Final Report

Bethe OPS Project
May 16, 2019

1   Team

Jaewon Sim - js2689@cornell.edu
Albert Tsao - awt46@cornell.edu
Yun Ping Tseng - yt376@cornell.edu
Yuxin Xu - yx67@cornell.edu
Angela Zhang - az337@cornell.edu
Amy Zhong - az287@cornell.edu
Jennifer Zhou - jz547@cornell.edu

2   Client

Erica Ostermann; Assistant Dean; Hans Bethe House; eo93@cornell.edu, hadbethe@gmail.com

3   Objective

The task for this project was to implement a responsive web interface for the Hans Bethe House that serves as an automated tool for house event sign-ups to replace the current mechanism of signing up for events on paper at the front desk.

The main objective of this report is to review and give a breakdown of what was accomplished and what was not accomplished in regards to the client's expectations and to the requirements agreed upon by both the team and the client. This report will also describe what is included in the final handover of the project intended for the client.

4   Work Completed After Final Presentation

The following work was done in the time after the final presentation and up to the final handover of the project to the client:

- Refined the UI and UX according to feedback from user testing
- Implemented one-day and two-hour email reminders, completing the implementation of the email notification system
- Finished setting up hosting, including successful setup of the domain name for Bethe OPS
- Set up working login authentication with a test IdP (versus a production IdP)

- Conducted thorough program testing
- Conducted acceptance testing with the client
- Refactored code into a more organized and readable structure
- Commented the source code
- Wrote project documentation as well as documentation for the maintenance and support of the system

5 Project Evaluation

5.1 What the Project Achieved

At the beginning of the project, the client and the team had agreed on more required features than were actually implemented in the end. Due to logistical setbacks related to getting hosting and login authentication setup that relied on assistance on Cornell IT (CIT), the client and the team re-evaluated which features were absolutely required for this version of the system and which features were desirable or considered lower priority. In the end, the team was able to fulfill all the re-evaluated requirements with the exception of completed implementation of login authentication (further discussed in section 5.2). In addition, to provide guidance on how to implement the features that were deemed lower priority in the end, the team wrote up documentation on the project and source code, and included these features as future work as discussed in section 5.3.

5.2 What the Project Did Not Achieve

As mentioned in section 5.1, some features that were initially required were given lower priority in the end for the sake of releasing a polished, first version of Bethe OPS. This was mainly due to significantly slower process in setting up login authentication and hosting that relied on assistance from CIT, who was not as responsive as the project timeline required. However, since the client plans to pitch the Bethe OPS project to future CS 5150 classes, the features that were given lower priority can be realized in future work completed by future teams who work on the project (refer to section 5.3).

In addition, one of the major components that was not entirely implemented was login authentication, mainly due to the timing setbacks mentioned in the previous paragraph. The current system has login integrated with a test IdP provided by Cornell, but not with an actual production IdP. Compared to the production version of the IdP, the test IdP is less secure and might not be completely up to date on users in the Cornell system. For the purpose of login, the test IdP does work but the production IdP should be implemented into the system as soon as possible.

5.3   Suggested Future Work

The features that were not able to be implemented in this version of Bethe OPS but are desired in the system should be realized in future work made on the system, as follows:

- Implementing a mechanism for event leaders to select an event to be the featured event rather than immediately defaulting to the earliest event happening next
- Include two tabs in the sidebar: one called "My Events" in which only the events the user logged in has been signed up for are displayed in the sidebar, and one called "Browse Events" in which all events are displayed in the sidebar for the user to browse as the current system does now
- Implement the functionality for the event action, "Download Data", that allows event leaders and admins to download data for events by semester
- Implement login authentication with the production IDP

Other suggested future work includes improvements that can be made on certain areas of the current system and suggestions made by users during user testing, such as:

- Including a "Search" bar that serves as an alternative to scrolling through the calendar and the sidebar to browse or find events
- Adding a messaging feature to the event profile that allows attendees of the event to message the event leader from the platform
- Redirecting the user to the event profile of the event they just signed up for or edited
- Implementing a pop-up or toast to confirm successful sign up
- Modifying the interface for event leaders so that an event leader can see the comments submitted by attendees who signed up for the event led by the leader
- Allowing users who are not affiliated with Cornell to be added to events
- Adding an "Email Attendees" feature to the "Event Actions" menu to allow event leaders and admins to send personalized emails to users signed-up for an event
- Adding an "X" button to the top right corner of modals as a clearer way for users to close pop-up forms (besides clicking out of the form)
- Adding a "Cancel" button to forms to allow users to cancel any changes made to forms
- Implementing clicking functionality that directs users to the featured event's profile upon clicking the featured event
- Adding a feature that allows users to add the event to their Google calendar
- Designing a better method of determining spot availability and removing yourself from the sign-up list or waitlist of an event with a hidden sign-up list
- Designing a more polished create account page for first-time users

6   Transfer of Copyright

The copyright of the software for Bethe OPS has been transferred to the client. Further details concerning the transfer of copyright are in "Business Documentation", which is included in the final delivery package (refer to section 7).

7   Final Delivery Package

The source code is on Github and can be viewed here; note that the repository is on Cornell Github, and thus requires Cornell net ID and password to login and view. The documentation in the final handover package is included in the project repository on Github under the folder *./documentation* as well. The following materials included in the final handover package are as follows:

- Feasibility study ("Feasibility Study")
- Requirements analysis and specification ("Requirements")
- System and program design ("System & Program Design")
- Detailed explanation of the user interface design and how user testing was carried out ("User Interface Design & Testing")
- User instructions specifying how to carry out certain user actions ("User Instructions", located in the folder *./documentation/instructions*)
- Developer instructions providing further explanation of how the source code is structured and which files are responsible for which functionalities of the platform (located in the folder *./documentation/instructions/developer_instructions*)
- Business documentation outlining the agreement between the client and the team on transfer of the rights in the system to the client ("Business Documentation")
- Source code