# NextGen Weather Demonstration Team: “Weather Demonstration Coordination”

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Role</th>
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</thead>
<tbody>
<tr>
<td>Steve</td>
<td>Abelman</td>
<td>NOAA/NWS</td>
</tr>
<tr>
<td>Paul</td>
<td>Strande</td>
<td>FAA</td>
</tr>
<tr>
<td>TBD</td>
<td>Industry Lead</td>
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Presentation Outline

• Goals and responsibilities of the Demo Team
• Team composition
• Building a comprehensive demonstration inventory
• Outreach strategy
• Developing demo section of NextGen Weather Plan
Goals and Responsibilities

Demo team organized by the JPDO Weather WG to:

• Identify, categorize, and document the existing NextGen weather demonstrations
• Identify, categorize, and document NextGen demonstrations that may require or benefit from weather assimilation
• Become the recognized coordination body that provides guidance and assistance on future demonstrations
• Provide guidance and assistance on Initial Operating Capability (IOC) demonstrations to ensure they are meeting IOC requirements
Goals and Responsibilities

• Facilitate communication between agencies and organizations to support the inclusion of weather, at the appropriate time, into future demonstrations
• Facilitate communication between agencies and organizations to urge compatibility between subsequent demonstrations
• Update the NextGen Weather Plan with a detailed demonstration strategy

The demo team will not:
  • allocate resources
  • evaluate demonstrations
  • suggest industry partners
Team Structure

• Team size is approximately 20 members
  – Mix of industry and agency participants including NOAA, FAA, NASA, DOD, Harris, MITRE, NGC, and others…

• FAA and NWS co-lead team. Industry lead yet to be named

• Identify lead contacts from other agencies within the JPDO structure to minimize effort and maximize response
• The top short term priority of our team is to build a comprehensive library and database which detail:
  – demonstrations of new or improved weather capabilities
  – other demonstrations where assimilation of weather information is required for improved operational decision making
  – Examples could include: forecast process techniques, net-centric data exchange capabilities, or trajectory based operation solution sets
At a minimum, the demo inventory will detail the following information:

- Demo Title
- Objective
- Description
- Start and End Dates
- Funded source(s)
- Performing Organization
- Location
- Wx Phenomena
- Is the Output Format Net-Enabled?
- POC E-mail and Phone #

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<tr>
<th>Demo Title</th>
<th>Objective</th>
<th>Description</th>
<th>Start Date</th>
<th>End Date</th>
<th>Funded by</th>
<th>Performing Organization</th>
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<tr>
<td>Delta Airlines EDR Demo</td>
<td>Proof of Concept Demo to verify and document improvements from use of Eddy Dissipation Rate turbulence detection algorithm to aid the reduction of turbulence-related fuel penalties</td>
<td>Delta Airlines (DAL) installed NCAR-developed Eddy Dissipation Rate (EDR) turbulence detection algorithm on its entire 737 fleet. Data collection will span one year in length beginning in Spring 2009. DAL will generate a report at the end of the year documenting cost savings and other benefits</td>
<td>2009</td>
<td>1 year</td>
<td>DAU/FAA</td>
<td>DAL</td>
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<tr>
<td>Optimized Profile Descents (OPD) Demo</td>
<td>Assess benefits of the use of optimized profile descents</td>
<td>Uses Area Navigation (RNAV) / Required Navigation Performance (RNP) approach with optimized vertical profile. Expected benefits to include 200 to 400 LBS of fuel savings per aircraft and reduced noise and emissions</td>
<td></td>
<td></td>
<td>FAA</td>
<td>FAA</td>
</tr>
<tr>
<td>Ground Based Augmentation System (GBAS) Demo</td>
<td>Increase throughput to maximize airport efficiency, reduce fuel consumption and lower noise and emissions</td>
<td>Demonstrate the use of Performance-Based Navigation Technology to improve arrival rates at airports</td>
<td>late 2009/2010</td>
<td></td>
<td>FAA</td>
<td>FAA</td>
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Outreach

• We need your help to spread our message!
• Outreach letter to be distributed through the JPDO to help build our inventory

Our Goal:
Become the one-stop shop for weather demo information
Adding a Demo Section to the NextGen Weather Plan

- Demo Team asked to develop “Section 5” of the NextGen Weather Plan
  - Tie elements of the 4-D Weather Data Cube and Weather Integration sections in the Plan to support identified operational demonstrations
- Title will be “Weather Demonstration Coordination” to ensure understanding of our mission
- The current plan is available at http://www.jpdo.gov/newsArticle.asp?id=113
Proposed Schedule of Activities

• Distribute outreach letter Jul 09
• Collect demo info from agencies/industries Jul 09
• Outline Wx Demo Coordination section Aug 09
• Draft Wx Demo Coordination section Sep 09
• Agency review period TBD
• Update Plan based on Agency comments TBD
• EC (NEWP?) Approval TBD
• Integrate Wx Demo Coordination into NextGen Weather Plan TBD
• Explore interfaces with relevant teams TBD
Challenges

• Manageability of data – How do we keep this library representative and up to date
• Categorizing types of Demos – Team has had several discussions about best way to categorize/organize demos (IT, Meteorological, chronological, etc…)
• Receiving needed input – Taking the time to send us the information
• Team participation – dedicated input from team members to do the real work
Summary

• JPDO Weather WG sponsored Demo Team building a comprehensive database/library of NextGen weather demonstrations
• Demo Team will also highlight other demos where weather might be integrated
• Become a “one-stop shop” of weather demo information
• Team will add a “Weather Demonstration Coordination” section to the NextGen Weather Plan
Contacts

Please forward questions or information to:

• Steve Abelman, NWS – steve.abelman@noaa.gov

• Paul Strande, FAA – paul.strande@faa.gov
Multiple Path Approach

- Met Demos
- IT Demos
- Cube Demos
- Integration Demos
- DST Integration Demos