**Technical Report Progress Report**

Profile of Landsat 8 and the Landsat Program

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**Introduction**

The overarching project for PSU’s technical writing course is the synthesis of a group technical report. Our group is profiling the Landsat program with focus on Landsat 8, a satellite observatory that has been operational since 2012 under the direction of NASA and USGS. This report will have four primary sections with each author covering one section: a historical overview and discussion of relevance (Sean), a technical discussion of the satellite design and launch (Thien), and two sections detailing how Landsat data is used in research of land (Jack) and water use (Kelli).

**Background**

The Landsat program has been instrumental to the advancement of orbital observatories and has generated great scientific and economic benefit. Landsat 8 was chosen as our topic to fulfill the shared interests of the group, which has two mechanical engineering students and two environmental science students. Preliminary proposals of each author’s sections have been submitted and reviewed and the group has reached out to industry professionals for primary source material. The group has also compiled a list of sources that will be useful for further research into Landsat.

**Work Completed**

As of February 28th, 2020, the group has created an outline of the paper detailing which sections will be written by which author and the topics addressed. Several meeting times have been established to check in on each other’s progress and combine the sections into a unified document. My sections will open the report with an introductory historical overview and conclude it with a discussion of relevance and future. I have interviewed Andrew Greenberg of PSAS and will use his insights to discuss the challenges of designing and deploying satellites and the relevance of Landsat and satellite observation to science and society. Journal articles and other documents have been sourced notably an entire issue of *Remote Sensing of Environment* containing eighteen articles about the Landsat program.

**Work to Be Completed**

Most the drafting for my section is presently incomplete and will be worked on over the weekend of February 29th. The initial draft will be peer reviewed by other class groups and within our own group the following week. A presentation of the report will be prepared for Wednesday, March 11th where we will field questions the help clarify any topics in the report. Following the presentation, final edits will be made to individual sections and to ensure cohesiveness and flow throughout the report.

**Anticipated Problems**

Currently, of the primary source status of two of the authors is unknown. For my section of the report much of the actual writing still needs to be done, and obligations outside of this report will also take time to complete. I expect the primary problem of the next two weeks will be efficient time management to accomplish these tasks concurrently. Potential issues could arise with sourcing or creating the necessary diagrams to help illustrate the evolution of the Landsat program.

Presentations are not my strong suit and I expect the preparation to be a difficult process. To properly prepare, I will be setting aside time on the weekend of March 7th to practice my presentation. Previously, I anticipated it could be an issue obtain primary source material and chose to act early and conduct an interview with Andrew Greenberg, who I know personally from my work with PSAS. By using him as my primary source, I was confident I could conduct interview in time to process and apply the relevant information to the report.

**Conclusion**

The report will be completed by the third week of March, 2020. We intend for the report to be an informative introduction to the scope of the Landsat program for those who are unfamiliar. Remote observation platforms such as Landsat are instrumental in climate change research and weather prediction, among other fields. With this report we hope to garner interest in Landsat for those who want to study large scale climate phenomenon or aerospace. Following this report, I will be getting more involved with PSAS’s own observation satellite, Oresat, to better understand the systems and constraints of spacecraft.