

Little Manila: A Digital Recreation

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Abstract

Little Manila was once a vibrant Filipino community in Stockton, California, decimated by a freeway construction project that began in the 1960s and took nearly three decades to complete. This paper describes our initial efforts to digitally recreate Little Manila as it appeared during the mid-twentieth century. Our game-like environment was developed primarily by an interdisciplinary team of undergraduate students who worked on the project during a five week summer fellowship. The team included two history majors, two graphic design majors, a computer science major, and a geological science major. The team managed itself using the Scrum methodology for software development, which included daily stand-up meetings that served to enhance communication and facilitate collaboration among team members. The current version of the software allows users to interact with non-player characters (NPCs) and explore many of the buildings near the intersection of El Dorado and Lafayette Streets, the center of Little Manila, to learn more about life for Filipino immigrants during the time period of the recreation. At the conclusion of the fellowship a “Big Reveal” event was held to demonstrate the software to members of the community. Nearly 120 people attended the event, with reactions from audience members ranging from tears to cries of recognition.

CCS Concepts

●**Software and its engineering** → Virtual worlds software; ●**Computing methodologies** → Graphics systems and interfaces

1. Introduction

“Virtual Heritage” is a discipline involving the use of information technology to construct 3D models of historically significant objects such as furniture, buildings, cities, and cultural landscapes [KFH09]. Such virtual reconstructions can make it possible for the public to view historical artifacts and visit historical sites that are difficult to access or that no longer exist. For example, virtual reconstructions have been created of the Chrysaliniotisa Quarter of Nicosia [DEC03], Troy [JKS02], and of ancient Rome [Fri08]. A recent trend in this area has been to develop *serious games*, games that teach users about cultural heritage while they play [AMcL*10, BBD*12]. Such games may help to raise *cultural awareness*, provide a *historical reconstruction* of an event from history, or offer an experience that increases *heritage awareness* of a location from the past or present [MCB*14]. In this paper we describe a work in progress to create a serious game that teaches about the culture and heritage of Little Manila, a once vibrant Filipino community in Stockton, California, decimated by a highway construction project that began nearly 50 years ago. Adding gaming interactions to virtual heritage projects provides an opportunity to involve audiences in the process of creating meaning and interpreting cultures and histories. Our

project is novel not only because it recreates a location of historical significance to Filipino America and the central valley region of California, but it was also developed primarily by an interdisciplinary team of undergraduate students working for a period of only five weeks.

2. History of Little Manila

One of the more fascinating aspects of Stockton’s diverse history is the story of its Filipino community and Little Manila, the neighborhood that once held the largest concentration of Filipinos in the world outside of the Philippines. For first and second generation immigrants, known as Pinoys/Pinays, who came to California in the early twentieth century, the neighborhood quickly became a safe haven from discrimination and economic insecurity. Little Manila continued to serve as a geographic center of Filipino-American culture and commerce until it was demolished to make way for the Crosstown Freeway in the 1960s.

At one time, Little Manila occupied a place of special importance in the collective memory of Stockton’s Filipinos. As a local legend goes, an early pioneer named Villarreal would meet newly-arrived Filipino immigrants at San Francisco’s ports to usher them to Stockton for opportunities in the fields [Mab08].

This story reflects the agricultural roots of Filipino immigration to Stockton. Following the Philippine-American War (1899-1902) and the United States' annexation of the Philippines, Congress enacted the Philippine Organic Act opening immigration to the U.S., while still restricting Filipinos' path to citizenship. After Hawaiian sugar plantations attracted the first wave of immigrant workers (*sakadas*) from the islands, the San Joaquin Delta began to draw laborers in significant numbers by the mid-1920s. The diversity of multi-seasonal fruit and vegetable crops grown in the Delta offered agricultural laborers both year-round work and higher wages than Hawaiian sugar plantations. Congress passed the National Origins Act in 1924, severely restricting immigration of Chinese and Japanese workers. Since Filipinos were exempt from these restrictions, they were in high demand among Delta farmers, especially asparagus growers. Eventually, laborers from the Philippines came straight to Little Manila as soon as they arrived in San Francisco [Rob16].

By the end of the 1920s, the intersection of El Dorado and Lafayette streets in Stockton became the center of a vibrant neighborhood that grew to accommodate the largest ethnic group providing agricultural labor in the Delta. In a region that placed high demand on their labor, Filipinos found themselves navigating a strictly segregated Stockton. North of Main Street, white-owned businesses posted signs warning "Positively no Filipinos Allowed" [MR08]. Finding lodging and businesses that would serve Filipinos, who often made easy scapegoats for economic downturns or social tensions in the city, was difficult in non-Filipino areas of the city. Little Manila became a vital center of commerce and community for these workers, geographically mixed with Japanese and Chinese communities. Hotels, like the Quezon and Mariposa, gave workers a place to live for months at a time when they were not working in the fields. Restaurants were scattered on every block and served a variety of cuisines from Chinese food at places like the Gan Chy Restaurant to traditional Filipino dishes such as *adobo* and *lumpia* at the Lafayette Lunch Counter. Restaurants and Filipino cafés were important sites of community formation and cultural preservation, as people congregated there to tell stories, converse, and reconnect. Little Manila also offered entertainment in the evenings. Pool halls, dance clubs, and cockfights (a traditional social activity brought over from the Philippines), provided a reprieve from hard farm labor. Filipino men would flock to the streets in their best Macintosh suits and Florsheim shoes to participate in these activities or simply to socialize with their neighbors. Little Manila's status as an economic and cultural center grew significantly during World War II. Filipinos who enlisted in segregated infantry units now had a path to citizenship. The War Brides Act (1945) allowed soldiers to bring back Filipina women as wives helping to address the historical gender imbalance (estimated as high as fourteen to one in the 1920s) between men and women in the neighborhood. The internment of Japanese families left businesses empty, which Filipino families acquired. Soon new businesses, including Filipino-owned barbershops, grocery stores, tailors, and hotels served all the daily needs of Filipinos and contributed to a post-war boom in the neighborhood's economy and cultural life. By the early 1950s, Little Manila had garnered a reputation as a center of regional, and even national Filipino-American culture [Mab13].

In 1968, Stockton officials began an urban renewal project that, like many other such projects in U.S. cities during the 1960s,

rushed to "revitalize" the city by bulldozing predominantly non-white areas. The first phase of this project began with the construction of the Crosstown Freeway. Although city officials considered two alternative locations for the freeway that would not have displaced as many residents, they ultimately decided to build the freeway through the heart of Little Manila. By the 1970s, this West End Redevelopment Project had cleared all but two blocks of Little Manila. Due to a lack of funds and budget miscalculations, freeway construction was not completed until the 1990s. By then, a new project threatened the remaining sections of Little Manila. In hopes of creating a new "gateway" center for highway travelers, comprising a gas station and fast food restaurant, the city tore down most of the remaining buildings constituting Little Manila. The demolition forced the relocation of Filipinos who once inhabited the vibrant community and decentered much of their community life. Although former residents still remember Little Manila today, its destruction displaced an important heart of Filipino-American culture. For decades, members of the community and advocacy groups fought to save cultural buildings in Little Manila. In 2003, the Little Manila area qualified for the National Trust for Historic Preservation's 11 Most Endangered Historical Places list as a result of community members' advocacy and the continued deterioration of the buildings. Today, the only buildings that remain are the Rizal Social Club, the Filipino Recreation Center and the Mariposa Hotel on Lafayette Street. The block that these three buildings occupy is marked by banners designating it as the Little Manila Historic Site. For members of the Filipino community who remember the vibrancy of the historic neighborhood, however, this area will never be the same [Mab13].

3. Little Manila Recreated

Six undergraduate students were selected for a five week summer fellowship to digitally recreate Little Manila as it appeared during the mid-twentieth century. The student team consisted of two history majors, two graphic design majors, a computer science major, and a geological science major. The team was supervised by a digital curator, a history professor, and a computer science professor. The team managed itself using Scrum, an agile methodology for software development [SJ11]. Some of the components of Scrum include *stand-up meetings* (or *daily scrums*) at which team members report daily on their plans and activities, and *sprints* - small units of time in which the team completes work that adds value to the project.

Stand-up meetings were held most mornings during the fellowship. At these meetings team members reported on what they had done since the previous meeting, what they were going to do before the next meeting, and what obstacles had been encountered [SJ11]. Such meetings helped the students keep lines of communication open during the project, as well as enhance collaboration and maintain accountability to the team throughout the fellowship. Since the team consisted of students from a variety of undergraduate majors, regular communication with team members was critical to the success of the project. *Sprints* lasted five to seven days and ended with a *sprint review and retrospective* meeting at which the students presented the current state of the application to the faculty supervisors. The faculty supervisors then offered suggestions for improving the project, and the team would determine the work they could accomplish during the next

sprint. This process was repeated until the fellowship ended and the project was completed.

The history majors were responsible for developing the narrative to inform gameplay, along with verifying the historical accuracy of the digitally constructed models. To perform these tasks, the history majors analyzed nearly a thousand photos from local archives, museums, and community members, and identified the businesses that were located in the Little Manila area by investigating three decades of Stockton's city directories (1940-70) and insurance maps. The students then conducted interviews with five Filipinos whose memories of the spaces and culture of the area in the mid-twentieth century provided content to embed in the game.



Figure 1: Digital model of the El Dorado Market with historically accurate materials.



Figure 2: An interactive map showing the location of the Crosstown Freeway (green lines) and Little Manila businesses.

The graphic design students used 3DS Max and Maya to construct historically accurate digital models of the many signs, buildings and other objects that made up the recreation of Little Manila. After importing these models into the Unreal Engine game editor, the students created and applied historically accurate materials (see Figure 1). Unreal Engine was chosen because of its rendering capabilities and capacity to produce the high-level graphics necessary for accurate historical reconstructions. The advanced lighting dynamics of Unreal Engine offered the possibility of producing an environment with near photo-realistic quality, an important aspect of simulating a sense of place in past

environments. The computer science student also used Unreal Engine's visual scripting system, Blueprints, to code the interactive features of the game, which include character dialogues, information windows, cinematics, and level sequencing.

The geological science student created a website that served as an introduction to the importance of the neighborhood and a launch point for the game. This site offers multiple approaches to engaging visitors with the spatial history of Little Manila, including a Geographic Information Systems (GIS) map that overlays the Crosstown Freeway on the Filipino businesses it replaced and an interactive historical map (see Figure 2). She also contributed rigged and animated non-player character (NPC) models for the environment using Adobe Fuse and Mixamo programs. The group collectively made final decisions about lighting and atmospheric settings in order to produce a high-level of realism for the environment.



Figure 3: The intersection of El Dorado and Lafayette streets.

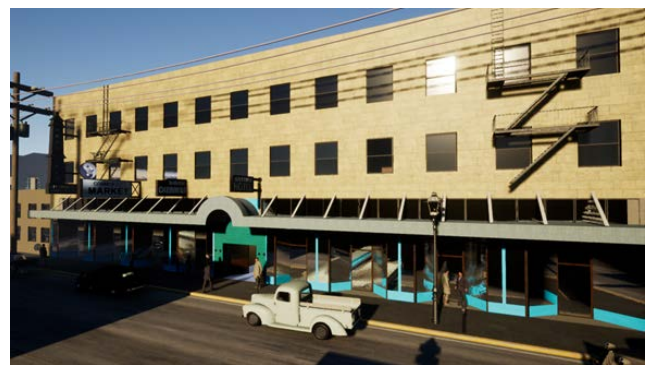


Figure 4: The exterior of the Quezon Hotel.

4. Gameplay

The game begins with an opening cinematic that introduces players to an NPC, their cousin, who meets them at the corner of the intersection of El Dorado and Lafayette streets (see Figure 3). This introduction underscores the historical significance of the intersection as the place where newly arrived immigrants often met family members who would subsequently acquaint the new arrival with the neighborhood. After receiving an overview of the two main streets in Little Manila, players can follow the cousin to the Quezon Hotel (see Figure 4). The cousin's room in the Quezon Hotel introduces players to the primary interactive components of the environment: information icons (see Figure 5). When

players come within close proximity of these spinning icons, they can activate information windows (see Figure 6) that display historical information about a particular topic, archival photographs illustrating the topic, or audio clips of interviews with former residents about the topic.



Figure 5: A room in the *Quezon Hotel* that illustrates the many information icons available throughout the game.

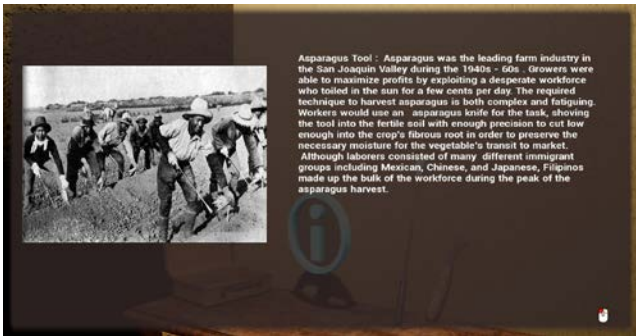


Figure 6: An information window activated by clicking on one of the game's many information icons. In this case the window provides information about the asparagus knife that can be found in the cousin's room.

The narrative of the game is loosely structured through the cousin's instructions to the player to explore the city, and then return to his room to trigger the end scene. Players can interact with NPCs to learn more about life in Little Manila. They can also visit historically significant sites such as the Lafayette Lunch Counter, an important restaurant in Little Manila where many Filipino immigrant laborers received their mail when they had no permanent address. The game concludes when players return to the cousin at the Quezon Hotel and initiate an end game film that discusses the impact of the Crosstown Freeway and the demolition of Little Manila.

5. The Big Reveal Event

When the fellowship concluded the students held a "Big Reveal" event at which they presented their digital recreation of Little Manila. Nearly 120 people attended the event, many of whom were interested community members. Reactions from the audience members ranged from tears to cries of recognition. The children who attended—fourth generation Filipinos who had grown up in Stockton with little knowledge of its important role in Fili-

pino American history—were eager to play the game themselves after the presentation. One seven-year-old boy intuitively navigated the virtual streets and buildings of Little Manila including the restaurant that had been operated by his great-grandfather. Later he recognized the Little Manila historic site in Stockton as he drove by it with his family, noting where the buildings he had seen in the game would have appeared in the city during the time period of the recreation. This experience clarified the goals of the project for our team: to engage users, and in particular school-age children, in exploring and recognizing the historic importance of Little Manila and its lasting legacy in the city of Stockton. Following the event, several members of the community engaged with the team and our digital recreation of Little Manila to discuss the memories triggered by the project, as well as to provide suggestions for revisions and future expansion of the content and interpretation. These suggestions ranged from minor fixes of visual inaccuracies to objections over the presence of too many Filipina NPCs on the streets given the city's historical gender imbalance.

6. Conclusions

In this paper we described our initial efforts to create a serious game that teaches users about the culture and heritage of Little Manila, and the community's reactions to our game. In the future, the faculty supervisors hope to provide opportunities for new teams of undergraduate students to expand and enhance the game. For example, we would like to increase the number of buildings with modeled interiors. Currently, users can explore the interiors of the Quezon Hotel and Lafayette Lunch Counter. Tasks (or quests) could also be added for players to accomplish while playing the game. These tasks could include activities such as finding a room to live in at one of the hotels, getting lunch and receiving mail at the Lafayette Lunch Counter, and finding employment. Lesson plans could also be developed to accompany the game to encourage K-12 teachers to integrate the game into their curriculum. A standard version of the game will be available for download through the project website to facilitate access in classroom settings.

Grant support is being pursued to develop an interactive exhibit that could be installed at a site such as the Filipino American National Historic Site Museum located in Stockton. The exhibit would include a virtual reality (VR) version of the game allowing patrons, both children and adults, to visit Little Manila in VR through the use of a head mounted display device. Such an exhibit would provide users with an even greater sense of what it was really like to walk the streets of Little Manila.

7. Acknowledgements

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