INTRODUCTION

The History Department and the University Archives came together and were awarded a grant that allowed a STEM major and Humanities to collaborate on a project exhibiting the unique features of the archives in the TTU library. The project managers decided to incorporate a Computer Science student and a History student in order to create a virtual historical tour of the University campus. The resulting project includes a user friendly, web-based virtual history tour which utilizes historical materials, programing, and 360° panoramic images.
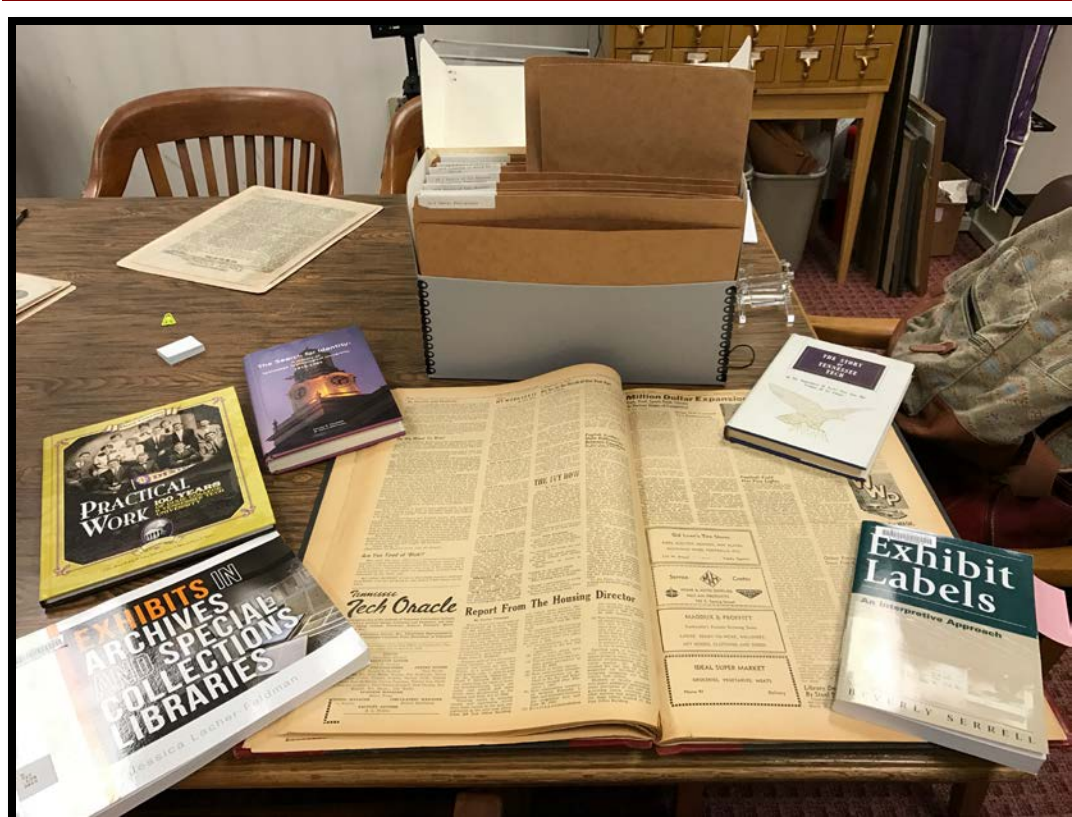
PROCESS

Overview of the Work

As a graduate student in Secondary Education – History, I have skill in research, yet this project gave me skills in another kind of historical research. The TTU Archives are filled with vast amounts of regional artifacts and information, including an incredible amount of historical photographs and papers documenting the history of the university. With my background, it was my duty to use the material in the archives in order to garner background information and photographs for each building around the Main Quadrangle on the TTU campus.
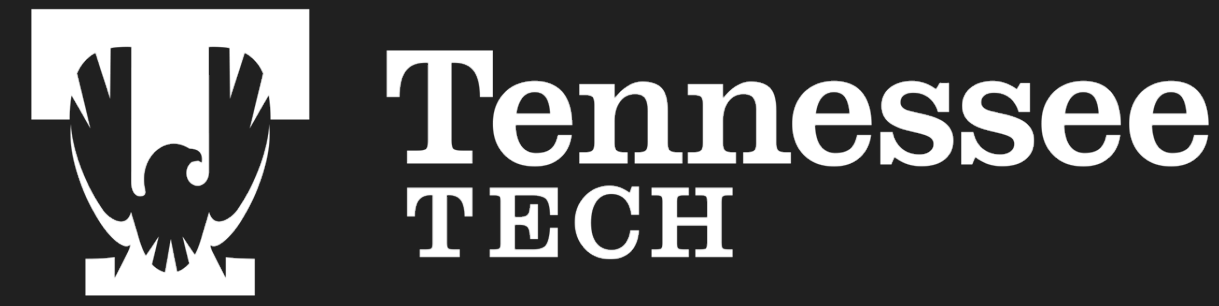
A Two Part Project

Chasely created the virtual aspect of the tourHe used JavaScript and several other applications to bring it to life. He created a spherical scene on each page, showing the building with a pop-up row of pictures along the bottom to explain the building's history to users.

Kellie did all the research, using several books in the TTU Archives as well as other documents and photographs in various collections. Chasely took these pictures and documents and inserted them into the program, along with a description of each picture and a brief synopsis of the building's history.
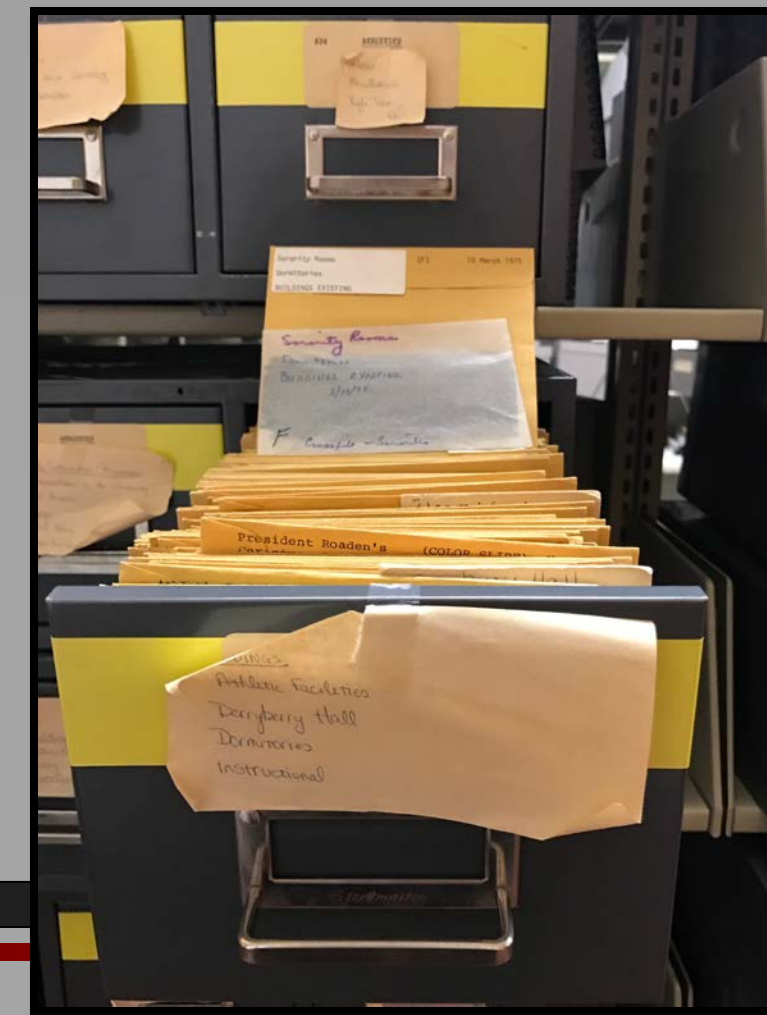
Creating a Virtual Historical Campus Tour

Tennessee TECH

Kellie L. Price and Chasely Goodman
TTU 2017 Research and Creative Inquiry Day

Process

Record Room, TTU Archives

Photo Services Negatives

Scanner

Kellie's research process for the Virtual Tour began with searching through the archives for information regarding the campus buildings around the Main Quadrangle, the main location for the tour. By searching for the main building's name through the "Finding Aids and Container Lists" on the Archive's website, it led to the room these record boxes are located (Above, Left), filled with campus documents and photos. TTU's Photo Services (Above, center) negatives were gone through to find pictures respective to each building. Everything was then scanned into the computer (Above, right).

Chasely's process began with developing an application to accomplish the virtual tour. A web-based application was chosen that would incorporate the use of HTML, CSS, and JavaScript together. A HTML pages was created to model each individual building that was chosen for the tour. To create a user friendly interface, each page was given a simple layout using HTML and a CSS style sheet. There are five basic classes, a class attribute points to a class in a style sheet, that handle the different elements of the HTML page including the title, basic information, map area, images bar, and the background. (Right)
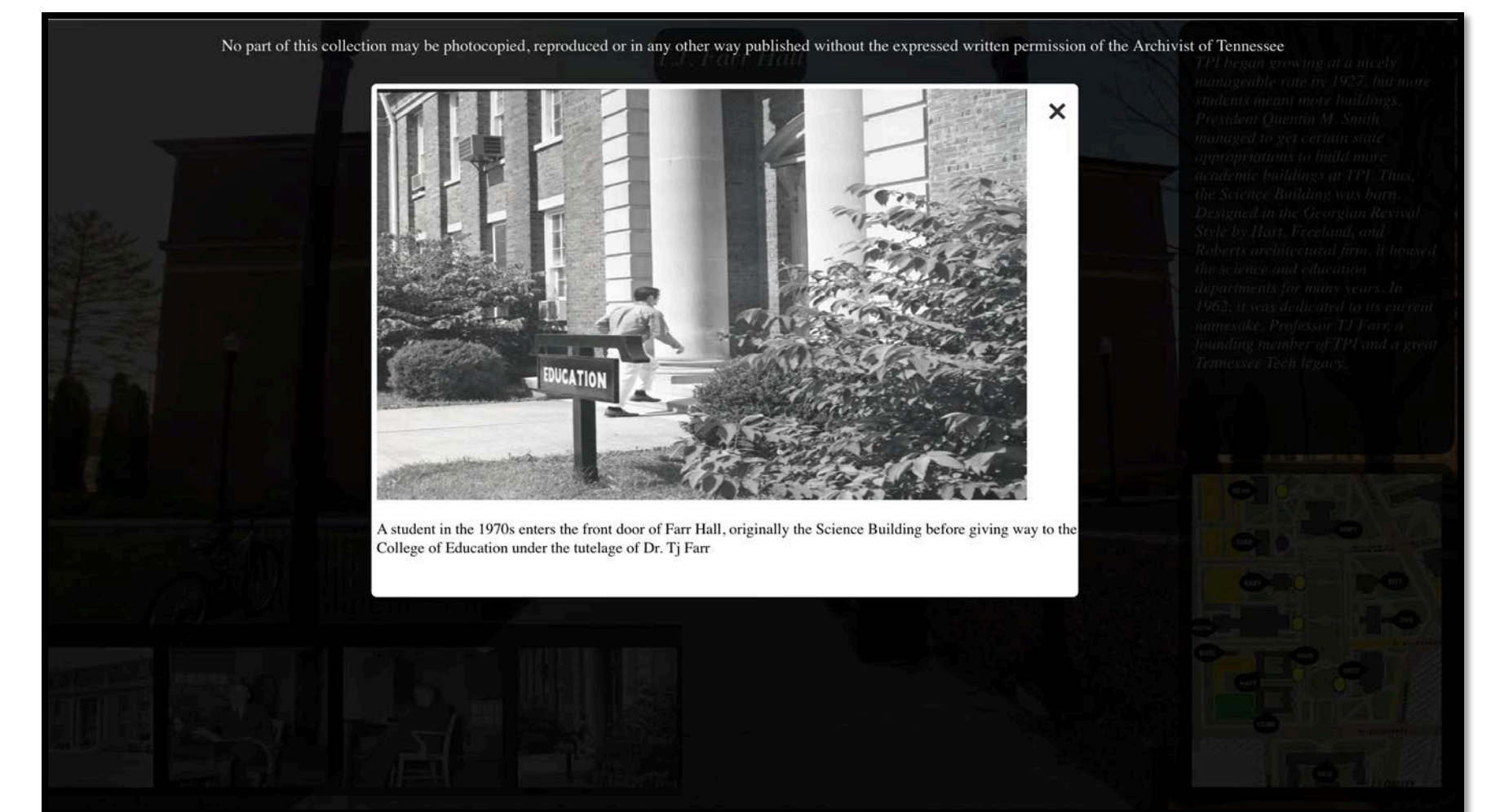
Building Page on Finished Tour

Process Cont.

The panoramic photo above was created using a digital camera, tripod, and a DSLRKIT 360° swivel panoramic indexing kit. The process of creating the photo consist of setting up the tripod with the panoramic indexing kit and taking a series of 36 images. The first 12 images are taken at a 0° pitch rotating 30 degrees at a time. Second we move to a +45° pitch and repeat the process. The camera should be set to manual mode with the shutter speed and white balance set for the scene. After the photos are taken, Photoshop is opened and we auto merge the photos together and begin polishing them.

Virtual Tour Result

At the bottom of the screen is a row of historical pictures depicting the building throughout its life with descriptions beneath them. (Above). As the user clicks on the pictures, they enlarge. This virtual work of art is something that not only gave me and Chasely the ability to learn about new, exciting parts of our respective fields, but this project is also something that can be used in the community at large, and it can also be added onto by future TTU researchers.

Acknowledgements