

Number	22-01-010	
Subject	DIANA Users Association General meeting of members	
Date	September 15 <sup>th</sup> , 2022	
Time	4 pm.	
Place	NDC Den Hommel, Utrecht, The Netherlands	
Present	Ane de Boer – Chairman Andrew Borgart  Ab van den Bos Loes Buijze Henco Burggraaf Zhekang Huang Marcello Malagù Lex van der Meer Ricky Tai Coen van der Vliet Marc van Vliet Nynke Vollema Anna van Wassenaer Jolanda van Willige	Ane de Boer Consultancy Delft University, Fac. of Architecture and the Built Environment DIANA FEA TNO-Applied Geosciences TNO-Structural Reliability Witteveen+Bos DIANA FEA ABT TNO-Structural Reliability Arcadis Witteveen+Bos Royal HaskoningDHV DIANA FEA JRI Communication vof
Report drawn up by	Jolanda van Willige JRI Communication vof	
Date	October 11, 2022	

## 1. Opening

The chairman opened the meeting at 16.05 and welcomed the attendees. Members introduce themselves. The agenda will be laid down.

## 2. Meet new contacts and new management DIANA FEA

Anna van Wassenaer starts the presentation. She asked what the connection is with the users of DIANA and the DIANA Users Association. She hopes for much more contact and remarks that the members of the DIANA Users Association are always welcome to visit DIANA FEA. Anna introduces herself. She started as CEO of DIANA FEA at the beginning of this year. She has worked in the technology business for more than 20 years, in both software development and digital transformation services. Her first intention at DIANA FEA is to listen to everybody. Furthermore she wants more DIANA users and new development process: Customer & user centricity and innovation operational excellence.

Marcello Malagù introduces himself. He is now product manager at DIANA FEA. Before, he works as a developer at DIANA. His role is to connect user needs. His goal is higher release frequency and a more agile mindset: more contact with customers. DIANA 10.6 will be released at the end of September. What is new in release 10.6:

- Enhanced response centrum analysis
- Improved soil-structure interface response
- Increased flexibility and phased analysis
- New lighting and physics-based rendering
- Modernized code
- Upgraded tools

What's after:

- Improved soil modeling:
  - Hardening Soil Model
  - Hoek-Brown model – 2002
  - Nonlinear Mohr-Coulomb model
- New Documentation
  - Online portal
  - Context sensitive help
- Increased user-friendless
  - Modeling connections

Questions about the presentation of Marcello:

- 1) Coen: Thank you for the update. I have a question about all the features? How far are you with the scheduled processes?

Marcello: First we have started the inventory and after we have finished the inventory we start with the priority and implementation. But firstly we like to finish the new release 10.6.

- 2) Huang: The flexibility of the **staged construction analysis**. The staged construction analysis is convenient. But while using it, we found that some features are missing in comparison with the phased non-linear analysis. The **staged construction analysis** can be linked with other analyses, such as transient heat analysis. And one convergence criteria set can be applied for all phases (stages).

- 3) Lex: Do you plan the option of plotting the mesh quality metrics, like aspect ratio, skewness, etc. This option was possible in DIANA met FX+ .

Marcello: I understand what's the problem and we will add this option to the wishlist.

- 4) Ricky: 2D elements for heat flow analyses. Today a heat flow analysis uses only solid elements in a 3D analysis, or uses 2D heat flow elements in a 2D analysis. A 3D analysis with 2D or 2,5D elements is missing. The application of a 2,5D heat analysis for a 2,5D boxgirder bridge should become available.

Marcello: We will add this to the wishlist

Anna: We want you to involve testing, if you are interested please let me know. We want to build a relationship with you. Ane remarks that we had organized this process in the past. It is the company who decides, not the DOV Users, but of course you can use the DOV Users too.

Update of the new people of DIANA FEA and who has leave the company:

- |             |                  |                                      |
|-------------|------------------|--------------------------------------|
| New people: | Marcello Malagù  | - Product Manager                    |
|             | Milad Bybordiani | - Software development engineer      |
|             | Marco Bolognin   | - Geotechnical consultant            |
|             | Jesus Mediavilla | - Support team lead                  |
|             | Anne de Roo      | - Manager Marketing & Communications |

Gerd Jan Schreppers and Jos Jansen have left the company, they are retired.

### 3. The Minutes of the general meeting of members of the DIANA Users Association on December 10, 2019 and actions.

There are no comments so the Minutes will be laid down by Jolanda.

#### Actions

Action 17-02	Henco	All presentations starting from the DIANA Users Meeting 2015 shall be put on the website.
<b>Action completed</b>		

Action 18-13	Ane/Jolanda	Will make a pdf file of all lectures which have been held during the DIANA Users Meeting 2018/2019 and send it to all members of the DIANA Users Association and all participants of the DIANA Users Meeting 2018/2019.
<b>Action remains</b>		

Action 19-02 <b>Action remains</b>	Ane/Jolanda	Ane will make an overview of the wishes of the DIANA Users during the DIANA Users Meeting 2019 and Jolanda will send it to the members of the Association.
Action 19-07 <b>Action postponed</b>	Gerd-Jan	Gerd-Jan will organize a session for evaluation DIANA 10.3 during autumn in Delft and he will inform all DIANA users. <i>The session will be organized in the first quarter of 2020, but is postponed regarding COVID-19.</i>
Action 19-09 <b>Action postponed</b>	Coen	Coen will fit the text of the workshop Module Design for the call of abstracts for the DIANA Users Meeting 2020 <i>Postponed regarding COVID-19</i>
Action 19-10 <b>Action completed</b>	Henco	Henco will submit the name of the person from TNO for the PROBAB group. <i>This will be Arthur Slobbe</i>
Action 19-11 <b>Action postponed</b>	Board	The board will participate in the preparation of the DIANA Users Meeting the organization of a general meeting of members of the DIANA Users Association during the DIANA Users Meeting 2020 in Valencia. <i>Postponed regarding COVID-19</i>
Action 19-12 <b>Action completed</b>	Jolanda	Jolanda will send all abstracts from the DIANA Users meetings to Henco Burggraaf for the website of the DIANA Users Association.

#### 4. Announcements from the Board

There are no announcements from the Board.

#### 5. Board election 2022 and rotation schedule board

As stated in the articles of the association, one board member should resign each year, but can be reelected. This has not been the case in recent years. A rotation schedule was drawn up for this at the time, indicating which person will resign at what time. Henco Burggraaf is stepping down for the next members' meeting. Henco has approached Ricky Tai as a replacement and Ricky is willing to take a seat on the board. Ricky has indicated that he wants to take on the tasks as secretary and also to take care of the website.

The members agree to the appointment of Ricky Tai as board member and Ane congratulates Ricky on his appointment and he thanks Henco for all his work for the board in recent years.

#### 6. Annual report 2019-2020-2021

There are no comments on the annual report 2019-2020-2021 after which the annual report is adopted. Ane remarks that there is still a desire to expand the 2021 publication list. He asks the members to see if more publications can be added to the list **Action → 22-01**

Lex asks if there is a condition for publication? Condition is that there is a connection with DIANA.

#### 7. Financial documents 2019-2020-2021

The financial documents from 2019, 2020 and 2021 have been submitted to the audit committee and the audit committee has granted discharge. In 2019 we still had a lot of expenses, in 2020 and 2021 we had a few expenses. In the recent years, we have used our equity capital. The starting point of our association was always that we should be able to finance one DIANA Users Meeting from our own capital. This means that we must have approximately € 10.000,-- to € 15.000,-- as equity capital.

From now on, the association will no longer contribute to the DIANA Users Meeting. So, the personal contribution for the participants in the DIANA Users Meeting will be higher.

Ane asks Coen to translate the financial documents into English so that the entire annual report is in English. Coen will do this **Action → 22-02**. Then the financial documents are adopted.

## 8. International DIANA Users Meeting

### - Budget DIANA Users Meeting 2023

Coen explained the budget for the DIANA Users Meeting 2023. The budget is based on the budgets of the DIANA Users Meeting held in the Southern European countries and where Coen has included inflation and increased prices by 4 to 5%. Maybe this is too low. On the right side we see the expenses like the fee for the meeting room, activities of the secretary, catering and Social Event. On the left side we see the income like contributions of the members and non-members, (PhD)-students and accompanying persons social events. The contribution for the members is € 490, not members € 660 and (PhD) students €270. Coen asks the members how they view these amounts?

Nynke: I don't think my employer has a problem with these costs. It's more difficult for him that I don't come to the office.

Anna: it matters what it yields. This must be in proportion to the costs and is important for an employer. Coen remarks that a seminar or conference costs more, but this is a user meeting where you also pay for the software.

Ab: at a conference you often have sponsors. The question is asked whether DIANA FEA wants to sponsor the DIANA Users Meeting? Anna notes that you can make it more attractive for students by reimbursing the travel costs.

It is believed that the rate for students should be lower. A master student cannot pay €270. Ab asks whether a student cannot follow the DIANA Users Meeting online? Ane replies that this hasn't been discussed yet. Andrew notes that a student also wants to have contact with the people who are at the DIANA Users Meeting.

Finally it is agreed that the contribution of members and non-members will go up and the contribution for students will go down. The board will ask the people of the University of Valencia if it is possible that students can follow the meeting online **Action → 22-03**.

Coen asks how we are going to sponsor the student travel grant. Is DIANA FEA willing to take this on? Anna replies that they should think about this internally. She herself also thinks of engineering firms to attract a student.

Coen notes that if companies want to pay for the travel costs for students, this provides brand awareness, but it also makes it easier to bind a student to your company.

It is agreed that Coen will adjust the rates in the budget **Action → 22-04**. The budget DIANA Users Meeting 2023 is then adopted.

Nynke asks when the DIANA Users Meeting will be held? This will be in April/May next year.

## 9. Estimation 2023 DIANA Users Association

Coen explained the budget for the DIANA Users Association in 2023. Two members have canceled their membership: Shell and Arthe. This means that we have less contribution income. We now have 14 members.

On the left side we see the expenses like the fees of the meeting rooms during the general meetings of the association, activities of the secretary and costs of the website hosting by the provider. In 2023 there will be no more costs for website adjustment and maintenance.

As the budget shows, we have a deficit of € 1.000,--. We can now do a number of things:

- 1) we accept the shortfall and hope it will be okay. Ane notes that Wagemaker has indicated that they want to become a member of the DIANA Users Association. Anna notes that Shell is a good customer of DIANA FEA. She may sometimes ask why they are no longer a member of the DIANA Users Association. Lex notes that we can compare DIANA FEA's customers to the list of members of the DIANA Users Association and see who else could become a member. Anna thinks this is a good idea and will take on this action with Ricky **Action → 22-05**.
- 2) Cutting costs and increasing yields. We can also do tasks that are now performed by Jolanda ourselves.

Ane refers to agenda item 13 "Mailing list address files". We can expand our mailing list. In the past, Ane has approached people at conferences and asked to be added to our mailing list.

Andrew asks when the contribution last went up. This was around 2014. Andrew notes that the costs are indexed but the revenues are not. Ane indicates that we can say that we plan to index the contribution next year, this will have an effect in 2024.

There are no more remarks about the budget 2023 so the budget is adapted by the members.

Anna notices that the website still needs updating. Ane replies that this promotion is ongoing, there are still presentations to be added to the website **Action → 22-06.**

## **10. Presenting new website and inventorying wishes/options**

Henco shows some screenshots of the new website: homepage, working groups (Random Fields), events, downloads and contact. A members' area can be created on the website that is protected from non-members. It is also possible to register for a general members meeting or a lecture evening via the website. Henco invites everyone to take a look at the new website.

Marc asks if it is possible to place the logos of the members' companies on the homepage or on the members page? Henco indicates that a banner can also be placed on the homepage at the bottom of the page with the logos of the members' companies.

The question is asked if it is an idea to open a forum on the website so that members can ask each other questions? It is proposed that a joint forum with DIANA FEA be placed on the website. It is agreed that Anna will pick this up with Ricky **Action → 22-07.**

In addition, it is proposed to place an example of a model on the home page every month. This can be from a different company every month. It is agreed that the members will send a sample of a model (Cracking concrete, yielding reinforcement) to Ricky **Action → 22-08.**

## **11. Updating current activities**

- Experiences with the Guideline NL calculation (RTD 1016:2020 version 2.2) and experiences with DIANA GUI.

In 2020 an update of the guideline has been published. Is it an idea to share the experiences in, for example, a working group or a study cell? This also applies to the experiences with DIANA GUI.

- Wish list development DIANA
- Evaluation DIANA 10.5 and soon DIANA 10.6
- Pre-testing DIANA (early users)

Anna notes that a wish list is something DIANA FEA would like to have. The product development department makes priorities. The users can give feedback if they are going to pre-test DIANA. Should we deal with the wish list in a forum environment? Then we would have input for requirements.

Marcello remarks that it will be good to deal with the wish list in a forum, a kind of brainstorm.

We can also place the wish list as a fixed agenda item on the agenda at every general meeting of the association.

Coen asks if the DIANA Advisory Board is it still there? Anna answers that there is no DIANA Advisory Board anymore.

Ricky remarks that the Users Association can collect the wishes of the users and make priorities and then send it to DIANA FEA. Ab remarks that we can also make a poll on the website for the wishes.

Ane indicates that we are going to start with the wish list from the last International Meeting in Trondheim 2019. He asks whether we are still going to evaluate DIANA 10.5 or will we do that at DIANA 10.6? It is agreed that we will link the evaluation to the wish list and the user interface. At every general meeting, the following agenda items are included on the agenda: wish list, evaluation and user interface.

Anna indicates that we can also hold a general meeting at the office of DIANA FEA in Delft. Ane thanks for this offer but notes that we have always opted for Utrecht or surrounding area because it is more centrally located. Loes indicates that the general meeting can also be held at TNO in Utrecht.

Ane thanks also for this offer. Maybe that will be a good option for the following general meeting.

Ane asks whether we want to share the experiences with the Guideline in a study cell or working group? Coen proposes to start a working group for this aspect. It is agreed that Coen, Ab, Lex, Ricky and Huang will start this working group sharing the experiences with the Guideline **Action → 22-09.**

## 12. Study cells

- *Connection to standard testing (workflow DIANA, DESIGN module, ...)*

Coen and Ab are looking how they can expand this study cell. A meeting was organized via Teams for people who were interested (ABT, RHDHV) and they looked at what they can do about DESIGN. Ab asks who uses DESIGN? Marc answers that he uses DESIGN for complex cases but not for review cases. Lex doesn't use it. A task for the study cell would be what the options are and what the challenges? Marc notes that if it works well it will be put to good use. It is agreed that Ab and Coen will see if they will expand the study cell **Action → 22-10.**

- *Random Fields*

This study cell has been completed in the meantime. Is there still a need for expansion?

Lex notes that if you take too a large correlation value, you will not get a warning. It is agreed that this will be on the wish list.

Ricky asks if there is a report of the completion of this study cell? There isn't, meanwhile a version is implemented in DIANA. Today, it is an available feature, but a hidden feature. Ricky asks that when a study cell has been completed, we can place the report of presentation on the website. It is agreed that we will do this in the future. Nevertheless a presentation about the Random Field option is on the website.

- *Expansion of NLFEA simulations NLFEA Guideline based on experiments performed for Safety Formats.*

We have already talked about this. Johan den Boon or Marco Roosen from RWS should be involved in this. A graduate student (Arjan de Putter) has been working on this, his report is also on the publication list and can be downloaded on the repository website of Delft University.

Ab indicates that there will be an article in Cement on this subject in the autumn and there is also an article in Structural Concrete available.

- *Probabilistic arithmetic (Module PROBAB, ...)*

Ane asks if there are any plans for this. Ab indicates that there are no improvements at this moment.

Ane and Lex uses it. Lex notices that it is pretty hard to use PROBAB.

- *Analyzes of undamaged and damaged structures.*

Henco once gave a presentation about this. No further follow up has been given.

- *Other ideas?*

Marc: looking at soil models. Can we superimpose PLAXIS and DIANA (Benchmarking)? Are there others working on this? Coen: is on our wish list. Anna indicates that there are companies that benchmark with Plaxis. DIANA FEA is going to add extra functionalities.

Ane indicates that he attended a presentation about arch bridges at the municipality of Den Bosch yesterday. The results of the PLAXIS calculations correspond to the results of the DIANA calculations.

Loes: works a lot with soil. It is agreed that Loes will tell something about her work at the next general meeting and Marc about his work with soil models at Witteveen+Bos **Action → 22-11.**

## 11. Questions

Anna, Marcello, Loes (are present for the first time) and Andrew (again present since years ago), really enjoyed being present today and getting to meet the members of the DIANA Users Association. Ane thanks Henco for all his efforts and work he has done for the board in recent years.

There were no further questions. The chairman closed the meeting at 18.00 hrs.

## Actions of the General meeting of members of the DIANA Users Association, September 15<sup>th</sup>, 2022

Action 18-13	Ane/Jolanda	Will make pdf files of all lectures which has been held during the DIANA Users Meeting 2018/2019 and Jolanda will send an email to all members of the DIANA Users Association and all participants of the DIANA Users Meeting that the available lectures are on the website.
Action 19-02	Ane/Jolanda	Ane will make an overview of the wishes of the DIANA Users during the DIANA Users Meeting 2019 and Jolanda will send it to the members of the Association.

## DOV ALV 23-01-002

Action 19-09	Coen	Coen will fit the text of the workshop Module Design for the call of abstracts for the DIANA Users Meeting 2020.
Action 22-01	All members	All members will see if more publications can be added to the publication list 2021 and they will send the publications to Jolanda ( <a href="mailto:info@dianausers.nl">info@dianausers.nl</a> )
Action 22-02	Coen	Coen will translate the financial documents 2019-2020-2021 from the annual report into English.
Action 22-03	The Board	The board will ask the people of the University of Valencia if it is possible that students can follow the meeting online.
Action 22-04	Coen	Coen will adjust the rates for members, non-members and (PhD) students in the budget for the DIANA Users Meeting 2023.
Action 22-05	Anna/Ricky	Compare DIANA FEA's customers to the list of members of the DIANA Users Association and see who else could become a member.
Action 22-06	Ricky	Updating website DIANA Users Association: adding presentations and annual reports to the website.
Action 22-07	Anna/Ricky	Anna and Ricky will pick up a joint forum with DIANA FEA to be placed on the website of the DIANA Users Association and the website of DIANA FEA.
Action 22-08	All members	The members will send a sample of a FE model (Cracking concrete, flowing reinforcement) to Ricky to be placed on the home page of the website so the website is changing every month.
Action 22-09	Coen(m), Ab, Lex, Ricky and Huang	Will start the study cell " <i>Expansion of NLFEA simulations NLFEA Guideline</i> " sharing the experiences with the Guideline
Action 22-10	Coen/Ab	Will see if they will expand the study cell "Connection to standard testing (workflow DIANA, DESIGN module, ...)"
Action 22-11	Loes/Marc	Loes will tell something about her work at TNO at the next general meeting and Marc about his work at Witteveen+Bos.