Subject: Minutes of the 4th meeting of the board of OpenDA

Meeting date: August 25th 2011

Present: Dr. Mark Roest (Vortech), Prof. Arnold Heemink (TU Delft), Dr. Martin Verlaan (Deltares/TU Delft), Dr. Julius Sumihar (Deltares), Dr. Nils van Velzen (Vortech/TU Delft)

By: Martin Verlaan

1. Opening and agenda
AH opens the meeting.

2. Minutes of the previous meeting
   - The auditing committee assigned to checking the finances of the OpenDA association over 2010 (NV and JS) advice the board to accept the financial statement produced by the treasurer (MR). The members do so unanimously and thank the treasurer and auditing committee for their work.

   Actions:
   - 20101221.03 The junit tests have improved much, but stability of the applications is still an issue. This action will be closed, but further steps will be taken.
   - 20101221.04 The OpenDA action plan has been completed and the main contours have been integrated in the plans for 2011 mentioned in the Annual report.
   - 20110222.01 The Annual report has been completed and published on the OpenDA website.
   - 20110222.02 NV and MV have written a number of exercises as part of an OpenDA course. Together with the presentations from the summer school in Iasi recently there is now a solid basis for a course.
   - 20110222.03 AH has spoken to a number of people from the groundwater modeling community and he will contact several others.
   - 20110222.04 It was decided after some discussion to start using the forum of the sourceforge site for OpenDA. The forum page at www.openda.org can then be replaced by a link.
   - 20110222.05 Only a partial list of new contacts was made. More work is needed.

3. Announcement
MV: The EU-project MyWave is almost signed. OpenDA plays an important role in the data-assimilation for SWAN within this project.

NV: TNO has started a feasibility study to couple a reservoir model (oil/gas production) to OpenDA. Vortech is assisting TNO in this project.

AH: The TU Delft is involved several proposals PhD-studies for the applications of data-assimilation based on OpenDA.

4. Evaluation of the current situation

- Development of a pilot study for OpenFOAM remains a challenge, since non of the members is actively applying data-assimilation to OpenFOAM themselves. Some initial implementation work has been carried out by Vortech, but was stopped due to higher priorities. The interest of the OpenDA association in this matter is merely in the promotion a wider use of OpenDA. After some discussion, it was decided to contact a representative of the OpenFOAM community to get a clearer picture of the requirements and a commitment to the use of OpenDA if a pilot project will succeed. This will support a more rational decision on the investment in an OpenDA wrapper for OpenFOAM.

- AH: The use of OpenDA for the masters course on data-assimilation at TU Delft was only partially successful. The course started out with OpenDA exercises, but reverted to the old Matlab based exercises after a few weeks. The main concern was technical issues with the installation. It appears necessary to improve the ease of installation and have an experienced OpenDA user/programmer available during the installation and initial steps with the exercises. We have learned much and realized a good set of course exercises at the same time.

- MV: Experiences at the summer school on data-assimilation in Iasi Romania with the OpenDA course exercises were very positive. The exercises were seen as a very useful addition to the more theoretical presentations. Several PhD student have showed a serious interest in using OpenDA for their research. The VirtualBox image used during this course made the installation of OpenDA much easier, even with a complete development environment included. Some students were more experienced than others with the Linux operating system that was used for the VirtualBox image. Although it would be straightforward to build a windows based image, this would require license fees per installation, which would not allow us to distribute the usb-sticks freely (or only at a prohibitive cost)

- A recurring theme is the knowledge needed for the initial installation of OpenDA. Although, all steps are straightforward and well documented, they do require some knowledge of the java runtime environment and about setting the path and environment variables of the operating system. Potential users who have difficulties at such an early stage are likely to give up. To improve this, the use of an installer will be investigated. It is recognized by members that users will always need quite some knowledge to connect their own model to the system. A blackbox approach with conversion routines to a standardized format is most likely to succeed, although this may give a worse performance. However, users that succeed with the initial steps are more likely to persever. It is decided to develop an example of this type.

5. Plans for 2011

- Some items that may help new users to get started are somehow not picked up. This is partially due to a lack of funding for maintenance of the generic parts of OpenDA. It is decided to look
for ways to attract additional funding for this. For the short run OpenDA funding will be used to implement some of the items with highest priority. NV and MV will make a list of items, to be sent to all for sorting the priorities.

6. Promotion

- OpenDA will be used as part of a course on data-assimilation in Denmark this October. AH and NV will teach there.
- It would be good to organize a course on OpenDA in the Netherlands this year. November seems a convenient time.

7. Next meeting

Date of next meeting is left open, so we can adjust it to the developments

8. Actions

<table>
<thead>
<tr>
<th>Date</th>
<th>Author(s)</th>
<th>Action Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>20101221.03</td>
<td>MV</td>
<td>Make version control and junit tests more strict</td>
<td>closed</td>
</tr>
<tr>
<td>20101221.04</td>
<td>MR</td>
<td>Organize the writing of a plan for 2011</td>
<td>closed</td>
</tr>
<tr>
<td>20110222.01</td>
<td>NV</td>
<td>Finish annual report and action plan.</td>
<td>closed</td>
</tr>
<tr>
<td>20110222.02</td>
<td>NV and MV</td>
<td>Write course material for OpenDA</td>
<td>closed</td>
</tr>
<tr>
<td>20110222.03</td>
<td>AH</td>
<td>Contact groundwater modeling community</td>
<td>Continued</td>
</tr>
<tr>
<td>20110222.04</td>
<td>MR</td>
<td>Replace the forum at <a href="http://www.opendata.org">www.opendata.org</a> with a link to the forum at sourceforge</td>
<td>Updated</td>
</tr>
<tr>
<td>20110222.05</td>
<td>MV</td>
<td>Make a list of new contacts</td>
<td>Continued</td>
</tr>
<tr>
<td>20110823.01</td>
<td>MR</td>
<td>Contact a representative of the OpenFOAM community to obtain requirements and commitment for a connection to OpenDA</td>
<td>New</td>
</tr>
<tr>
<td>20110823.02</td>
<td>NV,MV</td>
<td>Make a list with priorities that includes: installer, improved testing with a build server and a bb-example with conversion and standardized IdataObjects. Also find someone to perform regular checks.</td>
<td>New</td>
</tr>
<tr>
<td>20110823.03</td>
<td>MR</td>
<td>Look for ways to finance the maintenance of the generic parts of OpenDA.</td>
<td>New</td>
</tr>
<tr>
<td>20110823.04</td>
<td>MV</td>
<td>Organize a course on OpenDA the Netherlands</td>
<td>New</td>
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