



Bryce Contor <bcontor.uidaho@gmail.com>

new format of *.mdl file

9 messages

Bryce Contor <bcontor.uidaho@gmail.com>**Thu, May 6, 2010 at 9:54 AM**

To: Stacey Taylor <taylsl@if.uidaho.edu>

Cc: Allan Wylie <allan.wylie@idwr.idaho.gov>, Willem Schreuder <willem.schreuder@prinmath.com>

Stacey -

Attached is a copy of the new format Willem has come up with for the *.mdl file. It will probably be easier to modify Willem's to make the new *.mdl, the only changes will need to be the two header lines & the last two information lines.

It opens fine in Excel as space delimited, but when I open it in text editor there are some odd control characters that text editor doesn't recognize.

I don't know if MKMOD is going to require those special characters, and I don't know how to generate them. For now just make it space delimited and keep our fingers crossed.

In the old *.mdl file, the fifth line contained the number "342," which was the number of stress periods. Willem has added the numbers "25" and "246" to this line. I don't know what they signify, so for now we should probably just copy them.

Also note that I was wrong in where I said Willem had added the number "11" to signify the number of soil multipliers; instead of being the first number in the line of multipliers like I said, it is on its own new line.

Since the new *.nir data will include allowance for soil type, we need to change all the multipliers back to a value of "1."

Also note that Willem has changed the number of multipliers from what we had agreed upon w/ ESHMC. There's no practical impact; if we decide we need more than 11 we can make that change easily enough later. With 11 soil multipliers plus the final multiplier for (I can't remember what it was for - wetlands fixed points?), there should be 12 values of "1" on that line.

It will probably be a good idea to make a *.pdf of this e-mail and keep it in the file as part of the documentation of the ongoing morphing of our file structures.

Bryce

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Willem Schreuder <willem@prinmath.com>**Thu, May 6, 2010 at 10:40 AM**

To: Bryce Contor <bcontor.uidaho@gmail.com>
Cc: Stacey Taylor <taylsl@if.uidaho.edu>, Allan Wylie <allan.wylie@idwr.idaho.gov>, "Raymondj, Rick" <Rick.Raymondj@idwr.idaho.gov>

On Thu, 6 May 2010, Bryce Contor wrote:

In the old *.mdl file, the fifth line contained the number "342," which was the number of stress periods. Willem has added the numbers "25" and "246" to this line. I don't know what they signify, so for now we should probably just copy them.

The second and third numbers refer to the first and last stress period used to calculate the steady state. In mkmod, you can ask for a MODFLOW data set consisting of the steady state followed by the 342 transient stress periods which makes running the steady state followed by the transient a single MODFLOW run. mkmod also uses this definition of the steady state to calculate the steady state values to report in the output tables.

Also note that I was wrong in where I said Willem had added the number "11" to signify the number of soil multipliers; instead of being the first number in the line of multipliers like I said, it is on its own new line.

Correct - this is a fortran limitation (in readingp) You have to read the count, call ALLOCATE and then do another read to get the values. The BACKSPACE command to re-read the line does not always work reliably, so you are better off putting the count on its own line.

Also note that Willem has changed the number of multipliers from what we had agreed upon w/ ESHMC. There's no practical impact; if we decide we need more than 11 we can make that change easily enough later. With 11 soil multipliers plus the final multiplier for (I can't remember what it was for - wetlands fixed points?), there should be 12 values of "1" on that line.

I didn't change the number of multipliers, I simply used the number of zones represented in the P091202B.sol file which is 11. If the number of zones in the .sol file changes, the number of multipliers have to change correspondingly. Whatever the ESHMC recommended, 11 is what Allan implemented so that's what we need to generate multipliers for.

Note, however, that the .mdl file adds an additional multiplier on that line which is the wetland adjustmet, so Bryce is correct that this line should contain 12 values. I believe that has always been 1.0, so twelve 1.0's are what is needed at this time.

It will probably be a good idea to make a *.pdf of this e-mail and keep it in the file as part of the documentation of the ongoing morphing of our file structures.

That is a good idea, but remember that the .mdl file you generate actually may not get used other than for testing purposes, so don't waste a lot of time on it. When we use PEST to adjust the multipliers, PEST must write the .mdl file, so Allan sets up a template file that looks sorta like the .mdl file, but PEST then writes the .MDL file that readingp or mkmod actually reads with the specific multiplier values PEST wants to use.

Once we quit fooling with mkmod and readingp, it would probably be worth while documenting all the input file formats. Where this is particularly significant is in the new files like the .eff files for the efficiency and soil moisture calculations that are new. As the resident Perl guru, I think Allan is the ideal person to do that.

-Willem

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WWW: www.primmath.com Email: Willem.Schreuder@prinmath.com

Bryce Contor <bcontor.uidaho@gmail.com>**Thu, May 6, 2010 at 11:17 AM**

To: Willem Schreuder <willem@prinmath.com>, Stacey Taylor <taylsl@if.uidaho.edu>, Allan Wylie <allan.wylie@idwr.idaho.gov>, "Raymondi, Rick" <Rick.Raymondi@idwr.idaho.gov>

Everyone -

1) I agree is is vital to record and document the "final" file formats.

Based on the fact that our history with ESPAM1.1 and especially ESPAM2 is to never put a stake in the ground, but to continually mess with things, I assert heartily that it is also vital to record what we're doing as we go along.

Since Stacey and I are generating input data, it seems particularly important that we are apprised of changes in file structure, calculation algorithms, and assumptions. It is tough enough to get the data right when we *do* know those things!

2) At some point we need to decide how much transparency to offer the ESHMC. In ESPAM1.1 we had two levels of communication. Internal communication within and between IWRRRI and IDWR we only shared as required in discovery. Once the attorneys were drawn, loaded and primed, all communication between IWRRRI or IDWR any stakeholder was communicated to all stakeholders. We (well, Rick and his attorneys) need to decide when to move to this more formal second requirement. Since Willem is now a defacto part of the calibration team as well as a representative of one of the stakeholders, it is especially vital that we be squeaky clean about everything.

Bryce

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Stacey L Taylor <taylsl@if.uidaho.edu>**Thu, May 6, 2010 at 11:22 AM**

To: Bryce Contor <bcontor.uidaho@gmail.com>

Well said! J

From: Bryce Contor [mailto:bcontor.uidaho@gmail.com]**Sent:** Thursday, May 06, 2010 11:18 AM**To:** Willem Schreuder; Stacey Taylor; Allan Wylie; Raymondi, Rick**Subject:** Re: new format of *.mdl file

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Willem.Schreuder@prinmath.com <Willem.Schreuder@prinmath.com>**Thu, May 6, 2010 at 1:51 PM**

To: Bryce Contor <bcontor.uidaho@gmail.com>

Cc: Stacey Taylor <taylsl@if.uidaho.edu>, Allan Wylie <allan.wylie@idwr.idaho.gov>, "Raymondi, Rick"

<Rick.Raymondi@idwr.idaho.gov>, "Bowling, Jon" <JBowling@idahopower.com>

On Thu, 6 May 2010, Bryce Contor wrote:

| 1) I agree is is vital to record and document the "final" file formats.

My vote would be that we should document the format we start calibrating with. It seems like a good checkpoint.

| 2) At some point we need to decide how much transparency to offer the ESHMC.

Well ny 2c worth is that it has always been my perception and certainly my goal that everything any of us does in terms of the data and the ESPAM should have the maximum amount of transparency. If any of the ESHMC members want in on the discussion, I'm happy to include them in whatever email discussion or flame war. I'm sure most of the committee would have little interest in much of the gory detail which is the subject of lots of these emails, so to avoid filling up everybody's inbox with all kinds of crap we may not want to CC the whole ESHMC on everything, but there certainly should be no perception of any kind of secrecy.

So maybe what we can do is set up a special email account, say call it "ESHMC-file" or something like that. Then in all these email exchanges we CC the "file". This file can be available to anybody on the ESHMC that really want to go though all the emails, but we directly email only those people who really want to be in on a particular discussion. Maybe we can periodically email a list of all the subject lines of the emails in that folder to the committee if they REALLY want it, or make it available in some way, but the idea is to be transparent without being overwhelming.

Now I do realize that since the department have administrative responsibilities, there may be some email between some individuals that they could claim some sort of "privilege" on, and in those instances, don't include the "file" in those emails and we'll let the lawyers fight over those, but certainly I have always thought that IDWR wanted to be completely transparent about the data and ESPAM, and I think all the ESHMC members share that sentiment.

Maybe somebody from IDWR can talk to the IT folks and see if they have any clever ideas on setup and making available such a "file" email account. Then at the next ESHMC meeting we can discuss this and if some people want to get a copy of EVERY email to file, or just some, or whatever their preferences may be. Having such a "file" copy of all of the deliberations would certainly be convenient and would likely be of some value if not entertainment to the people working on ESPAM 27.0

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Wylie, Allan <Allan.Wylie@idwr.idaho.gov>

Thu, May 6, 2010 at 3:58 PM

To: Bryce Contor <bcontor.uidaho@gmail.com>, Willem Schreuder <willem@prinmath.com>, Stacey Taylor <taylsl@if.uidaho.edu>, "Raymondi, Rick" <Rick.Raymondi@idwr.idaho.gov>

I don't think the question is how much transparency, but when to inform them. I try to do informing in committee meetings because they probably ignore the e-mails, but in either case we can document that they were informed.

Allan

From: Bryce Contor [mailto:bcontor.uidaho@gmail.com]

Sent: Thursday, May 06, 2010 11:18 AM

To: Willem Schreuder; Stacey Taylor; Wylie, Allan; Raymondi, Rick

Subject: Re: new format of *.mdl file

Everyone -

1) I agree is is vital to record and document the "final" file formats.

Yes

Based on the fact that our history with ESPAM1.1 and especially ESPAM2 is to never put a stake in the ground, but to continually mess with things, I assert heartily that it is also vital to record what we're doing as we go along.

Yes

Since Stacey and I are generating input data, it seems particularly important that we are apprised of changes in file structure, calculation algorithms, and assumptions. It is tough enough to get the data right when we *do* know those things!

I apologize, Rick is on vacation, so this one fell through the cracks.

2) At some point we need to decide how much transparency to offer the ESHMC. In ESPAM1.1 we had two levels of communication. Internal communication within and between IWRRRI and IDWR we only shared as required in discovery. Once the attorneys were drawn, loaded and primed, all communication between IWRRRI or IDWR any stakeholder was communicated to all stakeholders. We (well, Rick and his attorneys) need to decide when to move to this more formal second requirement. Since Willem is now a defacto part of the calibration team as well as a representative of one of the stakeholders, it is especially vital that we be squeaky clean about everything.

I don't think the question is how much transparency, but when to inform them. I try to do informing in committee meetings because they probably ignore the e-mails, but in either case we can document that they were informed.

Allan

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Willem.Schreuder@prinmath.com <Willem.Schreuder@prinmath.com>

Thu, May 6, 2010 at 4:23 PM

To: "Wylie, Allan" <Allan.Wylie@idwr.idaho.gov>

Cc: Bryce Contor <bcontor.uidaho@gmail.com>, Stacey Taylor <taylsl@if.uidaho.edu>, "Raymondi, Rick" <Rick.Raymondi@idwr.idaho.gov>

On Thu, 6 May 2010, Wylie, Allan wrote:

I don't think the question is how much transparency, but when to inform them. I try to do informing in committee meetings because they probably ignore the e-mails, but in either case we can document that they were informed.

In that context, CC'ing 'file' provides a convenient mechanism of making a record. The only question is if the IT people can figure out a way of making those email available through a convenient, read-only pull mechanism like a web interface or something.

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Bryce Contor <bcontor.uidaho@gmail.com>

Thu, May 6, 2010 at 4:26 PM

To: "Wylie, Allan" <Allan.Wylie@idwr.idaho.gov>

Cc: Willem Schreuder <willem@prinmath.com>, Stacey Taylor <taylsl@if.uidaho.edu>, "Raymondi, Rick" <Rick.Raymondi@idwr.idaho.gov>

Certainly it's not my decision, but it is my worry.

I just remember Twin Falls in the summer of 2005, and can imagine how much fun a new high-powered consultant or attorney could have if there were any hint of indecorum.

I like informing by e-mail 'cause there is an electronic trail that can be referred to at any time, whereas in a meeting

any one party may or may not be represented, and their representative may or may not be awake at the critical moment. Even worse, certain unnamed parties have exhibited a proclivity to creative recall.

Bryce

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Bryce Contor <bcontor.uidaho@gmail.com>

Thu, May 6, 2010 at 4:40 PM

To: Willem.Schreuder@prinmath.com

Cc: "Wylie, Allan" <Allan.Wylie@idwr.idaho.gov>, Stacey Taylor <taylsl@if.uidaho.edu>, "Raymondi, Rick" <Rick.Raymondi@idwr.idaho.gov>

Willem -

The "file" cc is a good idea. If IDWR can't do it, Google has some options for free hosting of files and I bet there is a way to use that service for what you suggest.

B

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