SE 491 WEEKLY REPORT 9   Date: 10/31/16-11/6/16

Group number: 01

Visualization of Earth Modeling System (Project 1)

Prof. Johnny Wong (Advisor) & Prof. Chaoqun Lu (Client)

Team Members/Role:

Kellen Johnson – Team Communication Leader

Anish Kunduru – Team Leader

Julio Salinas – Team Concept Holder

Eli Devine – Team Webmaster

- ○ **Weekly Summary**

    This past week we were setup with a bit of a road block. The IT team we were attempting to use to set up our new Windows Server delayed in getting back to us. Due to this, we decided to instead go through the Computer Science Department to get our Server up and running. On Wednesday afternoon, we were finally granted our new server, and Kellen installed ArcGIS for Server on it using the Provision supplied by Josh Obrecht.

    In addition to our software Installation, we also spent a significant portion of the week attempting to finish the Design Document. As it stands, we are attempting to Publish a Map using the Python backend of ArcGIS for server. Once this is completed, we will move forward in attempting to create our custom mapping given the clients data. We have verified that we are able to now dynamically load our Map Services hosted on our ArcGIS Server as we were able to load the generic one (that comes with ArcGIS for Server) using the simple REST API.

- o **Past week accomplishments**
  - Kellen Johnson: Wrote a significant portion of the Design Document. Orchestrated talks with Josh Obrecht, and fully installed ArcGIS for Server on our new Windows Server. Lead team collaboration throughout the week. Attempted to create a custom test map-service / publish said map service.
  - Anish Kunduru: Worked on design document and fixed fast parser.
  - Eli Devine: Updated the team's website. Worked on mapping services and attempted to try to publish services using python. Still work in progress.
  - Julio Salinas: Attended with Kellen meeting with Josh, working on mapping services with the new guidance provided by Josh.

- o **Pending issues**
  - We're all a little rusty with Python (and some of us have very limited experience with it) so troubleshooting may hinder the development process. We plan to run samples of Python code to refamiliarize ourselves with the environment.
  - The "arcpy" (ArcGIS Python) module doesn't allow us to "create" maps or layers. Therefore, it looks like we may only be able to edit them. So our system is likely going to have to deal with a series of "temp" files.

- o **Individual contributions**

NAME	Individual Contributions	Hours this week	HOURS cumulative
Kellen Johnson	Installed ArcGIS for Server. Lead the writing of the Design Document. Met with Josh Obrecht to discuss auto-generated ArcGIS maps. Attempted publishing of a map using Python.	13	56
Anish Kunduru	Worked on the design document and fixed fast parser.	6	46
Eli Devine	Updated website to include our deliverables and began working with	6	24

	the mapping service process attempting to publish with python. Work in progress. Revision of Python materials.		
Julio Salinas	Edited the Design Document. Attended meeting with Josh Obrecht. Revision of Python materials.	4	24

- o **Comments and extended discussion**
    - Kellen Johnson: We need to spend more time on Project Development than Project Documentation. Additionally, we are going to have to speak with the client about restrictions of the arcpy module. We may be looking at partial GUI for what we're making unless we can somehow learn what exactly is being written into the Layer and Map files by ArcMap.
    - Anish Kunduru: Fast parser works now, but I couldn't determine an elegant way to lock the buffer map to the file. Instead, my current solution is to loop over the entire buffer until I being to hit null entries. I need to time the difference to see if this is acceptable.

- o **Plan for coming week**
    - Kellen Johnson: Re-edit the Project Plan for Version 2. I would like to continue working on publishing a map (whether it's actually our data or not) using only python. Hopefully we can get this done by the end of the week as then we can then move into creating our fully custom maps.
    - Anish Kunduru: Work on getting the server going (custom map services). Help with the project plan if necessary.
    - Eli Devine: Help on the edit for Project Plan V2 and have the publishing services down using python.
    - Julio Salinas: Revision of Project Plan 2. Continue to re-familiarize with Python. Attempt publishing using Python.

- o **Summary of weekly advisor meeting**

We met briefly with our advisor this week to discuss the setup of the Windows Server. Professor Wong made a call to IT to assure us that our server would be up and running by noon

on Wednesday, (11/2). Our next extended meeting will be on 11/9, as we will show our current progress to the client and adviser.