

Webinar #4 – Introduction to Pavement ME Design Version 3.0

The following provides an answer or response to all questions asked during the webinar. Some of the questions were asked in the Question and Answer Box, while others were asked and answered in the Chat Box. Response to both are summarized below.

Q: Is it possible to purchase a cheaper license that only gives you the hourly climate data?

A: I probably need some clarification on the question. I do know there is not a cheaper license.

Q: We had a question on the subscription seats. Are the seats able to be run simultaneously?

A: The answer is yes. If a subscription has 9, at the most 9 unique sessions can be concurrent.

Q: Does that mean that each seat can only be run on either the online platform or the desktop software?

A: The answer is no, those are separate and distinct. The purpose of AASHTO providing the desktop application with your subscription purchase is so that you are able to confirm and still work the legacy software while also getting familiar with and utilizing the web application. Those seats will be distinct, so they are just extra seats.

Q: Is entering climate data for international climate the same as for the United States?

A: The answer is yes. For version 3.0 everything is on the LTPP climatic data set and so the operation for entering international climate data is identical to the United States.

Q: If climate files are uploaded, are those climate files stored?

A: They are not stored, the climate files when it gets uploaded, gets basically integrated into the design files, and the design files themselves aren't stored. However, you can store climate library data, so if you do want to store specialized climate data, maybe that your agency has, you can certainly store that climate data as libraries in the system and those are saved on the multi-tenant server permanently.

Q: We had a question on sunrise and sunset columns being used in the pavement temperature models?

A: Sunrise and sunset values are not new to the software. They are currently available in the DGPX input file, the only new feature is that the values are actually shown in the application.

Q: Did the new charts enhancement override the resolution issue for the desktop application?

A: I want to say yes, I'm not 100 percent sure on the nature of that question. Those problems are gone with our move to open X and there won't be any shrinkage of those charts in your outputs. If you do see it, let us know, because you shouldn't.

Q: Is the backcalculation tool web-based?

A: Not yet, which is the correct answer. It is planned for next fiscal year. We will start working in that in July so it's coming quickly. I don't anticipate that, it should not take us the whole fiscal year to complete. Somewhere between 3 and 5 months. So about halfway through the fiscal year, be looking for the backcalculation tool web application. It just depends on issues we have with the multi-tenant web app and what the priorities are.

Q: How many analyses can be run launched simultaneously in batch mode?

A: Just to clarify, you can add as many designs as you want to your batch, you can add 100, you can add 1000, as many as you like. The server hard caps the analyses runs at 5. So five designs can run concurrently on the web application. And that's just what our stress testing showed. We had multiple users on, we ran 5 designs and for those users there was no noticeable slow down in the interactions with the interface. If it becomes necessary over time, over the next few months we will be looking at server load, and if it becomes necessary to update the server we have a process in place that can do that automatically. That will give us more processing power, potentially more RAM to work with, in which case we can run more analyses at a time. We also have a load balancer so we can spin out the second monolith. There are some cost issues there and also issues associated with where user data or agency data is actually being stored because we have a monolith. So we need to resolve some of those issues if we start running into some performance issues. If people have to wait too long for their designs to finish that's obviously a problem, so we do have some contingencies in place to handle that.

Brendan added-there is not a limit on the size of batching start, but the analysis Queue system will process them at the priority and availability of the server.

Q: Will former DGPX files be fully compatible with the web version?

A: yes the DGPX files from the previous version can be loaded by the web version.

Q: Will a video recording of this presentation be available?

A: The answer is yes. We'll send out an email to everybody that's on the listserv at me-design.com and that is where the webinar will be posted.

Q: Are the pavement response outputs stress strains report available in Version 3?

A: The structural response that's currently in the desktop application will still be there.

Q: Can we adjust the coefficients for local calibration runs?

A: Yes

Q: Are the current desktop license holders going to have concurrent access to both desktop and web-based versions?

A: Great question. The answer is yes. So again, if you have a one seat subscription, that is going to give you one seat on the web application and you can also request the desktop application, you'll have one seat for that as well. That seat will either be a workstation or site license based off of your current or previous purchases.

Q: Can we get a copy of the presentation?

A: That will also be made available on the website. We will send out a link to the listserv, to everybody that has attended today.

Q: Are you looking into expanding the analyses capacity depending on demand?

A: We've touched on this before. The answer is yes, if it becomes obvious that normal use of the application requires more capacity, we are in a position to quickly move to that.

I want to stress that the application is for practical design use at the agencies. So, if you are trying to run thousands of designs to do a calibration in the system, you could do that, but that is something we point you toward the CAT for, the calibration assistance tool. That's really why that was created. That's really how it should be used and the CAT will be updated very early in FY23 to be compatible with Version 3.0 so you will be able to prepare your calibration data, upload your designs, and perform validation, calibrate and decide if you need to do calibration verification through the CAT.

So my answer to that is if you are looking to do calibration runs, use the calibration assistance tool. But if you are just doing a lot of runs for your agency the system can certainly handle that too.

Another thing I just want to note on that, the server is much faster and more powerful than your average workstation computer and it churns through the design.

Q: Currently batch mode does not allow case mode without warnings. Cases must be run manually. Will this change with the web version?

A: I would say that batch mode should allow that to occur, so we'll look into that and make that update as necessary.

Q: Does 3.0 go live on July 1st?

A: Yes. July 1st is the go live date. I didn't elaborate on this, on the 27th, on Monday, we are going to process all the purchases in our system, so if you purchased any of the licenses or subscriptions for Pavement ME Design in the system you are going to get those two emails. You're going to get your web application email and your desktop application email. And then after that you will have access to the system, and we will process and should get through processing all those on the 27th.

Q: Have we used NARR or MERRA for the rigid calibration for Version 3.0?

A: We have used the MERRA climatic dataset. So version 3.0 will exclusively use the MERRA climatic dataset by default, and you can always upload custom climatic data to the system.

Q: Question regarding the backcalculation model.

A: It is going to be incorporated and developed in-house. The backcalculation tool is created through AASHTO, we are the developers and maintainers of the system. AASHTO owns that software, it was developed by AASHTO and its going to be incorporated into the system, most likely in the early half of 2023. AASHTO basically adopted the EVERCALC that was developed at Washington State.

Q: Does the web-based version have any minimum requirements for computer configurations or systems? For instance, memory, space, etc.?

A: Were not publishing any. Any modern computer should be able to run the application. It's all run on the server. So as long as your computer can open up your web browser. And that reminds me, I'm glad you asked this.

Because of the some of the features our users want to see in the system, we are only compatible with the Chrome and Edge browsers. Those are recommended for use. Firefox and Safari are not recommended for use. But no, there are no recommended minimum system requirements for the web application.

Q: Will Apple Chrome work?

A: Good question. We haven't tested Apple Chrome. It should work. Although I was working with a user yesterday who was working the system on their tablet using Apple Chrome and they were having trouble on the structure page, so it should work, and our team will consider it to be a bug if it

does not work because it needs to be compatible with the Chrome deployment. So if you're using it on Apple Chrome, let me know if you're running into issues there.

Q: Is the 5 analyses mentioned per tenant or the whole server?

A: The answer is per the whole server. But with most designs completing in 8 minutes, you're not finding that you have to wait for like a 25-year design. You shouldn't see a significant delay in your design run. If you are having to wait a long time, what you consider a long time, for your designs to complete, please email mepavementdesign@ara.com Let us know what you are trying to do and what your experience was and we are going to be compiling that information along with analytics from the server to determine if we need to increase the amount of, basically power that server has. Its' 5 total for the whole server.

Q: With changing climate are we expected to see changes or effects on climate models?

A: The current application, the first version of the web application, is identical to the desktop. Any changes to models within the software will have to go through Task Force review plus manual of practice updates. So, the software follows what the manual of practice includes.

Q: Can the grace period for last years license be extended to give more time to get v3.0 up and running on the desktop application?

A: Absolutely. The sunset plan for the desktop application is five years. We will support the previous version as we have done in the past and any updates to Version 2.6 over the next 5 years.

Q: Is it possible to import traffic data from weigh and motion devices?

A: So all the previous functionality for managing traffic data exists in the web application. So if it exists in the desktop application, it will in the web application. I don't know the details for importing directly from weigh and motion outputs, but if that's a feature that's important to your agency, please send us an email and we'll get that considered and looked at.

Just to clarify, weigh and motion data does include other traffic data not just axle weight, but I would not suggest that an agency import traffic data from weigh in motion data. That data usually needs to be processed, so its not a direct transfer, or it should not be a direct transfer.

Q: We had a question on special traffic. Does V3.0 offer any option including heavy vehicle categories that are not covered in the existing class categories?

A: The only one that I'm aware of is the use of special traffic from the legacy application. That will load in the special traffic component that should be identical to what we have in the desktop application.

Q: Can you clarify the subscription portion? It's unclear if we're going to have just one user or multiple. With a single user account will I be able to log in from any computer or will it be a specific desktop?

A: As we discussed in the webinar, when you purchase the subscription, AASHTO is giving you access to both the web application and an equivalent number of seats in the desktop application. And that just comes with your purchase. You can access the web application from anything, it's just a website that you go to. The desktop application is going to function identically. Once you install it on a machine, you will need to register the license on that machine and then any number of users can utilize that machine to run the software.

Q: What the backbone of the processor is from a governing equation point of view to solve a nonlinear elasticity equation?

A: We are not sure about this question and since no attendee was identified, the intent of the question was not pursued after the webinar. No answer is provided.

Q: Do processor run threads in parallel or sequential?

A: It's going to run them in parallel.

Q: Is there any change or update to the academic version?

A: Great question. What we've shown here today is the academic version. So folks who are using the educational license, you'll have access to this system. The same structures and limitations that are in the desktop application have been implemented here. I think that answers that question. The academic version is Pavement ME Design 3.0 you can use that and we'll be processing the educational purchases on the 27th.

Q: Another question on cloud storage. Is the software connected to cloud storages like S3 on EDWS or Google?

A: We do have some integrations. They are very minimal. There are several reasons why were not storing the user data, the design data, in S3, a lot of it has to do with the sheer volume of data that people want to store over time, so we currently are not planning to store the design data in the cloud. Again, that is distinct from the library and workspace configuration data, all of that is saved on a multi-tenant server and we have our standard backup procedures to make sure that data is always available. In the event of an issue, we can always recover.

Q: Will there be an additional cost to the web application or will it be part of the desktop license?

A: They have one desktop license so are they going to be able to access the web application. So there was a little bit of a blip early on in the AASHTO store page with the subscription vs. the desktop license and I've discussed that with the Ryan Fragapane, the AASHTO PM, and anybody who has purchased the individual license, were going to go ahead and give you the equivalent access to the subscription service because they are the same price. So you'll have access to both even if you've just purchased the desktop license. There is no cost difference.

Q: Do I need to purchase both desktop and online version?

A: No. There will just be one purchase through AASHTO.
