

“Transition?”  
What’s wrong  
with the way we  
do things now?

# Transition to Enhanced Short Term and Aviation Grids (Über Grids)

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# TAF-Grid Consistency

## TAF vs GFE comparison for ATL

### Aviation Digital Data Service (ADDS)

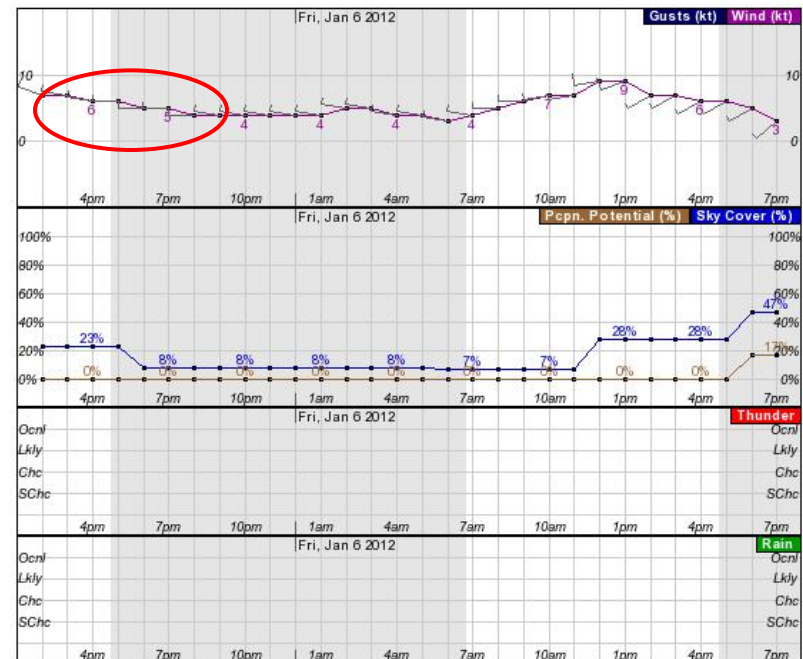
Output produced by TAFs form (2000 UTC 05 January 2012)  
found at <http://www.aviationweather.gov/adds/tafs/>

KATL 051952Z 30010KT 10SM FEW250 16/M03 A3013  
RMK AO2 SLP205 T01611033 \$

KATL 051954Z 0520/0624 **30011KT** P6SM FEW250  
FM052300 28006KT P6SM SKC  
FM061400 26009KT P6SM SKC



### Official GFE forecast grids for ATL



# TAF-Grid Consistency

## TAF vs GFE comparison for ATL

### Aviation Digital Data Service (ADDS)

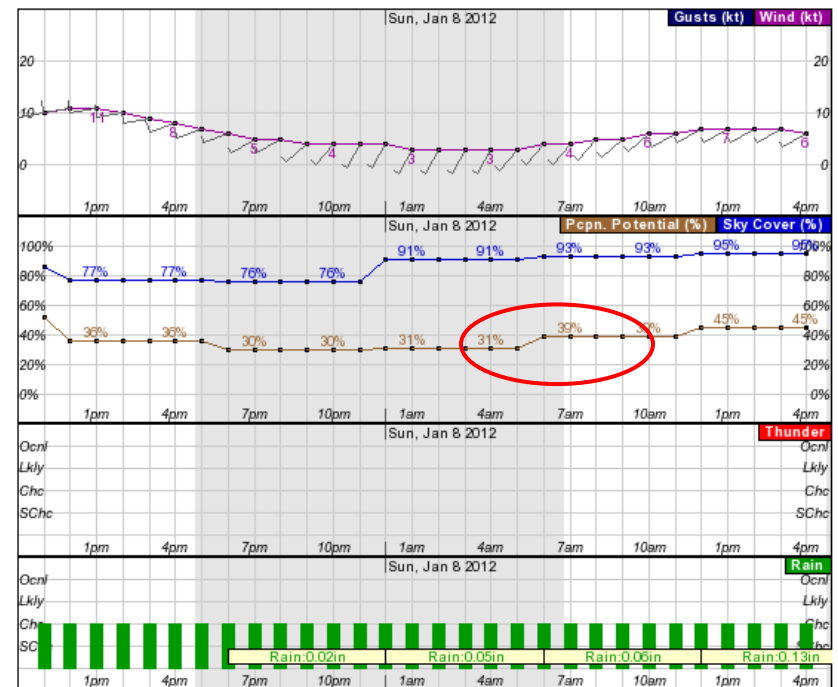
Output produced by TAFs form (1701 UTC 07 January 2012)  
found at <http://www.aviationweather.gov/adds/tafs/>

KATL 071652Z 26011KT 10SM SCT019 SCT050 18/11  
A3010 RMK AO2 SLP190 T01830111

KATL 071559Z 0716/0818 26011KT P6SM VCSH SCT025 BKN040  
FM080000 24006KT P6SM BKN025  
FM080800 22003KT 4SM -RA OVC012  
FM081500 23004KT 6SM BR VCSH OVC020



### Official GFE forecast grids for ATL



# We're Not the First

- Eastern/Central Region “Enhanced Short Term” (EST) tests/policy
  - 3-hourly near-term grid updates
  - Hourly grids to 24-36 hours
- Six ER/CR offices creating aviation grids and TAFs
  - Forecaster feedback: no one wants to go back to writing TAFs

# Our Approach: “Über Grids”

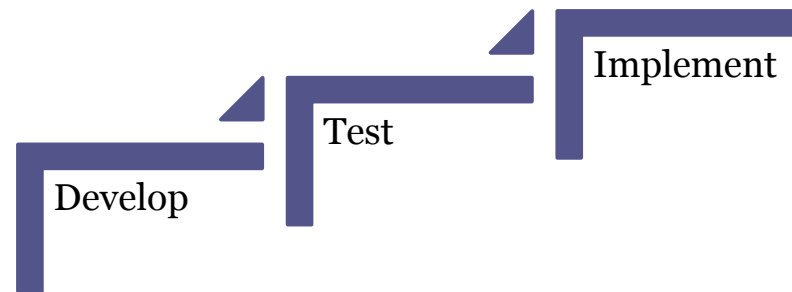
- Proposed early fall 2010
- Focus: to make GFE the WFO’s sole production tool
  - To produce meteorologically consistent forecasts, regardless of delivery medium and customer base
  - Improve the quality, precision, and detail of our current grid-based forecasts
  - Begin moving us in the direction of 4-D Wx Data Cube
- Fold EST and aviation grids into overall paradigm shift

# Steps toward “Über Grids”

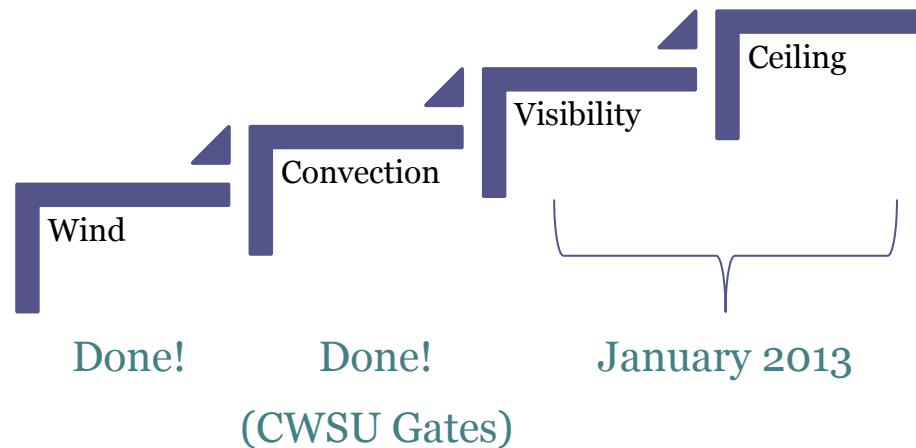
- Two teams defined:
  - 1) Development Team
    - Outline policy changes (esp. aviation focus)
    - GFE technical development and instructions
    - Web technical development and instructions
  - 2) Evaluation Team
    - Rigorously test and evaluate tools, procedures, etc.
    - Verification of new forecast sources
    - Provide feedback to Development Team and staff

# Steps toward “Über Grids”

- Multi-tiered approach – one element at a time



- Four main elements



# “Legacy” Approach to Short Term

- At 05/17Z:
  - Populate new grids with desired synoptic scale model(s)
  - At 07/19Z:
    - Write short-term AFD
  - At 12/00Z:
    - Forecast is valid
- At 02/15Z:
  - Evaluate/adjust short-term grids (as necessary)
  - Write update AFD

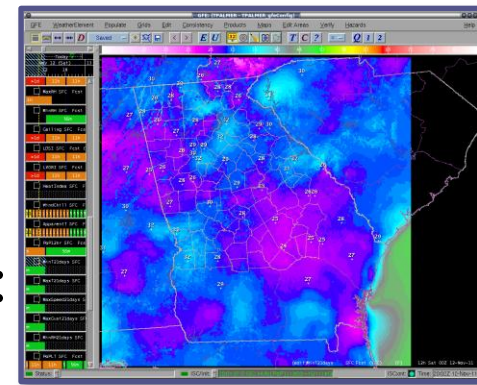


Seriously, we're still doing this in 2012???



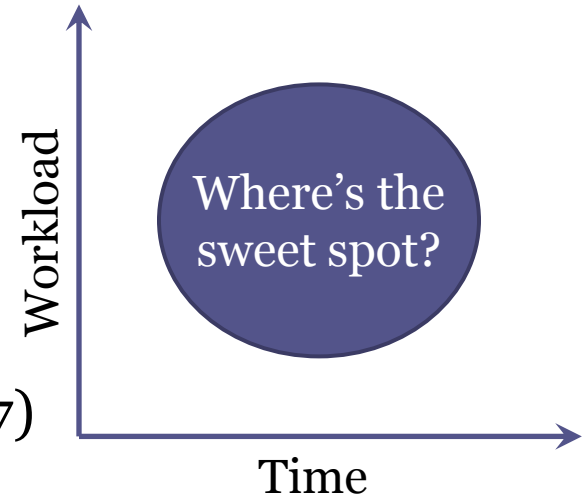
# “Über” Approach to Short Term

- At 01/03/05/07/09/11/13/15/17/19/21/23Z:
  - Evaluate EVERY grid in the “Near Term” - next 12 hours of grids
    - Adjust as necessary
  - Hourly PoPs/Wx/Sky through 12 hours
  - 3-hourly through 24 hours
  - Update AFDs as needed
- At 00/02/04/06/08/10/12/14/16/18/20/22Z:
  - ATL ROU/AMD TAF
  - At 00/06/12/18Z:
    - Write aviation AFD
- At 05/17Z:
  - Populate “Short Term” if necessary
  - Blend “Near Term”
- At 07/19Z:
  - Write short-term AFD



# Challenges and Issues

- Definite workload increase -  
What can we reduce/eliminate?
  - Automate text products
  - Reduce time spent on extended (Days 3-7)
    - Less than 30 minutes per day
  - Pull TAFs from grids rather than hand-typing
- Need to balance operational workload vs. “other” stuff
- Need more training on high-res models
  - How best to utilize/interpret them
  - Understand weaknesses and limitations



# Summary

- “Über” grids – the right thing to do
  - Want to produce the best grids possible for *all* users
- Staff buy-in *imperative* – multi-tiered approach to ease growing pains
- Need to balance added detail with finite amount of time
  - Still have program duties, training, outreach, research, etc.
- Already seeing significant benefits to customers and partners
  - Positive feedback from area EMs, USFS, FAA, etc.

Thank you!

Questions?