A MULTIMEDIA STUDENT SERVICE PROJECT

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Introduction

The Department of Computer and Information Sciences at Iona College in New Rochelle, New York has deviated from the traditional manner of disseminating information at open houses by distributing pamphlets describing faculty, programs, courses, internships, graduate study, and so on. The department has decided to take this method one step further by creating an interactive multimedia presentation. The purpose of this multimedia presentation was to convey the department’s message by allowing a prospective student to directly access the desired information, as well as to create a lasting impressing in that student’s mind. The task of creating this project was given to two students in the department who were inducted into Delta Epsilon Sigma, a national honors society of colleges in the Catholic tradition. In order to fulfill a required service obligation to the academic department, the two students undertook this project with the assistance of a faculty mentor. The students collected information, learned to use the multimedia presentation software Podium, established design guidelines and goals, and set out to communicate the department’s message through multimedia.

Multimedia was chosen because it is a new and exciting way to interest an audience, present an idea, sell a product, or teach a student. Multimedia takes a static presentation and makes it dynamic, as it combines the multiple media types of text, graphics, sound, video, and animation, and frequently incorporates user interaction. Statistics show that people retain 20% of what they see and 30% of what they hear. When seeing and hearing are combined, retention increases to 50%. If a person is to see, hear, and do something simultaneously, retention can be as high as 80% (Hofstetter 4). Incorporating text, images, sound, and video into an environment that employs the power of hypermedia allows users to navigate at will and investigate areas of interest which would best engage their attention and create a memorable experience.

The other main attraction of multimedia is its ability to address the widely varying learning styles of different individuals. According to Howard Gardner, an education professor at Harvard University, there are several multiple intelligences that are important in human beings. This multimedia project addressed three of them. In the first, verbal/linguistic intelligence, text and sound elements appealed to those who use speech and writing to think, communicate and create. In the second, visual/spatial intelligence, picture elements attracted those who deal with graphic arts as the expression of ideas and the use of sight and imagination to understand. Those who relate to the third, bodily/kinesthetic intelligence, which facilitates learning through physical coordination and activities, were able to actively interact with the system.
combining these different ways of perceiving and learning, the project was able to reach individuals with diverse learning styles (Dickinson 43-45).

**DESIGN**

The overall goal of the presentation was to attract potential students. As stated earlier, the project was to be displayed at open house, where all of the academic departments in the college would be represented. With the presentation site and overall goal in mind, three subsequent goals were developed. These goals were to draw attention to the Department of Computer and Information Sciences, to allow users to obtain information specific to their needs, and to communicate the mission of the department.

The first goal, to draw attention to the department, was entirely dependent upon the display site. In a large room filled with pamphlet-laden tables, a computer would surely stand out. Moreover, having an interactive multimedia application displayed on an overhead projector readily available for anyone to use would make the display even more noticeable. In order to achieve the second goal, allowing users to obtain information specific to their needs, this interactive multimedia presentation would enable the user to initially choose from a main menu and then navigate freely depending on his or her interests. The third goal, communicating the department’s mission, was especially important. Often parents and students are so overwhelmed by the deluge of written information distributed at these events that a department’s message can easily be overlooked. This presentation would combine all aspects of the department into a unified presentation, with information available at the click of the mouse. The chosen design would create a concise, efficient and interesting way to tie together all of the pieces, and yet let them be seen individually.

One of the initial major decisions was the choice of application to build this multimedia program. *Podium* was selected because it is versatile and user-friendly. In addition, there was access via e-mail to the author of the software, Fred Hofstetter, if problems were to arise. The students working on the project had no prior knowledge of *Podium* but were able to learn from a manual and experimentation. Faculty members were consulted to collect data for inclusion in the project, including various pamphlets and course catalogs. The students were then given freedom to design the application and write the script.

The design phase of the project included establishing an overall layout and then creating sample screens on paper. A flowchart and the projected screen design and contents were presented to the faculty mentor for approval before the implementation stage was to begin. The scripting also began here, though final drafts were not complete until the end of the implementation stage. Most of the information given in the voice-overs were drawn from bulletins and pamphlets on the available programs and degrees. The intention of the voice-overs was not to repeat what was written on the screen, nor to overwhelm the user with data, but to be informative and brief. Scripts were also approved by the faculty mentor.

**IMPLEMENTATION**

Once the initial feel of the project was determined, several tasks were undertaken. Pictures of faculty, computer facilities, students, and classes were taken with a digital camera and downloaded from the camera onto the computer. The file format of the digital pictures was unrecognizable by *Podium* and had to be converted to .bmp images using *Corel*. To prevent a palette shift from occurring and modifying
all of the screen colors when the pictures were moved into *Podium, Corel* was again used to change the picture files from 256-bit colors to 8-bit colors. The sizing of the pictures was also accomplished using *Corel*.

As the pictures were being translated into *Podium*, an overall color scheme was designed for the project. The initial color scheme was to be gold and maroon, the school colors of Iona. However, once the pictures and text were introduced into the screens, the maroon and gold scheme seemed too bold and difficult to view for any length of time. The new color scheme selected was a gray background with maroon lettering and better complemented the screen elements.

As the project grew, other pieces were incorporated. Classical music was selected as background for the presentation to relax the users, without distract them from the content of the project. At this point the different screens began to emerge with a distinctive theme. For instance, some backgrounds were changed from the traditional gray color in order to add some variety. Some text colors were changed, and certain pictures and words were timed to appear on cue, rather than all at the beginning.

With these enhancements, the entire project started to converge and become more focused. According to the flowchart, the screens were broken up into four major sections: About The Department, Undergraduate Programs, Graduate Programs, and Career Opportunities, with the main menu enabling a user to select from one of the four options. The first section, About the Department, was further divided into Faculty, Facilities, and Students. In the Faculty section, pictures of faculty were brought into the screen, one by one, while a voice-over talked about the faculty members and their accomplishments. In the Facilities screen, a voice-over explained the computing facilities at Iona, while music played in the background, and pictures were shown of the labs and computer library available to the students. The third section, Students, showed pictures of students at work and at play, while a voice-over explained a bit about the students’ lives at Iona. At the end of the Student screen, the user was able to view a typical student project created by some of our majors.

The second section, Undergraduate Programs, gave the user some information on the courses and offerings of the department. For each of the three degrees the department offers, the program gave information on the degree itself and the course offerings. The third section, Graduate Programs, had a similar design, but due to time constraints, this section was not part of the first release.

The fourth section, Career Opportunities, consisted of three sections: Internships, Undergraduate Jobs, and Graduate Jobs. In Internships, a user learned of some job opportunities which were available on a part-time basis while also enrolled as a full-time student at Iona. In Undergraduate Jobs, a user could learn what job types are available to them with a Bachelor’s degree, and also different companies where some Iona graduates have been employed. The third section, Graduate Jobs, explained what career opportunities are available for a students in one of our three Master’s programs as well as where Iona graduates are employed.

**PROBLEMS**

There were several problems that occurred as this project developed. The first problems encountered were with the pictures. The palette shifts which occurred in *Podium* were unexpected, and as a result it took some time to determine a solution. In fact, in this situation the author was contacted for guidance. Another problem with the pictures was that some of them were not very clear when they appeared on the
screen. The camera was not of the highest quality and some of the pictures came out too light and slightly fuzzy. As a result, the final project had fewer pictures than originally planned, and some which were not of the best resolution.

A second problem occurred because voices and music cannot play at the same time in Podium. Both music and voices are recorded as .wav files in Podium, and Podium cannot play more than one .wav file at a time. In order to use both the music and the voices, a CD was used for the presentation, thereby enabling Podium to play the voice as a .wav file and the CD on its own. For other parts of the presentation, the voice and the music were played at different times on the screen.

In addition, the students were unable to prevent a .wav file from repeating if it were being accessed from a screen below it in the hierarchy, indicating the user had already heard the voice in the session. For example, the introductory voice on the initial BA degree screen was played every time the user returned to it after accessing one of its menu options. There was no apparent solution to this problem.

A final major problem that was encountered related to the code used in Podium to create the screens. There were instances where the only way to format the screens or to perform certain tasks was to work with the code and not the design tools. Aside from the help files, there was no documentation for the code used by Podium, and the code was not simple to understand. Therefore, many of the features that were planned for the project could not be implemented, since there was no obvious way of writing code for it.

**ENHANCEMENTS**

There are several different enhancements planned for the future. First, the Graduate Program section must be written to allow use at Graduate open houses. Second, some of the problems may be resolved with the newer version of Podium. Third, with more documentation about the programming language used in Podium, several improvements can occur, such as the fading of pictures and words from a screen and the ability to manipulate text and graphics while a screen is running. Finally, the introduction of video clips would be a welcome addition to the project.

**CONCLUSION**

At open house a faculty member and a student were present at all times to answer specific questions and pamphlets were available for prospective students to take home. The reactions of the high school students that used the project can be deemed successful. Although definitive statistics are unavailable, those present at previous open houses would say that more people were attracted to the department’s table because of the project. Through the project, the users were shown the type of work and overall atmosphere they would encounter if they chose Iona and the Department of Computer and Information Sciences. The potential students most likely remembered more from the presentation than they would have from just a pamphlet. Taking all these factors into account, and comparing them to the goals set forth for this project, it seems as if the project has been a success.

The students involved in the project feel that they have benefited from the work that they performed for the department. Not only did the project enable the students to learn more about multimedia and application design, it allowed them to make a valuable contribution to the department by building this application. Although the project was time consuming, required an intense effort and bore no academic credit, it proved to be a valuable and memorable experience. Hopefully, other
students will continue this work in the future, as the department continues to grow and expand its opportunities.

Bibliography


