Overview

- A bit about ForeFlight
- A bit about my background
- The ForeFlight Mobile app
- What’s missing?
ForeFlight, LLC

- Formed 2007
- Grown to 50 - PST, QA, Development, Data
- GA, .mil, corporate, airline
  - ~70% of the market
- Per minute
  - 5,000 text WX
  - 10,000 radar tiles
  - 1,000+ sync changes

Circa 2007
Scott Dennstaedt

- ForeFlight Weather Scientist
- CFI specializing in TAA
- Former NWS research meteorologist
- Aviation author
- Own and operate AvWxWorkshops.com
- Aviation weather training
What’s ForeFlight?

• Flight planning app + charts + weather (iPad/iPhone)
• Requires annual subscription (no certification)
Apps are the future

• More and more pilots are getting their weather briefings through apps like this
• Especially as cockpit Internet connectivity grows
• Less are using Flight Service or ADDS as their primary source of preflight weather
• Can file and cancel flight plans through the app
• Get expected routing
• Get notifications (weather, routing, etc.)
• Future weather guidance needs to consider this form of delivery
AIRMETs/SIGMETs/METARs/TAFs

- Pre-flight & in-flight (ADS-B, XM)
Radar and PIREPs

- Precipitation type and icing PIREPs
Static imagery

- CIP/FIP, PIREPs, G-AIRMETs, freezing level, etc.
What’s missing?

• Go or stay decision is often based on the pilot’s evaluation of too much “disjoint” guidance… (Easter egg hunt)

• TAFs, METARs, AIR/SIGMETs, PIREPs, area forecast, satellite, radar, icing analyses and forecasts…

• ADS-B promotes this “old-fashioned” way of thinking

• Relies too heavily on pilot’s knowledge of weather and how to integrate these products while understanding their inherent limitations

• Need route-based integration that can be used against other factors (minimum safe altitudes, VFR vs IFR, etc.)

• Four-dimensional problem
Profile View

- Route-based (corridor) forecasts
- Provide a profile/cross-section view of clouds/icing/freezing level/tops/SLD
What’s missing?

• Higher temporal and spatial resolution (altitude) for icing forecasts

• Information on tops and layers (icing and cloud tops)
  • Actual (current) and forecast

• NOWcast updates while en route (via ADS-B)
  • Updated at least every 15 minutes

• Corridor/route specific focus
What’s missing?

• World icing forecast
• Currently provided by multiple vendors with no standardization
• Easy to ingest tiled-based maps
• Avoid/augment GRIB and BUFR
• geoJSON and other formats