Weather Demonstration Coordination
Joint Planning and Development Office (JPDO)
Weather Working Group

Team Charter
• Identify, categorize, and document existing NextGen weather demonstrations.
• Identify, categorize, and document NextGen demonstrations that may require or benefit from weather assimilation.
• Become the recognized coordinating body that provides guidance and assistance on future weather demonstrations.
• 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.

What is NextGen?
NextGen is a Congressionally mandated initiative to modernize the U.S. Air Transportation System. NextGen offers a transformational approach to resolving current inadequacies in the National Airspace System (NAS). Ultimately, NextGen will:
- Increase capacity and reliability in the NAS
- Improve safety and security in the NAS
- Minimize the environmental impact of aviation

The cost of not transforming to NextGen? Billions annually.

Demonstration Inventory Example
Title: NextGen Network-Created Weather (NNEW) FY08 IT Demonstration
Objective: Demonstrate interoperability data sharing between FAA and the National Weather Services (NWS) through the use of a federated Real-Time System and Flight Environments.
Description: The demonstration involves integrating NextGen and NWS data into a single environment and supporting new operational procedures.
Start and End Dates: 9/14/08 – 9/10/08
Funded Source(s): FAA, NWS program
Performing Organization: FAA/NWS, NWS
Location: FAA/WXTC NextGen Network-Created Weather (NNEW) lab
Weather Sources: NWS, NCEP, NARR, WRF, and other sources.
Is Output Format Net-Based? Yes
Point of Contact: Thomas E. Ryan, FAA and Mark B. Miller, NWS

Planned/Completed Demonstrations*
Environmental Information:
- IC4D Test Bed
- CoSPA - On-Board User Evaluation
- CoSPA 2010 Operational Evaluation
- 3-hour Routine Terminal Aerodrome Forecast Amendments

Information Technology:
- NNEW FY08 IT Demonstration
- NNEW FY10 Four-Dimensional (4-D) Wx Data Cube Capabilities Evaluation
- World Area Forecast System (WAFS) Gridded Data

Interpretation/Decision Support:
- En Route Automation Modernization (ERAM) and 4-D Predictive Weather Demonstration at Dayton Area NextGen Test Bed
- Delta Airlines Eddy Dissipation Rate (EDR)
- Hazardous Weather Avoidance Field for NextGen Automation Systems

The NextGen Weather Paradigm
• Integration of weather information into decision-support systems
• A "seat-centric" approach to data sharing for more efficient and dependable exchange of weather information

A common weather picture used for Air Traffic Management (ATM) decision-making

The 4-D Weather Data Cube
A "virtual" repository of high-resolution observed, automated, and forecasted weather data. The 4-D Weather Single Authorization Source (4D-WX) is a subset of the data in the Cube and will be used for ATM decision-making.

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