

Advanced Problem Analysis, Resolution and Ranking

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FAA/MOIE

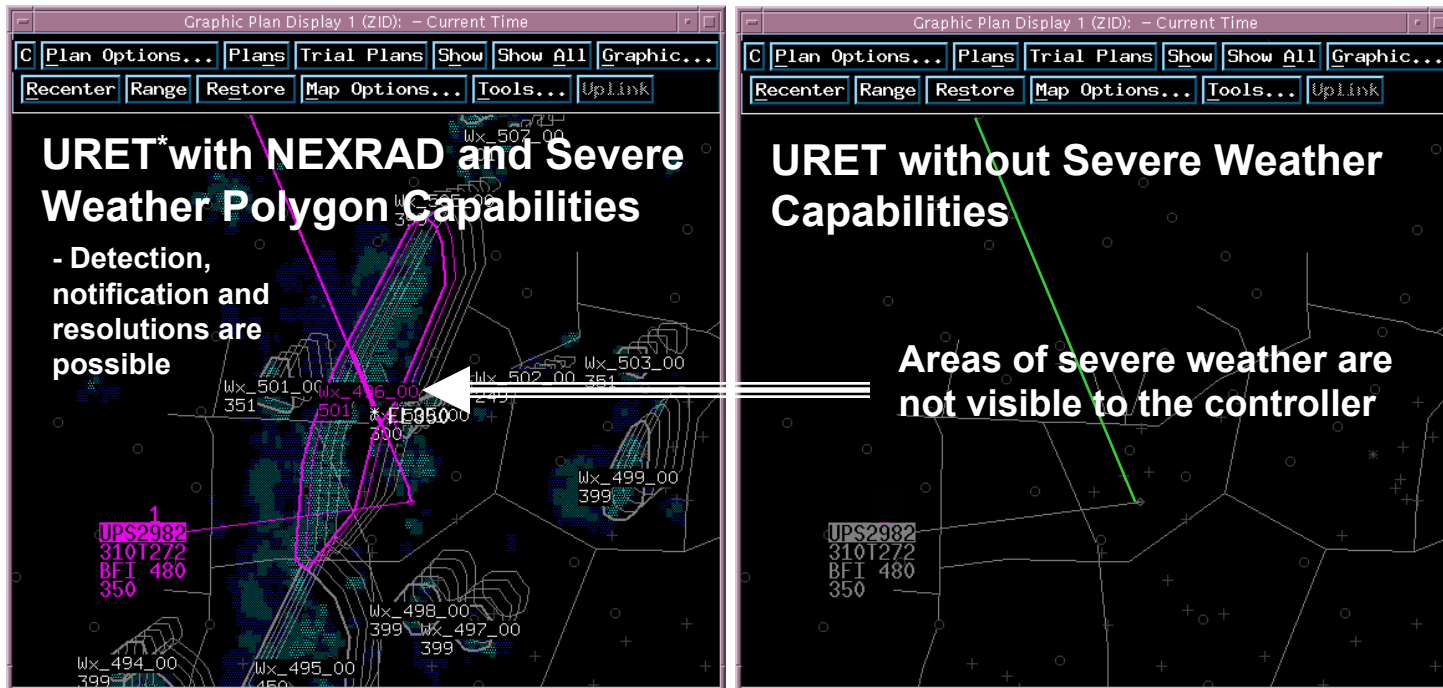


MITRE
Technology
Program

Problem

- **En route sector controllers do not have weather forecast information to support strategically routing aircraft around severe weather.**
 - **Next Generation Weather Radar (NEXRAD) only provides current time weather.**
- **Pilots may be rerouted around local weather multiple times.**

Background



*URET = User Request Evaluation Tool

Objective

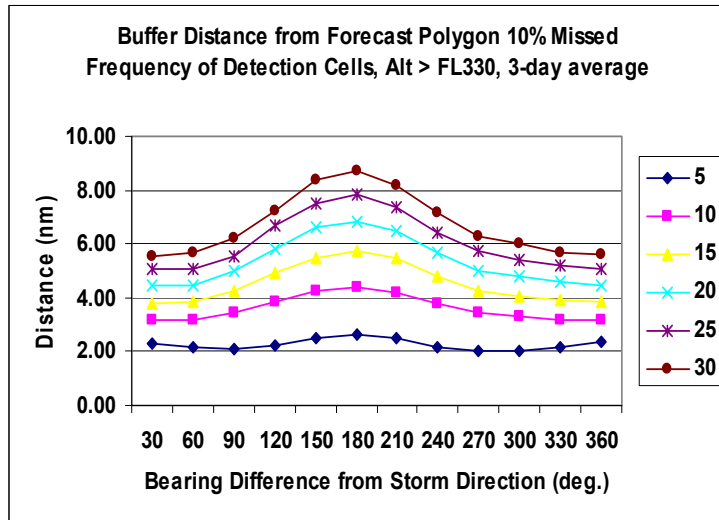
- **Provide strategic weather information to controllers to better support sector management**
- **Provide weather forecast information to help controllers provide better advice on reroutes when requested by pilots**
- **Provide strategic weather information to help controllers better plan reroutes when solving aircraft separation problems**
- **Conduct research to validate operational concepts, utility and acceptability, and system benefits**

Activities

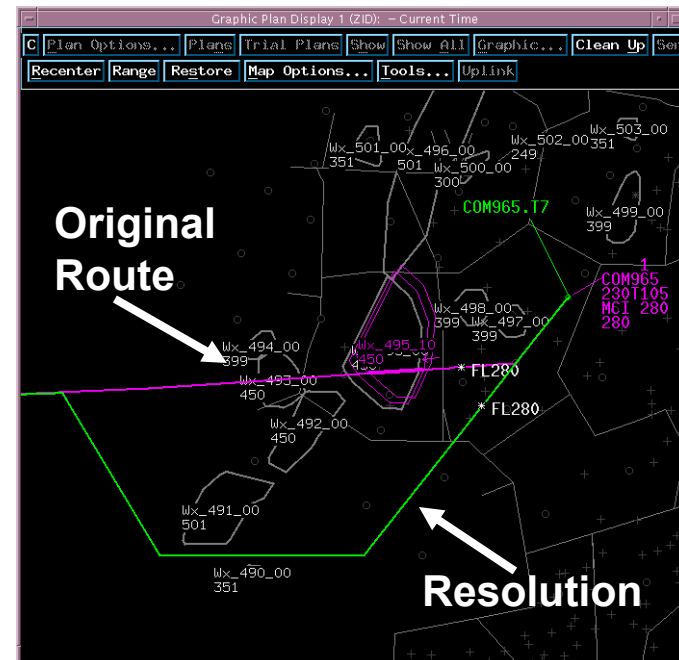
- **Analyze/refine National Convective Weather Forecast (NCWF) polygon product**
 - Polygon buffers
- **Design/code severe weather resolution algorithm**
- **Conduct pilot interviews and controller evaluations**

Highlight

NCWF Buffer Distance Analysis

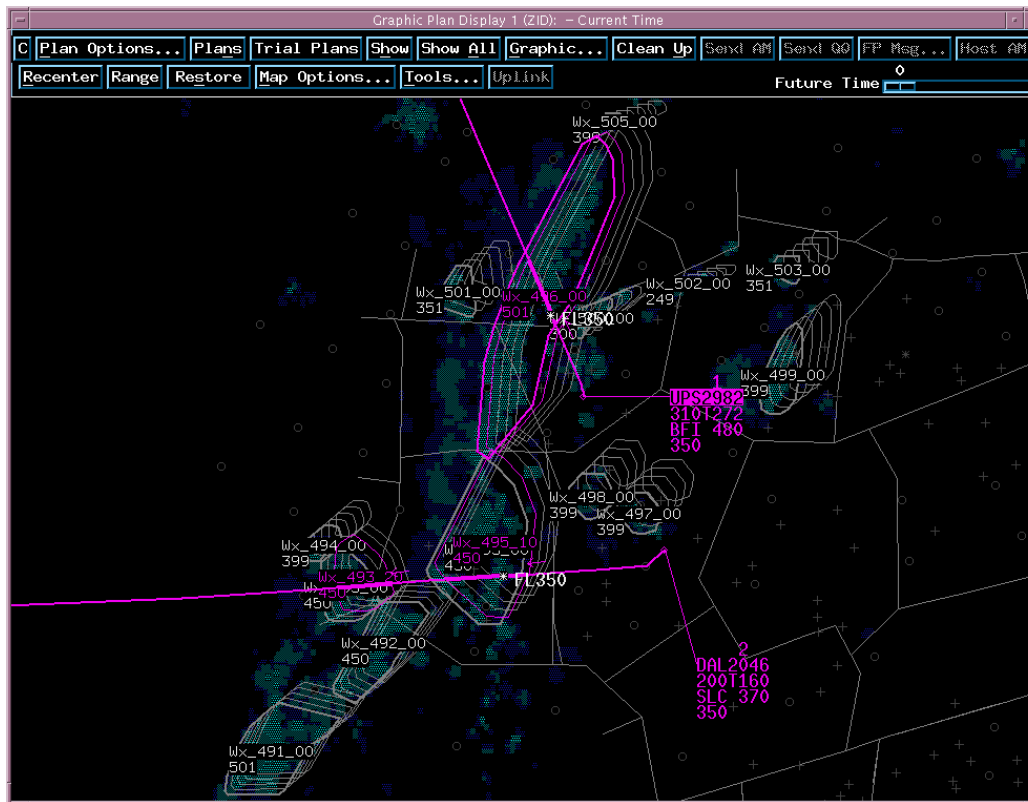


Multi-Leg Resolutions



Demonstration

Severe Weather Polygon Detection/Notification and NEXRAD Display



Impacts

- **Contributes to the state of the art in integrating weather products into decision support system automation at the sector**
- **Provides continuity in the evolution of enroute decision support system capabilities**
- **Has potential for significant improvements in en route efficiency, safety, and capacity**
- **Continued MITRE contribution to an important research area**

Future Plans

Operational Evaluation

