functions, such as creating members, managing members, and managing member roles. Member roles include authenticated, author, administrator, and editor. Furthermore, administrators are able to create a role that has specific permissions.

User Data

1. Custom database
    1.1 Resources – are educational materials, such as books, courses, events, communities, websites, and papers related to design science research in Information System Technology (IST).
    1.2 Conference information – all information related to DESRIST conferences, such as time, place, host, proceedings, and highlights.
2. Service based database
    2.1 Comments and rates for resources – contain such information, including a user's name, rating, title of a comment, and comment.
    2.2 Internal tracking – is used to monitor usage of the content in the website for supporting sorting functions, such as rating, most views, and most discussed.

Data Served from 3rd Party Services

1. Basic user profile – the user's information that the web application pulls from 3rd party services, such as LinkedIn and Google. User profile includes a title, affiliation, name, external link to the original page, and etc.
2. News and updates – all information related to the historic and current events of DESRIST. The information includes the content, published date, and comment.
3. Authentication – is a trusted way to let users sign in with 3rd party credentials, such as LinkedIn and Google.
4. Web analytics – services provided by Google. Web analytics are used to study the impact of the website on its users by analyzing traffic stat, audience data, browser report, etc.

ER Diagram

news
- id_news
- date
- detail
- comments

comment
- id_comment
- author
- email
- comments
- rating

resources
- resource_id
- type
- title
- description
- contributors
- external_link
- media

member
- member_id
- username
- password
- name
- gender
- email
- age
- primary phone
- secondary phone
- address_id

privileged_user
- privileged_user_id
- member_id
- username
- password
- name
- gender
- email
- age
- primary phone
- secondary phone

role
- role_id
- role_name
- permission_1
- permission_2
- ......
- permission_N

address
- address_id
- street
- city
- state
- country
- postal_code

Conference
- host
- place
- time
- external_link
- highlight

appearance
- id_page
- page_title
- portions
- logo

Relationships
- update (member — resources)
- live (member — address)
- assigned to (privileged_user — role)
  - privileged_user_id
  - role_id

Final Proposal

Findings and Recommendations

System

KBS Pro proposes to build a new DESRIST website to be hosted on the server owned and supported by Southern Polytechnic State University. The website will be built using Orchard CMS, which is open source Content Management System (CMS) built on the ASP.NET MVC platform. Orchard provides an administrative interface that allow web administrators can easily manage and maintain the website. Moreover, Orchard allows users who have proper permissions to publish, modify, and delete content without technical and computer programming knowledge.

The team has chosen Orchard because:

- Designer Control – Orchard is designed to allow administrators to create alternative templates that support any modules or fields they want to use.
- Semantic Modeling – Orchard allows administrators to create custom content types and put them together with reusable content parts and fields

Services

Resources/Knowledge: KBS Pro proposes to create a page containing resources and knowledge related to design science research in information system technology for updatability and maintainability. This Resources/Knowledge page is driven by a community-focused system that allows members of the website to publish, comment, and rate a resource.

Google Docs Service: Google Docs is a suitable solution for paper authoring, collaborating, and publishing. Google Docs is a web-based office suite that allows users to create and edit a document online while collaborating with other users in real time. Thus, web administrators can edit and publish the overview article, titled Design Science Research in Information Systems, at anywhere and anytime with or without the file.

Public Authentication Services: The team will rely heavily on 3rd party authentication services, such as Google and LinkedIn. In order to get access to any activities on DESRIST, users are required to sign up with a DESRIST account or a 3rd party account. If users choose to use 3rd party account, these services will let users get access to the web application without handling users' account login information.

Social Networking Services: DESRIST has features for users to share web content on popular social networking services, including LinkedIn and Google+. It also has a feature to receive content recommendations relevant to user's historical interactions.

Mobile Support: Orchard CMS has a module called Vandelay Theme Picker which will choose different active themes for user agents regarding a browser that is being used. With this module, a web administrator can provide a mobile theme for visitors who are using a phone's browser.

Appendix

Complete Requirement Analysis Documentation

1. General

1.1. Hosting: Commercial hosting company on Windows server that supports ASP.NET and SQL Server
1.2. Web Programming Language: ASP.NET MVC
1.3. Database Server: SQL Server
1.4. Content Management System: Orchard
1.5. Sitemap

2. Resources/Knowledge Repository

2.1. The administrators shall be able to add, modify, and delete resources.
   2.1.1. **Description**
      After properly logging into the website, the administrator is able to add, modify, and delete resources.
   2.1.2. **Technical issues**
      Pre-condition: the administrator is properly logged in.
      Post-condition: the resource will reflect to the administrator's addition, modification, and deletion.

2.2. Members of the site shall be able to add and suggest resources.
   2.2.1. **Description**
      After properly logging into the website, the user is able to add and suggest a new resource.
   2.2.2. **Technical issues**
      Pre-condition: the user is properly logged in.
      Post-condition: the resource that users added will be posted on the proper section of the page.

2.3. The site members shall be able to comment, review, and rate on resources.
   2.3.1. **Description**
      After properly logging into the website, the user is able to comment, review, and rate on resources.
   2.3.2. **Technical issues**
      Pre-condition: resources should already exist, and the user is properly logged in.
      Post-condition: the comment, review, and rating that the user provided will be posted on the proper section of the page.

3. The Solution for the Overview Article "Design Science Research in Information Systems"

3.1. The web application shall be able to provide the direct link to the overview article that is stored in Google Docs.

   3.1.1. **Description**
   After properly logging into the website, the user is able to access to the overview article that is stored on Google Docs.

   3.1.2. **Technical issues**
   Pre-condition: the user is properly logged in, and the overview article should be already stored on Google Docs. The document should also have permissions to read and edit.
   Post-condition: the user is able to access to the article.

3.2. The administrators shall be able to modify the overview article.

   3.2.1. **Description**
   After logging into the website, the administrator is able to modify the overview article.

   3.2.2. **Technical issues**
   Pre-condition: the administrator is properly logged in.
   Post-condition: the article will reflect the administrator's modification.

3.3. Members of the site shall be able to comment and review on the overview article.

   3.3.1. Description
   After properly logging into the website, the user is able to comment and review on the overview article.

   3.3.2. Technical issues
   Pre-condition: the user is properly logged in.
   Post-condition: the comments and reviews that the user provided will be posted on the proper section of the page.

4. Use of Public Authentication Services

4.1. The web application shall be able to display 3rd party's login page.

   4.1.1. **Description**
   The website is able to display 3rd party's login page.

   4.1.2. **Technical issues**
   Pre-condition: the website is properly coded, and the login page is displayed.
   Post-condition: the user is able to access into the website through the login page.

4.2. The users shall be able to log into the website by using 3rd party account, including Google and LinkedIn.

   4.2.1. **Description**

After accessing the website's main page, the user is able to log into the system with their Google or LinkedIn accounts.

4.2.2. **Technical issues**

Pre-condition: the login field is already provided.

Post-condition: the user will have access to the system privileges.

5. Member Services

5.1. The web application shall be able to display member's profiles.

5.1.1. **Description**

The website is able to pull user information from the 3rd party companies, including Google and LinkedIn, and displays user's profile page.

5.1.2. **Technical issues**

Pre-condition: the website should be able to connect to the 3rd party's server to pull user data.

Post-condition: users who are logged in will have their own profile page.

5.2. The users shall be able to see other user's profiles.

5.2.1. **Description**

After properly logging into the website, the user is able to see other user's profiles.

5.2.2. **Technical issues**

Pre-condition: the user is properly logged in.

Post-condition: the user will have access to other user's profile pages.

6. Content Management System

6.1. The system shall be able to display web pages according to administrator's modifications.

6.1.1. **Description**

The Content Management System, Orchard, should be able to display all web pages according to administrator's modifications.

6.1.2. **Technical issues**

Pre-condition: Orchard CMS is installed on the web server with all necessary configurations.

Post-condition: the system will display all web pages.

6.2. The administrators shall be able to modify web pages through an administrative panel.

6.2.1. **Description**

After properly logging into the website, the administrator should be able to modify a web page through an administrative panel.

6.2.2. **Technical issues**

Pre-condition: the administrator is properly logged in, and Orchard CMS is installed on the web server with all necessary configurations.

Post-condition: the administrator can modify a web page through an administrative panel.

6.3. The users who are assigned to a specific role shall be able to do their tasks.
    6.3.1. **Description**
        After properly logging into the website, the users should be able to do tasks through an administrative panel regarding their privileges.
    6.3.2. **Technical issues**
        Pre-condition: the user is properly logged in and is assigned to a specific role by a web administrator.
        Post-condition: the users can do particular tasks through an administrative panel regarding their privileges.

7. Better Integration with Social Networks

7.1. The system shall be able to display DESRIST group discussion on a particular web page.
    7.1.1. **Description**
        The system is able to pull out data from LinkedIn and display DESRIST group discussion instantly on a particular web page.
    7.1.2. **Technical issues**
        Pre-condition: The API is properly coded.
        Post-condition: the system will display DESRIST group discussion from LinkedIn.

7.2. The users shall be able to participate in DESRIST group discussion.
    7.2.1. **Description**
        After properly logged into the website with a LinkedIn account, the user can participate in DESRIST group discussion.
    7.2.2. **Technical issues**
        Pre-condition: the user is properly logged in with a LinkedIn account.
        Post-condition: the user can participate in DESRIST group discussion.

7.3. The users shall be able to share contents through social networking services.
    7.3.1. **Description**
        The user should be able to share contents on their social networks.
    7.3.2. **Technical issues**
        Pre-condition: the user is properly signed in to their social networking account, and the content can be shared.
        Post-condition: the user can share the content on his/her social networks.

8. Mobile Supported Design

8.1. The system shall be able to automatically choose an appropriate theme for the browser that is being used.

8.1.1. **Description**

The system can automatically choose an appropriate theme for the browser that is being used.

8.1.2. **Technical issues**

Pre-condition: necessary plugins and mobile supported themes are already installed.

Post-condition: an appropriate website template is picked for the browser that is being used.

Analysis Phase Signoff

AITP Chapter Name

Kendell Mendoza
Printed
President

Signature
Date: 10/8/13

Justin Kratzer
Printed
Vice President

Signature
Date: 10/9/13

Client Name

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