Title: Revised Report Proposal

Date: June 26th, 2017

To: Prof. Paterson

From: Matthew Fung

Date: June 7th, 2017

Subject: Proposal for Evaluating Possible Improvements for WFRT Weather Forecasts

**Introduction**

The UBC Weather Forecast Research Team (WFRT from now on) is a research group in the department of Earth, Ocean, and Atmospheric sciences that focuses on the application and development of weather models. The primary task for the team is to produce tailored weather forecasts for organizations such as BC Hydro. However, part of the [forecasts](http://weather.eos.ubc.ca/wxfcst/users/Guest/custom.php?location=3510) are also accessible by the general public. While mobile weather applications and government weather agencies are very useful in providing weather information, the services WFRT provide goes above and beyond by producing forecasts with greater resolution and by providing real time information at a higher frequency. That said, based on user statistics, the public meteograms are more or less only used by members of the team. The proposed study aims to find out ways to make the existing forecasts more accessible to the general public.

**Statement of Problem**

The main reasons that make the forecast difficult to use are twofold. The current layout of the forecast is very compact and is too detailed. Moreover, the platform used to support the forecast is designed strictly for computer screens and does not support mobile devices well. That said, a certain level of detail needs to be retained as the graphics are used by the research team members to issue local forecast reports. The study seeks to find out what are the crucial elements of the forecast that cannot be omitted, and what are the areas that can be simplified. Thus, problem is therefore to investigate layout and content that both meets the needs of day-to-day users and forecasters.

**Proposed Solution**

The suggested approach for this issue is to utilize icons to replace some time series graphs such that the information can be understood at a glance. As well, one will also consider including added features that set the WFRT apart from others such as the addition of a real time rooftop web-cam, or providing information useful for commuting cyclists.

**Scope**

In order to investigate the effect of the suggestions, I aim to answer the following questions.

 1. Where do people generally go to access local weather data?

 2. What form of forecast summary will best suit the general public?

 3. Which type of specialized forecast will be the most popular?

 4. What are the benefits of providing real-time weather web-cam footage? Is it feasible?

 5. What technological platform is preferred for displaying the forecast?s

**Methods**

For my primary source of data, I aim to gather opinion among students at UBC campus regarding their preferences on the above mentioned questions. Furthermore, I will consult the members of the WFRT on their input of the suggestions.

As for secondary sources of data, I will research on literature regarding data visualization of forecasts in the Bulletin of the American Meteorological Society to look for ways of simplifying data for public use.

**My Qualifications**

I am part of the WFRT for two summer terms as a coop student. I am familiar with the operations of the forecasts and am familiar with the person who designed the current forecast. I believe my affiliations with the members of the WFRT allows me to conduct the study thoroughly.

**Conclusion**

As a public research university, one of the goals of UBC is to serve taxpayers in our city and province. It is my hope that WFRT can contribute to this cause by better understanding the needs and preferences of the research team and the public, and that I can evaluate the benefits and feasibility of the potential features. All in all, the study aims to improve the forecast interface such that the general public can fully utilize the high quality products the team produces.