

DESIGN DOCUMENT

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Introduction

Overview

This design document addresses how the SoCS information portal will be implemented. This is done with the help of use cases that outline what users must do to complete a task within the system. Working through use cases we explored the existing website and considered what we could keep, what we should fix, and what should be added. Using this technique design decisions were made as a group. Multiple solutions were considered each time a problem was encountered, this lead to final decisions that will be described in this document. This document will describe the types of use cases that will be common within the system.

Document Nomenclature

When an asterisk is used with requirements it means that the requirement was not in the previous version of the requirements document. In the context of use cases, an *new* symbol denotes a use case that is not described in detail somewhere else in the document.

Appendix A: Use Cases

This section contains information about the use cases. It is broken down into the title of the use case, the summary of the use case, the steps it would take to complete the use case, the related design decisions, to create this use case, who would be completing this use case, and finally, the related use cases.

Homepage

1.0 Looking for Information Unknown to the System

User: Unknown user type

Start: SoCS homepage

Goal: Find information about SoCS

Summary:

A user, I have arrived at the site, and am looking for a specific piece of information. But my purpose of visiting the site is unknown to the system.

Priority: High

Steps:

1. The user navigates to the SoCS homepage, here they will find information relevant to all user groups (Faculty, Staff, Prospective Students, Undergraduate Students, Graduate Students, Administrator):
 - a. Events
 - b. News
 - c. Images (image carousel)
 - d. Contact information for the department
 - e. Welcome message
 - f. Site navigation
2. The user will select one of the navigation headings (listed above) that relates to the information they are looking for.

3. From here the user will find what they are looking for, or finds navigation that pertains to the information they are trying to find.

Design Decisions:

1.0 Navigation from the Homepage

2.0 Design an Attractive Homepage

Primary Stakeholders:

- Prospective Students
- Undergraduate Students
- Graduate Students
- Faculty
- Staff
- Teaching Assistants
- System Administrator
- Alumni *new*

Related Use Cases:

A user has arrived at the site, and: *new*

- Types keywords into a search bar to aid them in finding information.
- May not have come to the homepage with a specific goal in mind, just looking for general information.

Future Students

2.0 Find Out About SoCS at Guelph

User: High school student in southwestern Ontario

Start: Beginning to do research on computer science programs at universities in Ontario.

Goal: Find information about being a student at SoCS.

Summary:

As a prospective student, I want to find out what SoCS is at the University of Guelph.

Priority: High

Steps:

1. Google “computer science at Guelph.” Click the link that leads them to the SoCS homepage.
2. Click on ‘Future Students’ from top navigation on the homepage.

Design Decisions:

- 1.0 Navigation from Homepage
- 2.0 Design Attractive Homepage
- 4.0 Content on ‘Future Students’ Homepage
- 4.1 Sub-categories Under ‘Future Students’ Header

Primary Stakeholders:

- Prospective Students
- Staff; Recruitment Officer
- Staff; Program Counselor

Related Use Cases:

As a prospective student, I am looking for: *new*

- Courses offered by SoCS.
- An undergraduate program calendar.
- A graduate program calendar.
- The available majors offered by SoCS.
- Student testimonials.
- Information regarding co-op in SoCS.
- Admission information.

Undergraduate Students

3.0 Find Out How to Contact the Program Counselor

User: A first year student at the University of Guelph

Start: Would like to plan for area of application.

Goal: To find out how to contact the program counselor

Summary:

As a first-year undergraduate student, I want to find out how to contact my program counselor to discuss my area of application.

Priority: High

Steps:

1. Navigate to the SoCS homepage
2. Select 'Undergraduate Students'
3. Locate the program councillor information on the page

Design Decisions:

5.1 Sub-categories Under 'Undergraduate Students' Header

5.0 Content on 'Undergraduate Students' Homepage

Primary Stakeholders:

- Prospective Students
- Undergraduate Students
- Graduate Students
- Staff; Program Counselor

Related Use Cases:

As an undergraduate student, I want to find out: *new*

- Who to contact about changing courses.
- The location of my program counselor's office.
- Who to contact about course selection.
- Who to contact for information about adding a minor.

3.1 View All CIS Courses offered by SoCS for Undergraduate Students

User: A high school student, recently accepted to a SoCS program

Start: Would like to find out what CIS electives to take

Goal: Find out what CIS electives to take

Summary:

As a highschool student who has been recently accepted, I would like to view all of the CIS courses offered by SoCS for undergraduate students.

Priority: Medium

Steps:

1. Navigate to the SoCS homepage.
2. Select 'Undergraduate Students'
3. Select 'Courses'

Design Decisions:

5.1 Sub-categories Under 'Undergraduate Students' Header

5.0 Content on 'Undergraduate Students' Homepage

Stakeholders:

- Prospective Students
- Undergraduate Students
- Graduate Students
- Staff

Related Use Cases:

As a highschool student who has been recently accepted, I would like to: *new*

- Find course descriptions for the CIS courses offered by SoCS for undergraduate students.
- Find which semesters courses are offered in.
- Find course prerequisites.
- Find course level.
- Find how many credits a course is worth.

3.2 View a Course Outline for a Past CIS Course Offering

User: A keen returning undergraduate student

Start: Preparing for CIS*2750

Goal: To find a course outline for CIS*2750

Summary:

As a keen undergraduate student, I would like to see an outline for CIS*2750 from a previous semester.

Priority: Medium

Steps:

1. Navigate to the SoCS homepage.
2. Select 'Undergraduate Students'
3. Select 'Courses'
4. Navigate to CIS*2750 course
5. Select 'Course Outlines' from CIS*2750 description.
6. Specify year from list

Design Decisions:

11.0 How Courses Offered by SoCS Will be Displayed

Primary Stakeholders:

- Prospective Students
- Undergraduate Students
- Graduate Students
- Staff

Related Use Cases:

As a student, I would like to:

- Find a course outline for a course I am not enrolled in.
- Find a specific outline for a graduate course
- Find a specific outline for an undergraduate course.
- Compare course outlines for the same course from different years.

Graduate Students

4.0 Find Information About Graduate Programs Offered by SoCS

User: A student residing in Ontario who has completed their undergraduate degree.

Start: Beginning to do research on computer science graduate programs at universities in Ontario.

Goal: To find information about graduate studies in SoCS at the University of Guelph.

Summary:

As a prospective graduate student, I want to find out about SoCS graduate program at the University of Guelph.

Priority: High

Steps:

1. Clicked on a link for the SoCS website
2. Click on 'Graduate Students' from top navigation

Design Decisions:

6.0 Content on 'Graduate Students' Homepage

6.1 Sub-categories Under 'Graduate Students' Header

Primary Stakeholders:

- Prospective Students
- Staff; Recruitment Officer
- Staff; Graduate Administrative Assistant

Related Use Cases:

As a prospective graduate student, I would like find information about:

- Graduate courses.
- Schedule of important dates.
- Graduate student program calendar. *new*
- Who to contact about graduate studies in SoCS.
- Student testimonials. *new*
- Admission information. *new*

4.1 Find Schedule of Important Dates for SoCS Graduate Students

User: A graduate student at SoCS.

Start: At the library finishing off my thesis, looking for important dates relating to submitting and defending the thesis.

Goal: To make note of dates needed for graduate students preparing to defend a thesis.

Summary:

As a current graduate student, I want to find important dates within SoCS.

Priority: Medium

Steps:

1. Google Search “socs guelph” and follow link to the SoCS homepage
2. Click on ‘Graduate Students’ from top navigation
3. Click on subcategory called important dates and view the important dates and deadlines

Design Decisions:

6.1 Sub-categories Under ‘Graduate Students’ Header

Primary Stakeholders:

- Graduate Students

Related Use Cases:

As a graduate student, I would like to find the following information about: *new*

- Graduate degree requirements.
- Graduate program calendar.
- Scholarships and funding.
- Lab schedules.
- Course details.

4.2 Find More Information about Graduate Courses

User: A graduate student who just completed their first semester at the University of Guelph

Start: Doing research about what SoCS courses to take next semester

Goal: To find out more detail about a specific course

Summary:

As a graduate student, who has completed my first semester, I would like to get more information on specific graduate courses.

Priority: Medium

Steps:

1. Navigate to the SoCS homepage.
2. Select 'Graduate Students' or 'Undergraduate Students'
3. Navigate to the 'Courses' section
4. Navigate to 'Upcoming Semester' or 'Current Semester' or 'Past Semester' or 'All Courses'
5. Using the pointer click on a course
6. The course information is displayed including prerequisites a small description and a link to the outline

Design Decisions:

11.0 How Courses Offered by SoCS Will be Displayed

Primary Stakeholders:

- Graduate Students
- Prospective Graduate Students
- Staff; Program Counselor
- Staff; Graduate Administrative Assistant
- Staff; Graduate Coordinator

Related Use Cases:

As a graduate student, I would like to find information about: *new*

- Graduate degree requirements.
- Graduate program calendar.

As a faculty member, I would like to update the information about when courses will be offered next semester. *new*

Help

5.0 Submit a Ticket to Help Ticket System

User: A first year CIS*1500 student

Start: Student sits at the last available monitor and finds that the screen is broken. "It

was like that when I got here”.

Goal: Contact someone to fix the broken monitor in the lab.

Summary:

A user wishes to submit a ticket for a broken monitor in the lab in order to get it fixed.

Priority: High

Steps:

1. Goes to the SoCS webpage to report the problem
2. Navigate to the 'Help' Page
3. Use the navigation wizard to search for what to do about a broken monitor
4. Click on 'Submit a Ticket'
5. Fill out the form with the appropriate information
6. With your pointer click 'Submit'

Design Decisions:

1.0 Navigation from Homepage

9.0 How Information Will be Displayed on 'Help' Homepage

Please refer to Appendix C - Other Considerations - for considerations on future design decisions for this use case.

Primary Stakeholders:

- Prospective Students
- Undergraduate Students
- Graduate Students
- Faculty
- Staff
- Teaching Assistants
- System Administrator
- Alumni *new*

Related Use Cases:

As a user, I am having difficulty with a SoCS department system, I would like help with:

- Printing and using the plotter.
- Logging into the school computers remotely. *new*

- Resetting a Sunray computer
- Logging into the Mac computers

5.1 Find Out How to Print to the Plotter

User: A SoCS faculty member

Start: It's the night before a presentation, and I am unsure how to print a poster using the plotter.

Goal: Find instructions on how to print to the plotter

Summary:

As a SoCS faculty member I would like to find information on how to print material using the plotter.

Priority: Medium

Steps:

1. Type socs.uoguelph.ca into the address bar and arrive at the SoCS homepage.
2. Select 'Help' from the navigation bar.
3. Select 'How To'
4. Click on the plotter sub-problem under 'Printing'

Design Decisions:

9.0 How Information Will be Displayed on 'Help' Homepage

Primary Stakeholders:

- Undergraduate Students
- Graduate Students
- Faculty
- Staff
- Teaching Assistants

Related Use Cases:

As a user, I would like help with: *new*

- Remote login.
- Troubleshooting lab computers.

- Submitting a ticket.

Our People

6.0 Find Faculty Contact Information

User: An undergraduate Student in SoCS

Start: I would like to look up a SoCS professor by name to find their email address.

Goal: Find the professor's email address

Summary:

As an undergraduate student, I would like to look up a SoCS professor by name to find their email address.

Priority: High

Steps:

1. Selects SoCS from their bookmarks toolbar and arrives at the SoCS Homepage.
2. Selects "Our People" from the navigation bar.
3. View the faculty and staff profiles until you find the professor you are looking for.
4. Select the professor

Design Decisions:

7.0 How to Display Faculty and Staff Profiles

7.1 Categories Under Faculty and Staff Profiles

Primary Stakeholders:

- Undergraduate Students
- Graduate Students
- Faculty
- Staff

Related Use Cases:

As a user, I would like to find a staff or faculty member's: *new*

- Website link.
- Profile information.

- Position within SoCS.
- Phone number (extension)
- Room number.
- Building.

Alumni & Outreach

7.0 Learn About SoCS Alumni

User: A member of SoCS Alumni

Start: Looking to network with other alumni.

Goal: Would like to see news about other SoCS alumni members.

Summary:

As a member of SoCS alumni, I would like to learn about what other alumni are doing.

Priority: Low

Steps:

1. Selects SoCS from their bookmarks toolbar and arrives at the SoCS Homepage
2. Selects 'Alumni & Outreach' from the primary navigation bar
3. Select 'Alumni' from the secondary navigation bar

Design Decisions:

8.0 Content on 'Alumni & Outreach' Homepage

8.1 Sub-categories Under 'Alumni & Outreach' Header

Primary Stakeholders:

- Alumni
- Staff

Related Use Cases:

As a user, I would like to find information about:

- Resources for high school teachers promoting computer science. *new*
- Alumni related events (e.g. networking, reunion, etc.). *new*
- Roboticon competition for high school students. *new*

Back-end

8.0 Upload a Course Outline

User: SoCS Faculty Member

Start: Its the first day of a new semester and as a professor, I need to upload a course outline.

Goal: To upload the course outline for a course being taught

Summary:

As a professor in the SoCS department, I would like to upload my course outline for the course I am teaching.

Priority: Medium

Steps:

1. Upload the course outline to the to the system by attaching the file to a form.
2. Add the URL of the new course outline into the DB

Design Decisions:

Please refer to Appendix C - Other Considerations - for considerations on future design decisions for this use case.

Primary Stakeholders:

- Prospective Students
- Undergraduate Students
- Graduate Students
- Faculty
- Staff

Related Use Cases:

None.

Appendix B: Design Decisions Catalog

This section includes the details about the design decisions and how they relate to the use cases. Each documented decision includes the design question, possible solutions researched, the requirements it relates to, what decision was chosen, and finally the related design decisions and use cases.

Homepage

1.0 Navigation from Homepage

Design Question:

How do we get the user from the homepage, to the information that they want?

Possible Solutions:

A. Use Existing Navigation

Use existing primary navigation (top) to hold header categories (e.g. 'Future Students') with drop-down menus to hold sub-categories (e.g. 'Program Overview').

Pro:

- Easy implementation, use existing framework
- Less chance for new bugs to be introduced to the system
- Less mouse clicks to navigate to sub-category

Con:

- Users don't know if header categories are clickable or not
- If list of sub-categories is highly populated (e.g. > 10) site becomes cluttered
- Requires more accurate mouse movements

B. Top Navigation with Secondary

Present header categories (e.g. 'Future Students') in the primary navigation (e.g. top); with no drop-down menu. The sub-categories (e.g. 'Program Overview') under the header categories would be located in the secondary navigation (e.g. left or right column)

once a user clicks on an item from the primary navigation.

Pro:

- Creates less confusion by only displaying primary headers in navigation
- Simplifies user experience by minimizing options to select from homepage
- Displays information tailored to a specific user category, more captivating for first-time visitors
- Increases availability of high-value screen real-estate on homepage

Con:

- Extra mouse clicks to navigate to a sub-category
- Potential for losing existing links

C. Provide All Navigation on Homepage

Put links to sub-categories directly on the homepage.

Pro:

- All navigation is laid out for the user, none is hidden

Con:

- Highly cluttered homepage
- Overload of potential navigational options
- Consumes high-value screen real-estate on homepage

Relevant Requirements:

- 1.5 Utilize Existing Site Architecture *new*
- 7.1 Follow W3C Accessibility Standards
- 7.2 Easy to Understand Layout
- 7.3 Easy Navigation
- 7.4 Aesthetically Pleasing

Decision:

B. Top Navigation with Secondary

Related Design Questions:

2.0 How will we design an attractive homepage?

Related Use Cases:

1.0 Looking for Information Unknown to the System

2.0 Design Attractive Homepage

Design Question:

How will we design an attractive homepage?

Possible Solutions:

A. Image slider: A widget that displays a list of images one at a time to the user

Pros:

- catches the attention of the user
- keeps the user on the page
- aesthetically pleasing

Cons:

- takes up space
- people rarely click on slider images for more detail

B. Use Bootstrap CSS: A front-end development framework that includes gui and design components.

Pros:

- reliable - professionally developed and commonly used
- improved development speed
- customizable
- wide range of applications

Cons:

- very standardized look by default

C. Use Flat UI CSS

Pros:

- simpler aesthetic than bootstrap

Cons:

- fewer features than bootstrap
- extension of bootstrap
- bootstrap and flat UI have to load

D. Use LESS framework instead of CSS

Pros:

- more dynamic than CSS (can use variables in CSS and updates without refreshing)
- saves time during implementation
- more robust than CSS

Cons:

- longer load time on page

Relevant Requirements:

- 1.5 Utilize Existing Site Architecture *new*
- 7.1 Follow W3C Accessibility Standards
- 7.2 Easy to Understand Layout
- 7.3 Easy Navigation
- 7.4 Aesthetically Pleasing

Decision:

- A. Image slider

Related Design Questions:

- 1.0 Navigation from Homepage

Related Use Cases:

- 1.0 Looking for Information Unknown to the System

3.0 Image Slider on Homepage

Design Question:

Now that we have decided to use an image slider, what image slider will we use on the homepage?

Possible Solutions:

A. Bootstrap Image Slider

Pros:

- Works with Wordpress
- Will look consistent with other Bootstrap UI elements

Cons:

- There is limited functionality

B. Menu Cool Image Slider - Type of image slider

Pros:

- Pure Javascript (fast, no google libraries to load), no flash, no jQuery
- Tooltips
- Captions

Cons:

- Not consistent with bootstrap elements

Relevant Requirements:

1.5 Utilize Existing Site Architecture *new*

7.1 Follow W3C Accessibility Standards

7.2 Easy to Understand Layout

7.3 Easy Navigation

7.4 Aesthetically Pleasing

1.3 Open Source

4.0 Maintainability

8.0 Portability

Decision:

A. Bootstrap

Related Design Questions:

None.

Related Use Cases:

1.0 Looking for Information Unknown to the System

Future Students

4.0 Content on 'Future Students' Homepage

Design Question:

What will be on the 'Future Students' homepage?

Possible Solutions:

A. Current

- Quote
- Video

B. New

- Introduction
- Quicklinks
 - Undergrad calendar
 - How to apply
 - Requirements from high school
 - Co-op
- Interesting student projects
- Video

We discussed what type of information we were looking for while applying for university. Based on our previous experiences as well as the undergraduate survey, we discussed

the benefits of having the most important quick links available in the top fold of the web page for a student who is brand new to applying to university, the navigation with all of the options could be overwhelming. We wanted to maintain the strongest features of the current site architecture and much of the already informative content.

Relevant Requirements:

- 7.2 Easy to Understand Layout
- 7.3 Easy Navigation
- 1.5 Utilize Existing Site Architecture *new*

Decision:

- B. New Navigation

Related Design Questions:

- 4.1 What sub-categories will be located under the 'Future Students' header category?

Related Use Cases:

- 2.0 Find Out About SoCS at Guelph

4.1 Sub-categories Under 'Future Students' Header

Design Question:

What sub-categories will be located under the 'Future Students' header category?

Possible Solutions:

A. Currently:

- Contact Information
- Why SoCS?
- Program Overview
- Co-op
- Admissions
- Tours
- Graduate Students

B. New Categories

- Courses Offered

- Academic Calendar
- Program Admission Requirements

- Contact Information
 - Recruitment Officer
 - Undergraduate Program Counsellor
 - Graduate Program Counsellor
 - Graduate Program Coordinator
- Why SoCS?
 - Description
 - Testimonials
 - Alumni
 - Description of industry
 - Current salary makings
- Program Overview
 - Description of Area of Application
 - Different majors (Soft Eng vs. Comp Sci)
 - Undergraduate Academic Calendar
 - Link to Graduate Calendar
- Co-op
 - Description of Co-op Program
 - Testimonials
 - Student Websites
- Admissions
 - Canadian High school Students
 - American Students
 - International Students
 - University / College Transfers
 - Mature Students
 - UoG Internal Transfer / Readmission
 - Ontario University Application Centre
 - High School Requirements
 - How to Apply

- Tours
 - Lauren Zweep Contact Information
 - Campus Tours
 - Book a Tour
- Graduate Students
 - (can link to grad students home page)

Relevant Requirements:

- 7.2 Easy to Understand Layout
- 7.3 Easy Navigation
- 1.5 Utilize Existing Site Architecture *new*

Decision:

B. New Navigation

Related Design Questions:

None.

Related Use Cases:

2.0 Find Out About SoCS at Guelph

Undergraduate Students

5.0 Content on the 'Undergraduate Students' Homepage

Design Question:

What will be on the 'Undergraduate Students' homepage?

Possible Solutions:

A. Current

- Academics
 - Co-Op

B: New

- Summary of undergraduate program
- Job offers for undergraduate students

- Undergraduate Research Assistant (URA)
 - Postings from local industry
- Undergraduate schedule of dates
- Academic Planning (advisor info Dr. Klotz)

Include items on the homepage that are likely to be most popular on the homepage, and links to other information accessed less frequently on the side navigation.

Relevant Requirements:

7.0 Usability

Decision:

B. New Navigation

Related Design Questions:

5.1 Sub-categories Under 'Undergraduate Students' Header

Related Use Cases:

- 3.0 Find Out How to Contact the Program Counselor
- 3.1 View All CIS Courses Offered by SoCS for Undergraduate Students
- 3.2 View a Course Outline for a Past CIS Course Offering

5.1 Sub-categories Under 'Undergraduate Students' Header

Design Question:

What sub-categories will be located under the 'Undergraduate Students' header category?

Possible Solutions:

A. Current

- None

B. New

- Counselling resources
- Co-op

- Scholarships & Funding
- Forms
- Lab Schedules
- Courses
- Important Dates

Relevant Requirements:

7.0 Usability

Decision:

B. New Navigation

Related Design Questions:

None.

Related Use Cases:

- 3.0 How to Contact the Program Counselor
- 3.1 View All CIS Courses Offered by SoCS for Undergraduate Students
- 3.2 View a Course Outline for a Past CIS Course Offering

Graduate Students

6.0 Content on 'Graduate Students' Homepage

Design Question:

What will be on the 'Graduate Students' homepage?

Possible Solutions:

A. Current:

- future students
 - Program overview & Admissions
- Contact Information

B. Current:

- Academic Planning (advisor info Radovan)
- Prospective Grad Student enticement
- How to apply to Grad School at Guelph

- Important Dates

Relevant Requirements:

7.0 Usability

Decision:

B. New Navigation

Related Design Questions:

6.1 What sub-categories will be located under the 'Graduate Students' header category?

Related Use Cases:

- 4.0 Find Information About Graduate Programs Offered by SoCS
- 4.1 Find Schedule of Important Dates for SoCS Graduate Students
- 4.2 Find More Information About Graduate Courses

6.1 Sub-categories Under 'Graduate Students' Header

Design Question:

What sub-categories will be located under the 'Graduate Students' header category?

Possible Solutions:

A. Current

- Future Students
 - Program Overview and Admissions
- Contact Information

B. New

- Future Students
- Program Overview and Admissions
- Forms and documents
- Contact Information
- Scholarships & Funding
- Lab Schedules
- Courses

- Important Dates

Relevant Requirements:

7.0 Usability

Decision:

B. New Navigation

Related Design Questions:

6.0 What will be on the 'Graduate Students' homepage?

Related Use Cases:

4.0 Find Information About Graduate Programs Offered by SoCS

4.1 Find Schedule of Important Dates for SoCS Graduate Students

4.2 Find More Information About Graduate Courses

Our People

7.0 How to Display Faculty and Staff Profiles

Design Question:

How will faculty and staff profiles be displayed on the 'Our People' homepage?

Possible Solutions:

A. Could have all the staff and faculty pictures displayed in tables each organized by hierarchy. The table will include their: name, office room number, position, phone extension, and email (this solution reflects the current design).

Pros:

- All information is transparently available to the user.

Cons:

- There are duplicates, certain professors names and information are listed twice
- Very little information about each person (i.e. professors research, homepage links)

- Text is too small - all text is the same size, makes it hard to know what is most important

B. Could be organized into a grid of squares where each square contains a: name, position, photograph, and department title(s). Clicking on the box would reveal additional information listed on a small profile page.

Pros:

- Information is visually pleasing
- much more information per page without scrolling
- much more information about each staff or faculty member can be displayed on a separate page

Cons:

- Too little information to display on separate page currently, if professors don't include profiles or links these pages will look bare.
- Risks being difficult to get certain information at a glance when staff or faculty needs to copy lots of information

C. Could be tiled pictures that accordion open with information upon mouse click

Pros:

- The accordion style looks clean.
- The accordion displays an overview of all of the content without having to scroll to the bottom of the page.
- It allows us to hide information that the user may not want to see or need to see. This is also useful when accessing the content from a mobile device, there will be less information to scroll through.

Cons:

- Not as much space for content as B

D. Could be a modal pop-up

Pros:

- Aesthetically pleasing

- No load time for going to a new page

Cons:

- Difficult to close
- Can't navigate site until you close

Relevant Requirements:

6.A Academic Planning

6.D Applying

7.2 Easy to Understand Layout

7.4 Aesthetically Pleasing

Decision:

B. Grid with pictures that direct to a new page

Related Design Questions

7.1 What sub-categories will be located under the 'Our People' header category?

Related Use Cases

6.0 Find Faculty Contact Information

7.1 Categories Under Faculty and Staff Profiles

Design Question:

What categories will be located under each faculty and staff member in the 'Our People' section?

Possible Solutions:

A. Current

- Phone Number
- Position
- Room Number
- Name
- Picture
- Email

B. New

- Phone Number
- Position
- Room Number
- Name
- Picture
- Email
- Recent publications
- Personal website link
- Professional website link
- Short biography
- Area of expertise

Relevant Requirements:

7.0 Usability

Decision:

B. New Navigation

Related Design Questions:

7.0 How to Display Faculty and Staff Profiles

Related Use Cases:

6.0 Find Faculty Contact Information

Alumni & Outreach

8.0 Content on 'Alumni & Outreach' Homepage

Design Question:

What will be on the 'Alumni & Outreach' homepage?

Possible Solutions:

A. Current

- Pictures of staff and faculty at outreach events

B. New

- Picture slider of outreach events
- Alumni Contact Info (for alumni coordinator)
- Alumni testimonials from successful alumni
- Projects that alumni are involved with

Relevant Requirements:

7.0 Usability

Decision:

B. New

Related Design Decisions:

8.1 Sub-categories Under 'Alumni & Outreach' Header

Related Use Cases:

7.0 Learn About SoCS Alumni

8.1 Sub-categories Under 'Alumni & Outreach' Header

Design Question:

What sub-categories will be located under the 'Alumni & Outreach' header category?

Possible Solutions:

A. Current

- Teacher Resources

B New

- Outreach
 - Teacher Resources

Relevant Requirements:

7.0 Usability

Decision:

B. New Navigation

Related Design Questions:

8.0 Content on 'Alumni & Outreach' Homepage

Related Use Cases:

7.0 Learn About SoCS Alumni

Help

9.0 How Information Will be Displayed on 'Help' Homepage

Design Question:

How will information be displayed on the 'Help' homepage?

Possible Solutions:

A. Have a list of all help items.

Pros:

- Ok for a small amount of items

Cons:

- Cluttered
- Hard to find what you're looking for when there are many items.

B. Use an accordion to display all the help topics and expand when clicked.

Pros:

- Good for a moderate amount of items (~7 per topic)

Cons:

- Could become a long list of topics with long lists of items within. Not very maintainable (req 4.0)

C. Use a grid of large buttons with icons to narrow the users search through possible help topics. When they click on the button it will bring them to another page with a narrowed down list of topics or items.

Pros:

- Progressive disclosure

- Maintainable
- Easy to add more topics without clutter

Cons:

- Requires more planning to create

Relevant Requirements:

- 7.0 Usability
- 4.0 Maintainability
- 3.0 Ticketing System
- 1.5 Utilize existing architecture
- 1.4 Search for content
- 1.3 Open Source

Decision:

- C. Grid of buttons

Related Design Questions:

- 9.1 What sub-categories will be located under the 'Help' header category?

Related Use Cases:

- 5.0 Submit a Ticket to Help Ticket System
- 5.1 Find Out How to Print to the Plotter

9.1 Sub-categories Under 'Help' Header

Design Question:

What sub-categories will be located under the 'Help' header category?

Possible Solutions:

Current:

- How To
 - SSH Public-Private Key Authentication
 - Subscribe to the SoCS Event Calendar in Thunderbird

- Staff & Faculty Photocopier Setup (OS X)
- Campus Police
- CCS
- SoCS Technical Support
- Webmaster

New:

- How To's
 - Printing
 - Remote computing
 - Software
- Troubleshooting lab computers
 - Problem with Sunray
 - I can't log out
 - Screen is frozen
 - Won't turn on
 - Problem with Windows
 - Problem with Mac
 - Problem with hp box linux
- Ticket Form
- Campus Police
- CCS
- SoCS Technical Support
- Webmaster

Relevant Requirements:

- 7.0 Usability
- 4.0 Maintainability
- 3.0 Ticketing System
- 1.5 Utilize existing architecture
- 1.4 Search for content
- 1.3 Open Source

Decision:

B. New Navigation

Related Design Questions:

9.0 How Information Will be Displayed on 'Help' Homepage

Related Use Cases:

5.0 Submit a Ticket to Help Ticket System

5.1 Find Out How to Print to the Plotter

News & Events

10.0 How Content Will be Displayed on 'News & Events' Page

Design Question

How will we display news and events?

Possible Solutions

A. Continue using the current news feed

Pros:

- little implementation required

Cons:

- comment section that doesn't link anywhere
- no way to navigate to events by date

B. Create a new news feed

Pros:

- current and upcoming events could be displayed at the top of the list
- upcoming events and recent events can be displayed on the homepage
- customize style

Cons:

- More work and learning curve than using a pre-existing widget

C. Update the preexisting news feed

Pros:

- Add sections to existing news feed (upcoming, current, past)
- remove comment buttons
- use pre-existing content management system
- current and upcoming events could be displayed at the top of the list
- include more events from different parts of SoCS, such as SOCIS, GCC, and other SoCS related clubs or course projects.

Cons:

- Pre-determined Constraints within the widget

Relevant Requirements:

7.0 Usability

4.0 Maintainability

1.5 Utilize existing architecture

Decision:

C. Update pre-existing news feed

Related Design Questions:

None.

Related Use Cases:

None.

Other

11.0 How Courses Offered by SoCS Will be Displayed

Design Question:

How will we display the courses offered by SoCS for undergraduate and graduate students?

Possible Solutions:

A. Have the courses listed in a table with their course descriptions etc. and have the course outlines in their own table on a separate page.

B. Have a link to the course outline displayed with the course's description. These will all be displayed in a list with alternating background colour.

Relevant Requirements:

7.0 Usability

4.0 Maintainability

1.5 Utilize existing architecture

Decision:

B. Course outline and description grouped together

Related Design Questions:

None.

Related Use Cases:

8.0 Upload a Course Outline

4.2 Find More Information About Graduate Courses

3.2 View a Course Outline for a Past CIS Course Offering

3.1 View All CIS Courses Offered by SoCS for Undergraduate Students

Appendix C: Other Considerations

Future Decisions:

Decisions that are yet to be made include mostly implementation specific features that cannot be described fully at this time due to lack of information. These decisions will become more obvious during development iterations. They include:

- What information and fields will be on a form for a ticket?
- How will course outlines be uploaded?
- Will courses be pulled from an existing database, a new database, or hard coded in?
- Any other back-end specific details that will need to be researched as we familiarize ourselves with wordpress content management system

Minor Problems to Address on the Current Site:

- redundant breadcrumbs under top navigation and on side navigation
- “Help” drops down to next row and off the top navigation when some top navigation buttons are pressed
- roboticon is under home
- news & events link to the same page but have two separate links
- news & events has comment buttons that don’t work

Design Guide:

Keep a consistent theme throughout, when adding to the existing site

Follow common design conventions to improve familiarity

- Search bar at top right
- Header at top center
- Content at middle
- Everything that is clickable has a hover state
- Primary navigation at top center
- Secondary navigation at side (right or left, see navigation decision)

Don’t overwhelm the user

Homepage must adhere to a minimalist aesthetic

Appendix D: Stakeholders and Requirements

Stakeholders

The following is a list of stakeholders:

- Prospective Students
- Undergraduate Students
- Graduate Students
- Faculty
- Staff
- Teaching Assistants
- System Administrator
- Alumni *new*

Requirements

1. General

1.1 Hosted on SoCS

The system must be hosted on the SoCS website.

Metric: Pass/Fail

1.2 Interface

The system must provide an interface for the user to interact with.

Metric: Pass/Fail

1.3 Open Source

The system must be open source.

Metric: Pass/Fail

1.4 Search for Content

The system must provide users with a method to search for content by keyword.

Metric: Pass/Fail

*1.5 Utilize Existing Site Architecture

The system must utilize existing site infrastructure when possible. In particular.. current system, wordpress..

Metric: Not Applicable (N/A)

2. Users

2.1 Permission Levels of Users

The system must contain three permission levels for users.

Metric: Pass/Fail

2.1.1 Permission Level: Content Creator

The system must contain a 'Content Creator' permission level. A user with this permission level is able to create new content within the system and edit content that they have created.

Metric: Pass/Fail

2.1.2 Permission Level: General User

The system must contain a 'General User' permission level. A user with this permission level is able to navigate through, and view, content in the system.

Metric: Pass/Fail

2.1.3 Permission Level: Administrator

The system must contain an 'Administrator' permission level. A user with this permission level has complete access to the system.

Metric: Pass/Fail

2.2 Enforce User Permissions

The system must enforce permission levels of users within the system.

Metric: Pass/Fail

3. Ticketing System

3.1 Direct General Users to SoCS Ticket User

The system must direct general users to the SoCS ticket system, Request Tracker, when necessary.

Metric: Pass/Fail

3.2 Create Informative Tickets

The system must guide users to create more informative tickets before submission to Request Tracker.

Metric: give someone a broken machine, write a ticket, repeat with a different user (1 on old system, 1 on new). Which ticket is more informative?

3.3 Prompt for Additional Ticket Information

The system must prompt the user for problem specific useful information that will aid the

system administrator to identify and solve the problem.

Metric: Pass/Fail

3.4 Troubleshoot Prior to Ticket Submission

The system must help users troubleshoot their issue prior to guiding them to the ticketing system.

Metric: 80% of users should be able to comprehend the information provided and troubleshoot their issue.

4. Maintainability

4.1 Add Content

The system must allow for administrators to add content.

Metric: Pass/Fail

4.2 Edit Content

The system must allow for administrators to edit content.

Metric: Pass/Fail

4.3 Remove Content

The system must allow for administrators to remove content.

Metric: Pass/Fail

4.4 Flexible

The system must be flexible, to accommodate changes in content and improve usability

over time.

Metric: The hierarchy and organization of sections in the system must be rearrangeable.

4.5 Document System Status

The system must document its status at an appropriate interval, to assist the system administrator with maintenance of the system.

Metric: Pass/Fail

5. Security

5.1 Restrict Access to Add Content

The system must not allow general users to add content to the system.

Metric: Pass/Fail

5.2 Require Password for System Changes

The system must require administrators to use a password to make changes to the system.

Metric: Pass/Fail

5.3 Modify Privileges

The system must allow administrators to modify privileges of general users and allow them to add content to the system.

Metric: Pass/Fail

6. Reliability

6.1 Document Internal System Malfunctions

The system must document internal malfunctions for the administrator to review.

Metric: Pass/Fail

6.2 Informative Error Message

The system must provide the user with an informative error message upon malfunction.

Metric: 80% of surveyed users rate error message as informative, as opposed to informative.

6.3 Notification for Inability to Complete Request

The system must notify the user when it is unable to complete a request.

Metric: Pass/Fail

6.4 Retain Session Data

The system must retain the users session data while they complete their request.

Metric: Pass/Fail

7. Usability

7.1 Follow W3C Accessibility Standards

The system must follow the W3C standards for accessibility.

Metric: Pass applicable W3C validators provided by W3.

7.2 Easy to Understand Layout

The system content must be available in an easy to understand layout.

Metric: Ask the user to find specific content, 80% of users complete task in an appropriate time frame.

7.3 Easy Navigation

The system must be easy for the users to navigate.

Metric: Returning users should be more proficient at finding information. Proficiency will be measured in number of clicks and time.

7.4 Aesthetically Pleasing

The system must be aesthetically pleasing to the user.

Metric: The averaged rating for the aesthetic appeal of the system from surveyed users will achieve a grade of at least 4 out of 5.

*7.5 Follow Typical Web Conventions

The system will make use of typical web conventions.

Metric: N/A

8. Portability

8.1 Availability

The system must be available on a web browser.

Metric: Pass/Fail

8.2 Platform Compatibility

The system must be supported on mobile, tablet, or computer web browser.

Metric: Pass/Fail

9. Efficiency

9.1 Load Time Efficiency

The system must be able to efficiently load into a web browser.

Metric: The system must achieve a grade no lower than a 'C' for all five criteria tested by the efficiency testing tool located at: <http://www.webpagetest.org>

Organization of SoCS Information

1. General SoCS Information

- 1.A Organizations and Clubs Within SoCS
- 1.B Events
- 1.C News & Announcements
- 1.D Scholarships & Funding
- 1.E Forms
- 1.F Schedules
- 1.G Important Dates
- 1.H Policies
- 1.I Building Information
- 1.J Resources

2. Academic Planning

3. Careers

- 3.A Job Listings

3.B General Information

4. Co-Operative Education

5. Degree Information

6. Prospective Students

6.A Academic Planning

6.B Program Information

6.C Is SOCS For You?

6.D Applying

7. Teaching Assistants

7.A Available Positions

7.B Guidelines and Standards

7.C Resources

7.D Contact Information

8. Moodle

9. Alumni

10. Graduate Students

10.A Thesis Information

10.B Exams

10.C Graduate Department

10.D Important Dates

10.E Defence

10.F Degree Information

10.G Student Information

10.H Application Information

11. Faculty Resources

12. Courses

12.A General Information

12.B Offerings

12.C Outlines

12.D Course Details

12.E 4900 & 4910 Information

12.E.A Topics

12.E.B Information

13. People

13.A Staff

13.A.A Profile

13.A.B Contact Information

13.B Faculty

13.B.A Profile

13.B.A.A Academic

13.B.A.B Personal

13.B.B Availability

13.B.C Contact Information