Digital Aviation Services - Building TAFs from Grids

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Special thanks to:
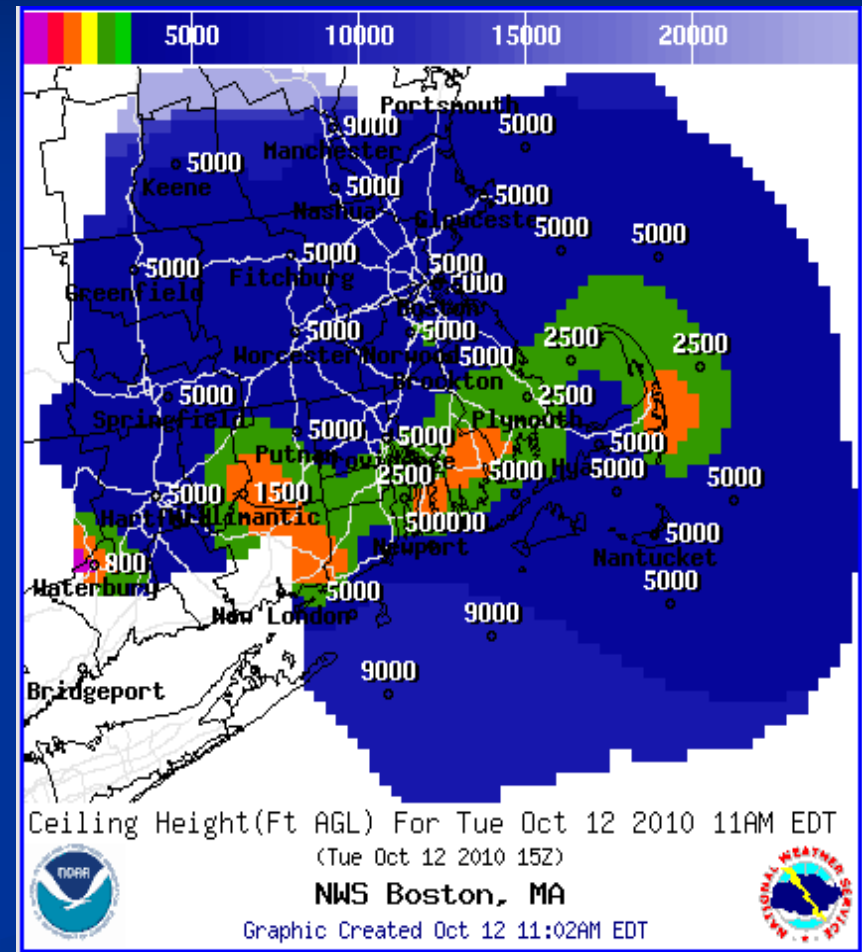Cammye Sims – Aviation Services Branch, NWS HDQ
Joe Dellicarpini - WFO Taunton, MA
Fred McMullen – WFO Pittsburgh, PA
Jeff Waldstreicher – NWS Eastern Region HDQ

What are Digital Aviation Services

- Participating Weather Service Forecast Offices (WFOs) are producing experimental digital forecasts (grids) of ceiling, visibility, and probability of thunder
- Local applications developed in which TAFs fall directly out of these grids
- These are not necessarily guidance TAFs, most offices using the output directly
  - Still an option to change (TEMPOs, PROBs)

Ceiling Height(Ft AGL) For Tue Oct 12 2010 11AM EDT
(Tue Oct 12 2010 15Z)
NWS Boston, MA
Graphic Created Oct 12 11:02AM EDT

Why Digital Aviation Services?

- Moves toward the NextGen requirement of digital ceiling and visibility

- Moves toward the NextGen requirement of consistent forecasts of aviation impact parameters and eventually the SAS

- Important guidance tool for helicopter medical services, search and rescue operations, and GA

- Improves NWS forecast consistency beyond aviation (not just aviation short term grids)
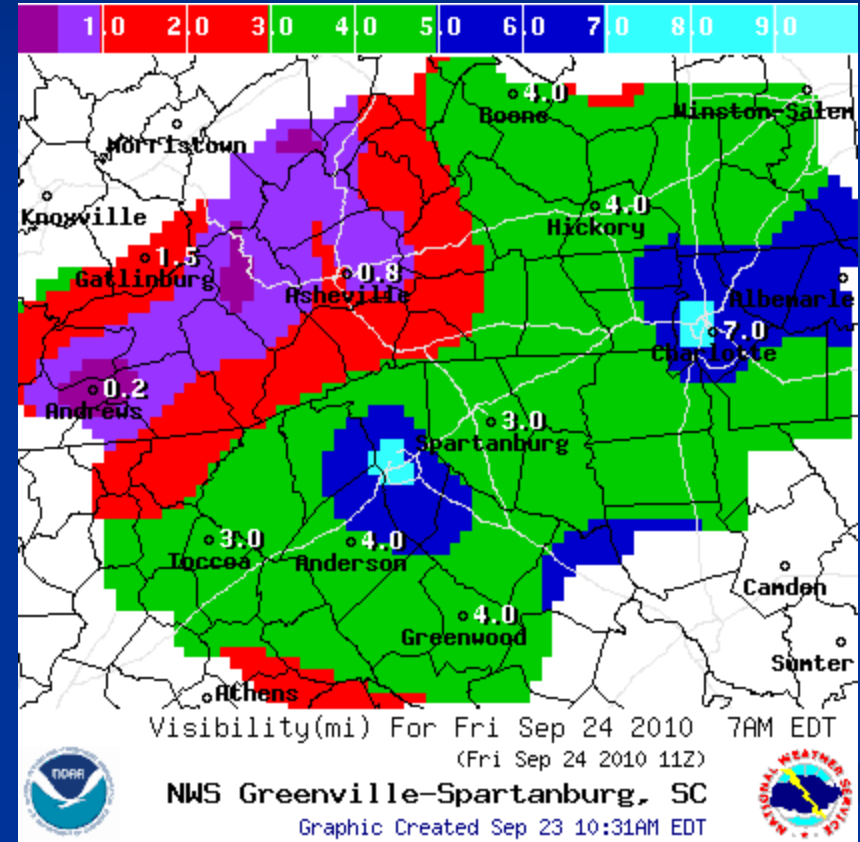
Current and Future Direction

- Graphical aviation forecasts are available on the following WFO web sites:
  - Boston, MA
  - Jackson, KY
  - Caribou, ME
  - Charleston, WV
  - Greenville-Spartanburg, SC

  www.weather.gov and click these approximate locations on the national map

- Formalizing requirement to expand services for nationwide coverage

- Examine and work with new guidance tools like Gridded LAMP, NCV, and high resolution numerical models

- A national C&V grid used by AWC for the Area Forecast

Challenges Ahead

- Coordinating the national requirement
- C&V transition between forecast offices (e.g. can you tell where the one office domain ends and another begins)
- Meaningful verification
- Office prioritization
- Cloud top information as required by the Area Forecast
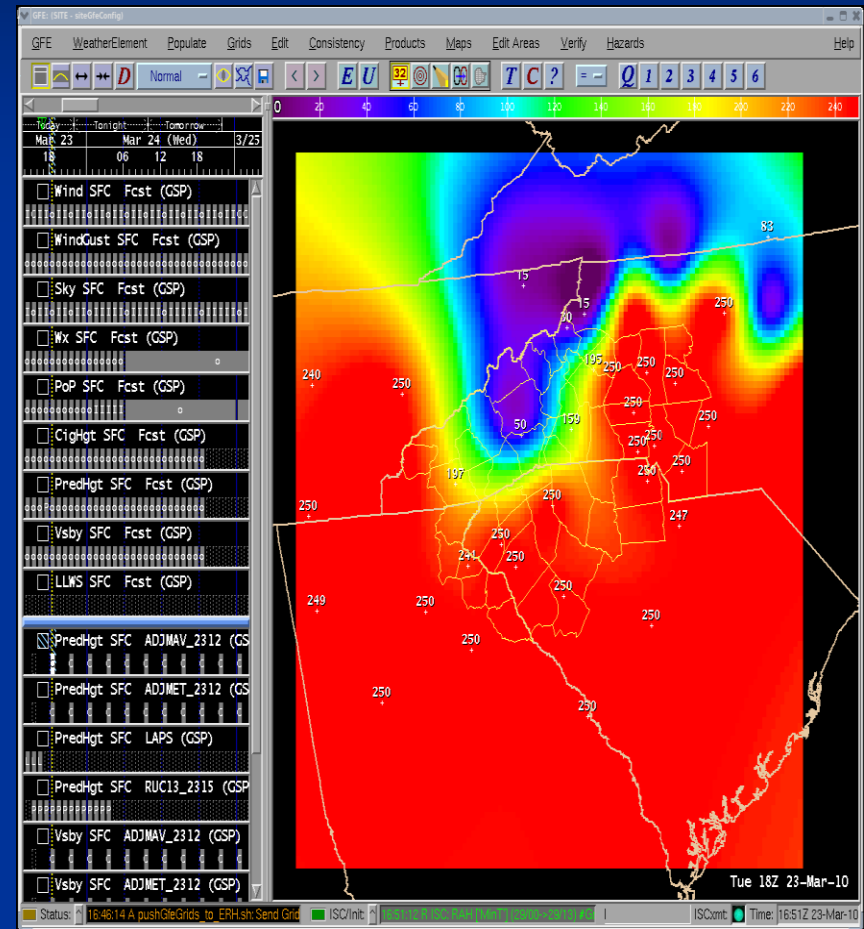
Example of smart tools used by forecasters to produce grids

So What Have we Deduced So Far?

- Participating offices do not want to go back to writing TAFs!
  - Operations far more efficient
  - Short term forecaster no longer removed from grids to compose TAFs
  - Participating offices say product consistency is indeed improved
- No discernable decrease in skill (POD and FAR)
- Interesting assessments of guidance products for common biases