Utilizing Hazard Services Concepts for Product Creation at the Aviation Weather Testbed

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Overview

The 2016 Aviation Weather Testbed (AWT) Summer Experiment performed a test of the Aviation Weather Center’s (AWC) ability to produce the Convective SIGMET product within the Advanced Weather Interactive Processing System (AWIPS). AWC currently uses N-AWIPS software combined with locally developed tools for SIGMET production. This test leveraged work from the NOAA Earth Science Research Laboratory (ESRL) on the experimental Hazard Services software platform.

Hazard Services is a framework for the issuance of hazard information meant to unify many of the existing application tools with AWIPS including WarnDelay, RiverIn, and the Graphical Hazard Generator (GHH). This platform has the potential to also replace legacy N-AWIPS and local applications currently in use by operational forecasters at AWC with one integrated solution, harnessing the other advancements provided by the AWIPS platform.

Outcomes

The aging testbed AWIPS system provided some technical challenges. A new workstation was built and added to the system to achieve reasonable performance in the display of high-resolution radar data for forecast production. Instability was introduced to the system by a previously unknown software bug resulting in the failure of both daily test runs and the software itself. This was combined with the load of other testbed activities resulting in less than ideal user interface performance.

The summer experiment provided an opportunity for developers to interact with the end users, forecasters. This collaboration led to rapid troubleshooting and improvement for future work. The use of AWIPS is still fairly new to AWC so many forecasters were being introduced to the general use of AWIPS in addition to the new interface components from Hazard Services. Despite the learning curve and technical issues experienced, there was strong agreement that the platform represents a big step forward from the current process.

Future Work

Hazard Services is potentially applicable to numerous products issued by AWC. Development work is continuing, establishing capabilities for AVIEX and non-convective SIGMET products.