

ONCE UPON A TIME, THERE WAS A
PILOT...



QUESTION: WHY IS THIS IMPORTANT?

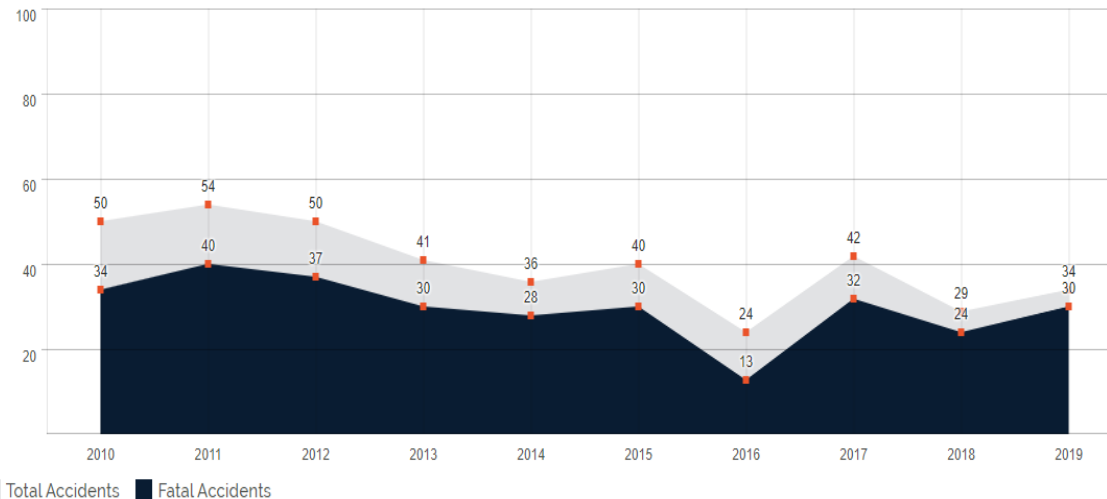
ANSWER: SAFETY!



Safety Implications

- Our Weather accident numbers seem to be steady rather than improving
- VMC into IMC, Thunderstorms, Icing, etc., are all killing pilots
- 66.7% of fatal accidents have an IFR pilot on board

Figure 1.7.1: Weather accident trend
2019 Non-commercial fixed-wing



Poorly translated (or poorly understood) weather information can lead to loss of control in flight, which has a 50% chance of ending with a fatality.

Source: 31st Joseph T. Nall Report; General Aviation Accidents

SAFETY

NTSB safety research report Aug 2021

- Preventing Turbulence-Related Injuries in Air Carrier Operations Conducted Under Title 14 *Code of Federal Regulations* Part 121

Lack of shared awareness of turbulence risks. Many different turbulence forecasting products are available to meteorologists, dispatchers, air traffic controllers, and pilots. However, many of these products are proprietary, and they vary considerably in their capabilities, which limits a shared awareness and common understanding of forecasted turbulence risks across all key stakeholder groups involved in Part 121 air carrier operations. Could this be true for other weather risks/ information as well?

“...increased sharing of turbulence observations can help reduce turbulence-related accidents and injuries in Part 121 air carrier operations but that shared information also needs to be widely and commonly understood.”

Are current requirements for weather review at recurrent training enough?

PART 121 PILOTS AND DISPATCHERS



Part 121 Pilots

- Have access to a dispatcher and must agree on a plan.
- Automation issues – WIFI availability , May not have access to all the same websites as dispatchers.
- Get a weather briefing package that was created by dispatch with their flight plan. May use many different weather sources (e.g. AWC, Weather.com, etc.) or third-party applications (e.g. Company or approved weather provider, iPads, EWINS)



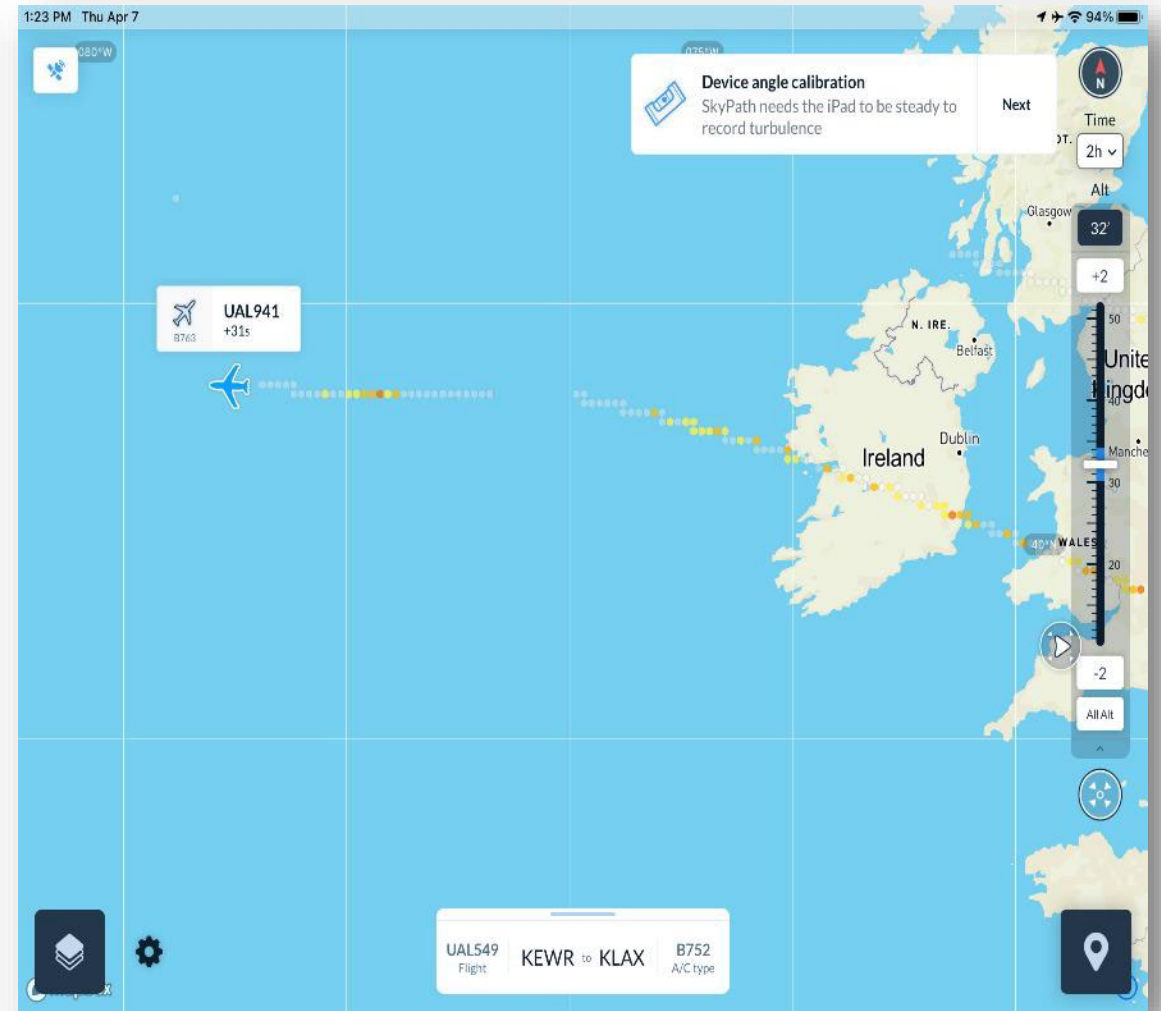
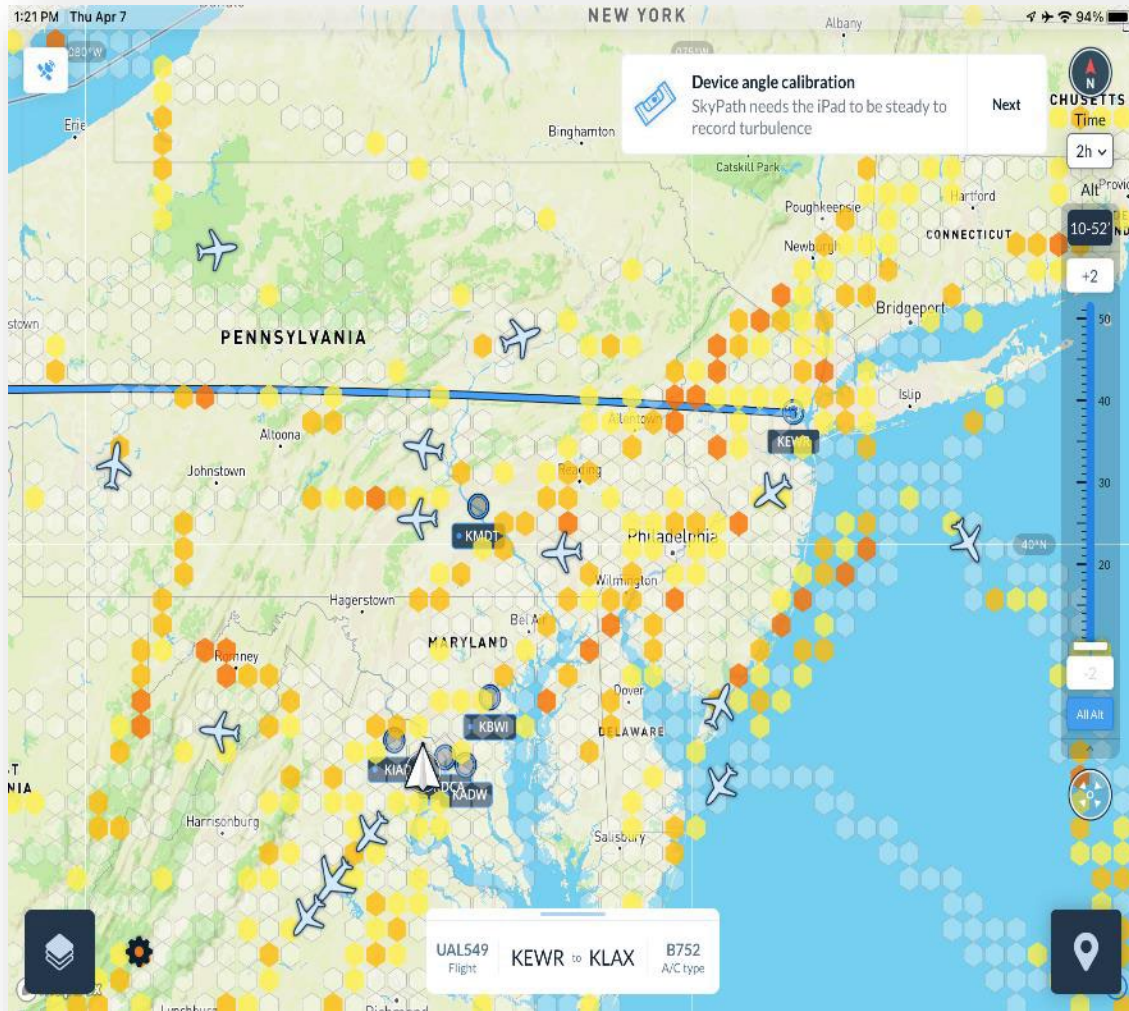
Part 121 Dispatchers

- Works with Pilots, ATC or ATC coordinators, may have company or third-party Meteorologists available. Shares operational control with the Captain.
- Automation issues – radar is :06 old, may not have access to all the same apps or websites as pilots.
- May use many different weather sources (e.g. AWC, Weather.com, etc.) or third-party applications (e.g. Company or approved weather provider, EWINS)

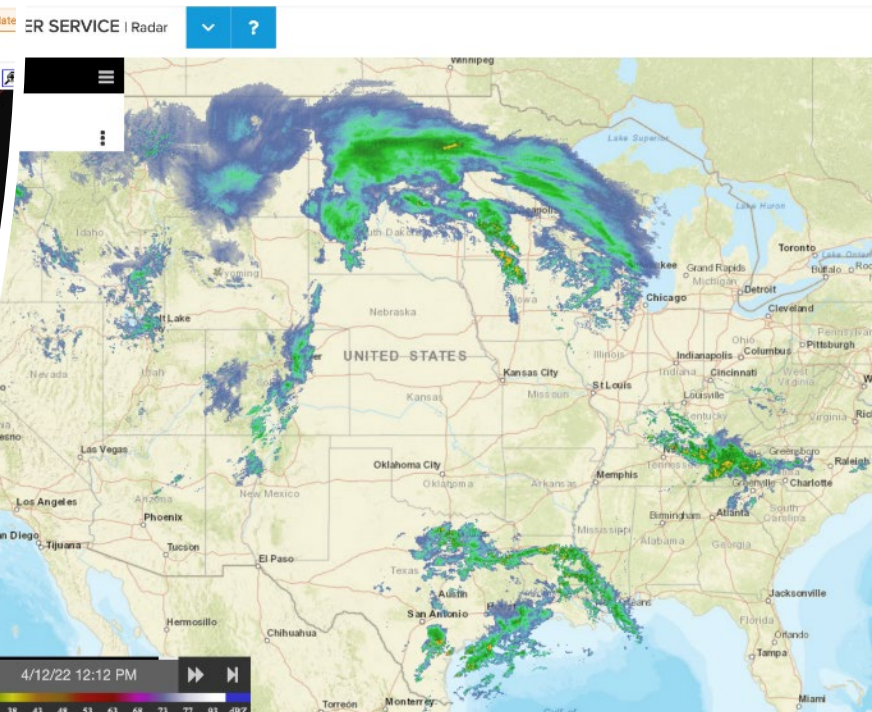
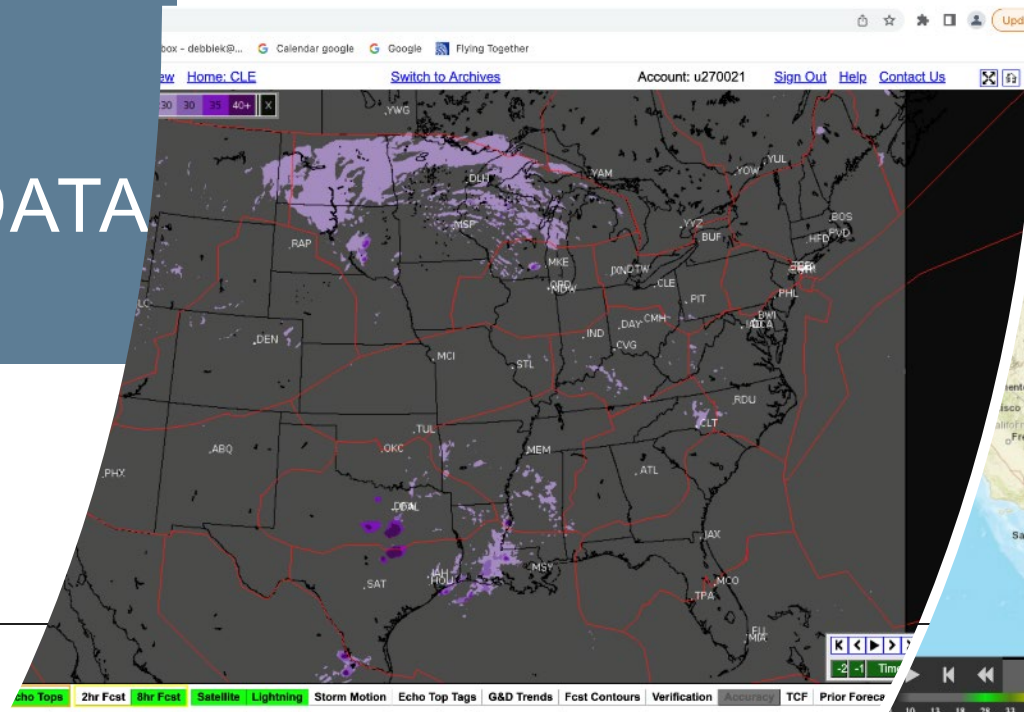
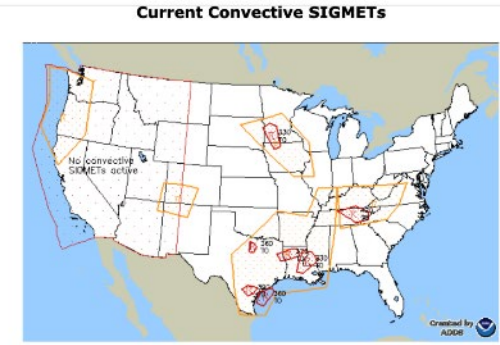
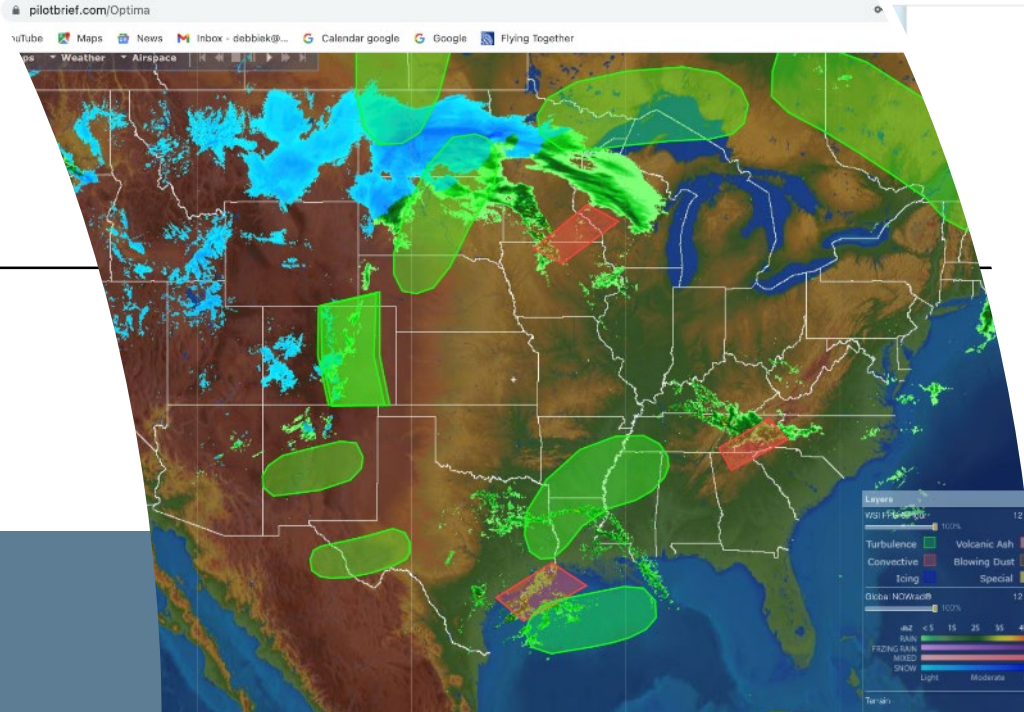
PART 121 PILOTS MULTIPLE SOURCES OF WEATHER DATA– EFB APPLICATIONS



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PART 121 DISPATCHERS MULTIPLE SOURCES OF WEATHER DATA AVAILABLE



PART 135 AND PART 91 PILOTS



Part 135

- Fewer dispatchers than Part 121 (airline) operations
- Little, if any, meteorological support



Part 91

- Typically, general aviation pilots are responsible for their own decision making
- Reliant on publicly available weather sources (e.g. AWC, Weather.com, etc.) or third-party applications (e.g. Foreflight)

PART 107 AND AAM OPERATORS



Part 107

- Like Part 91 pilots, part 107, or sUAS operators, are self-reliant in their decision-making processes
- Limited publicly available resources for sUAS pilots



AAM Operations

- We assume that, in the near-term, these operations will act similar to helicopter/Part 135 operations
- Unsure of what weather information these new operations will need beyond the better understanding of micro-weather in urban areas