



MDCRs

Airline Industry Perspective

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MDCRS – Current State

- **Seven participating Carriers:**
 - American, Delta, FedEx, Northwest, Southwest, United and UPS
- **New Turbulence and Water Vapor initiatives.**
- **Varying avionics and reporting rates among carriers.**
- **Communication cost share arrangement resulting in limited data access.**





MDCRS – Desired State

- **Government management of the program so that:**
 - Data communication fees are accommodated so that data can be freely distributed.
 - Data is fully quality controlled.
 - Data is distributed via standardized channels and available to all.
 - Data is reported when and where needed.
 - Mechanisms exist for new data reporting members.
 - New data types can be efficiently integrated into the data stream.
 - Program is in line to meeting the goals of NextGen.





SWA - EDR

- Southwest will receive production level software for aircraft installation by mid to late November from Honeywell.
- SWA plans to report turbulence reporting after working with NCAR during a test period during the first quarter 2010.
- Current plan is to install all 340 737-700 aircraft with EDR threshold reporting capabilities sometime in the second quarter of 2010.
- Initially data will be available via websites (ESRL and Experimental ADDS) and then incorporated into our WSI Dispatch Fusion tool to SWA Dispatchers.





EDR – Open Issues

- Would like to have text reports converted to a “Dispatcher-Pilot” friendly type format.
- Would like to establish more widespread data distribution methods. Need to address communication cost issues in the longer term MDCRS plan.
- Would like automated means to forward reports to affected aircraft.
- Need a “bridge” so that all turbulence values EDR and RMS-g could be made available in either format if desired.
- Need to integrate EDR and RMS-g data into AWC operations.



Water Vapor

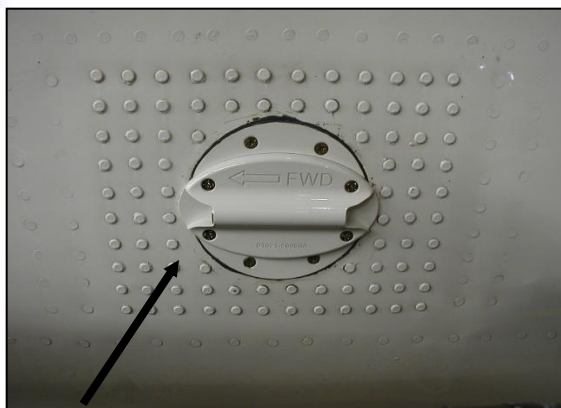
- SWA subcontracts with ARINC to provide Water information on 31 aircraft. All 31 aircraft are expected to be installed by the end of the 2nd quarter of 2010.
- Sensor in final STC process for 737.
- UPS currently has 7 aircraft installed with the latest sensor/software, and began reporting data on September 5, 2009. Expects to have 25 aircraft installed by the end of the first quarter of 2010.
- Initial testing has taken place with very encouraging results.
- November test planned in Rockford, Illinois with UPS, NWS, and the University of Wisconsin comparing UPS aircraft readings with launched “balloons”.







Aircraft N411UP WVSS-II installation pictures at Goodrich during “C” check in May 2004.



Air Sampler (View looking inboard)



**System Electronics Box (SEB)
(View looking outboard)**



Air Sampler (View looking outboard)





WVVS Project

- ***"These readings will give us more accurate initial conditions for computer models. This has the potential to revolutionize weather forecasting."*** – Randy Baker (UPS Meteorology)
- ***"It allows forecasters to better diagnose all weather hazards, from tornadoes to winter storms to fog and low cloud aviation forecasts."*** – John Gordon (MIC NWS Louisville)
- ***"We are very excited to be part of this groundbreaking opportunity to both strengthen our partnership with the NWS and to provide the entire weather community with this important new data set."*** - Rick Curtis (SWA Meteorology)

