

CICS Science Conference
November 29, 30 & December 1, 2016
College Park, MD, USA

Abstract: Identifying Users, Diagnosing Understandability Challenges, and Developing Prototype Solutions for NOAA Climate Prediction Center's Temperature and Precipitation Outlooks

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The National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) Climate Prediction Center (CPC) issues climate information and outlooks for various climate topics on timescales ranging from three days to one year out. The utility of this climate information for decision makers is dependent on effective visualization; however, achieving effective and interpretable visualizations is often challenging. This project analyzes the NOAA NWS CPC temperature and precipitation outlook visualization products in order to assess how risks and uncertainties associated with the outlooks can be communicated more effectively to decision makers and subsequently guide revisions for improving climate outlook visualizations for decision makers. To better identify product users, understandability challenges, and solutions for improving CPC temperature and precipitation outlooks, this project assesses individual visualization of CPC products and the overall product design. The first phase of this project was completed in August 2016. In this phase, we conducted eight semi-structured interviews with NOAA experts (identified through CPC) in order to understand CPC's objectives, current and aspirational goals of temperature and precipitation outlook images, and the intended user audiences. I will discuss the initial findings of this research including the suggested target for the climate outlooks identified by the majority of the interviewees. Results from this first phase will structure interactions with intended user audiences in future phases and the research foci; such next steps will be discussed.