

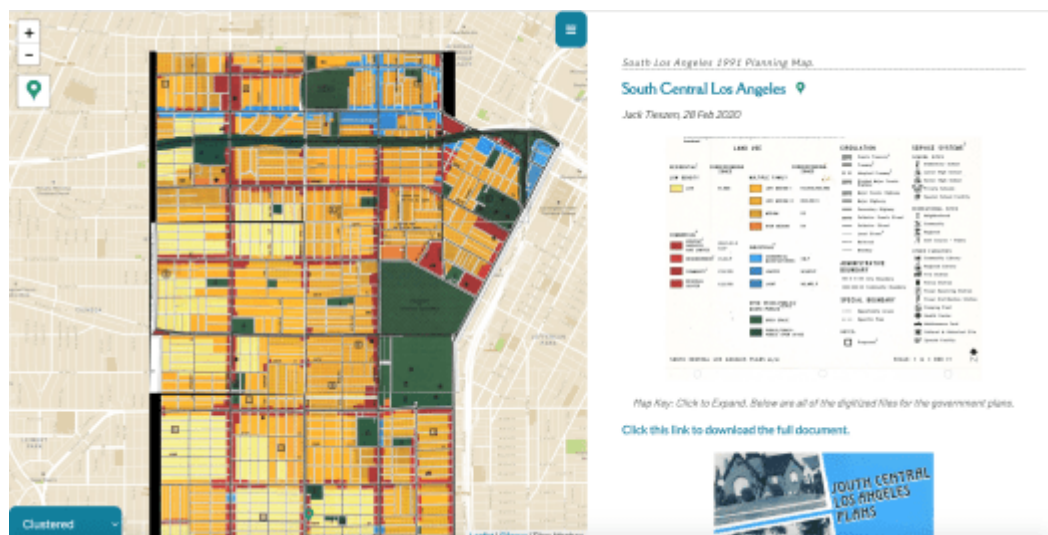


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By: Jack Tieszen

Introduction

The increase in digital programs and an interest in digital humanities have led to many new practices being adopted in working with geospatial data, especially when these practices involve the process of migrating records from physical to digital. At the University of Southern California's Library for International and Public Affairs, Visualization Librarian Andy Rutkowski and I identified a series of documents that we wanted to make accessible through digitization. We also wanted to learn more about utilizing the infrastructure available to us to complete this project. The eventual creation of the Visualize LA City Planning Documents website was structured around this goal of making the information we found digitally accessible using widely available programs and websites (Rutkowski and Tieszen 2020). You can find the website here: <https://visualizela.github.io/planningdocs/>



Background

The materials that we had access to consisted of a series of government-produced planning documents for the city of Los Angeles. They were located within USC's Library for International and Public Affairs. These planning documents were stored in 38 binders, and each ranged from around 30 pages to over 100 pages of text and geospatial information. The text provided descriptions of the plans and research



about unique zones in Los Angeles. For instance, in the South Central Los Angeles planning documents, much of the text focused on the socio-economic issues of the area in the early 1990s. The geospatial imagery reflected the policies and changes that the plans were looking at adopting. Each map showcased zoning boundaries to indicate how the city determined the use of specific spaces. While there were many maps within the planning documents, the ones we focused on were located at the end of each binder because they displayed the most pertinent information to the text preceding them.

Minimal Computing

One of the concepts that we utilized heavily within our discussions of how to accomplish each process in this project was the idea of “minimal computing.” According to “Global Outlook: Digital Humanities,” minimal computing involves “computing done under some set of significant constraints of hardware, software, education, network capacity, power, or other factors” (Bauer et al., 2015). Within the USC project, we looked at two major constraining factors. The first of these constraints was the technical infrastructure available or the hardware and software we had access to. We asked ourselves what we needed both physically and digitally to complete the tasks set before us and accomplish the goals of this project (Gil 2015). We utilized what we had within the library: a Xerox scanner and a used computer (2014 Macbook pro laptop with an I7 processor with 16GB of RAM). Everything else that we used to work with these files once they were digitized involved the open-source program QGIS and the websites Mapbox and GitHub. The second constraint was education and the need to develop the necessary skills required to accomplish each unique task. I have a background in geography and informatics, which provided me a familiarity with geographic information systems and computer languages. However, I was a few years out of practice with any form of GIS or programming. Since the project required using QGIS and Mapbox to work with geospatial data and a bit of Markdown language to edit the website within GitHub, I started learning/re-learning these systems on the job through online tutorials.

The Processes Involved

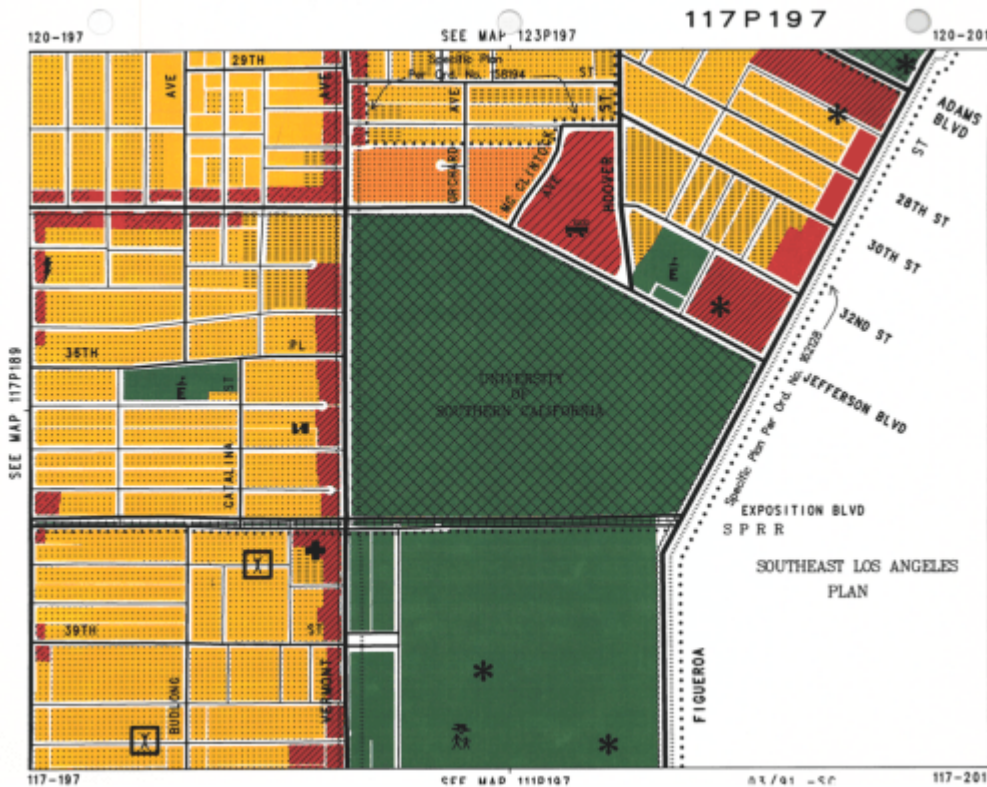
With the project set and its main philosophy developed, the processes could be determined and begun. First, it was to digitize the documents; next, it was to edit the digitized records; lastly, it was to publish these documents to an accessible



website. Each process had distinct challenges, timelines, and objectives.

The full series of steps taken went as follows: We first conducted a brief research overview of the documents. This had two purposes, first to understand what exactly we were scanning and publishing so that we could correctly contextualize the materials when they were published online. The second purpose was to find out what would be the easiest series of documents to scan so that in our early tests, we wouldn't be burdened with a large number of digital documents. In addition to this research, we wrote down basic metadata descriptions of each binder, highlighting the content and similarities shared between the documents. Next, we scanned the files, ensuring that all the materials digitized were subject to the same resolution to maintain consistency across the digitized files. These documents, along with all other digital records associated with the project, were saved to Google Drive for storage and team access. We then focused on manipulating the geospatial files in a digital format to ensure they could be utilized within QGIS. This included a batch file manipulation process, turning the images from PDF files into TIFF files. It also included photo editing to remove unnecessary elements such as white space and thick borders from the image. Next, we imported the images into QGIS, georeferenced them, and saved them as GeoTIFF files. These would then be uploaded to a Mapbox server. We then built a website within GitHub based on a web template known as Flâneur, a website that was initially intended to help students create essays in the digital map edition (Childress 2017). We edited the website to focus on the maps and the text related to these geospatial points of data. Lastly, we transferred the Mapbox datasets into GitHub and added the PDF files of the digitized text. With that step completed, the website was ready for use.

The LA City Planning Digitization Project involved a series of independent steps, some of which were discovered as we worked through the project. The timeline for this project was ten weeks to go from concept to website. While I had an additional ten weeks to bring in more ideas, the timetable indicates that this type of project can be done relatively quickly at a professional level, even with the restrictions mentioned.



Conclusion

With a project like this utilizing the philosophy of minimal computing, I wanted to address it from a broad perspective and generate questions related to both digitization and working with digitized files. The questions that helped in the development of the project were as follows:

1. What restrictions do you have within the library at the time of your project, and how can you use them to your advantage?
2. What specific resources do you think you need to complete this project successfully, and can you find these resources online/can you build them yourself?
3. If there is a history of similar projects, what have they accomplished, and what lessons can you learn from them in relation to your project?
4. What collaboration efforts (internally or externally) can you bring in to navigate the project?

What all these questions engage in is the concept of illuminating one's resources or



lack of resources to discover how to complete a project. The benefit of a digital project is that many resources exist to fill in gaps with technology or education. Being adaptable to find solutions for these problems is a strong skill to have when working in the digital space, so exploration helps to generate new methods of success.

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