

ENSEMBLE VERIFICATION SYSTEM (EVS) SOFTWARE SURVEY

This survey was completed at the end of the EVS training by the workshop participants. Below are the results and comments from 16 participants.

A Software structure and organization:

1. The software is organized logically and the various stages of verification are presented clearly.

	<u>Strongly disagree</u>					<u>Strongly agree</u>				
U	1	2	3	4	5	6	7	8	9	10
Answers			1		2		6	3	4	

Comments:

- Extremely good start and with further testing will improve. Would become clearer with more use.
- I liked the organization of it a bit more than IVP, more logical.
- Looks great at this stage.
- Run... button was confusing.
- Yes, given stage in development.
- Complex.

2. All of the key stages of verification you would expect to see for operational work are present in the software.

	<u>Strongly disagree</u>					<u>Strongly agree</u>				
U	1	2	3	4	5	6	7	8	9	10
Answers	4				1	1	6	3	1	

Comments:

- Need more experience.
- Does it comply with recommendations of all metrics by the National Verification Report?
- Not an expert in probabilistic verification, so not 100% sure, but appears to be a good start!
- Need to get more experience with it first.
- Yes, given stage in development.

- **Can't really comment yet. I think we are going to have to apply and discover when the key stages of verification are reported to RFC forecasters.**
- **Basic.**
- **Yes, as far as I can tell. It's a new tool and more familiarity is needed.**

B Functionality:

1. The software maintains a good degree of flexibility for selecting which forecasts you would like to verify.

	<u>Strongly disagree</u>					<u>Strongly agree</u>				
U	1	2	3	4	5	6	7	8	9	10
Answers						1	8	3		3

Comments:

- **Appears very flexible.**
- **Should have "graph" tab.**
- **I think.**

2. The software maintains a good degree of flexibility for selecting which verification metrics you would like to compute.

	<u>Strongly disagree</u>					<u>Strongly agree</u>				
U	1	2	3	4	5	6	7	8	9	10
Answers						1	5	3	3	3

Comments:

- **As far as I can tell at this point.**

3. The software has most or all of the functionality you would like to see.

	<u>Strongly disagree</u>					<u>Strongly agree</u>				
U	1	2	3	4	5	6	7	8	9	10
Answers	4			1	1	1	4	4	1	

Comments

- I am very interested in the direction of prognostic verification.
- Too soon to say.
- Need to use more.
- Needs further functionality to filter down to a few key metrics given operational time constraints.
- Ignorant here, ask me again in 5 years. We need people like Holly and Allen answering this question.
- Yes, as far as I can tell.

C User interaction:

1. The Graphical User Interface (GUI) is organized logically and is pleasant to work with.

	<u>Strongly disagree</u>					<u>Strongly agree</u>				
U	1	2	3	4	5	6	7	8	9	10
Answers										
1			1	1	1	1	1	5	4	1

Comments:

- Again, need to work with it more.
 - Some streamlining is needed.
 - Appears an excellent start, obviously has some kinks.
 - Still needs work, but they know that.
 - Still needs some work on labeling of options to better understand their meaning.
 - Some hidden features need to be made more visible.
 - Really appreciate the built in guide to the stats - a great feature.
2. There are no major delays while working with the GUI (do not consider time to compute the verification metrics here)

	<u>Strongly disagree</u>					<u>Strongly agree</u>				
U	1	2	3	4	5	6	7	8	9	10
Answers										
3							2	4	4	3

Comments:

- For the examples, it worked fine.
- Small dataset, could not evaluate.

3. There are no major bugs or unexpected behaviors.

	<u>Strongly disagree</u>					<u>Strongly agree</u>				
U	1	2	3	4	5	6	7	8	9	10
Answers			3	1	4	3		1	2	
	2									

Comments

- A work in progress - an impressive start!
- List provided, but most minor and easily correctible.
- Some bugs present - reported to James.
- Obviously expect some bugs with an alpha program. James worked his butt off to fix!
- Many minor found, no major after 2 hours of use.
- Several bugs, but should be easy to fix.
- Crashed a couple of times from Java errors.
- Many small ones, but very impressive with what was created in such a small timeframe.
- We hit a few snags - James observed a few of these.

D User's manual (N/A, as not reviewed):

1. The user's manual is organized logically and is easy to follow.

	<u>Strongly disagree</u>					<u>Strongly agree</u>				
U	1	2	3	4	5	6	7	8	9	10
Answers										
	16									

Comments

2. The user's manual contains sufficient examples, which are well explained and informative.

	<u>Strongly disagree</u>					<u>Strongly agree</u>				
U	1	2	3	4	5	6	7	8	9	10
Answers										
	16									

Comments

3. The user's manual is sufficiently detailed and is not missing important information.

	<u>Strongly disagree</u>					<u>Strongly agree</u>				
U	1	2	3	4	5	6	7	8	9	10
Answers										
16										

Comments

E Suitability for operations:

1. You or your colleagues will use this software for verifying operational forecasts.

	<u>Strongly disagree</u>					<u>Strongly agree</u>				
U	1	2	3	4	5	6	7	8	9	10
Answers										
1			1		2	1	1	2	4	4

Comments

- **Not sure of the probabilistic forecast capabilities of my office, thus I am not sure of the need to use this software at this time.**
- **I assume that this will occur eventually.**
- **This piece of software will become critical as we move more into ensemble forecasts.**
- **Will reach that point over time.**
- **In time.**

2. You foresee no major problems with using this software for operational verification (consider time issues, data issues, user interface issues, complexity of the verification process, and comment as necessary).

	<u>Strongly disagree</u>					<u>Strongly agree</u>				
U	1	2	3	4	5	6	7	8	9	10
Answers										
4				1		2	3	3	2	1

Comments

- **The potential is there.**

- Archive still a big question.
 - It is pretty complex, but familiarity and ease should come with experience.
 - Large learning curve for those using software and NWS employees. A large part of this is understanding the metrics.
 - Significant training of staff necessary.
 - Not sure at this time; more use needed.
3. No additional functionality or upgrades are required before this software is fit for operational work.

	<u>Strongly disagree</u>					<u>Strongly agree</u>				
U	1	2	3	4	5	6	7	8	9	10
Answers										
	2	2	3	1	1	1		1	1	3

Comments

- Still an early beta - many bugs on plots.
- Bugs must be fixed.
- As known.
- An excellent start, but James would even admit that it needs work to mature.
- Bug fixes and some usability issues (e.g. Run vs. Run...).
- Needs more review.

F Training and experience:

1. You understand the basic concepts of probabilistic forecast verification and would feel comfortable explaining the basic purpose and functionality of EVS to colleagues.

	<u>Strongly disagree</u>					<u>Strongly agree</u>				
U	1	2	3	4	5	6	7	8	9	10
Answers										
		3	1	1	4	1	4	1	1	

Comments

- More than I was a week ago, but still a long way to go.
- More review and study needed.
- Excellent primer in 3 days, but could use a 3 credit college course to understand.
- Need more experience with software and certain metrics.

- I have very little background in statistics, so I'm going to have to work quite a bit more on this.
 - Need more experience and examples.
 - I would need to keep it very basic.
 - Time and additional training.
 - I don't have the background yet. I need to review the material.
2. You feel sufficiently well trained to perform verification of operational forecasts with EVS, or feel comfortable reaching this level without further, formal, instruction.

	<u>Strongly disagree</u>					<u>Strongly agree</u>				
U	1	2	3	4	5	6	7	8	9	10
Answers										
	1	1	1	2	4	2	4	1		

Comments

- Experience will be the key to comfort using.
 - Need more experience in operational applications first.
 - I am concerned about the time interval between this training and when I'll have the opportunity to work with this software at home. Further, more in depth training would be great once I've mastered the basics.
 - Need more training.
 - I would definitely need to play with it a lot.
 - Need time to explain the program and output datasets.
3. Given the time constraints, you feel that the training provided so far has focused on the most important aspects of verification from an operational point-of-view.

	<u>Strongly disagree</u>					<u>Strongly agree</u>				
U	1	2	3	4	5	6	7	8	9	10
Answers										
	1				1	1	4	7	1	1

Comments

- Yes, great job by James!
- Not sure at this point.
- Very good workshop and clearly expressed concepts.
- Overall, yes.

Please write any additional comments or suggestions below:

- Great start! Have high hopes for it. This will generate reams of data that, with experience, will turn into extremely useful information.
- Definitely want to see same look and feel with IVP and EVS. Perhaps we should involve HMOS/Satish on prognostic development with James. The two seem to have a lot in common. Need comprehensive explanation of archiving requirements.
- The lab exercise was well written. I appreciate that it reinforced the concepts from the presentation.
- Considering the amount of time we actually used the software and the length of time until deployment in the offices, many of these questions are impossible to answer. Once the software is deployed, extensive training would be helpful.