Information Kiosk

Team 2: Jose Arita •Brian Baker •Adonis Costa •Guido De Souza •Michigun Joseph •Mikaela Mitchell •Jose Pacheco •Ashley Shorter •Macklin Tweedie

Sponsor: ECE Advisory Board • Instructor: Dr. Jerris Hooker • Faculty Advisor: Petru Andrei

Summary

An interactive kiosk is to be built for the Electrical and Computer Engineering Department. This device will serve as an information hub for all activities and functions in the College and will have a user-friendly and inviting appearance. The goal is to improve the information flow of the College while enhancing the image of the ECE Department to be that of an up-to-date center of advanced technology.

Background

- The FAMU-FSU College of Engineering does not have any modern technology exhibits
- Existing maps and displays are going unused
- Information is not currently dispersed in a convenient and efficient manner

Objectives

- Create a visually appealing information hub
- Allow students, visitors, staff, and faculty a chance to interact with the system
- Add exciting 'WOW' factor to the College
- Reach audiences missed in previously used methods with up to date information

Acknowledgments

We would like to use this opportunity to show our gratitude to everyone involved with the ECE Advisory Board, Dr. Petru Andrei, and Dr. Shayne McConomy. Team 2 thanks them for their guidance and support, constructive criticism, and professional views thus far on this venture.

Survey Results

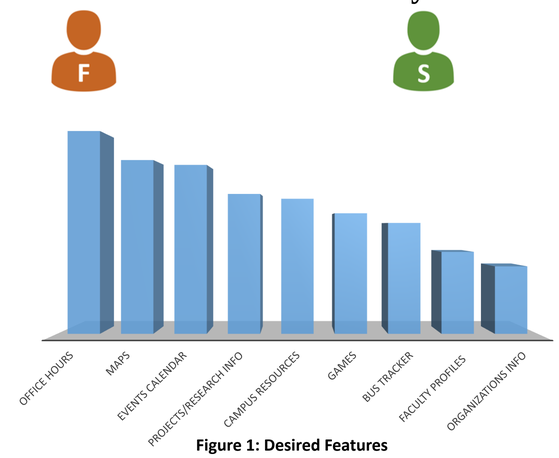

Figure 1: Desired Features

The most desired features were obtained as a result of two surveys, where the first survey gave the user the choice of including any feature that could be incorporated within the kiosk. The second survey condensed major answers and these were the most popular outcomes.

Concept Generation

- Proposed Designs
  - Multiple Screens
  - Moving Screen (Tilting or Up/Down)
  - Back Projection with Motion Controls

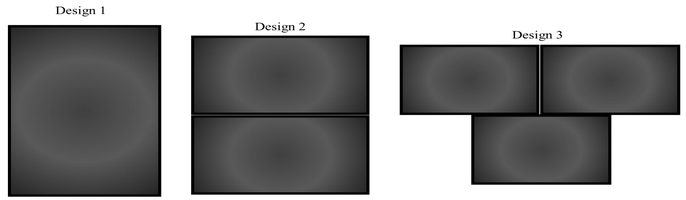

Figure 2: Screen Layout Options

Selection Criteria	Weight	Option 1	Option 2	Option 3	Option 4
User Interface	W3	**Touchscreen**	Voice	Kinect	—
Touchscreen	W4	Integrated	**Overlay**	N/A	—
Screen Size	W4	55 inches	44 inches	36 inches	Variable
# of Screens	W4	1	2	3	Projection
Degrees of Freedom	W7	Fixed	1 Pivot	1 Translation	Multiple
Location	W8	Corner	Middle	—	—
Concepts Generated		**Design 1**	Design 2	Design 3	Design 4
Wow-Factor	W1	1.5	2	2	2
Cost Estimate	W2	2	1	0.5	0.5
TOTAL SCORE		**3.5**	3	2.5	2.5

Table 1: Decision Matrix

Figure 3: Concept on Location

Concept Components

1	55 in. Display
2	Protective Glass
3	Touchscreen Overlay
4	Two 2.5 in. Speakers
5	Flush-mount Frame
6	Computer
7	9 in. Wall Build-up

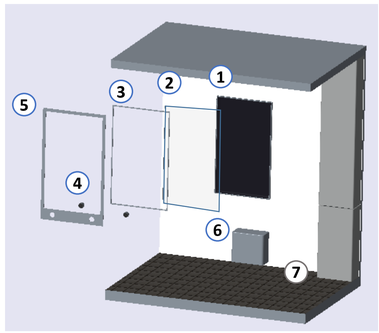

Figure 4: Exploded Concept

Concept Selection

- Selected Design
  - Single Screen, 55 in., portrait orientation
    - Height accessible for various users
    - Impressive screen will attract users
    - Glass with touchscreen overlay protects display
  - Compact speakers for high traffic, multipurpose area
  - Discrete Hardware
    - Existing column used for depth
    - Computer within wall or remotely wired to display
    - Room to expand
    - Clean, bold look

Software Design

- Access to data from COE website is essential
- Fully decouple Drupal to access data
  - New COE website will be rolled out soon
  - Built using internet content manager Drupal
- Display data inside Android app
  - Add custom features like interactive map and professors' office hours

Conclusion

The ECE Kiosk will provide a smart and innovative way to display key information for students and faculty all while exhibiting the technological edge that the college takes pride in. Consulting with all parties involved has yielded a very promising plan moving forward.

Future Plans

- Purchase displays, computer parts
- Finalize mounting location with building services
- Coordinate programming tasks with CMS
- Benchmark anti-tampering measures, software, and ergonomics