INTRODUCTION

Henry E. Huntington was an exceptional businessman who built a financial empire consisting of railroad companies, utilities, and real estate holdings. The Huntington Library has a collection of Henry Huntington’s landholdings in the form of paper tract maps. The Library does not know the exact extent of Huntington’s landholdings in Southern California.

Dealing with historical maps can be cumbersome and difficult. In order for these maps to be useful, they are digitized and georeferenced. The tools often used to examine historical maps are the swipe tool and the transparency slider. The user can use these tools to compare and contrast changes. A shortcoming of the swipe and transparency slider tools is that the top image disappears completely.

As a mental trick, the user can swipe back and forth multiple times to create an illusion of the original image being superimposed on the map.

SOLUTION

The tract maps were converted from paper form to digital. The maps are then georeferenced and rectified to align them with a referenced base map. To ensure accuracy, the referenced base map used parcel data.

The process of creating a transparent background and retaining the line work of the tract maps was completed in Adobe Photoshop. Generally, the backgrounds of historical maps are difficult to make transparent due to the discontinuous colors from aging and the texture or wrinkles of the map. The workflow to make a transparent background was to invert the map, select the line work, and extract the line work to a new dataset. By inverting the map, the background becomes contiguous and the line work is distinguishable for selection. Once the line work is selected, it can be extracted to the new dataset to be used in ArcGIS.

The files must be saved in a format that retains transparency, such as .TIFF or .PNG.

WEB APPLICATION

Henry Huntington’s landholdings were displayed through the creation of a web application, hosted by ArcGIS Online. The main features of the application were the usage of the transparency slider and swipe tools. These tools in conjunction with the version of the map with the transparent background allow the user to see the line work of the tract map on top of the base map.

The web application has bookmarks that allow the user to zoom in to specific tract maps. The user has the option to select a variety of different base maps to see how changes occur between the historical tract maps and today.

The shortcomings of the transparency slider and swipe tools are the original map fades away or disappears entirely. In addition, the user tends to move the slider back and forth multiple times to imagine where the original map would be on the base map.

A way to overcome these issues of the transparency slider and swipe tools is by creating and using a version of the map with a transparent background that retains the line work of the historical tract maps. The user no longer needs to swipe back and forth as much.

Through the combination of transparent background with line work, transparency slider, swipe tool, and a web application, users of the application can explore and discover Henry Huntington’s landholdings around Southern California.

SUMMARY

The shortcomings of the transparency slider and swipe tools are the original map fades away or disappears entirely. In addition, the user tends to move the slider back and forth multiple times to imagine where the original map would be on the base map.

A way to overcome these issues of the transparency slider and swipe tools is by creating and using a version of the map with a transparent background that retains the line work of the historical tract maps. The user no longer needs to swipe back and forth as much.

Through the combination of transparent background with line work, transparency slider, swipe tool, and a web application, users of the application can explore and discover Henry Huntington’s landholdings around Southern California.