

Unified Forecast System - Steering Committee (UFS-SC) Meeting

20 November 2020

Telecon 11:00 AM - 12:00 PM EDT

Participants:

Ricky Rood (co-chair)	U. of Michigan
Hendrik Tolman (co-chair)	NOAA NWS/OSTI
Deepthi Achuthavarier	NOAA NWS/OSTI
Curtis Alexander	NOAA OAR/ESRL
Henrique Alves	NOAA OAR/WPO
Tom Auligne	JCSDA
Jian-Wen Bao	NOAA OAR/ESRL
Michael Barlage	NOAA NWS/EMC
Ligia Bernardet	NOAA OAR/ESRL
Jacob Carley	NOAA NWS/EMC
Rocky Dunlap	NOAA OAR/ESRL
Gregory Frost	NOAA OAR/ESRL
Tom Hamill	NOAA OAR/ESRL
Lucas Harris	NOAA OAR/GFDL
Henry Juang	NOAA NWS/EMC
Karen Keith	NOAA NWS/OSTI
Jim Kinter	GMU
Dorothy Koch	NOAA NWS/OSTI
Geoffrey Manikin	NOAA NWS/EMC
Avichal Mehra	NOAA NWS/EMC
Daniel Melendez	NOAA OAR/WPO
Louisa Nance	NCAR
Shachak Peeri	NOAA NOS/OCS
Cristiana Stan	GMU
Jeffrey Whitaker	NOAA OAR/ESRL
Jamie Wolff	NCAR
Mariana Vertenstein	NCAR CGD/CESM
Xuejin Zhang	NOAA OAR/AOML

Meeting Minutes:

Minutes for review: [6 November UFS SC Meeting Minutes](#)

Open Actions

- Update on [Open Actions](#)
- Call for news items on the UFS portal
- List of AGU and AMS presentation: Henrique and Maoyi are working on this

- Moving over to VLab from Confluence and Cog sites - we will soon be reaching out to team leads
- Portal will have an updated GST by tomorrow
- UFS community survey has ~60 responses
- Land WG had kick-off meeting last week

Primary Business Items

SRW release

- Jamie Wolff gave an update
- FV3, LAM, CCpp
- End to end workflow
- Target release: TBD; delayed from 7 December
- HRRR, RAP, NAM and GFS as external model data sources for initial conditions
- 3 km, 13 km, and 25 km predefined CONUS domains
- Experiment generation and end-to-end execution with task management using Rocoto workflow or stand alone scripts
- Two supported physics suites: GFSv15p2 and RRFS_v1alpha
- Platform support
 - 1: preconfigured platforms
 - 2: configurable platforms
 - 3: limited-test platforms
 - 4: build-only platforms
- GST
 - Severe wx example
 - RRFS at 25 km and then 3 km
- Workflow does not use CIME so it is not same as in the MRW application
- When will the domain expand past CONUS? Not supporting that to the user community because they will not have the compute resources for something that large
- Another short update on this during the 4 December meeting

V&V survey

- Geoff Manikin gave an update
- Define critical metrics for each application at each gate
- Workshop dates February 22-24, 2021 - remote
- Moving towards ensemble approach; have to determine metrics in deterministic and ensemble framework; will be an ensemble component
 - Tom will touch base with Geoff and Tara to discuss this further
- Ligia asked about forecaster involvement, do we have their commitment? 10-20% in the survey; needs to be higher, have promoted the workshop to the forecasters, NWS regions and NCEP centers; they are a key group in determining priorities going forward

Advancing the stages and gates

- Process based needs to be better defined; link between underlying science and metrics; needs to be addressed going forward
- Four key stages in the R2O Funnel slide
- Evolution vs. Revolution: few small innovations a year vs something brand new
- I20 report layout proposal_Hendrik
 - Overview of thought process; not set on format yet

- Mariana asked what are the requirements for workflow? A big part of a good workflow is modularizing what you are doing and the rest is executing the modules; more research friendly workflow is essential to have
- Ricky: workflow issues are called out in our strategic plan as a strategic focus; need to expose and elevate that more; idea of both differentiation of function and keeping a more system level vision is needed
 - Ricky and Hendrik will work on elevating that in the SC

Chat Log

Dorothy Koch - NOAA Federal 11:20 AM

Very exciting!

Jim Kinter 11:20 AM

How similar is the workflow for SRW to that for MRW?

Jim Kinter 11:21 AM

Bummer.

Ligia Bernardet - NOAA Federal 11:37 AM

Geoff, are you having enough feedback from the forecasters (field and centers)? It is important to get their input because they are a key group in the formal evaluation of NCEP model updates.

Mariana Vertenstein 11:55 AM

I have a question on workflows related to Hendrik's funnel

Jim Kinter 11:56 AM

It is implied that there are different metrics at each gate. However, it would be valuable (to both NOAA and to investigators) for PIs at the Ideation stage to know what metrics are used at the end stages before T20, so that even RL 1-2 research has some hope of influencing operations.

Mariana Vertenstein 11:56 AM

What is the implication of workflow requirements for testing in the right hand side of the funnel

Jim Kinter 11:57 AM

there is a workshop on 11/30 - 12/2 on the precipitation predictability grand challenge.

Mariana Vertenstein 11:57 AM

If the community has different workflows than NCO - this would be very challenging. But NCO workflow requirements do not really target the user-friendly features that the community would need.

Dorothy Koch - NOAA Federal 11:57 AM

It seems there will be limitless number of tests - nearly one for each decision

Tom Hamill - NOAA Federal 11:57 AM

Hendrik: would be happy to review document offline. In particular, would like to ensure that the document for stage/gate at low RLs reflects modern practice of some iteration rather than a single definitive yes/no.

Jim Kinter 11:58 AM

@Tom agree!

Ligia Bernardet - NOAA Federal 11:59 AM

@Jim, can you provide more information on the workshop about precipitation predictability grand challenge?

Jim Kinter12:00 PM

<https://cpo.noaa.gov/News/News-Article/ArtMID/6226/ArticleID/2030/NOAA-DOE-Precipitation-Processes-and-Predictability-Workshop>

Jacob Carley - NOAA Federal12:01 PM
have to run to another meeting - thanks all!

Ligia Bernardet - NOAA Federal12:01 PM
@Jim, tks