

Sprintsession March 20th, 2008

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A second sprintsession was held on March 20th, 2008, in the meeting room Innovation (how appropriate) of the new institute on Delta Technology Deltares.

Agenda

The meeting started with the following agenda:

The meeting starts at 9:00 (sharp - so be on time) with three brief presentations:

- 9:00 - 9:15 Mark van Koningsveld - Introduction
- 9:15 - 9:45 Bart Jan Kelter - setting of rights on and providing access to the subversion repositories
- 9:45 - 10:15 [Pieter van Geer & Kees den Heijer - presentation on useful routines that are now in McTools](#)

This time schedule is relatively strict so that externally interested people will be able to join if they want to. After this the programme becomes flexible (an aspect that was evaluated positively by you last time).

The following items were suggested from the developersgroup:

- [addition of Fortran routines to McTools, working with dll's: from Matlab to Fortran and vice versa \(Gerben de Boer, Jan Kramer, Fedor Baart\)](#)
- discussion on the new duinerosion routines: strong points, status so far, implementation and use in other projects etc. (Kees den Heijer, Pieter van Geer, Ferdinand Diermanse, Mark van Koningsveld, Sander van Rooij)
- [general maintenance of McTools \(Robin Morelissen, Gerben de Boer, Kees den Heijer, Pieter van Geer, Mark van Koningsveld\)](#)
- discussion on upcoming coastal projects in the framework of Sandmotor and Weak link issues (PieterKoen Tonnon, Jan Mulder, Ap van Dongeren, Jaap van Thiel de Vries, Dano Roelvink, Mark van Koningsveld)
- discussion on the setup of an operational storm impact model for DC and MICORE (Deepak Vatvani, Mark van Koningsveld, Ap van Dongeren, Jaap van Thiel de Vries, Dano Roelvink)

Everyone is obviously free to join and contribute to each of these topics or to raise other items that are not on the agenda yet. It looks like it will be a very productive day. McTools is now at revision 759. Free dinner for the person to hit 1000!

Script demonstrating useful McTools applications (by Pieter and Kees)

Error rendering macro 'code': Invalid value specified for parameter 'com.atlassian.confluence.ext.code.render.InvalidValueException'

```
clear all;fclose all;close all;clc

cd f:\mctools\mc_toolbox; mcsettings
addpath(fileparts(mfilename('fullpath')));

% edit getCalls getIsCalledBy getInputSize getInputVariables roundoff double2evalstr getFileName getVolume
writemessage('init');

%% getInputVariables / getInputSize
clear;fclose all;close all;clc
quickstart internet
d = readTransectData('Jarkus Data','Noord-Holland','03000','2006');
xInitial = d.xe(~isnan(d.ze)); %keep only the points with non-NaN z-values
zInitial = d.ze(~isnan(d.ze)); %keep only the points with non-NaN z-values

dbstop in getVolume at 42
dbstopcurrent
[Volume, result, Boundaries] = getVolume(xInitial, zInitial);
dbclear in getVolume at 42
dbstopcurrent
writemessage(3,'Example of getInputVariables completed');

%% roundoff
clear;fclose all;close all;clc
X = 87643.7852;
for n = -2:2:4
    Xround = roundoff(X, n);
    disp(num2str(Xround))
end

%% getdefaults
dbstop in roundoff at 40
Xround = roundoff(X);
dbclear in roundoff at 40

%% double2evalstr
clear;fclose all;close all;clc

dbstop in double2evalstr_test at 9
```

```

run double2evalstr_test
dbstopcurrent

dbstop getHsig_t_test at 30
dbstop getHsig_t_test at 41
run getHsig_t_test
dbstopcurrent
writemessage(4,'Example of double2evalstr_test completed');

%% getFileName
clear;fclose all;close all;clc
directory = 'D:\heijer\My Documents\Work\TU Delft\PhD project\Prob2B\ParametricStudy\DenHeijer2008\Case_10';
extension = 'txt';
exception = 'DP_Case_10_maxRD=068.7.txt';
fileid = [];
dbstopcurrent
fname = getFileName(directory, extension, exception, fileid)
writemessage(5,'Example of getFileName completed');

%% writemessage
writemessage(7,'Staring example of writemessage');
dbstopcurrent
SavedMessages = writemessage('get')

%% IsCalls
fun = 'getDuneErosion_VTV2006';
directory = 'D:\heijer\My Documents\Program Files\McTools\mc_toolbox\mc_applications\mc_ucit\getDuneErosion\';
IsCalls = getCalls(fun, directory);
IsCalls = getCalls(fun, directory, 'quiet');
dbstopcurrent
writemessage(1,'Example of IsCalls completed');

%% IsCalledBy
clear;fclose all;close all;clc
fun = 'getVolume';
directory = 'D:\heijer\My Documents\Program Files\McTools\mc_toolbox\mc_applications\mc_ucit\getDuneErosion\';
[IsCalledBy, Line, Column] = getIsCalledBy(fun, directory);
[IsCalledBy, Line, Column] = getIsCalledBy(fun, directory, 'quiet');
dbstopcurrent
writemessage(2,'Example of IsCalledBy completed');

%% FD_GUI_figure
cd( directory);
run FD_GUI_figure
dbstopcurrent
writemessage(6,'Example of FD_GUI completed');
clc

%% guidisp
guidisp('set','FD_GUI_message_panel');
guidisp('test message panel');
guidisp('set',[]);
guidisp('Test Command line');
dbstopcurrent
writemessage(7,'Example of guidisp completed');

%% dbstate
dbstop in getDuneErosion_test at 6
dbstop in getDuneErosion_VTV2006 at 12
getDuneErosion_test('VTV2006',1);
dbstopcurrent
writemessage(7,'Example of dbstate completed');

%% dbstopcurrent
cd('D:\heijer\My Documents\Work\Deltares\Projects\McTools');
dbstopcurrent;
pause(0.1);

%% writemessage
SavedMessages = writemessage('get')
dbc clear all

```

Interfacing with Fortran

To use fortran functions from matlab there are a few options:

- the loadlibrary method
- the mexfile method
- the swig method

The outcome of this session has been moved to a separate Tech Note.

Items that came up during the day

migrate Reference Guide generation to Build Server

- use <http://www.artefact.tk/software/matlab/m2html/>
- generate set of HTML pages nightly
- provide access to generated pages (upload to external Apache web server) or:
- install external TeamCity for all external projects and then embed them as

```
{panel:borderStyle=solid|borderColor=#3C78B5|borderWidth=1px}
{html}
<script type="text/javascript" src="http://<build-server>/externalStatus.html?js=1&buildTypeId=bt8"><
/script>
{html}
{panel}
```

- (optional) add search engine for HTML pages

- Merge ucit.wldelft.nl into public.wldelft.nl

- !! possible only after documentation generation will be migrated to build server and published on web-site

- P: with copy of UCIT files

- try to mount it using WebDAV on unix - check if it is used

- BUG in repository: svn co <http://svn.wldelft.nl/repos/mctools/trunk/> mctools gives:

```
...
A mctools\UCIT_Actions\ModelActions\Support\template\hwgxytot.def
A mctools\UCIT_Actions\ModelActions\Support\template\default.sed
A mctools\UCIT_Actions\ModelActions\Support\template\ym6.sco
A mctools\UCIT_Actions\ModelActions\Support\template\run.bat.new
svn: REPORT request failed on '/repos/mctools!/svn/vcc/default'
svn: REPORT of '/repos/mctools!/svn/vcc/default': 200 OK (http://svn.wldelft.nl)
```

- Show how log messages work in DelftShell using log4net

- Matlab Builder NE (?) can we make Matlab plugin for DelftShell in this way?

- Remove spaces in directories

- Repository size is 1.45Gb - split src and data