PANASONIC WEATHER SOLUTIONS

ELIZABETH WILSON
PANASONIC AVIONICS

A B2B COMPANY THAT BUILDS SOLUTIONS UNIQUELY TAILORED TO THE BUSINESS NEEDS OF EACH AIRLINE

ULTIMATE ENTERTAINMENT  BUSINESS PLATFORM  CONNECTED AIRCRAFT  TURNKEY  ZERO TOUCH

© 2017 Panasonic Avionics Corporation. Proprietary and Confidential
Simplifying and strengthening our network

18 satellites
150 beams
20,000 – 40,000 MHz

Extremely powerful spot beams are layered over existing wide and HTS beams, covering 50% of all commercial air traffic
Each TAMDAR probe has **3 RH sensors** inside.
Chart of improvements in forecast skill of the experimental (with TAMDAR) over the control (without TAMDAR) All forecasts were verified using RAOBs as "truth"

NOAA's most optimized model for aircraft data is RUC

PWS 3D-Var WRF is essentially the same code as NCAR 3D-Var WRF

PWS RT-FDDA and 4D-Var WRF are best suited to utilize asynoptic observations


*After corrections outlined in:
Hybrid 4D-EnVar Deterministic Global Model Output on Native Flight Levels (1000 ft)

Panasonic Global

NCEP Global

Wind

Temp
Reduction in CO2 emission and fuel costs

**Climb Profile Optimization**
- Ascend
- CLIMB PROFILE OPTIMISATION
- MACHINE LEARNING PERFORMANCE MODEL
- OPTI CLIMB
- More savings, less CO₂

**Energy efficient descent**
- Continuous descent
- Regular descent
- THRUST AT EACH ALTITUDE
- PANASONIC WIND UPLOADS

- 10% Fuel savings during climb
- Up to 10%
- 3% Fuel savings on descent
- Up to 3%

© 2017 Panasonic Avionics Corporation. Proprietary and Confidential
Fuel Savings & Reduction in CO₂ Emission

Powered by TAMDAR, FlightLink, OptiClimb and the PWS forecast

Potential for annual benefit across a 20 aircraft, mixed fleet:

$1.4M USD/Year of fuel savings
6,205 metric tons of CO2/year emissions reduction

*Based on an average fuel cost of US $2.00 per gallon
Thank You!

Elizabeth.Wilson@panasonic.aero