

CERTIFICATION OF WEATHER SYSTEMS

Presented to: Friends and Partners in Aviation Weather

By: Gordy Rother AFS-220

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CURRENT CERTIFICATION OF WEATHER SYSTEMS

- **Discuss today's position on certifying an instrument or system vs certifying data.**
 - Liability we can accept with regard to risk identified.
 - AWOS/ASOS Standards identified requiring human system certification and operation.
 - Configuration management has driven hardware specifications to a single manufacturer.
 - Combination of these elements has restricted the ability to establish the adequate number of weather systems in the NAS due to cost and ability to maintain.

CURRENT UAS LIMITATIONS

- **Why VFR? “Integration into the NAS”**
 - Because of other aircraft need to be able to see and avoid.
 - Example; transitioning from IFR to VFR.
 - Detect & Avoid equipage will mitigate the risk for mid-air collisions UAS to UAS operations
 - UAS to manned aircraft require see and avoid
 - Certification of UAS,
 - Flight only in conditions of capability and certification All-Wx Ops UAS
 - UAS certified vehicles will have weather related limitations. Weather must be available to comply with certification limitations.

UAS AFM LIMITATIONS

- **Flight only in conditions of capability and certification All-Wx Ops UAS**
- **Certification of UAS has identified weather limitations.**
 - Ex; No Operations in visible moisture at temperatures +5C degrees and below.
 - Ex; No operations within 25 miles of TRW.
 - Ex; No operation in temps below -10C degrees.
- **Weather information must be available in the area of operation to comply with certification limitations.**

ACCEPTANCE OF DATA DRIVEN WEATHER INFORMATION

- **ASTM F38 Weather Supplemental Data Service Supplier Specifications Group has a charter to draft new specifications for UAS weather.**
 - Risk Based Levels of Acceptable Information
 - For Example, UAS Operations in Class-G Airspace (non-passenger).
 - Acceptable weather parameters
 - Visibility +/- XX
 - Ceiling +/- XX AGL
 - Wind Speed and Direction +/- XX Degrees/Knots
 - Temp +/- XX Degrees C
 - Altimeter Information +/- XX Inches of Mercury
 - Hazardous Wx Avoidance
 - Icing
 - Turbulence
 - Thunderstorms

SUMMARY

- **FAA Gap Analysis on missing weather information in process.**
 - Weather COI SWAT
- **Standards will be based on ASTM F-38 Working Group risk based recommendations.**
- **Make recommendations for approval for data driven weather systems.**