Review from Spring 2018 COPC

Overview:

- Review/takeaways from Spring 2018 COPC meeting
- Top NCEP conventional data challenge

Jeff Ator
IT Specialist
NCEP/EMC

5/23/2018

Spring 2018 COPC meeting

OFCM Committee for Operational Processing Centers (COPC)

- Executive-level parent body of WG-OD and WG-CSAB
- Meets semi-annually
- Spring 2018 meeting held May 8th-9th at 557th WW, Offutt AFB in Omaha, NE

GOES 15->17 transition

- GOES 17 AMVs available beginning late August 2018 for testing
- Current plan is for outage beginning October 2018 to drift GOES 17 to GOES-West location, followed by ~2 week collocation with GOES 15, then turn off GOES 15 and begin drift to storage location
- NCEP planning to ask OSPO for extension of collocation period to at least 3 months, but this may not be possible given human resource and potential frequency interference issues associated with longer term collocation period

U.S. WIGOS identifiers

- COPC supports plan to use new “Federal Meteorological Data Management Practices” document for guidance on these identifiers (as well as other future topics!)
- COPC will brief upcoming ICMSSR meeting and ask them to promote this guidance, once finalized, to other U.S. agencies outside the scope of WG-OD and COPC
- Will also help determine how to best reach other affected communities (e.g. universities, commercial vendors)

Top NCEP conventional data challenge

Majority of processing code for conventional observations was written in FORTRAN77 during the 1980's and 1990's

- Software is patchwork and difficult to learn for new team members
- New data sources take too much time to integrate and make available for use in model analyses
  - compared to other worldwide NWP centers
  - e.g. assimilation of high-resolution BUFR radiosonde data
- Software is not parallelized or ready for future large data sets

Pending approval of funding for necessary technology and contractor support, the plan going forward is to:

- Re-engineer the entire suite of codes using Python, with modular design and modern software engineering techniques
- Store observations in a high-performance geospatial database structure, allowing for fast and customized retrievals

Development would be over a period of several years, with current staff providing experiential guidance while also maintaining the existing processing until the new system is ready to take over.