Motivation for Operational Bridging and the Aviation Weather Statement

Weather Evaluation Team Presentation
Friends and Partners of Aviation Weather
October 23, 2013
Operational Bridging (OB)

OB is a set of weather forecasting processes, meteorologist/TFM decision maker engagement protocols and communications tools.
Aviation Weather Statement (AWS)

- Event driven Text/graphical forecast
- Collaboration: government & industry mets. and
- Disseminated to TFM planners concerning weather constraints deemed critical to traffic flow decisions
Motivation for OB and AWS

- WET believes the TFM community is positioned to begin exploiting information provided by the meteorology community today.

- Reliable probabilistic convective weather information is now available:
  - TFM planners build a plan for the day that is based on the most likely weather scenario.
  - This info supports alternative plans to account for other potential weather scenarios.
  - NextGen calls for use of probabilistic weather forecasts in planning.
  - New Decision Support Tools, e.g., Collaborative Trajectory Options Program (CTOP).
Motivation for OB and AWS

- **OB supports transition from strategic to tactical planning**
  - Strategic plan / probabilistic products
  - Operational bridging / AWS and OB interaction
  - Tactical plan / deterministic products
  - Multiple scenarios = fewer “surprise” weather disruptions

- **This dynamic forecast process including AWS is the conceptual evolution of the CCFP**

- **Additional motivation: NextGen themes**
  - Single Authoritative Source (SAS)
  - Human Over The Loop (HOTL) of the forecast process
Motivation for OB/ AWS

Ultimate goal of OB and the AWS is to provide an ability for TFM decision makers to more proactively initiate, amend or terminate planned or active TFM initiatives, and result in more efficient use of available airspace.
Evaluation of OB/ AWS

- Limited in scope demonstrations of the OB process and the AWS have been rated favorably by users and provided sufficient support for strategic planning during convective weather events.

- The AWS was found to be effective in highlighting small spatial scale events with potentially high impacts and also provided additional trend information to users.
Proposal to CSG in September with presentation for decision in November

Current thinking is a 2016 implementation NAS wide

If a “scheduled” CCFP still required, plan is to automate
Future Efforts Needed

- Understanding probabilistic weather information for TFM decisions and defining particular thresholds for traffic management initiatives
- Determine standard thresholds (requirements) that would trigger the need for an AWS to be generated
- Standardize the format of the AWS graphic and text
- Potential automation of current CCFP
- Linkage with other TFM initiatives
Questions?

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URL:
http://testbed.aviationweather.gov/aws/index
Demonstration Participants

Participants -

- **Industry** - AOCs, FOCs, Meteorologists
  - Delta, FedEx, JetBlue, NetJets, Southwest, United, UPS, and NBAA
- **Government**
  - Traffic Management Units - New York Air Route Traffic Control Center (ARTCC) (ZNY), Washington ARTCC (ZDC), New York Terminal Radar Approach Control (TRACON) (N90), Boston ARTCC (ZBW), and Cleveland ARTCC (ZOB)
  - Air Traffic Control System Command Center
  - Center Weather Service Units - Cleveland, Washington D.C., New York, and Boston