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Requirements

IEEE GameSIG

Version 4.0

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1. Introduction

1.1. Purpose

The goal of this document is to define the requirements for redesign of both the IEEE GameSIG website and the IEEE GameSIG logo (the "Project," used interchangeably with "Website"). It will explain the intended motivation and features of the Project and outline any assumptions and constraints that may affect its outcome. This document is intended for both The Denenbees, the designers of the Project ("Designers"), and any stakeholders that may be affected by its development. These requirements will be proposed to the Sponsor for his approval.

1.2. Statement of Work

Darren Denenberg (the "Sponsor") has engaged the Designers to redesign the Website for purposes of bringing it to a more contemporary and inviting state which is more amenable to its target audience, college-age video game designers.

1.3. Scope

The scope of the work (the "Scope") will include an exhaustive heuristic review of the current website, consulting with the Sponsor to discuss his vision and expectations for the Project including the user experience ("UX"), execution of the new design, implementation of the new user interface ("UI") and redesign of the IEEE GameSIG logo. To that end, there is the potential that the Designers may need to learn and apply new software tools to complete the Project.

The Scope of this Project will not include the redesign or implementation of the server-side for the Website or any eCommerce features.

1.4. Definitions, Acronyms and Abbreviations

Term or Acronym	Definition
Client	Professor Darren Denenberg
Designers	The team, The Denenbees
Organizers	IEEE GameSIG organizers
Project	IEEE GameSIG website
Sponsor	Professor Darren Denenberg
Us/We/Our	The team, The Denenbees, the Designers
UI	User Interface

UX	User Experience
Website	IEEE GameSIG website or Project

1.5. References
(see Appendix 5.3)

1.6. Overview

This document is primarily written for both the Sponsor and Designers and describes the details of the Project.

Section 2 provides a brief description of what IEEE GameSIG is, along with the purpose, goals and phases for this Project. It also lists the user types and their general characteristics, explains the ways in which they will use the Website, and shows examples of usage scenarios with storyboards and personas to better capture the Website's key audience. It then ends with an explanation of any issues the Designer's feel may be an impediment to the successful outcome of this Project followed by any, currently known, assumptions the Designers may have formed about the Project. The section essentially helps establish a context for the more formal requirement specifications in Section 3.

Section 3 contains an outline for the Project's features and functionality in the order of their necessity to the Scope: those that are required, and those that would be nice to have in future versions of the Website entitled, "Optional Requirements". In addition, it details the Website's behavioral aspects through a usage diagram showing all the known possible use cases, followed by a detailed use case description for each. It will also outline the nonfunctional requirements which further define the Project's operations criteria.

Section 4 provides visuals to show the intended look and flow of the Project's UI with final mockups. A workflow diagram is also provided of which will serve as a site map and graphic overview of the Website's processes and hierarchy.

Section 5, like Section 3, details the Website's behavioral aspect, but through uses sequence diagrams to capture the most important user interactions. The Designers are aware that the diagrams characterize interactions outside the Project's Scope, but We maintain that an awareness of server-side behavior was necessary to the Project's development. To that end, the diagrams assisted the Designers with what may potentially occur at runtime.

Section 6 shows the progression of logo mockups and briefly describes the Designers' objectives with respect to each design generation.

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Finally, Section 7 shows a diagram used in the preliminary stages of the Project. It became the framework for the previously mentioned mockups and Websites site map and workflow.

2.   General Description

IEEE GameSIG is an annual game developer competition where university students form teams and compete with others to make a game in different category criteria. The purpose of the website is to provide an overview of what the competition is and its parts as well as allowing teams to register their game and content.

The current UI design for the Website is outdated and does not reflect the modern aspects of game development. It was developed circa 1990 and contains features of that period: a GIF animated homepage that interferes with the page loading speed and outdated fonts that are difficult to read. Further, not all of the pages are linked and the user is bombarded with a lot of information on every page, creating cognitive overload.

The focus of UI design is to know and anticipate the needs of its users. A good UI design will account for the presence of all the features required to accomplish a user's tasks while making them easy to use and easy to access. In addition, a UI should have a visual hierarchy, a consistent layout, and a familiar user language.

The ultimate goal of the Designers is to apply current usability heuristics in our approach to the Project and make it more welcoming and easier to navigate.

2.1.   Project Phases

As part of the work requirements, the Designers will execute the following phases of the Project to completion.

2.1.1. Design Phase
  - 2.1.1.1. Work with the Sponsor to get requirements
  - 2.1.1.2. Receive Sponsor feedback
  - 2.1.1.3. Develop the Project and proposal for approval by Sponsor
  - 2.1.1.4. Present updates during weekly status meetings

2.1.2. Build Phase
  - 2.1.2.1. Complete all coding for the Project

2.1.2.2. Utilize all content necessary for the Project provided by the Sponsor, or find the resources needed from the Sponsor's contact

2.1.2.3. Conduct all testing on the website

2.1.2.4. Resolve any coding issues

2.1.3. Implementation Phase

2.1.3.1. Implement and test the Project on different browsers and devices

2.1.3.2. If possible, the Designers will implement the necessary information to get the prototype application synced up with the registration process

2.1.3.3. Present updates during weekly status meetings.

2.1.4. Handoff Phase

2.1.4.1. Check that all requirements have been met

2.1.4.2. Provide a project closure report for approval

2.1.4.3. Provide all documentation in accordance with the Project

2.2. User Characteristics

The following are the three user classes that will be implemented by the system. Any other users are not essential to this Project.

2.2.1. College Student

The College Student represents any user who is qualified to enter the Project competition - the primary user. The student is expected to search the Website for relevant information on the competition, view videos and photos in the Gallery, view Rules & Regulations of the competition, provide personal information for registering including uploading a game video and documentation for their competition submission, and accessing, viewing and posting on social media.

2.2.2. The Attendee

The attendee ("Attendee") is any user who only wants to attend the event but are not participating in the competition. The Attendee is expected to search the website to get a basic understanding of the event and learn how to buy tickets.

2.2.3. Social Media

Social Media is any of the four, third-party social media websites or applications that provides a direct link to the Website. This includes Youtube, Twitter, Facebook and Instagram. Social media is expected to have the same, or more, content about the competition. Any user will be able to Like or Follow the Project's social media to get the most current news and Information.

2.3.   Product Perspective

As previously mentioned, the current website is outdated and needs to be brought up to the current industry standards for web design and visual communication. This includes a more effective and consistent page hierarchy.

2.4.   Personas/Scenarios
      2.4.1. College Student/First Time User

Eddie Baker

"I want to find my passion by exploring my interests."

DEMOGRAPHICS

Age: 21
Occupation: General
Location: Long Beach, CA
Archetype: Adventurous/
             Casual Gamer

Goals

- Wants to explore the field of game development.
- Work at a well-known game studio that made some of his favorite games.
- Secure a good life for him and his family.
- Make new friends / develop new hobbies.

Frustrations

- Lack of creative freedom.
- Products without veteran/pro user options.
- Unreliable team members.

Scenario

Eddie attends CSULB pursuing a B.S. in software engineering. He is currently a junior, and has started to look for real-world experience that he can showcase in his interviews. One thing he currently does in his down-time is casually play video games. He really values this time because it helps him to de-stress from work and school. He decides to look for opportunities that involve developing a game and, maybe, enter it in a competition. He stumbles upon GameSIG, and decides to form a team and register for it. Even if he does not win, he knows this is a great opportunity for him to get to know more about game development and e-sports in general.

2.4.2. College Student/Second Time User

Meagan Finch

"I want to be a winner in the game of life.""

DEMOGRAPHICS

Age: 25

Occupation: Student at USC

Location: Los Angeles, CA

Archetype: The Game
             Enthusiast

Goals

- Build a reputation as a top game designer.
- Discover and learn new Internet tools and platforms.
- Be inspirational to women.
- Travel the world.

Frustrations

- Sloppy work.
- Overabundance of shooter games.
- Gratuitous violence.
- Deadlines

Scenario

Meagan is a junior at the University of Southern California working toward her B.S. in Computer Science (Games). She would love to work at Blizzard after she graduates and is working hard to make that happen. Her school schedule does not allow much time for recreation but, she manages to squeeze in a few hours per week to work on her side game design projects and play online games.

Meagan is fortunate to have her own apartment off campus where she has more square footage to spread out. Living alone gives her the extra space to work on several projects at once without any distractions.

During her Winter school break, she entered one of her games into a competition. Although the top prize eluded her, she was not discouraged. She will keep competing every year until she either wins or draws the attention of a top gaming company.

2.4.3. Parent of the College Student

Nick Williams

"Can't wait to see my son's work!.."

DEMOGRAPHICS

Age:	52
Occupation:	General
Location:	Lake Forest, CA
Archetype:	Dad

Goals

- Wants to correctly register for event.
- Learn more about what video games look like due to lack of experience growing up.
- See his son show off his work at the competition.

Frustrations

- Has very little experience on the Internet.
- Regsitered for few events online, has always registered in person.
- Does not know much about the event and has to do some research on his own.

Scenario

Nick is a proud father who now lives a more quiet life with his wife since his children have gone on to college. While his oldest son, Joe, has already been out working, his youngest son, James, has just entered into college. Nick is worried about James' ability to integrate into college. However, he was pleasantly surprised when James asked him if he would like to attend a video game competition that he had registered for.

2.4.4. The Competition Judge

John Johnson

"Gameplay is essential."

DEMOGRAPHICS

Age: 34

Occupation: Game Developer

Location: Irvine, CA

Archetype: Detail-orientated

Goals

- Focuses primarily on the mechanics of a game; story can come second.
- Wants game developers to exceed their own abilities - this applies to himself.
- Values creativity and innovation while acknowledging the concept of inspired work.

Frustrations

- Unoriginal gameplay mechanics.
- Cluttered and overly-complicated game UI.
- Incomplete or half-baked work.

Scenario

John is a game developer at Atlus, and has been working with designers and programmers for six years. John admires the company for what they do and focuses highly on refined gameplay mechanics. Having designed major gameplay and having programmed them before, he has adequate – if not exceptional – knowledge on what makes a game a good game.

John became a judge for a game-making competition known as GameSIG. He hopes to share his knowledge of game development with young inspiring college students through praise and critique. This year will be his second time as a judge. John uses the GameSIG website to check on the upcoming event's sponsors, as well as the teams who will be participating.

2.4.5. The Sponsor

Milli Pearce

"I'm trying to promote my company"

DEMOGRAPHICS

Age:	31
Occupation:	Sponsorship Coordinator
Location:	LongBeach, CA
Archetype:	The Promoter

Goals

- Deciding if her company should sponser the competition.
- Gather ideas of how the competition works.
- Decide the pros and cons of sponsering the event.
- Contact the event planner.

Frustrations

- Don't have a lot of experience with game making.
- There are other events her company can sponsor.
- Not sure if it is a good investment.

Scenario

Milli works for an energy drink company. She has been in the marketing department for over 5 years. She loves meeting people so she can find the perfect target for her company. Milli's company gives her a task to sponsor an event that relates with programming to promote the energy drinks created by her company. She overheard there is a game development event for college students called GameSIG and she becomes interested in it. She goes on the GameSIG website to learn more about the event.

2.5. Storyboards

2.5.1. Buy Tickets
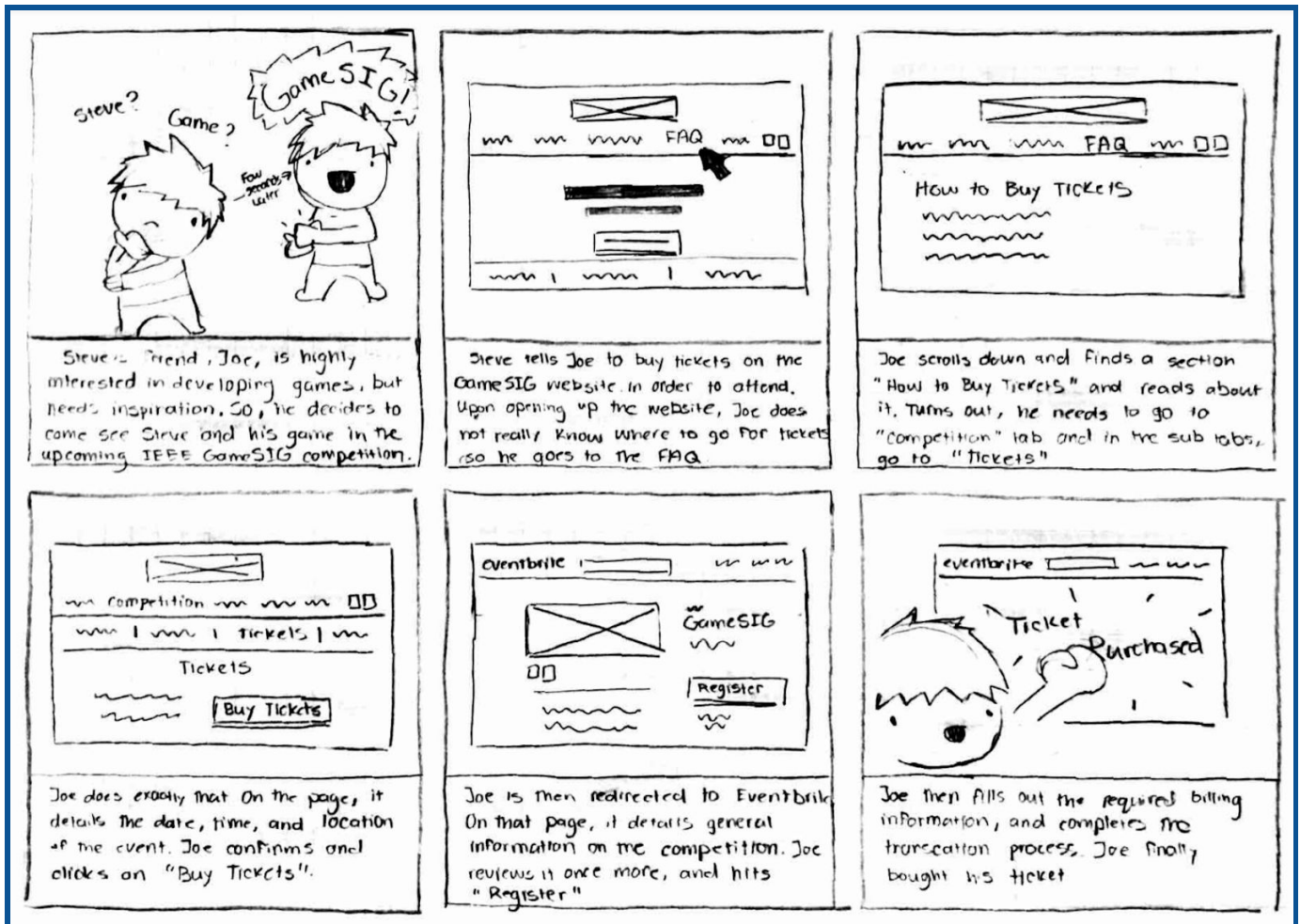
2.5.2. Registration
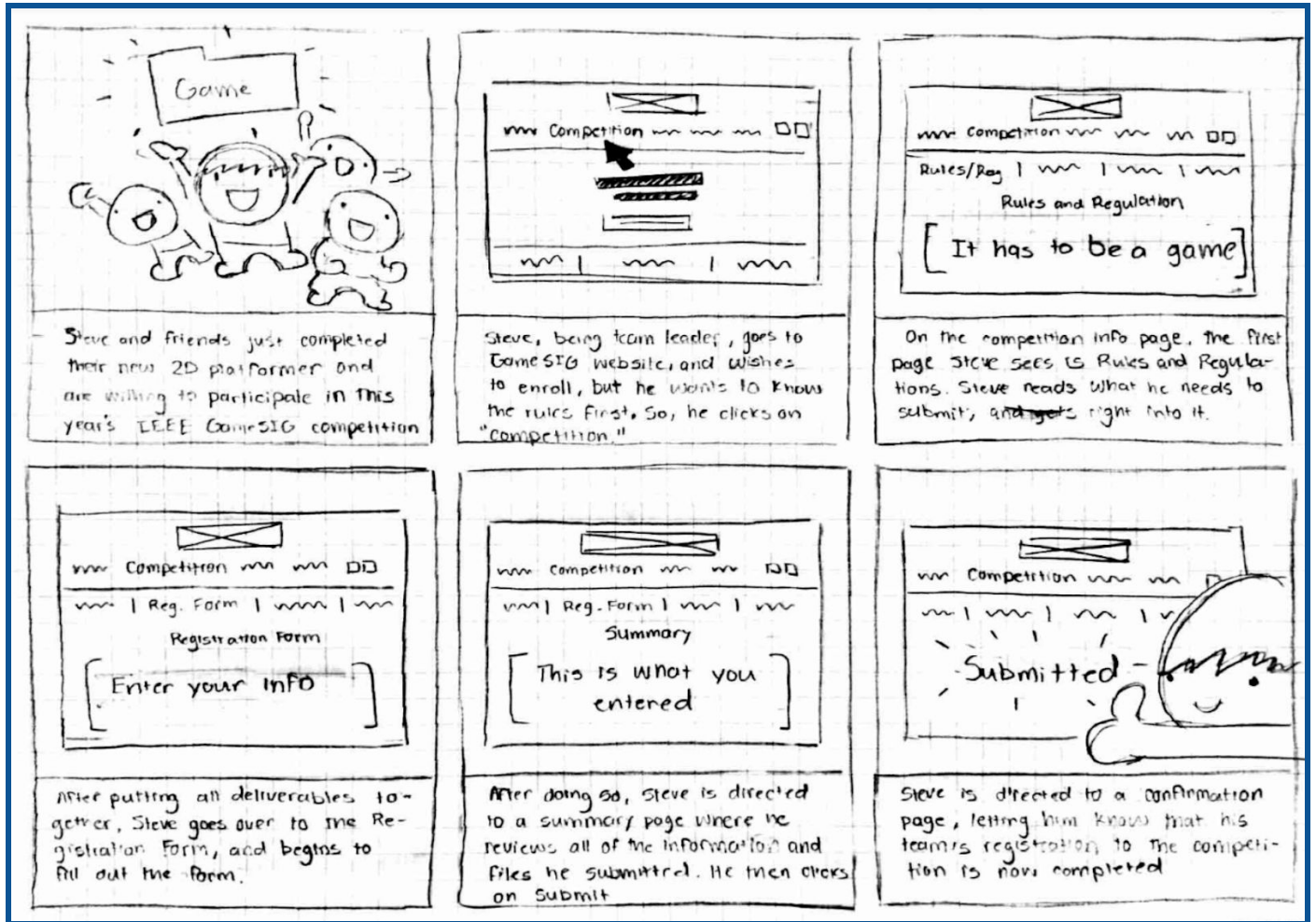
2.6. Design Constraints

The Project has two rudimentary limitations with respect to its design; physical, and psychological. Both will limit the user and not the Designers. In terms of the physical, it is important that any actions leading to an irreversible outcome, such as submitting a registration form, will need a dialog box to confirm the user intended to submit.

The psychological constraints include, but are not limited to, the use of mapping, symbols and other conventions that either influence the user's behavior, audibly alerting the user when an error has been made or guide the user in the right direction based on learned customs, respectively (Redaelli, 2013).

Although there are aspects of the first two constraints that are currently out of the Project's Scope, the Designer have been advised and will maintain an awareness of any back-end processes throughout the duration of this Project.

Another limitation is with respect to stakeholder satisfaction and the extent to which the Project's design may be similar in composition, color or functionality to other websites of the same subject matter. To that end, the Designers intend to adhere to industry standards for website development by applying its general guidelines, theories, principles and approaches toward the development of websites.

Finally, the Designers are constrained in their adherence to the Website Content Accessibility Guidelines (WCAG), Accessible Rich Internet Applications (WAI-ARIA) and all other laws which govern websites and their design.

2.7.   Assumptions

The Designers surmise certain assumptions with respect to this Project that may ultimately affect how it is designed in that the audience is familiar with the Website's reputation, providing accurate competition information and dates, and other general organization announcements. We also concede:

2.7.1. The web hosting will be properly maintained
2.7.2. The user's of the Website will have either an established Internet connection or Internet access
2.7.3. The server-side of the Website will be properly maintained
2.7.4. The user's of the Website will be at least 18 years of age and enrolled in a community college or university
2.7.5. The IEEE GameSIG Organizers (the "Organizers," singularly as "Organizer") will provide all the Website content
2.7.6. The Site will be used on either a tablet, desktop or laptop computer.

3.   Specific Requirements

3.1. Functional Requirements
    3.1.1.   Pages
        3.1.1.1.   Homepage
            3.1.1.1.1.   Introduction content
            3.1.1.1.2.   Social media widgets

3.1.1.1.3. Footer that includes a site map and clickable links

3.1.1.2. Competition
3.1.1.2.1. Rules and Regulations
3.1.1.2.2. Event History
3.1.1.2.3. Judges and Sponsors
3.1.1.2.4. Organizers with profiles and photos

3.1.1.3. Registration/Tickets
3.1.1.3.1. Registration form with the ability to submit videos and documentation
3.1.1.3.2. Call-to-action button for submission
3.1.1.3.3. Call-to-action button to redirect to Eventbrite

3.1.1.4. About Us
3.1.1.4.1. Mission Statement
3.1.1.4.2. Organizers with profiles and photos

3.1.1.5. Gallery
3.1.1.5.1. Component for past competition game design winners; this includes the title, the description, the team name, the platform the game uses, the school the creators are from, and a video
3.1.1.5.2. Links to galleries displaying previous competitions and content, by competition year

3.1.1.6. FAQ
3.1.1.6.1. What, when, where and how information about the competition

3.1.1.7. Contact Us
3.1.1.7.1. A contact form

3.1.2. Optional Requirements

3.1.2.1. A carousel on the homepage that displays past competition event photos
3.1.2.2. Pictures of video game characters to represent the board members; this will contribute to adding personality to the website, and lessen the tension of the competition for college students.
3.1.2.3. Embedded social media feed, specifically Twitter, in one of the pages.

3.2. Behavior Requirements
    3.2.1. Use Cases
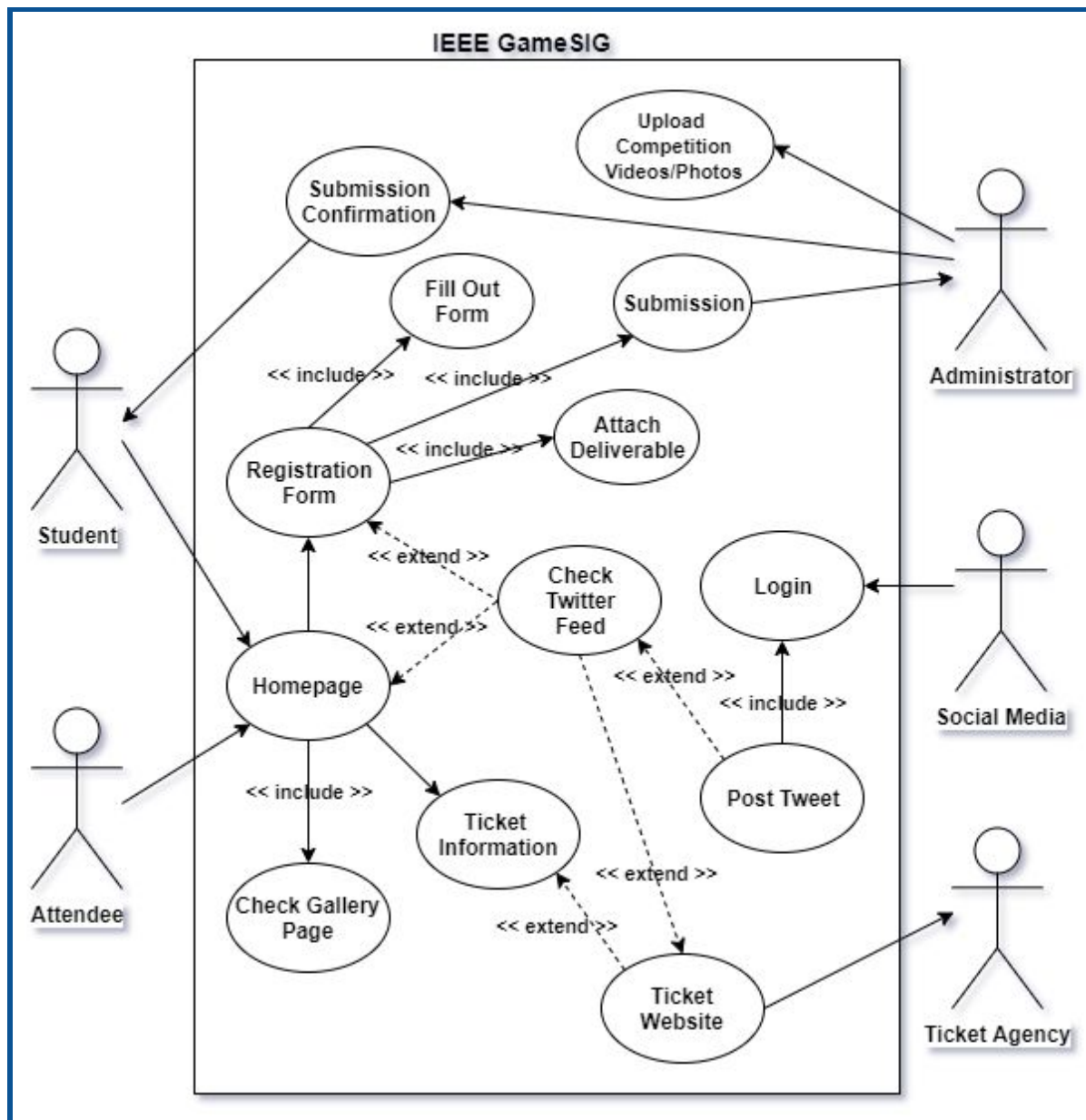
3.2.1.1. Register For the Competition

Section	Content/Explanation	
Use Case Name	Competition Registration	
Priority	High	
Criticality	High	
Short Description	Users are able to register and submit their entries to the competition	
Goal(s)	Provide all information to register for competition	
Primary Actor	College students	
Secondary Actors	Social Media	
Preconditions	User must have all required entries ready to submit; User is at GameSIG Homepage	
Success End Condition	A confirmation page shows, verifying that the submission was a success.	
Failed End Condition	The page reloads and details the error.	
Trigger	User clicks on "Enroll" from Homepage or user clicks on "Registration Form" under the Competition tab	
Main Success Scenario	**Step**	**Action**
	1	From the Homepage, user clicks on the "Register" button
	2	The Registration page appears
	3	The user enters the required information on the form and uploads their video
	4	Clicks on the "Submit" button when done.
Alternative Scenarios	**Scenario *.1: User is in another page of the website**	
	1.1	From the current page, the user locates the navigation bar
	1.2	Click "Registration/Tickets," and a sub-menu appears
	1.3	In that sub-menu, click on "Registration Form"
	Scenario *.2: User is on social media	
	2.1	While on the third-party Twitter feed page, the user clicks on the Register for IEEE GameSIG link
	2.2	The user is redirected to the Registration Form page
Exception Scenarios	**Scenario *.1: User leaves required entry fields or entire entry form, blank.**	
	1.1	System detects 404 error, that states "cannot find the page requested."
Relationship to other use cases	There are several ways to access the Registration page on the Website	

Supplementary Information	The information required includes the team name, each members name, name of the game, game genre, platform used, etc.
Open Issues	What happens if the website server crashes upon submitting?

3.2.1.2.   Check Gallery

Section	Content/Explanation	
Use Case Name	Check	
Priority	Medium	
Criticality	Low	
Short Description	Users are able to browse freely for past videos and pictures	
Goal(s)	For entertainment purposes and/or inspiration	
Primary Actor	Users, Attendee	
Secondary Actors	Judges, Sponsors	
Preconditions	Have video streaming software installed	
Success End Condition	Videos load, and begin playing. Pictures are rendered, and can be viewed.	
Failed End Condition	Unable to play videos / 404 error, and shows image ID	
Trigger	User clicks on "Gallery"	
Main Success Scenario	**Step**	**Action**
	1	From the Homepage, the user clicks on "Gallery" in the navigation bar at the top.
	2	They then click on the desired team/game to view videos and pictures
	3	Click on the desired video or view image
Alternative Scenarios	**Scenario *.1: User is on social media**	
	1.1	User clicks the hyperlink from Facebook/Instagram/Twitter
	1.2	The user gets directed to the IEEE GameSIG - Gallery website
	1.3	The user clicks on any available video to view or looks at images
	Scenario *.2: User is on Youtube	
	2.1	User is on the Homepage of Youtube
	2.2	User searches for IEEE GameSIG videos
	2.3	User expands the description of the video
	2.4	They click on the hyperlink that directs them to the IEEE GameSIG "Gallery" website
Exception Scenarios	**Scenario *.1: User has internet connection issues**	
	1.1	System detects 404 error, that states "Cannot

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	find the page requested."
	Scenario *.2: User does not have Flash Player to play videos
	2.1	System is unable to detect streaming software, then states it, "Failed to load resource."
Relationship to other use cases	None
Supplementary Information	User must have some sort of video streaming software (Flash)
Open Issues	What happens if the video has been taken down from Youtube

3.2.1.3.   Buy Competition Tickets

Section	Content/Explanation	
Use Case Name	Purchase tickets	
Priority	High	
Criticality	High	
Short Description	User is able to buy a ticket for the event but will not participate in the competition	
Goal(s)	Correct date/time and successful transaction	
Primary Actor	Attendee	
Secondary Actors	Participating or nonparticipating college students	
Preconditions	Ticket window is still open and event tickets have not been sold out	
Success End Condition	The page redirects the user to the Eventbrite website	
Failed End Condition	The page reloads and details the error.	
Trigger	User clicks on "Buy Tickets" or goes on the Eventbrite website and searches for IEEE GameSIG	
Main Success Scenario	**Step**	**Action**
	1	From the Homepage, the user clicks on the "Competition" tab on the navigation bar
	2	A sub-menu appears and they click on "Tickets"
	3	Scroll down and click on "Buy Tickets"
Alternative Scenarios	**Scenario *.1: User directly goes on the Eventbrite website**	
	1	Go direct to the third-party Eventbrite Homepage
	2	Type in "IEEE GameSIG" in "Looking for," "Irvine, CA" in "in", "Any date" in "on."
	3	They click on the IEEE GameSIG event
	4	Scroll down and click on "Buy Tickets"

		Scenario *.2: User is on social media	
	1	User clicks on the link that was posted on social media	
	2	The link takes the user to the Tickets page; they scroll down and click on "Buy Tickets"	
Exception Scenarios	Scenario *.1: Eventbrite website is down		
	System detects an error, and prompts the user to input the required information		
	Scenario *.2: Ticket window is closed / tickets are out of stock		
	The "Buy Ticket" button will be grayed out and changed to "Sold Out"		
Relationship to other use cases	None		
Supplementary Information	Tickets can only be bought from Eventbrite; users cannot do it directly from the IEEE GameSIG interface.		
Open Issues	What happens if Eventbrite website is suspended or not functioning		

3.3. Nonfunctional Requirements

3.3.1. Usability

3.3.1.1. The Website's UI should anticipate the needs of its users for a better UX

3.3.1.2. The users should be able to easily figure out all the functionalities of the Website

3.3.1.3. The user should be able to easily navigate through the Website's features to find information

3.3.2. Reliability

3.3.2.1. The users expect the Website to function properly and consistently

3.3.2.2. The Website should be dependable and stable

3.3.3. Responsiveness

3.3.3.1. The Website should be responsive to user input and process in a reasonable period of time

3.3.3.2. The Website should be optimized for display when using desktops, tablets and mobile devices

3.3.4. Performance

3.3.4.1. The Website's loading time should not take longer than 3 seconds

3.3.5. Availability

     3.3.5.1.   The Website should have a 99% uptime

3.3.6. Scalability

     3.3.6.1.   The Designers are aware that the Website should have the potential to handle all the users' input and the submission files

 3.3.7. Confidentiality

     3.3.7.1.   System should secure its user's personal information

4. UI Design

4.1. Mockups

4.1.1. Homepage

The main page of the Website; what the user first see when the Website loads.
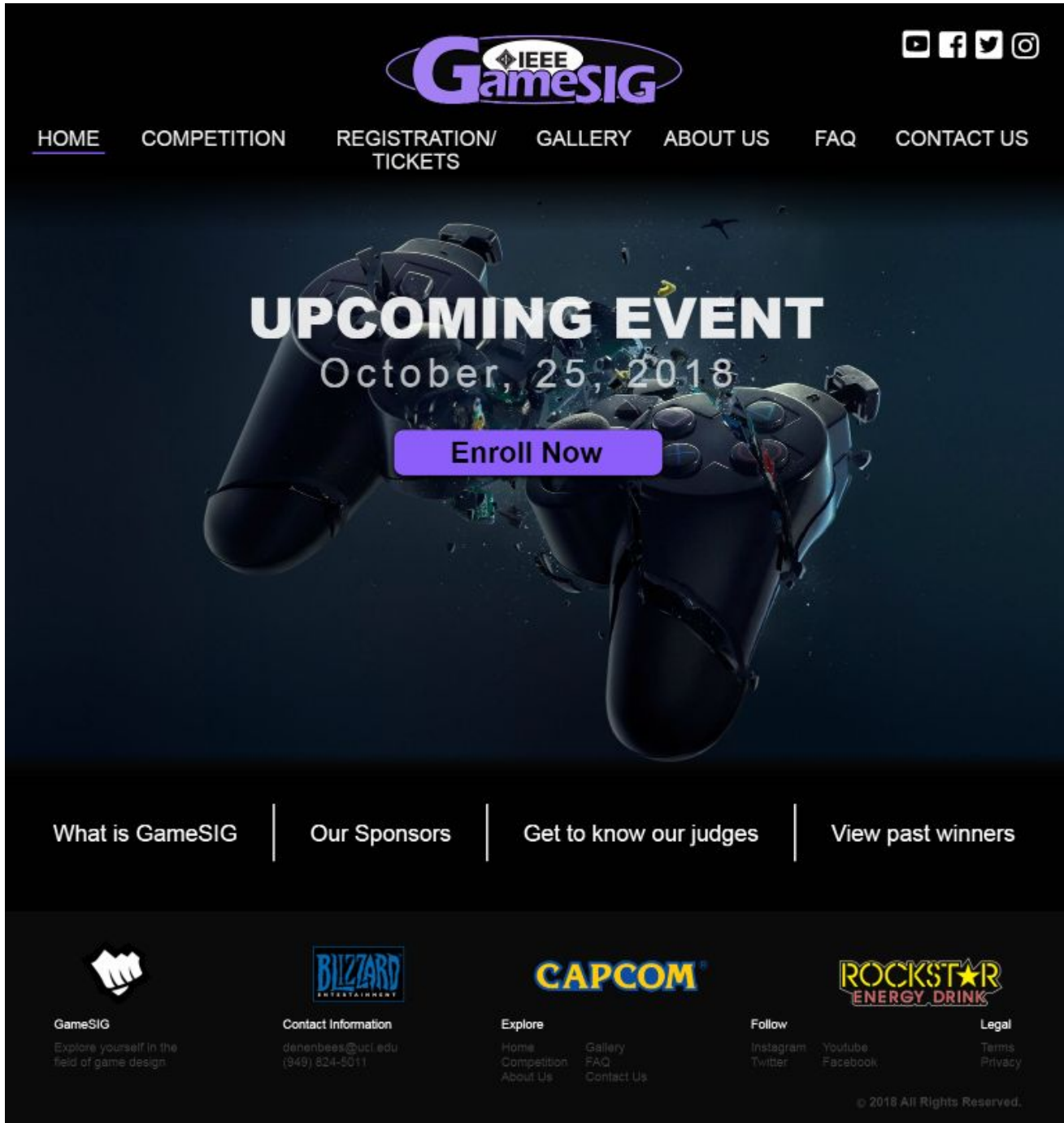
4.1.2. Competition -Rules and Regulations

This page includes all the information a user needs for entering the the competition.

4.1.3. Competition - Judges and Sponsors

This page includes information on the judges and sponsors who will be participating in the upcoming competition.

2018 Sponsors

We gratefully acknowledge our incredible sponsors whose educational, corporate, and personal continuing commitments have made a tremendous difference to the gaming world and computer programming world in general. We thank them for their support on all levels and look forward to the ongoing process of bringing resources to young men and women in the field of computer software and hardware.

Riot Games, Inc. is an American video game developer and esports tournament organizer based in West Los Angeles, California.

Blizzard Entertainment, Inc. is an American video game developer and publisher based in Irvine, California, and is a subsidiary of the American company Activision Blizzard.

Capcom Co., Ltd. is a Japanese video game developer and publisher known for creating numerous multi-million selling game franchises, including Street Fighter, Mega Man, Resident Evil, Devil May Cry, Ace Attorney, Monster Hunter, Dead Rising, Breath of Fire, as well as games based on the Disney animated properties.

Rockstar is an energy drink created in 2001, which, as of 2009, had 14% of the US energy drink market. Rockstar is based in Las Vegas. As of January 2013, Rockstar Energy Drink was available in more than 20 flavors and in more than 30 countries.

4.1.4. Competition - Event History

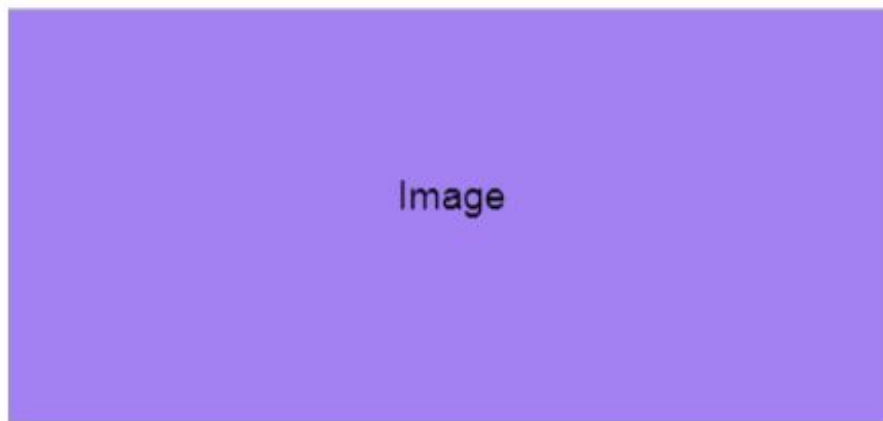   The Event History page shows the previous winners from past competitions.
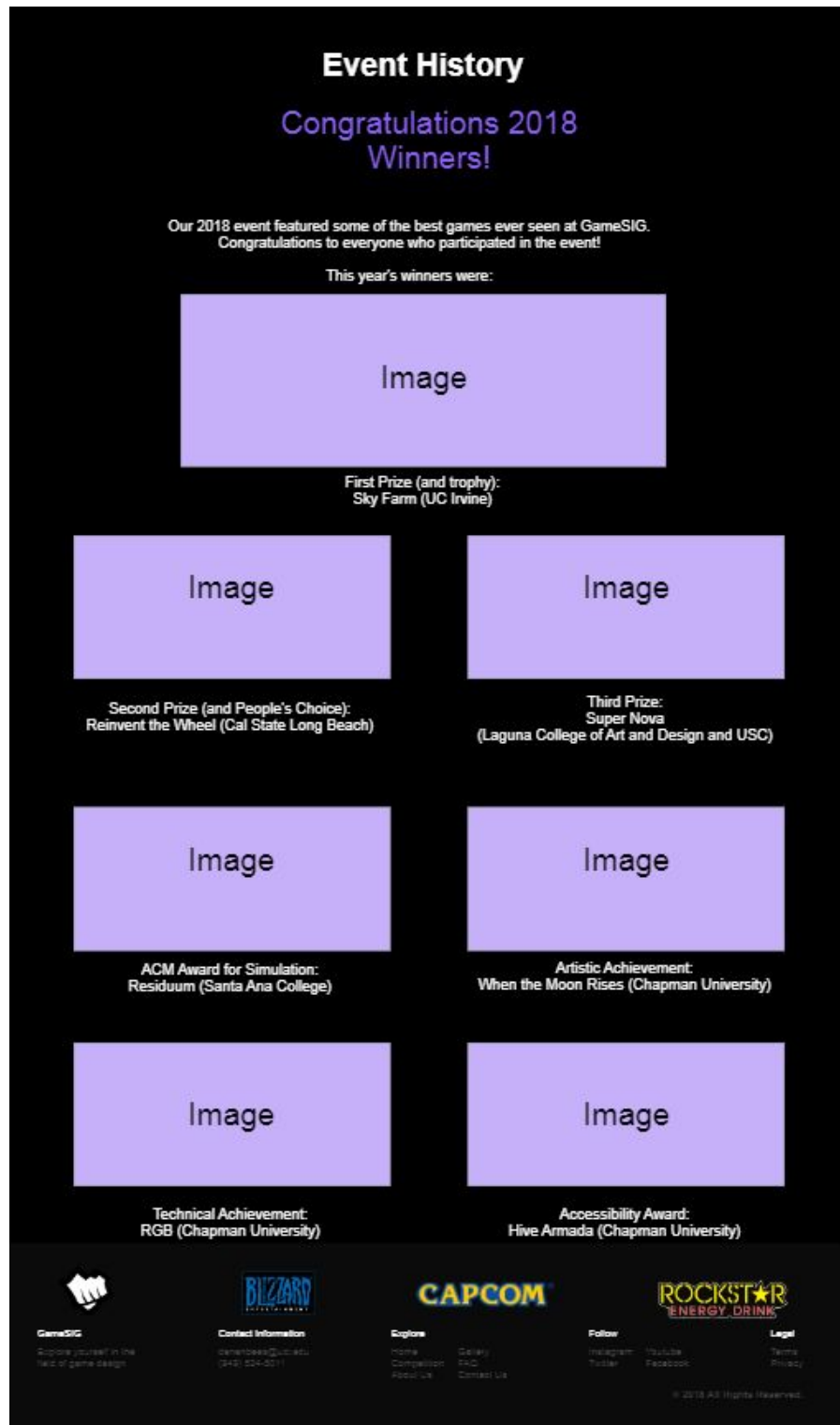
4.1.5. Competition - Tickets

The Ticket page provides details, and a hyperlink to buy tickets for the upcoming IEEE GameSIG event.

4.1.6. About Us

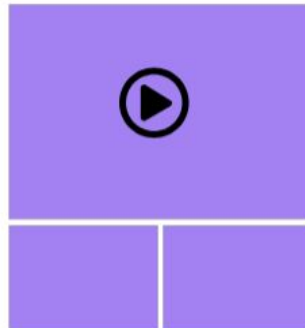The About Us page provides the mission statement and methodology of the Project.
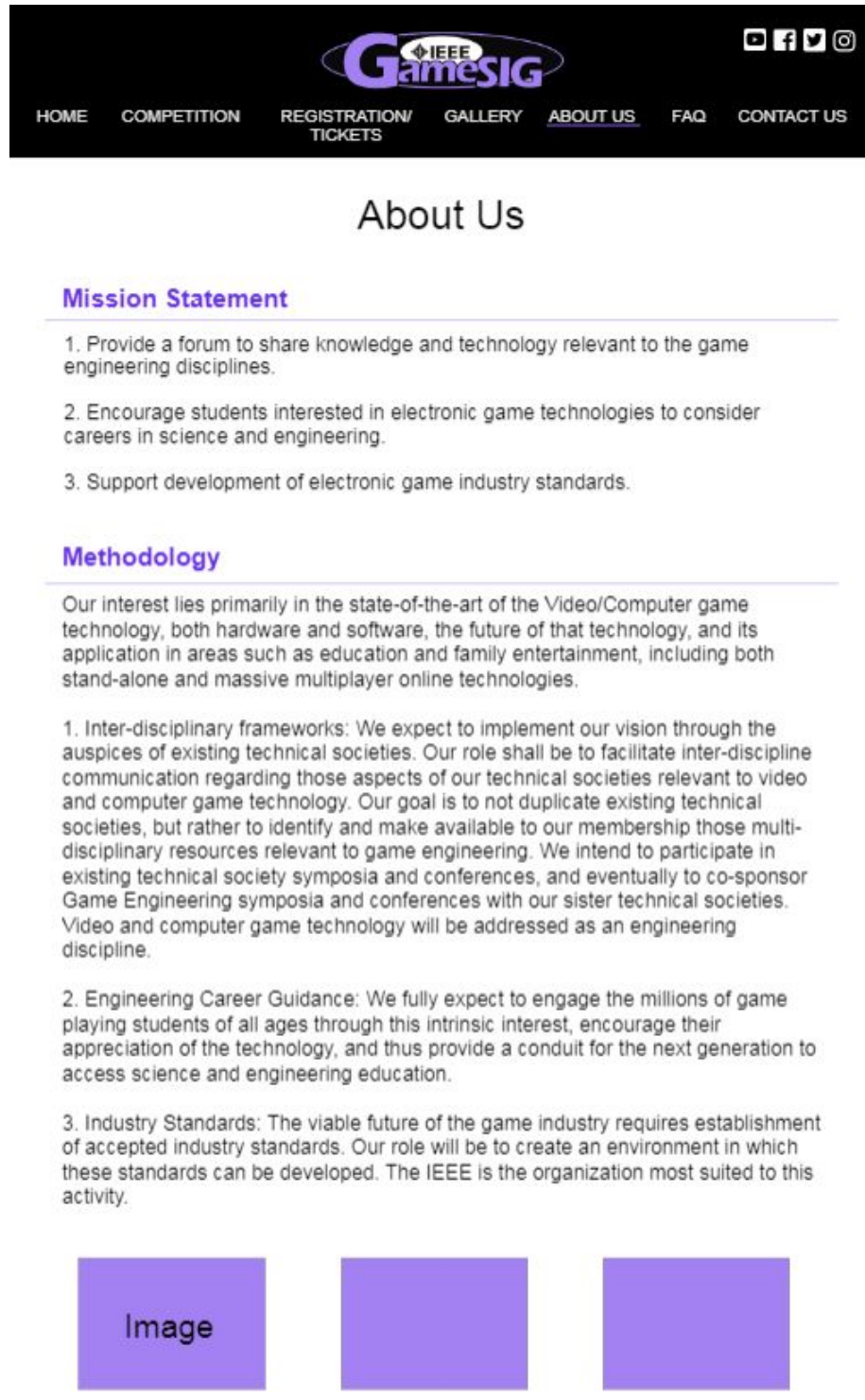
4.1.7. Gallery

The Gallery page is a showcase for previous game development team videos, competition photos and general competition images.

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4.1.8. Contact Us

This page allows the user to send an email to a general mailbox to get answers to general questions.

4.1.9. FAQ

The FAQ page contains questions and answers that are frequently asked by users.
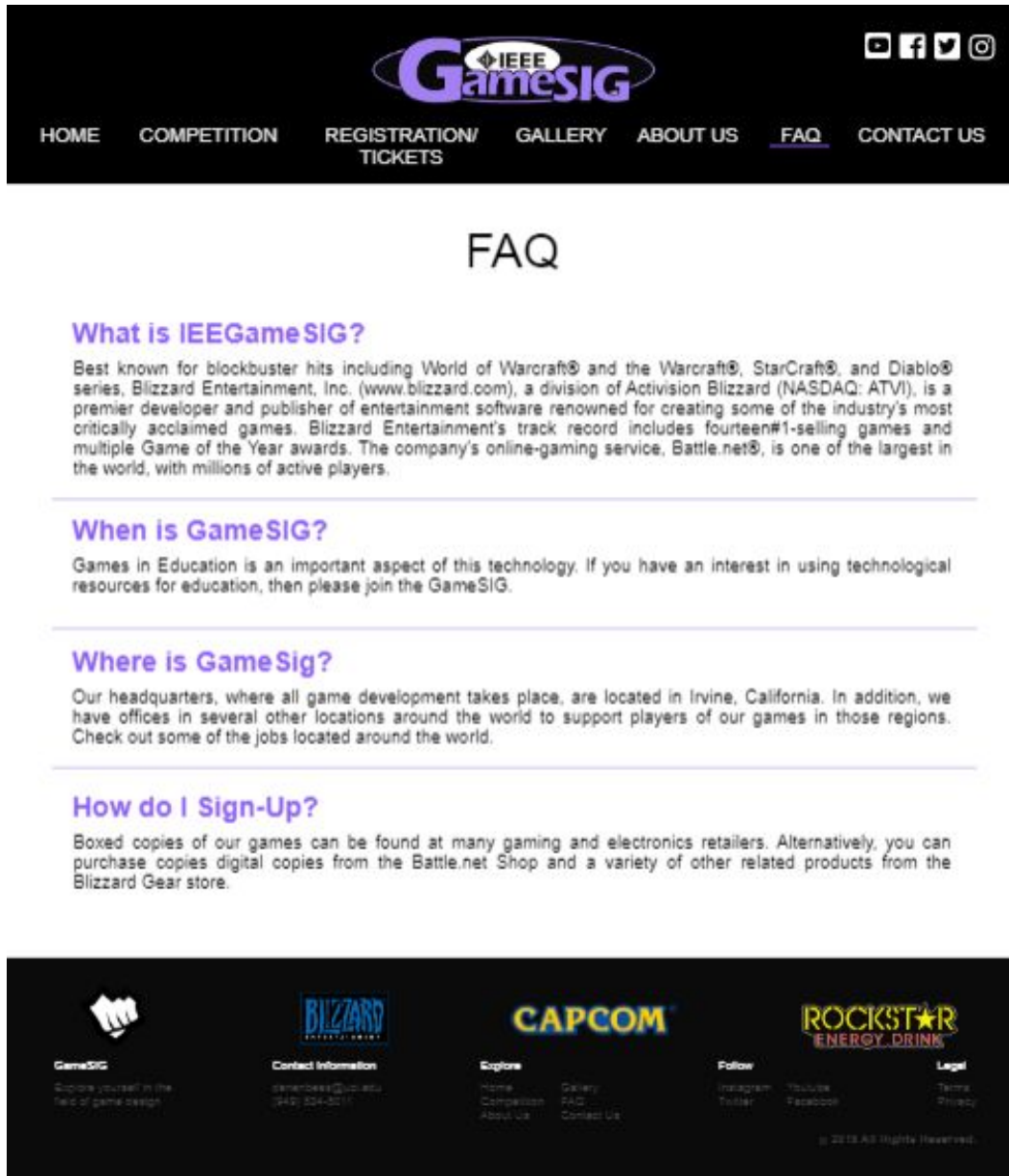
4.2. Workflow Model/Site Map

4.2.1. Flow Expectation

The model below indicates the Website's page flow. In general, it is a map used to represent the Website's page connections and the potential paths the user can take as they interact with the UI.

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The user characteristic types - the College Student, the Attendee, and Social Media - will be used to demonstrate navigation through several different user action combinations.
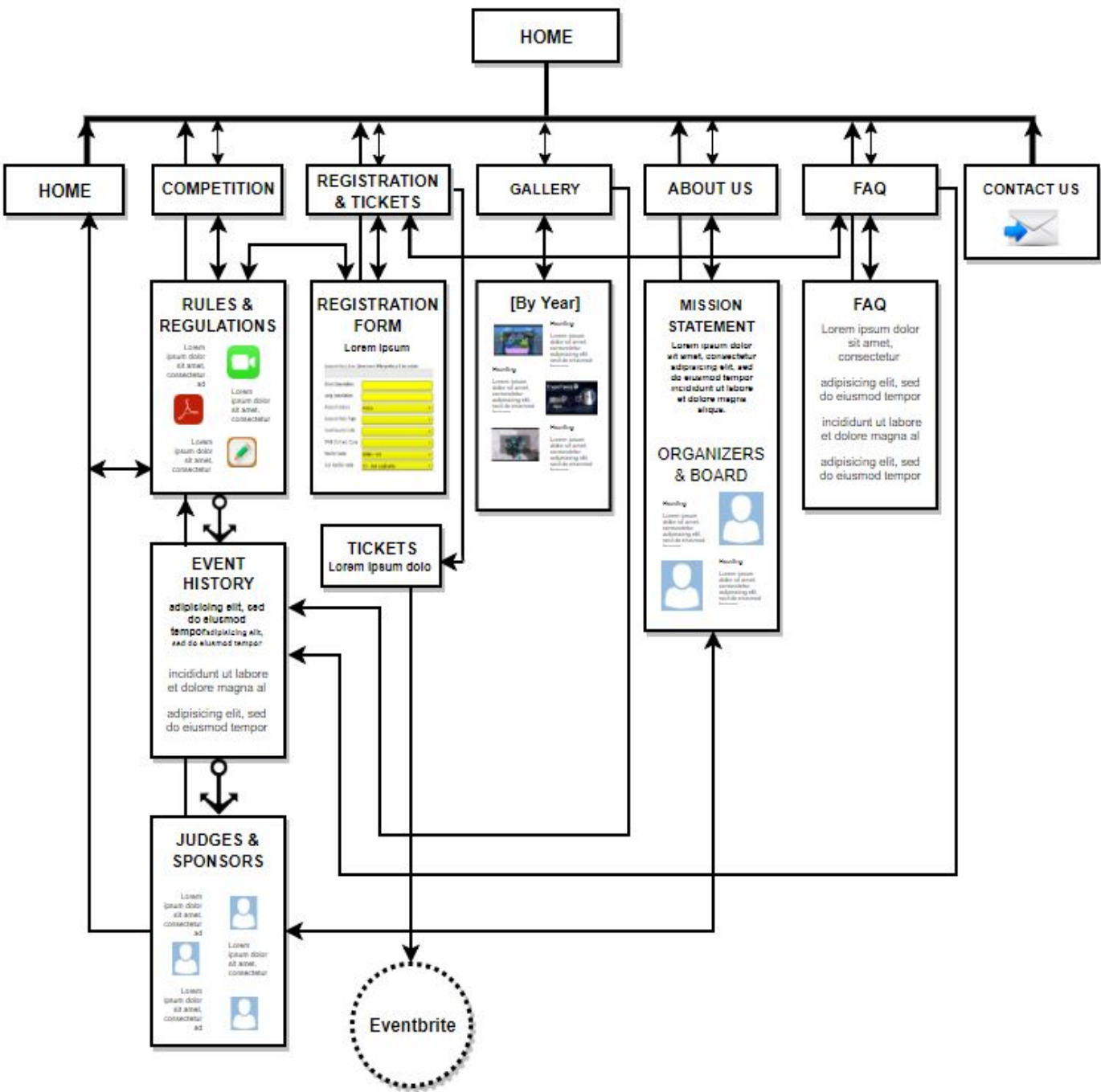
4.2.1.1.   College Student - First Time User/Potential Competitor

At *Homepage:* the user clicks *Gallery.* A *Gallery* state replaces the *Homepage.* The two-edge arrow indicates that the user may return to the *Homepage*.

At *Gallery:* the user is only able to scroll through the page. The two-edge arrow indicates that the user may return to the *Homepage*.

At *Homepage*: the user clicks on *Competition*. A *Competition* state replaces the *Homepage*. The two-edge arrow indicates that the user may return to the *Homepage*.

At *Competition*: A *Rules & Regulations* state automatically replaces *Competition* since it is the first thing the users see. The two-edge arrow indicates that the user may return to the *Homepage*.

At *Rules & Regulations*: the user clicks on the *Event History*. The *Event History* state replaces *Rules & Regulations*. The anchor-link indicates that *Event History* is part of the same component as *Rules & Regulations* and will return to the *Rules & Regulations* state if users click on the link. The single-edge arrow indicates that the user may return to the *Homepage.*

At *Event History*: the user clicks on *Judges & Sponsors*. The *Judges & Sponsors* state replaces *Event History*. The anchor-link indicates that *Judges & Sponsors* is part of the same component as *Event History* and *Rules & Regulations* and will return to the *Event History* or the *Rules & Regulations* state if either link is clicked by the user. The single-edge arrow indicates that the user may return to the *Homepage.*

4.2.1.2.   College Student - Second Time User/Competitor

At *Homepage*: the user clicks *Registration & Tickets.* A *Registration & Tickets* state replaces the *Homepage*. The two-edge arrow indicates that the user may return to the *Homepage*.

At Registration & Tickets: the user clicks on *Registration Form*. The *Registration Form* state replaces *Registration & Tickets*. The two-edge arrow indicates that the user may return to *Registration & Tickets* and back to the *Homepage*.

At *Registration Form*: the user enters information into the *Registration Form* fields and uploads their entry video and document files. The user initiates submission by clicking the submit element.

4.2.1.3. The Attendee - Parent of Student

At *Homepage*: the user clicks *Registration & Tickets.* A *Registration & Tickets* state replaces the *Homepage*. The two-edge arrow indicates that the user may return to the *Homepage*.

At *Registration & Tickets*: the user clicks on *Tickets*. The *Tickets* state replaces *Registration & Tickets.* The one directional arrow indicates that the user cannot return to the *Registration & Ticket* component.

At *Tickets*: the user clicks on the *Buy tickets* element. This redirects the user to a third-party website, *EventBrite*. The one directional arrow indicates the user may not return to *Tickets*.

5.   Software Design
5.1.   UML Sequence Diagrams

The purpose of the following diagrams is to help capture two of the most important workflow actions and use cases from the prior Sections, 3 and 4, in greater detail. This includes user competition registration and buying competition tickets.

5.1.1. College Student - Second Time User/Competitor

Use case name:	3.2.1.1 Register For the Competition
Brief description: Users are able to register and submit their entries to the competition	
Client Side	
Methods (operations)	**Method Descriptions**
Request pages	*Requests pages to display and view*
Enter and load information	*Enters information, uploads video and documentation*
Submit form	*Submission of completed competition form*
Receive confirmation	*Receives confirmation of successful submission*
Server Side	
Methods (operations)	**Method Descriptions**
Display page	*Displays page per user link click*
Display entry form	*Displays new blank competition entry form*
Retrieve entry form	*Retrieve new completed competition entry form*
Confirm information	*Requests confirmation of user information*
Confirm submission	*Displays confirmation of entry form submission*

Register for IEEE GameSIG Competition
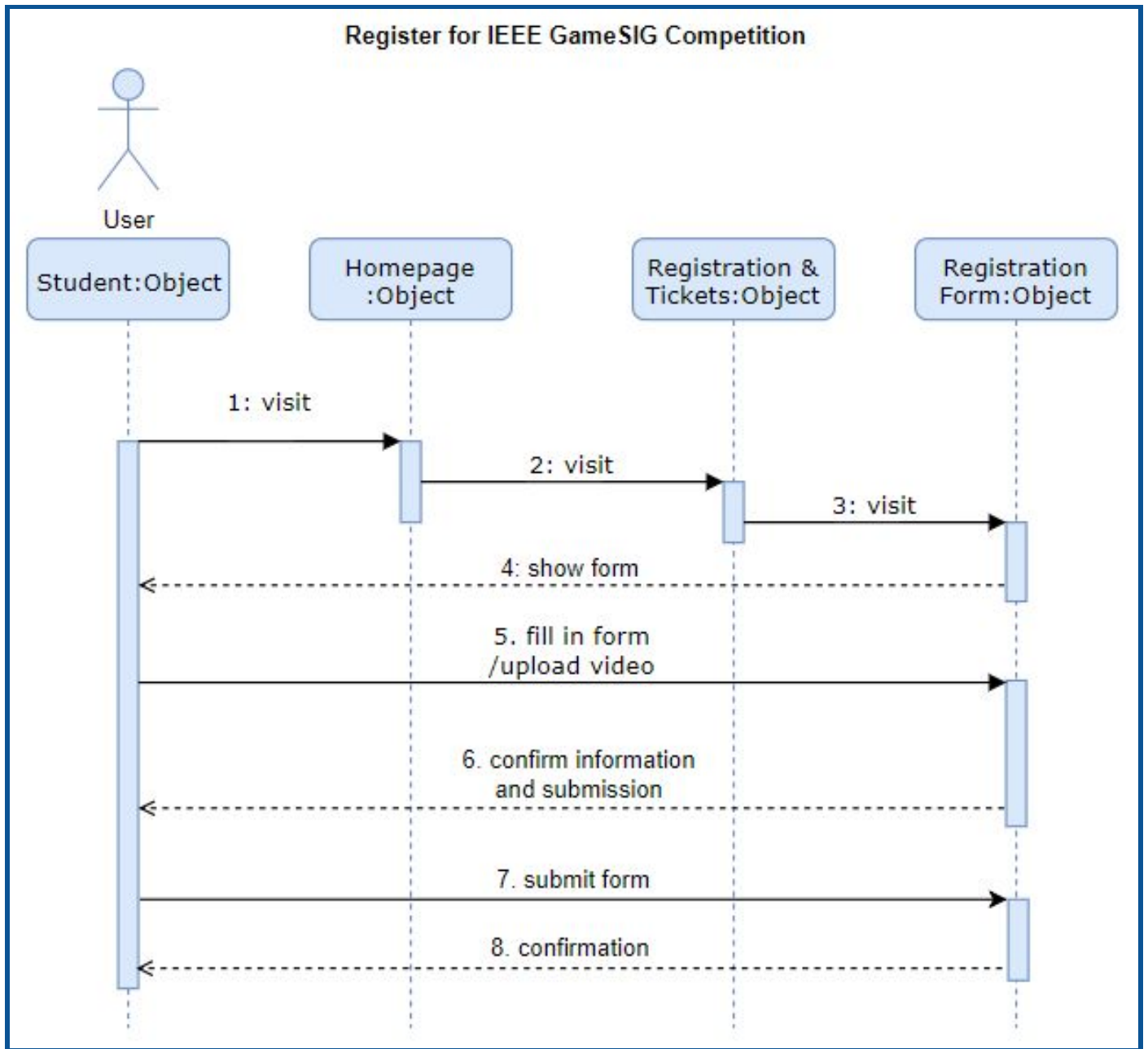
5.1.2. The Attendee - Parent of Competitor - Buys Tickets

Use case name:	3.2.1.3 Buy Competition Tickets
Brief description: User is able to buy a ticket for the event but will not participate in the competition	
Client Side	
Methods (operations)	**Method Descriptions**
Request pages	*Requests pages to display*

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View pages	*Views displayed pages*
Request redirect	*Requests a redirect to 3rd party ticket purchasing website, Eventbrite*
Server Side	
Methods (operations)	**Method Descriptions**
Display page	*Displays page per user link click*
Display ticket information	*Displays information on buying competition tickets*
Redirect to Eventbrite	*Redirects user to a 3rd party website to purchase competition tickets*
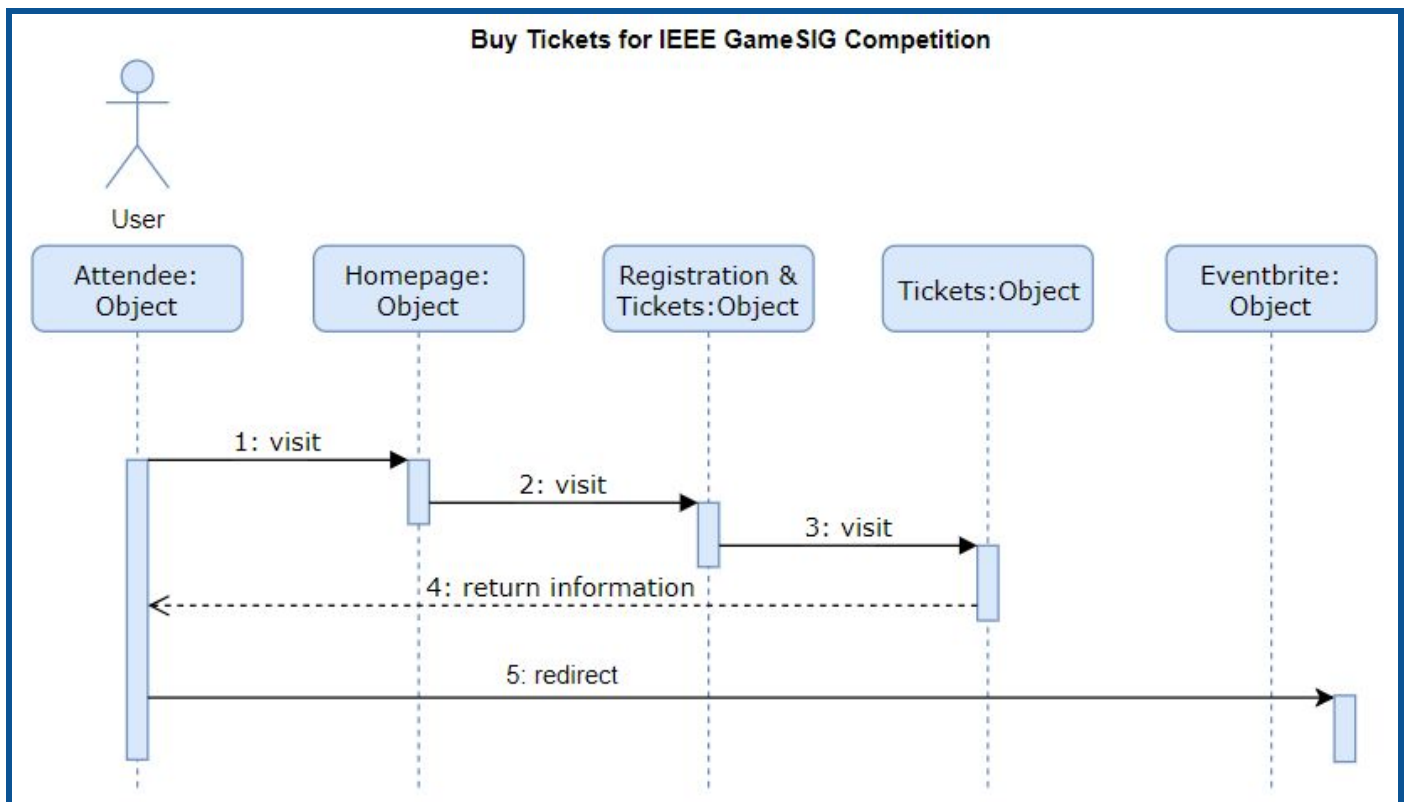
6.   Logo Design

The intent of the Designers is to design a logo that will reflect the feel and personality of the IEEE GameSIG competition and one that will eventually become the IEEE GameSIG competition brand identity. To that end, We had to take into consideration the the ages of the competitors, or the users of the Website, the essence of video games, and the IEEE registered trademark technical specifications which sets forth, the colors and relative positioning of the two elements that comprise the trademark.

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6.1. Mockups

In these initial mockups, the Designers tried to capture the playfulness of gaming by using a retro-style game controller and primary colors to capture the youthfulness of the Website's users.

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The second group of designs were cleaner. Here, the aim of the Designers was a more mature approach. The first two designs in the group downplayed the IEEE trademark in favor of what We believed is most important, the competition.

The second two designs in the set applied a monochromatic scheme and made both elements relatively the same size. We felt that this was more unifying and gave both elements equal weight.

The third strategy was to bring back complimentary colors. This time We used a different color of blue outlined in the trademark specifications to regain some playfulness. The Designers felt that while We were heading in the right direction, the design was not bold enough and looked unbalanced.

This group of mockups was the result of finding a black and white version of the trademark in the IEEE specifications. This opened the door to endless color possibilities and enabled the Designers to find the color that would best

coordinate with the Website design. Both the Designers and Sponsor agreed that these designs would best capture the image for the competition.


Both the Designers and Sponsor agreed on the style and color of the logo design, above.

7. Appendix

7.1. Card Sorting Diagram

The Sponsor was asked to provide his vision of the Website's page flow by using the card sorting sorting technique. This was intended to clarify what information the users should see, what flow the users should follow when navigating through the website, and what actions are available to them.

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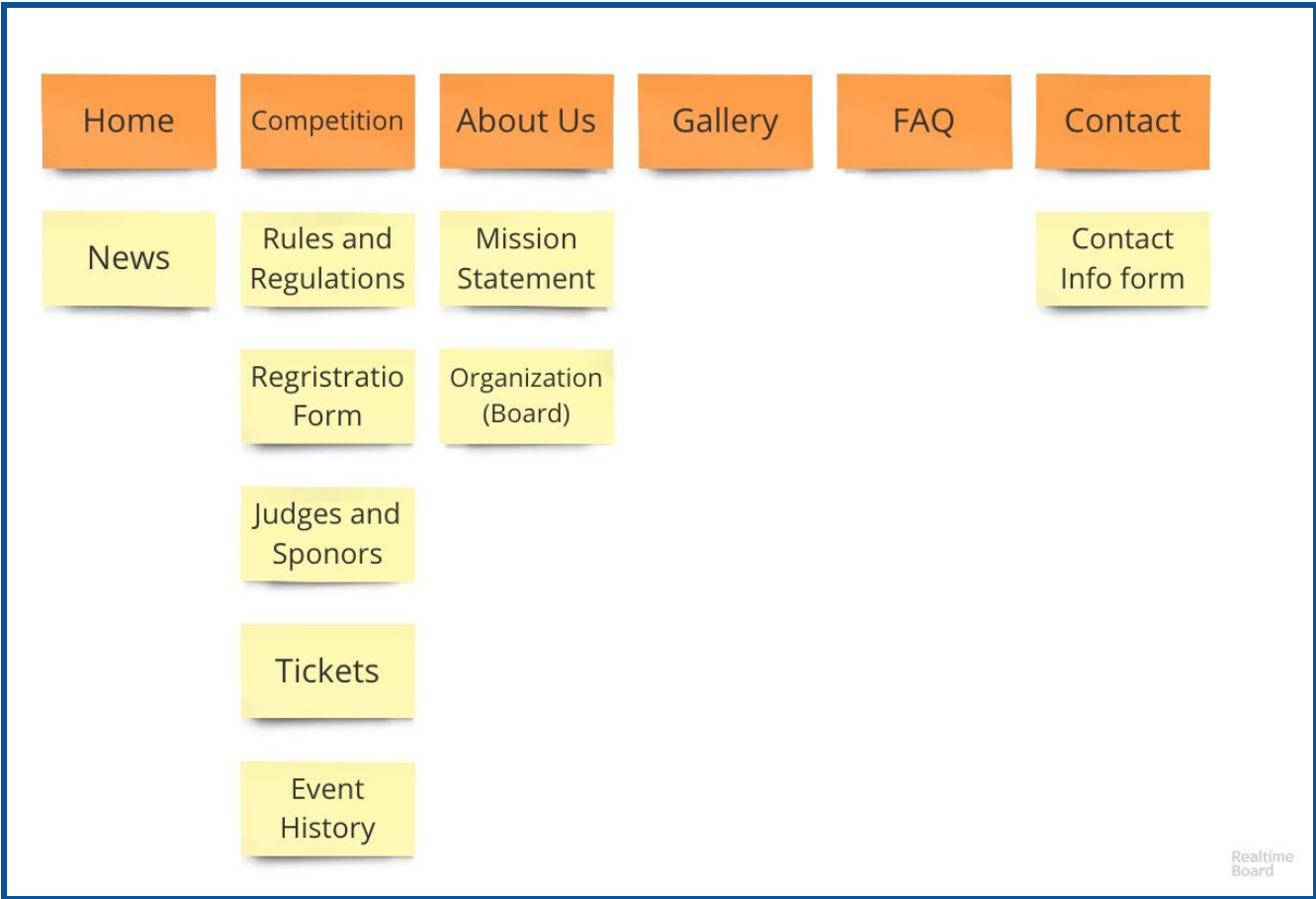
7.2. Revision History

Version 1.0 (Oct. 16)

7.2.1. The following sections have been added: Statement of Work, Scope of Work, Period of Performance, Place of Performance, Work Requirements, Assumptions, Personas/Scenarios, and Functional Requirements.

7.2.2. Five personas have been added: first time participant, returning participant, Attendee/guest, sponsor, and judge.

7.2.3. Functional requirements are specified.

7.2.3.1. A use case diagram has been added.

7.2.3.2. Requirements are listed based on priority: Must-haves, Nice-to-Haves, Great-if-We-Can-Have.

Version 2.0 (Nov. 1)

7.2.4. The following sections have been revised: Statement of Work, Scope, Project Phases, Specific Requirements.

7.2.5. The following sections have been added: Introduction (with the subsections: Purpose, Statement of Work, Scope, Definitions, Acronyms and Abbreviations, References and Overview), General Description (with subsections: User Characteristics, Product Perspective, Personas/Scenarios, Storyboards, Design Constraints and Assumptions), Functional Requirements, Nonfunctional Requirements, (Use Cases), and Appendix (with a Glossary, Mockups, Storyboards and Analysis Models).

Version 2.0 (Nov. 2)

7.2.6. Added Flow explanation and user characteristic types to explain Workflow Diagram (Cheri)

7.2.7. Revised the Workflow Diagram and added it to the document (Cheri)

Version 2.0 (Nov. 3)

7.2.8. Added Flow explanation, user characteristic types to explain Workflow Diagram (Cheri)

Version 2.0 (Nov. 5)

7.2.9. Revised Workflow Diagram and added it to the document (Cheri)

Version 2.0 (Nov. 6)

7.2.10. Edited the Function Requirements section and added Optional Requirements (Cheri)

7.2.11. Revised the Overview section to reflect the above changes (Cheri)

Version 2.0 (Nov. 7)

7.2.12. Moved User Characteristics and Mock-ups to the appropriate sections of the document (Cheri)

7.2.13. Added UML Diagram section to the Software Design section of the document and prepared and added two UML Sequence Diagrams to that section (Cheri)

Version 2.0 (Nov. 10)

7.2.14. General edits to document.

Version 2.0 (Nov. 12)

7.2.15. Added descriptions to Sequence Diagrams.

7.2.16. Moved Card Sorting to the Appendix.

Version 3.0 (Nov. 15)

7.2.17. Updated the Gallery section in Flow Diagram along with its description

7.2.18. Updated, edited and made additions to section 1 (Cheri, Don, Danny)

7.2.19. General additions and edits to the entire document (Cheri)

Version 3.0 (Nov. 27)

7.2.20. Added the Logo Design section and Mockups subsection with descriptions (Cheri)

7.2.21. General edits to some sections and a paragraph to the Overview (Cheri)

7.3. References

Redaelli, Mike. Design Fundamentals: Constraints. *HotJar*. 5 February 2013. www.webdesignerdepot.com/2013/02/design-fundamentals-constraints/. Accessed on 29 October 2018.