“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 28006RT P6SM SEC
FM061400 26009RT P6SM SEC
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/taf/

KATL 071652Z 26011KT 10SM SCT019 SCT050 18/11
A3010 RMK ACO2 SLP190 T01830111

KATL 071652Z 0716/0912 26011KT 66SM VCSH SCT025 BKN040
FM080000 24006KT 6SM BKN025
FM080800 22003KT 4SM RRA VCSH012
FM081800 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

(Wind | Convection | Visibility | Ceiling)

Done! Done! January 2013
(CWSU Gates)
“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?