ForeFlight

Intelligent Apps for Pilots™

Mobile Flight Planning

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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

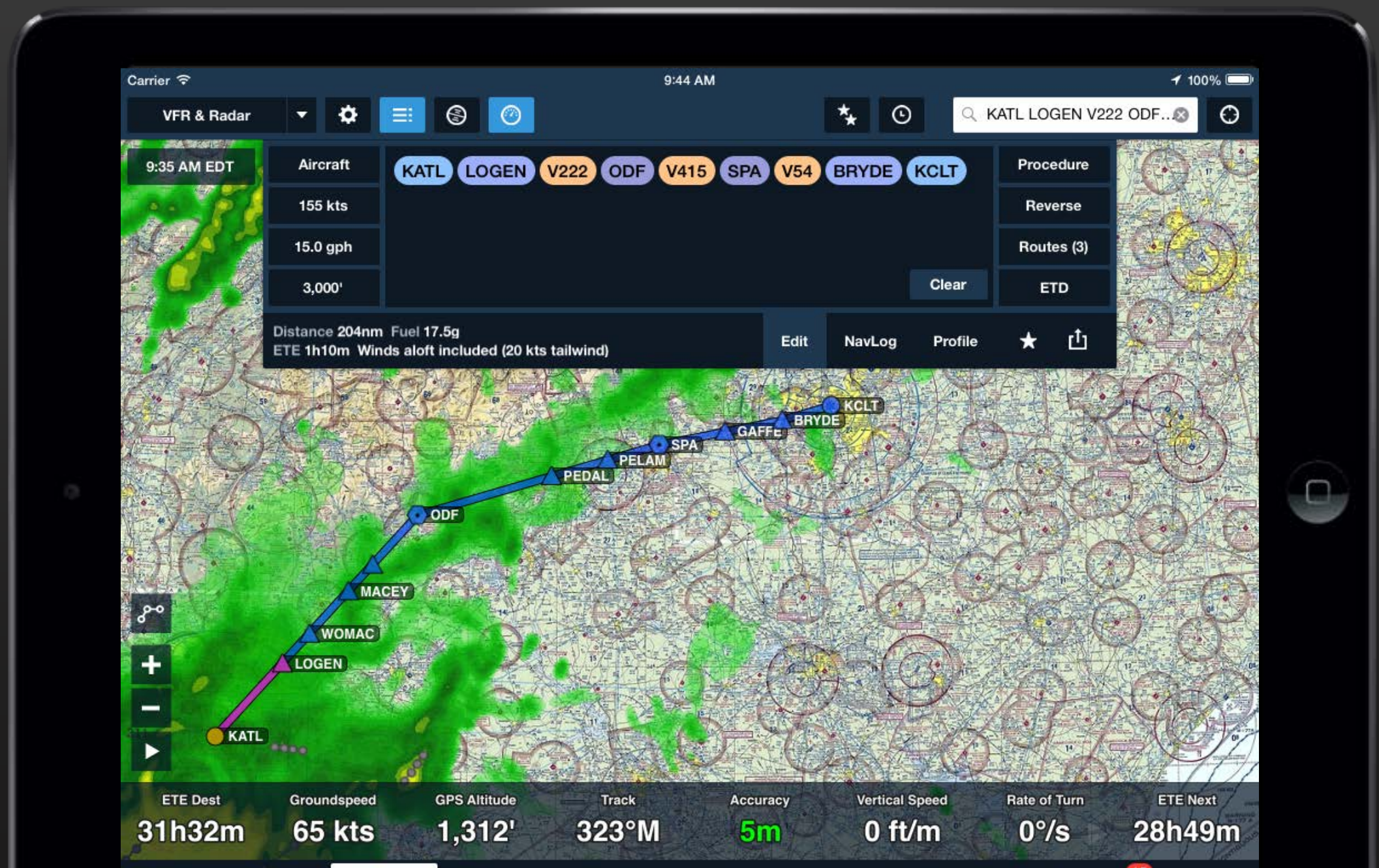
Circa 2007

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

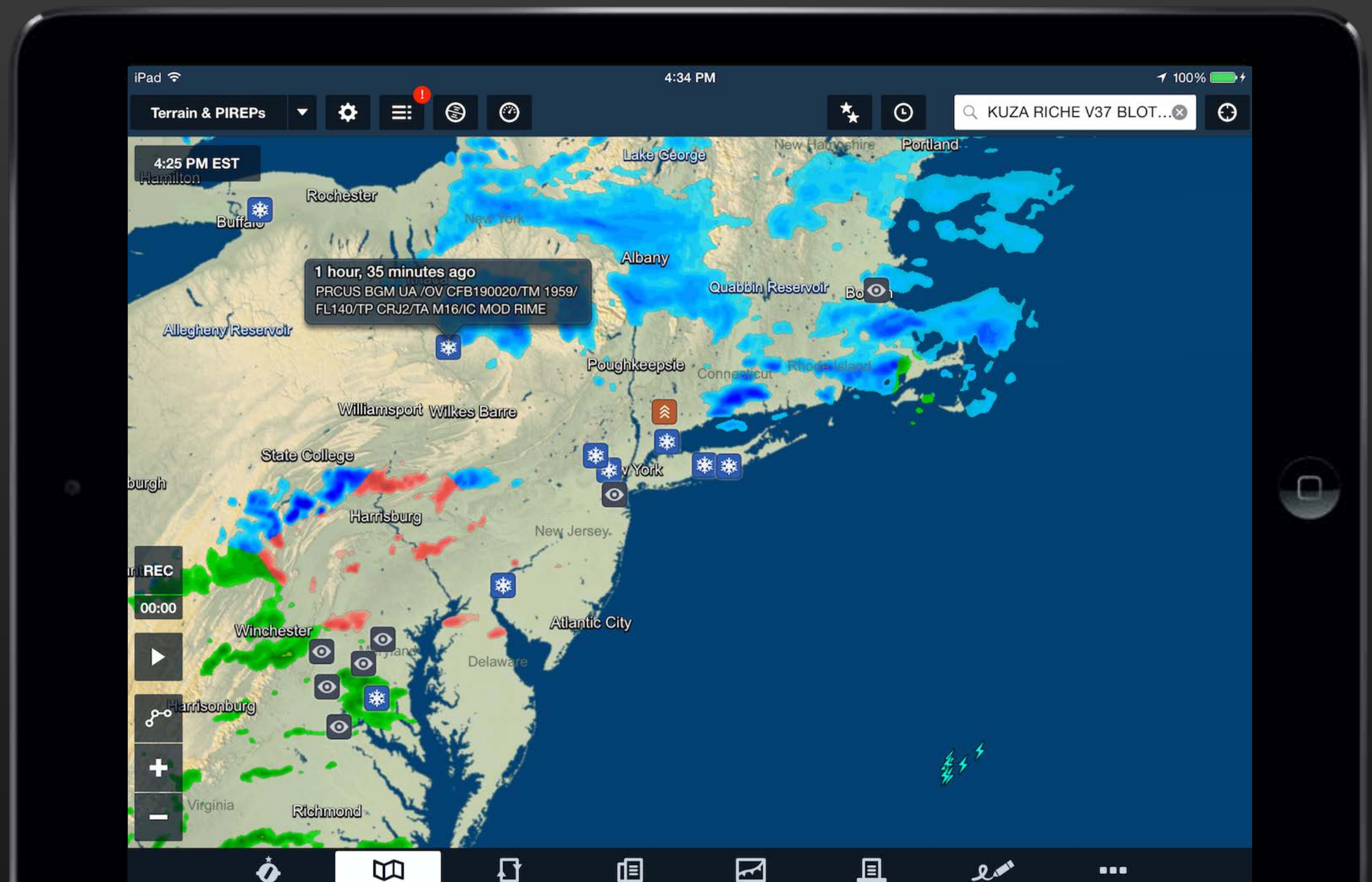
- More and more pilots are getting their weather briefings through apps like this
  - Especially as cockpit Internet connectivity grows
  - Less are using Flight Service or ADDS as their primary source of preflight weather
- Can file and cancel flight plans through the app
  - Get expected routing
  - 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)

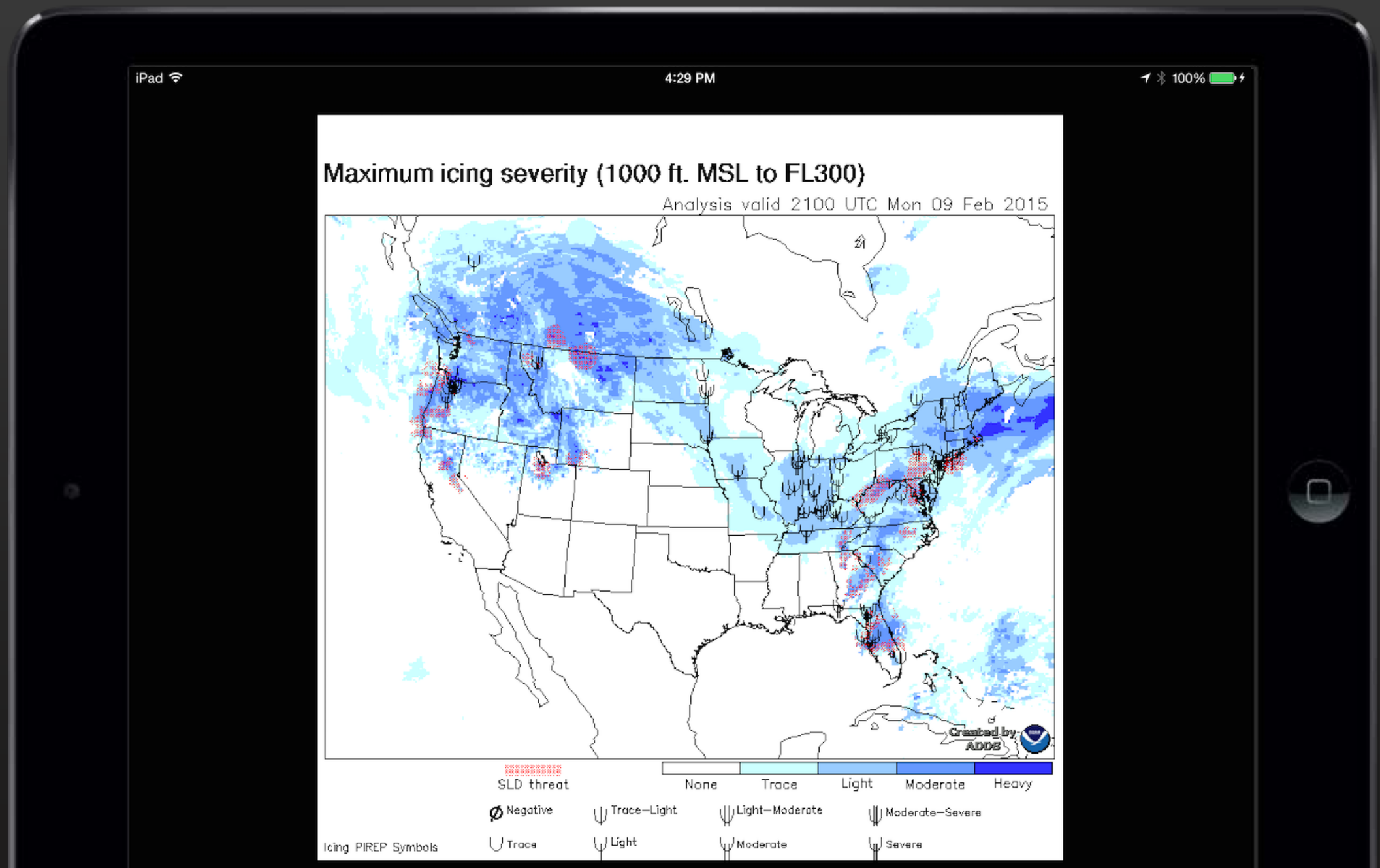
Radar and PIREPs

- Precipitation type and icing PIREPs



Static imagery

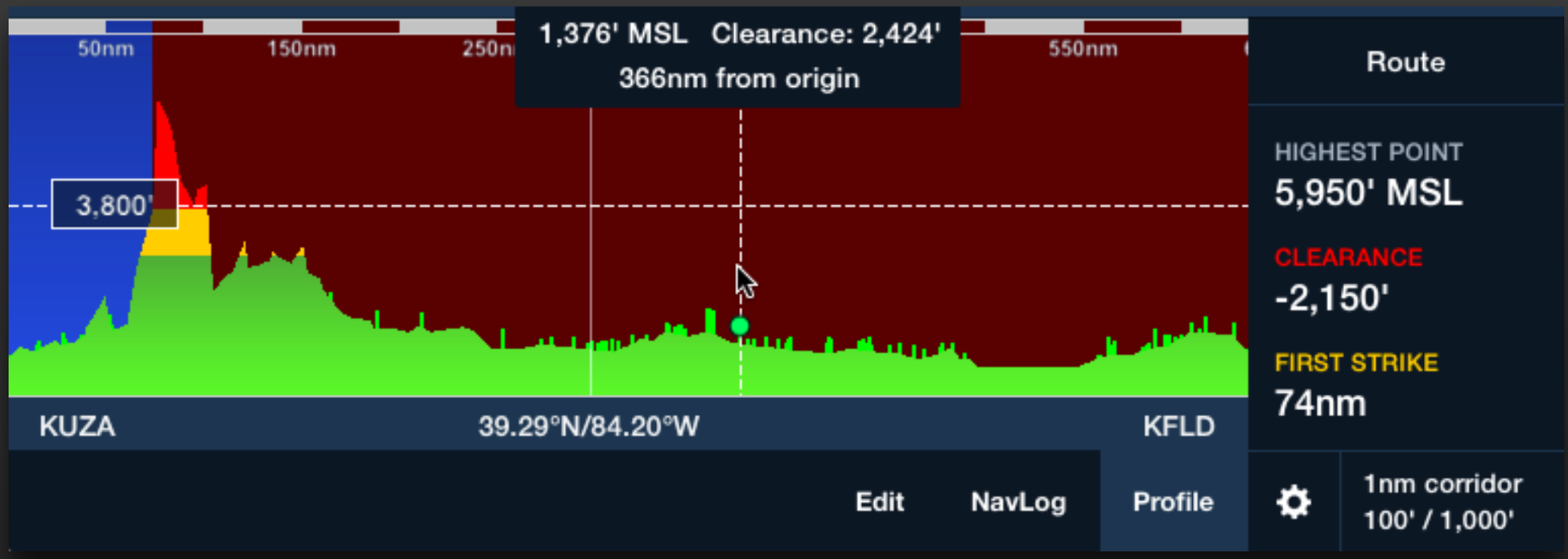
- CIP/FIP, PIREPs, G-AIRMETs, freezing level, etc.



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