

OpenEarthTools

Open source

Data, Models and Tools for

marine & coastal

science & technology



.. and what about



?

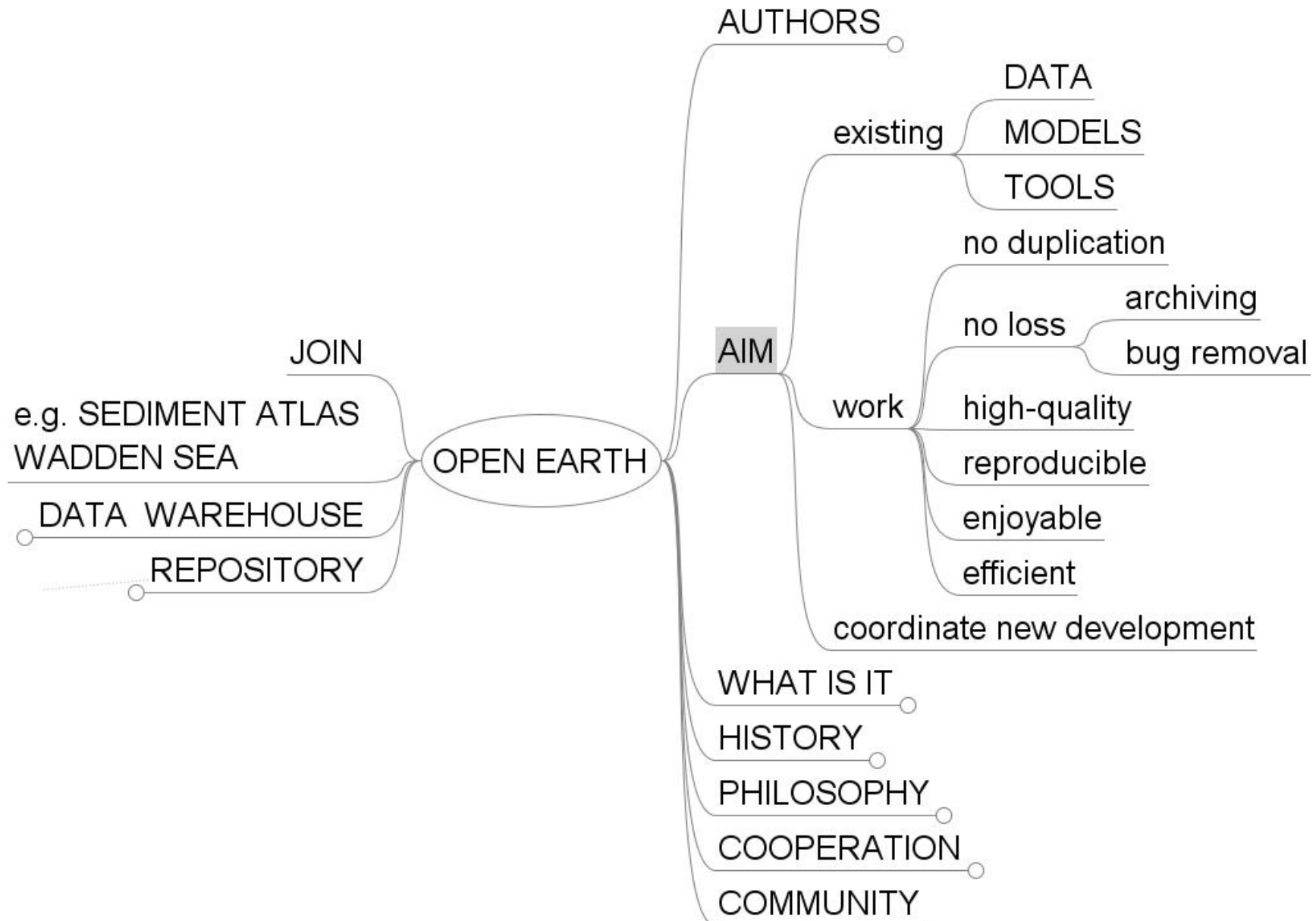
Currently sub-optimal: OpenEarth needed

Change!

Yes we can!



Currently sub-optimal: AIM



Currently sub-optimal: example *coordinates*

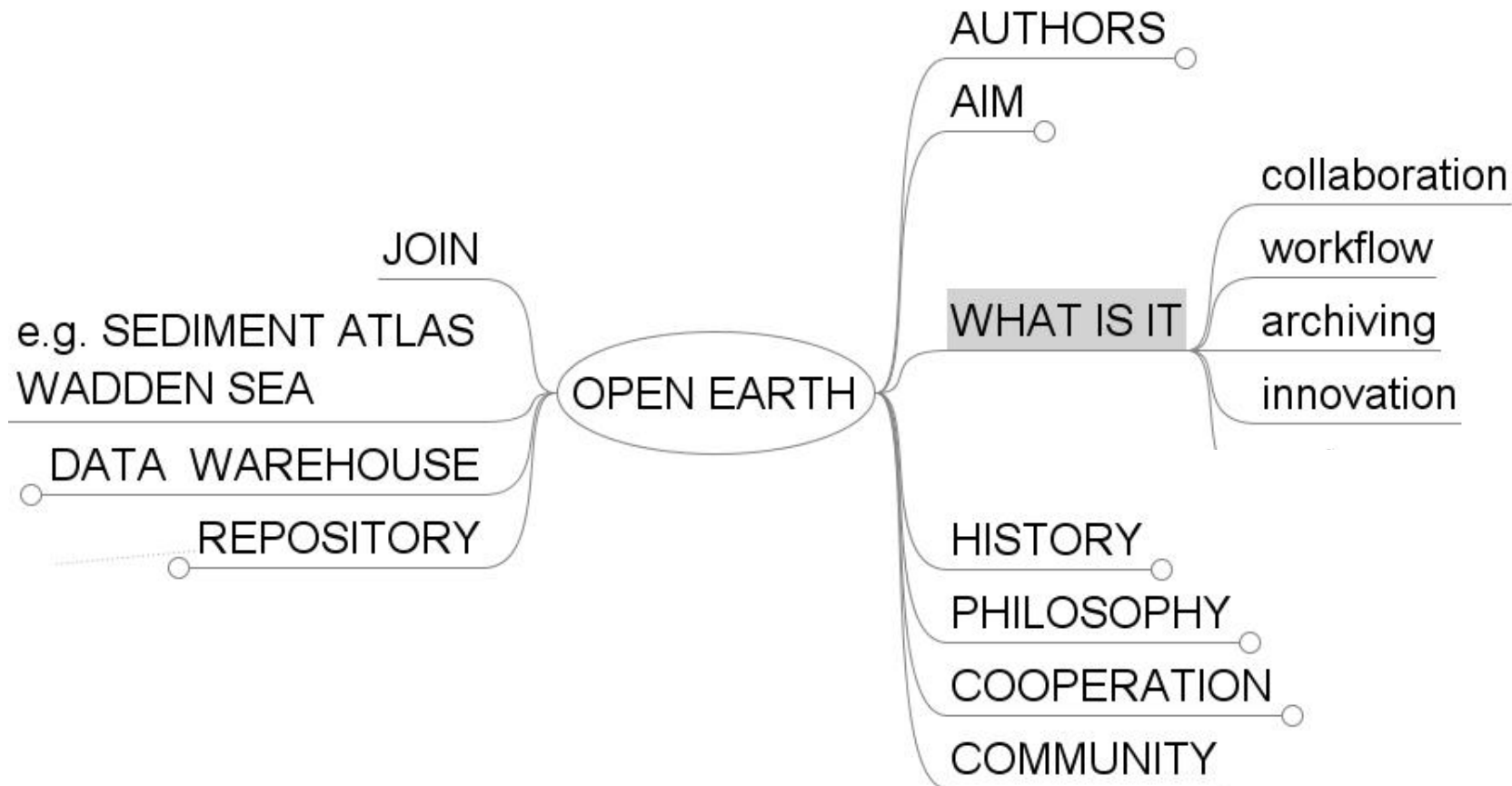
1. PCTTRANS marine: much ado with external files
2. General Mapping Toolbox: only *.eps on linux
3. arcGIS: \$
4. matlab mapping: \$
5. etc.

6. matlab CTRANS DV: Rijksdriehoek, UTM, LonLat
 - Zitman > Verploeg > Bonekamp > Elias > de Boer > ?

7. **OpenEarth** SuperTrans
 - Maarten van Ormondt (Deltares)
 - GUI & matlab command line
 - ~ 3000 transformations
 - free if you join OpenEarthTools

```
>> [x,y]=ConvertCoordinates(5,52,'WGS 84','geo','WGS 84 / UTM zone 31N','xy',...)
```

Currently sub-optimal: What is OpenEarth



Currently sub-optimal: PHILOSOPHY

Journal of Personality and Social Psychology
2009, Vol. 96, No. 1, 83–103

© 2009 American Psychological Association
0022-3514/09/\$12.00 DOI: 10.1037/a0012823

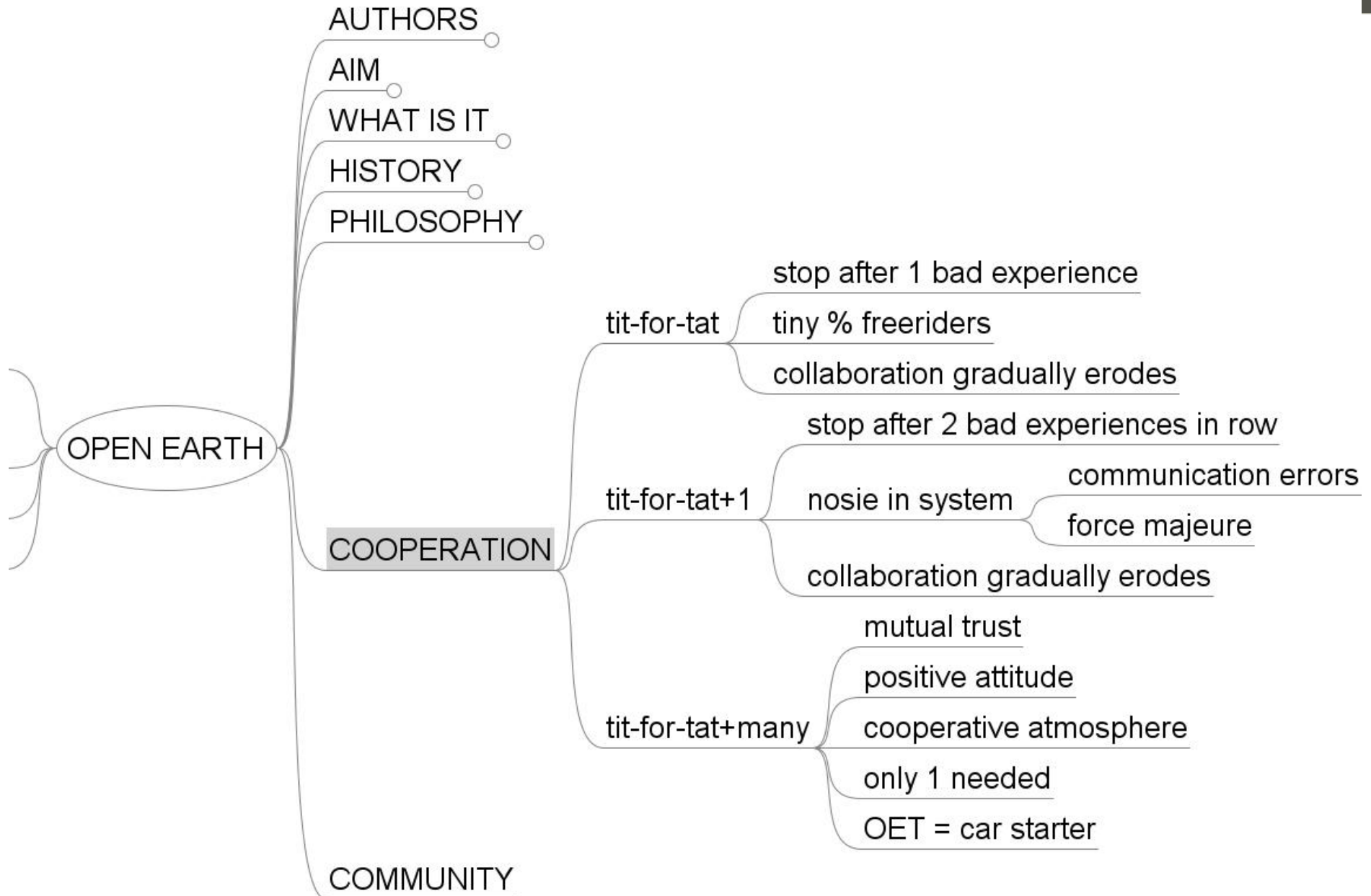
Promoting Cooperation and Trust in “Noisy” Situations: The Power of Generosity

Anthon Klapwijk
VU University Amsterdam

Paul A. M. Van Lange
VU University Amsterdam and Leiden University

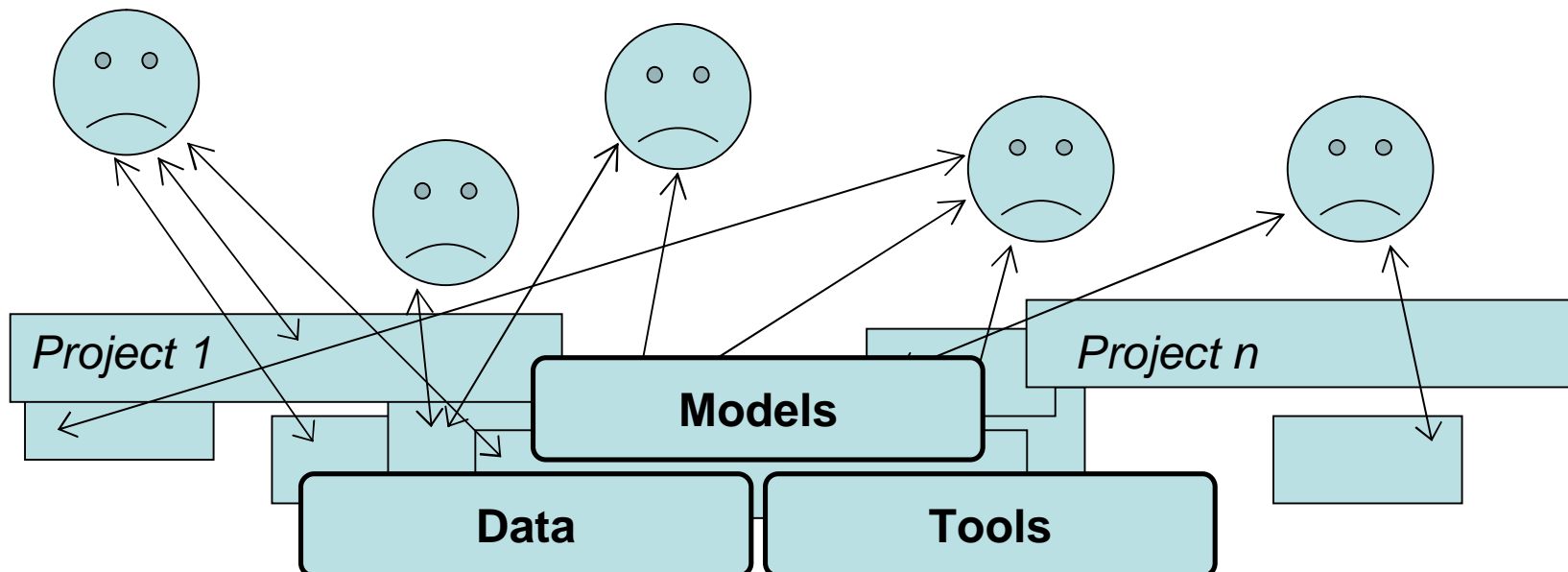
The authors present an interdependence theoretical framework and advance the argument that generosity serves the important purpose of communicating trust, which is assumed to be of utmost importance to coping with incidents of negative noise (i.e., when the other every now and then behaves less cooperatively than intended). Using a new social dilemma task (the parcel delivery paradigm), it was

Currently sub-optimal: COOPERATION

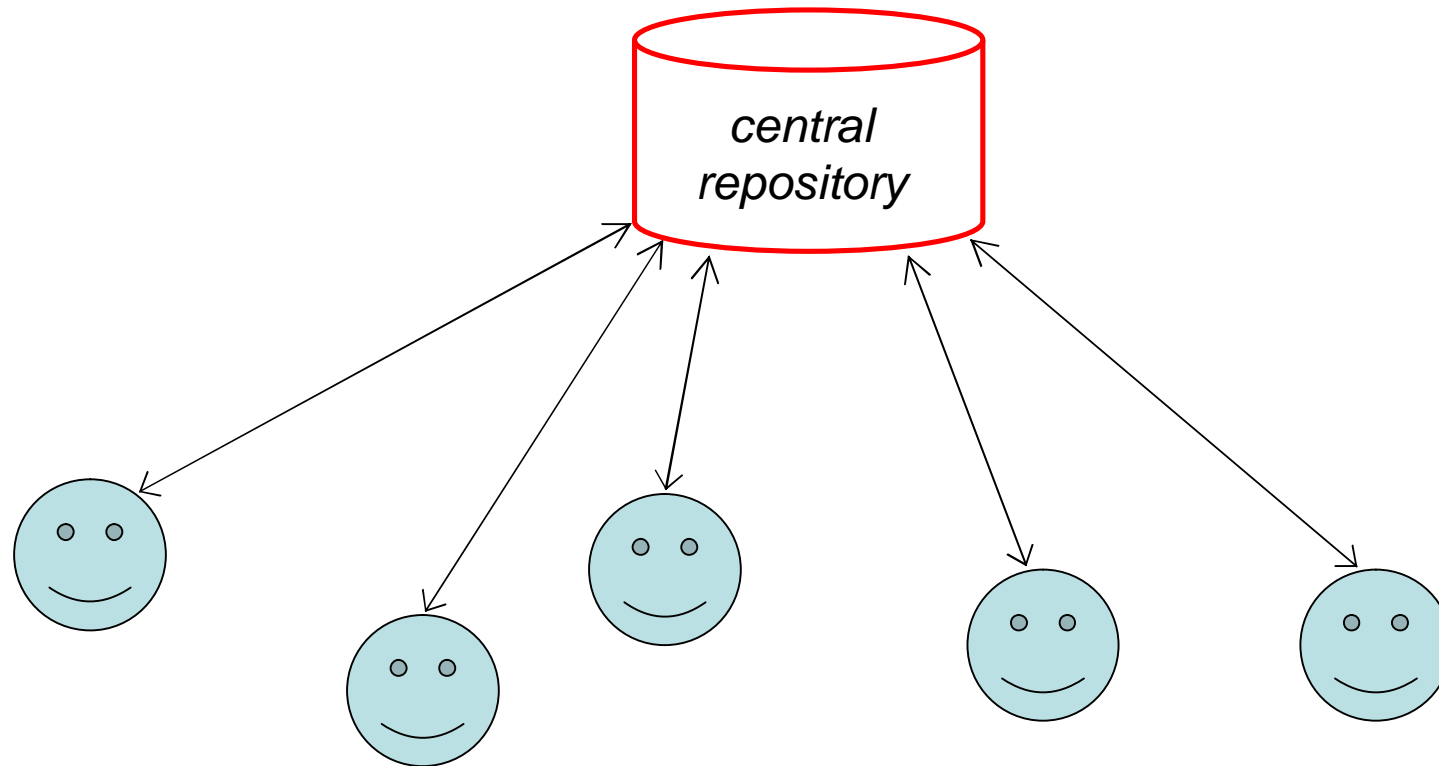


Currently sub-optimal: COMMUNITY

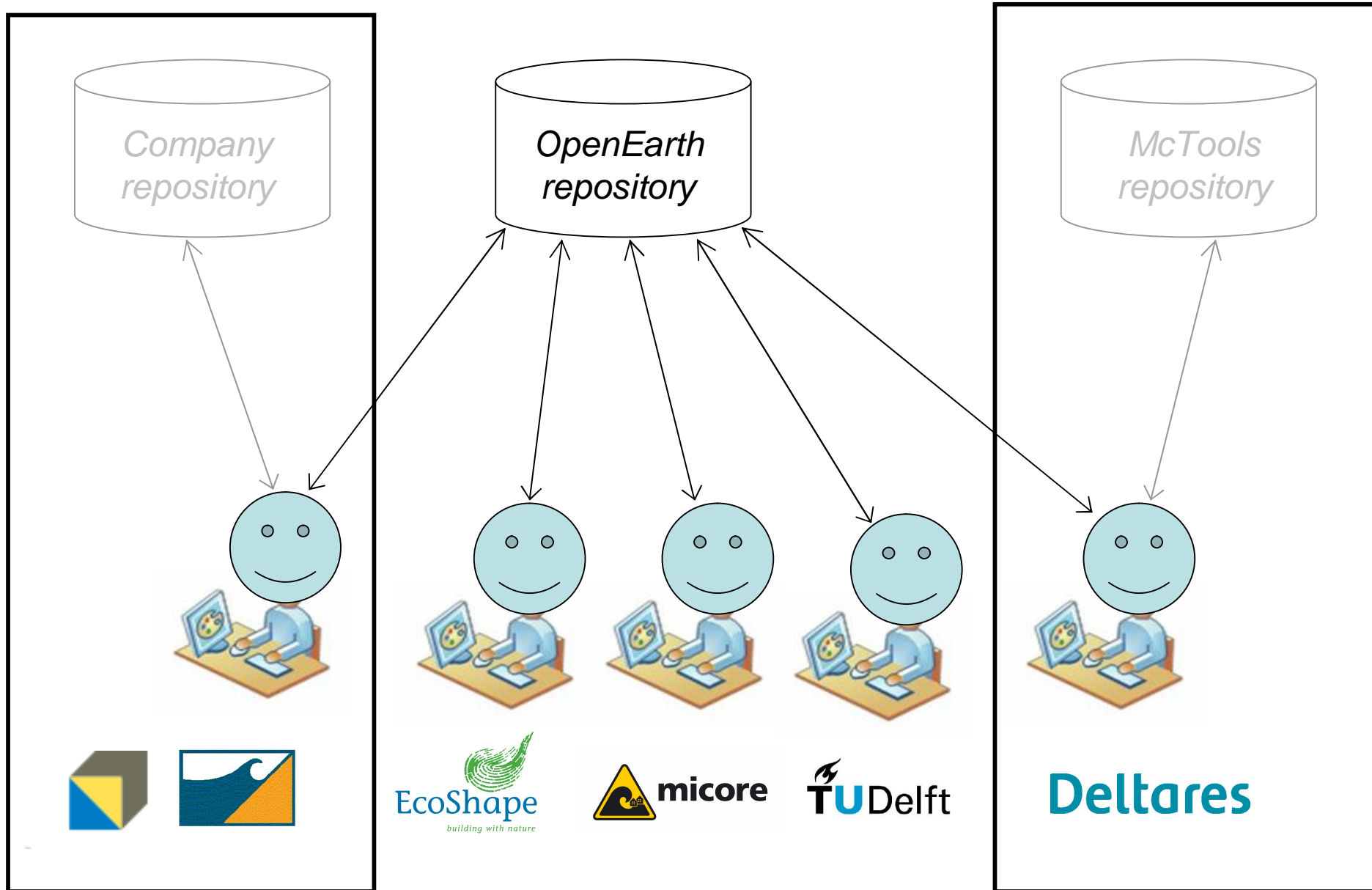
- all collaborating not enough
- chaos
- coordination needed
- but no overall boss
- like wikipedia



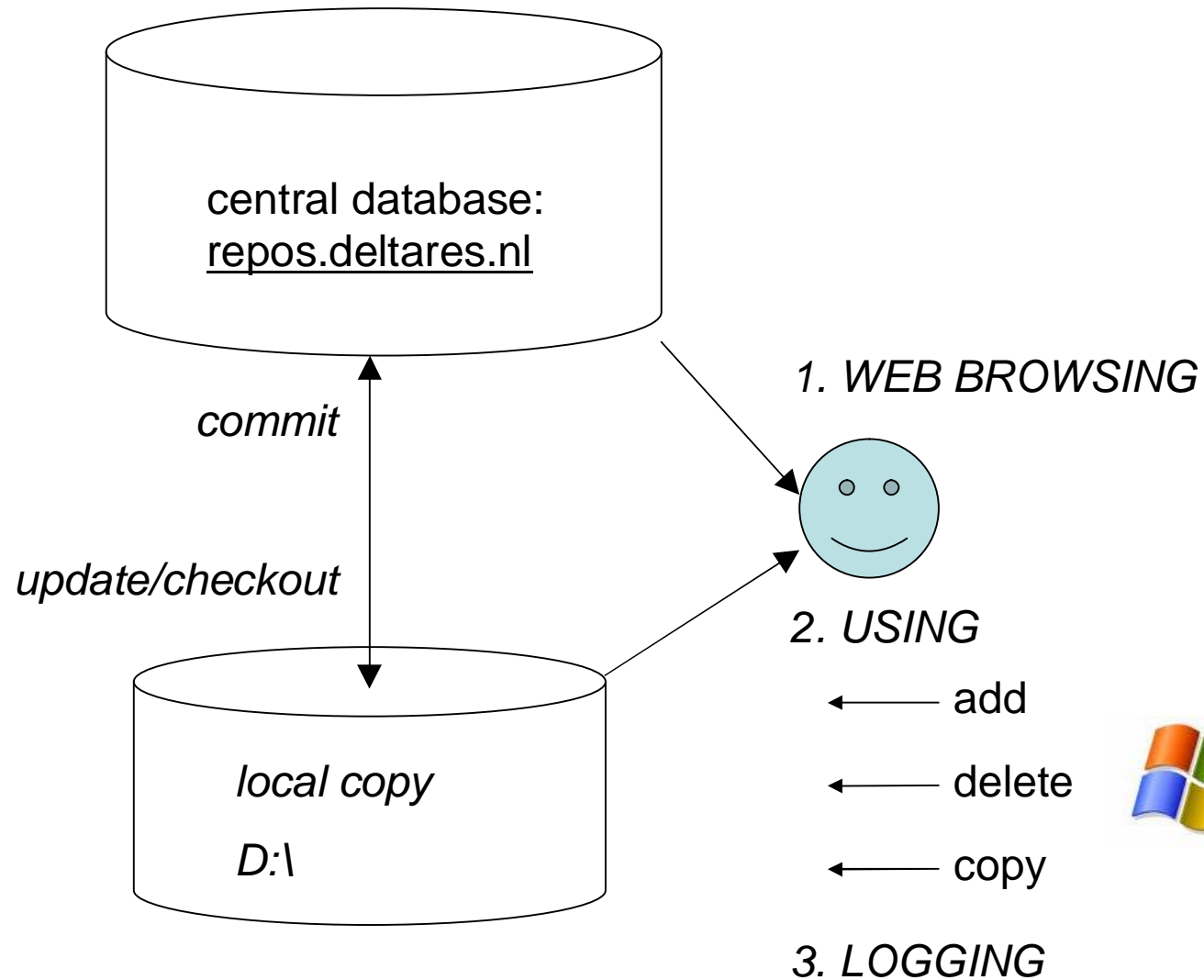
Optimal = possible: REPOSITORY



Optimal = possible: REPOSITORY



Optimal = possible: REPOSITORY *basics*



Optimal = possible: REPOSITORY web access

Revision 0
Collection of Repositories

- GWSobek/
- Maconomy/
- NHI/
- OpenEarthData/
- OpenEarthModels/
- OpenEarthRawData/
- OpenEarthTools/**
- Rijn-Maas/
- RtcModule/
- TKW/
- XBeach/**
- curnquat/
- ds/
- gebiedsschematisaties/
- hydra/

Revision 103
/trunk/matlab/applications/xbeach

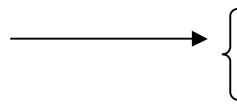
- [Parent Directory]
- grid/
- CreateEmptyXBeachVar.m
- XB_Read_Results.m
- XB_run.m**
- XBeach_1D.m
- XBeach_Write_Inp.m

```
function [runflag runtime msg] = XB_run(varargin)
%XB_RUN runs xbeach calculation
%
% Routine calls "xbeach.exe" (by default; another
% with keyword-value pairs) within the exepath, u
% the run.
%
% See also CreateEmptyXBeachVar XBeach_Write_Inp
%
% -----
% Copyright (C) 2008 Deltares
% Pieter van Geer
```








Powered by [Subversion](#) 1.4.6 (r28521)

Optimal = possible: REPOSITORY *local copy*

up to date



modified

	delft3d_waq_io_inp	m	27.812	29-09-2008	18:13	-a--
	delft3d_waq_io_src	m	8.087	01-04-2008	10:16	-a--
	delwaq_disp	m	3.477	22-08-2008	15:31	-a--
	delwaq_meshgrid2dcorcen	m	3.728	03-10-2008	12:04	-a--
	Open	m	3.506	13-08-2008	15:38	-a--
	Scan with Sophos Anti-Virus	m	3.768	30-09-2008	11:48	-a--
	View (Lister)	m	4.049	24-09-2008	11:46	-a--
		m	9.900	26-05-2008	10:26	-a--
	SVN Update	m	12.149	26-05-2008	10:27	-a--
	SVN Commit...	m	11.805	26-05-2008	10:27	-a--
	TortoiseSVN	m	3.893	13-08-2008	16:38	-a--
		m	4.235	13-08-2008	16:22	-a--
	Send To	m	16.709	24-07-2008	15:40	-a--
		m				
	Cut	syn	602	01-10-2008	12:12	-a--
	Copy	m	3.871	01-04-2008	10:16	-a--
	Pack files	m	4.446	01-04-2008	10:16	-a--
		m	4.495	01-04-2008	10:16	-a--
	Create Shortcut					
	Delete					
	Rename					
	Properties					

Optimal = possible: REPOSITORY *documentation*

```
>> help applications
```

```
OpenEarth applications
```

```
rijkswaterstaat - data: rijkswaterstaat data types (donar)  
delft3d          - delftd file formats  
knmi            - read knmi wind and meteo timeseries  
swan           - swan toolbox
```

```
>> help rijkswaterstaat
```

```
donar\_read      - read ASCII text file from www.waterbase.nl  
getwaterbase   - get data from waterbase.nl  
getwaterbasestation - get stations names for parameter  
getwaterbaseparameter - get parameter from waterbase.nl  
hmcz\_read      - read meteo file from hmcz@ rws
```


```
>> help donar_read
```

```
DONAR_READ read ASCII text file from www.waterbase.nl
```

```
DAT = donar_read(fname, <keyword, value>)
```

```
See also: getwaterbase, www.waterbase.nl
```

```
% DONAR_READ read ASCII text  
%  
% DAT = donar_read(fname, <ke  
%  
% See also: getwaterbase, ww
```



Optimal = possible: REPOSITORY logging

Log Messages - F:\checkouts\OpenEarthTools

From: 23-10-2008 To: 23-03-2009 Messages, authors and paths

Revision	Actions	Author	Date	Message
304		baart_f	01:55:58, maandag 23 maart 2009	Changes for compatibility with Ualg. Compatibility function for UCIT.
303		boer_g	15:28:45, vrijdag 20 maart 2009	Add more meta-info (lat lon), and test indirect dimension mapping.
302		ormondt	13:47:42, vrijdag 20 maart 2009	SuperTrans moved to OpenEarthTools
301		ormondt	13:43:11, vrijdag 20 maart 2009	
300		ormondt	12:35:26, vrijdag 20 maart 2009	SuperTrans moved to OpenEarthTools
299		ormondt	12:27:48, vrijdag 20 maart 2009	findinstruct and findstrinstruct added.
298		ormondt	12:27:17, vrijdag 20 maart 2009	Several gui functions added.
297		boer_g	11:25:07, vrijdag 20 maart 2009	updated oetnewfun lgpl block (removed postal adress), and added (!)gpl info.
296		heijer	10:44:08, vrijdag 20 maart 2009	exampleStochastVar.m: option added to deactivate (= set to deterministic) one or more variables
295		boer_g	18:05:45, donderdag 19 maart 2009	Fixed loading of table from INP struct from different directory.
294		b.c.vanprooijen@tudelft.nl	17:47:46, donderdag 19 maart 2009	update of 1dv waterbed module
293		friocou	16:47:54, donderdag 19 maart 2009	Allow for selection of multiple years [Yann Friocourt]
292		boer_g	10:07:31, donderdag 19 maart 2009	updated to fix time dimension with correct CF units
291		boer_g	09:56:39, donderdag 19 maart 2009	only add javapath for netcdf when not yet present
290		b.c.vanprooijen@tudelft.nl	09:03:24, donderdag 19 maart 2009	uploading waterbed
287		boer_g	16:39:42, woensdag 18 maart 2009	Added *.urls to relevant netCDF tools.
286		boer_g	13:53:16, woensdag 18 maart 2009	In imageplot made frame required 1st arg, set clipping to off by default, and use setProperty.
285		boer_g	11:47:47, woensdag 18 maart 2009	added new function
284		boer_g	13:08:27, dinsdag 17 maart 2009	Reshape locations vector to [x,y] matrix for MUDFile
283		heijer	17:11:43, maandag 16 maart 2009	designpoint added
282		heijer	16:01:51, maandag 16 maart 2009	some statistical functions added
281		boer_g	18:57:50, vrijdag 13 maart 2009	new functionality to replace string codes (e.g. N/A) in cell with numeric codes (e.g. nan) to obtain fully numeric column fields
280		boer_g	18:57:01, vrijdag 13 maart 2009	new function to replace string codes (e.g. N/A) in cell with numeric codes (e.g. nan)
279		boer_g	11:41:27, vrijdag 13 maart 2009	added conversions between output variable codes (keyword, longname, shortname)
278		boer_g	16:26:59, donderdag 12 maart 2009	Changed manual input arguments order to enforce specification of column names, and added option to use solely table field from SWAN_INPUT as input.
277		baart_f	10:40:28, donderdag 12 maart 2009	speedup in first call of readTransectDataNetcdf (from 180s to 1.5s) repeating questions are slowed form 0.25s to 0.28s
276		boer_g	17:34:40, woensdag 11 maart 2009	added xbeach url
275		heijer	13:41:11, woensdag 11 maart 2009	input changed to propertyname-propertyvalue pairs
274		roelvin	15:25:03, dinsdag 10 maart 2009	New version including improved grid box selection
273		baart_f	15:00:03, maandag 9 maart 2009	testing with test server
272		baart_f	12:25:06, maandag 9 maart 2009	worked on update grid. some problems with multiple transects on the same year

New version including improved grid box selection

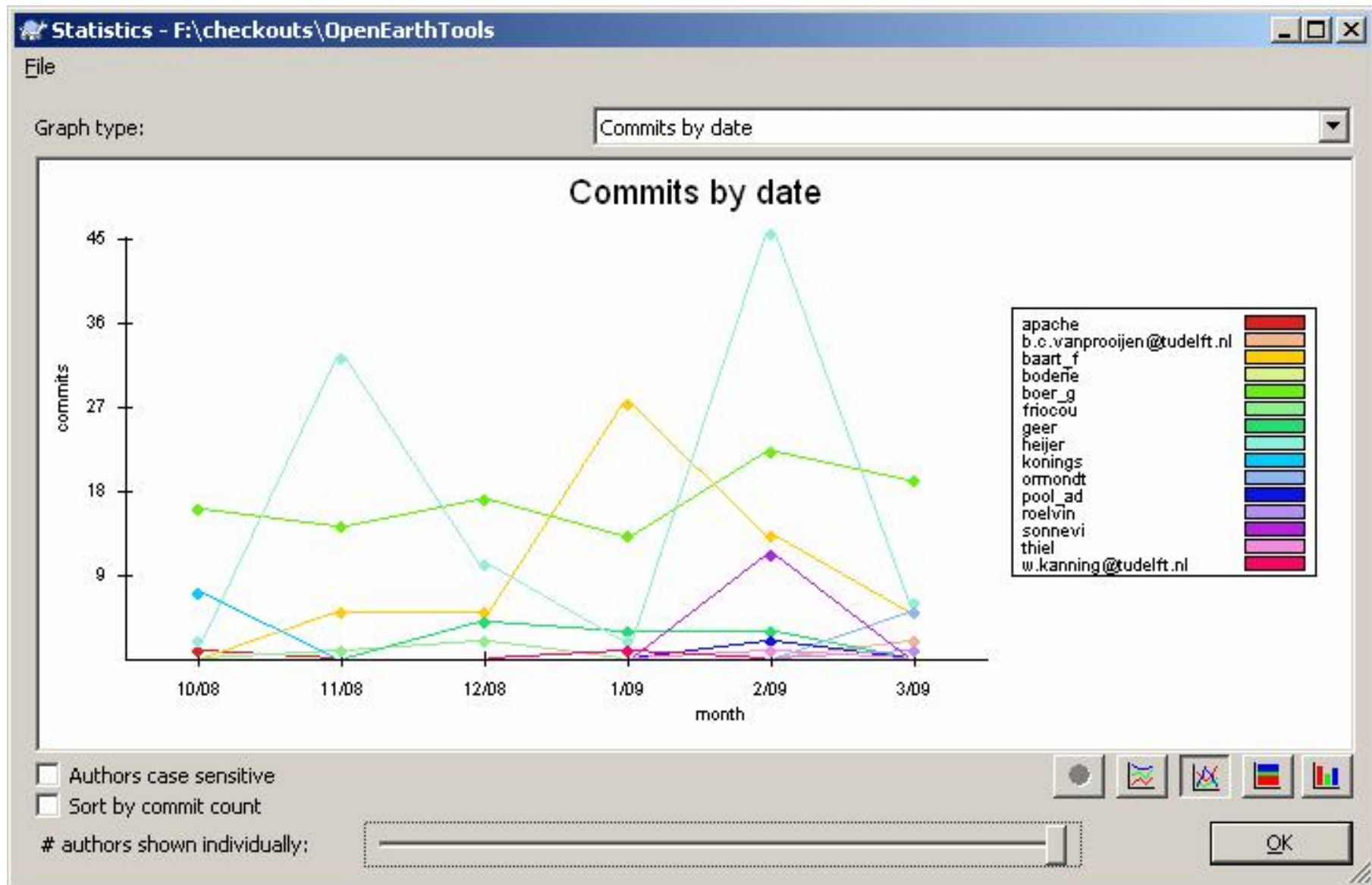
Action	Path	Copy from path	Revision
Modified	/trunk/matlab/applications/xbeach/grid/XBeach_GridOrientation.m		
Modified	/trunk/matlab/applications/xbeach/grid/XBeach_selectgrid.m		
Added	/trunk/matlab/applications/xbeach/grid/rblines.m		
Added	/trunk/matlab/applications/xbeach/grid/rblines.mht		
Added	/trunk/matlab/applications/xbeach/grid/select_area.m		
Added	/trunk/matlab/applications/xbeach/grid/select_oblique_rectangle.m		
Added	/trunk/matlab/applications/xbeach/grid/wbmf.m		
Added	/trunk/matlab/applications/xbeach/grid/wbmf2.m		

Optimal = possible: REPOSITORY *blaming*

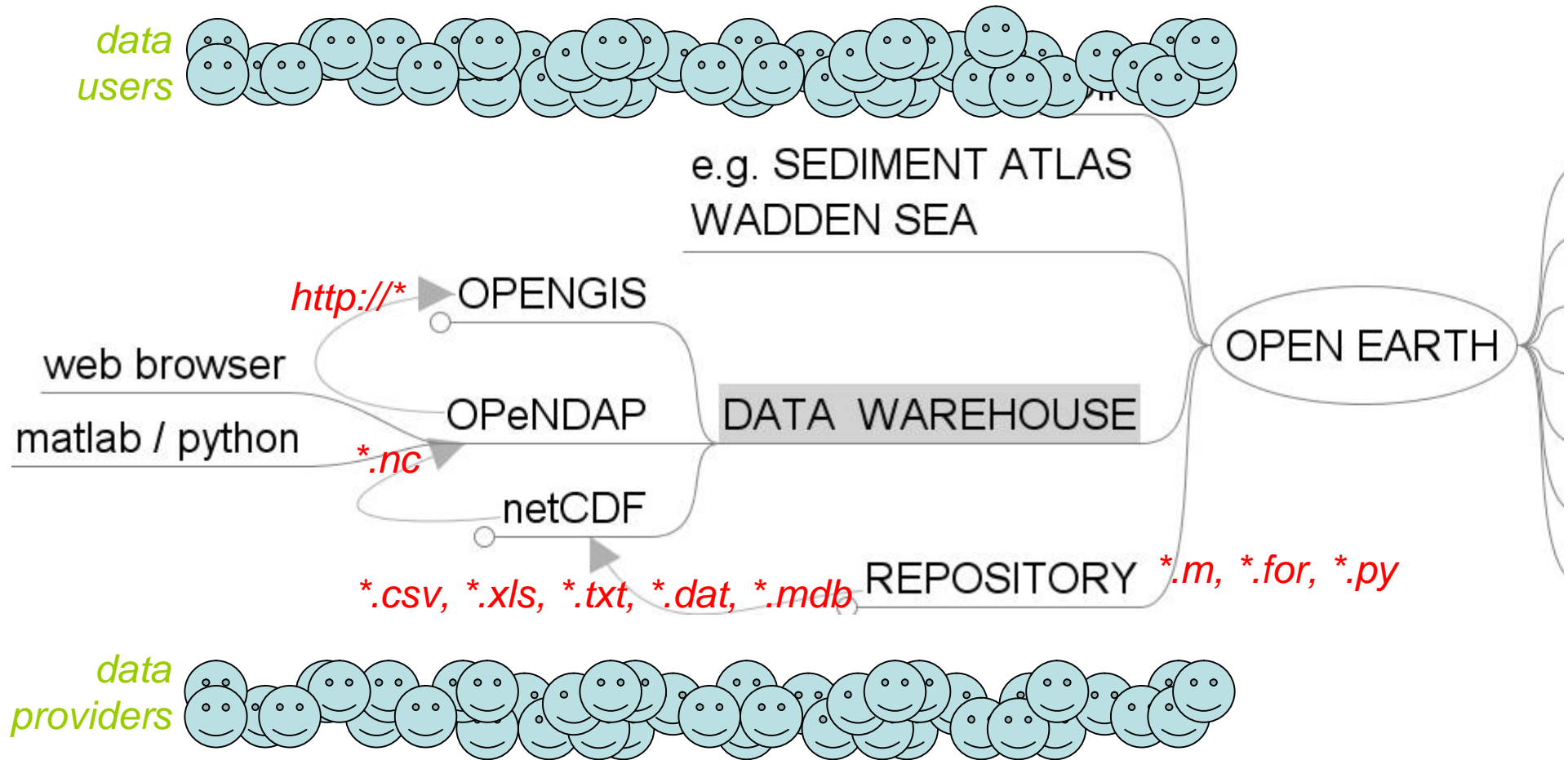
TortoiseBlame - getDuneErosion.m

Revision	Author	Line
2120	geer	93 %% Initiate variables
975	heijer	94 writemessage('init');
975	heijer	95
1724	geer	96 NoDUROSResult = false;
1307	heijer	97 getdefaults(...
1307	heijer	98 'xInitial', [-250 -24.375 5.625 55.725 230.625 1950]', 1,...
1307	heijer	99 'zInitial', [15 15 3 0 -3 -14.4625]', 1,...
1307	heijer	100 'D50', 225e-6, 1,...
1307	heijer	101 'WL_t', 5, 1,...
1307	heijer	102 'Hsig_t', 9, 1,...
1307	heijer	103 'Tp_t', 12, 1);
975	heijer	104 AdditionalErosionMax = DuneErosionSettings('get', 'AdditionalErosionMax');
975	heijer	105 Bend = DuneErosionSettings('get', 'Bend');
975	heijer	106 SKIPBOUNDPROF = false;
975	heijer	107
2120	geer	108 %% Check input
2120	geer	109 [xInitial,zInitial,D50,WL_t,Hsig_t,Tp_t] = DUROSCheckConditions(xInitial,zInitial,D50,WL_t,Hsig_t,Tp_t);
2120	geer	110
2120	geer	111 %% debug plot initial profile
975	heijer	112 if dbstate
975	heijer	113 dbPlotDuneErosion('new');
975	heijer	114 end
975	heijer	115
2120	geer	116 if DuneErosionSettings('get', 'DUROS')
975	heijer	117 %% STEP 1; get DUROS erosion
1694	heijer	118 writemessage(100,'Start first step: Get and fit DUROS profile');
1866	geer	119 [result, Volume, xOmin, xOmax, xOexcept] = getDuneErosion_DUROS(xInitial, zInitial, D50, WL_t, Hsig_t, Tp_t, fal
2138	heijer	120
2138	heijer	121 % update initial profile with minor modification by findCrossings
2138	heijer	122 [xInitial zInitial] = deal(...
2138	heijer	123 [result(1).xLand; result(1).xActive; result(1).xSea],...
2138	heijer	124 [result(1).zLand; result(1).zActive; result(1).zSea];
2138	heijer	125
1724	geer	126 if isempty(Volume)
1724	geer	127 NoDUROSResult = true;
1724	geer	128 end
975	heijer	129 %% STEP 2; get profile shift due to coastal Bend
1724	geer	130 if result(1).info.resultinboundaries && ~NoDUROSResult
976	heijer	131 TargetVolume = eval(DuneErosionSettings('AdditionalVolume')); % Attention, TargetVolume represents an addit
975	heijer	132 AdditionalErosionforCoastalBend = Bend > 6;
975	heijer	133 if AdditionalErosionforCoastalBend
975	heijer	134 G = getG(TargetVolume + Volume, Hsig_t, w, Bend);
975	heijer	135 result(end+1) = getDUROSprofile(xInitial, zInitial, result(1).info.x0 - G, Hsig_t, Tp_t, WL_t, w);

Optimal = possible: REPOSITORY *statistics*

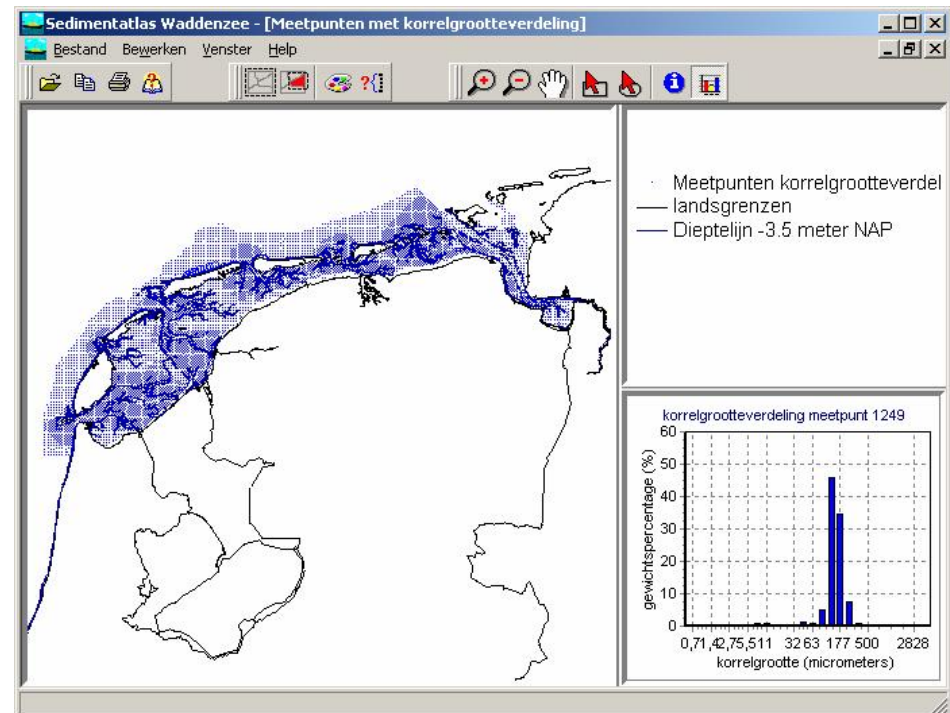


Optimal = ongoing: DATA WAREHOUSE



Optimal = ongoing: example: Sedimentatlas WaddenZee

- Example: Sediment Atlas Wadden Zee (Rijkswaterstaat)
- www.waddenzee.nl
- from handy GUI
- get **raw data**
- transform into **netCDF**
- put on **OPeNDAP** server
- to use in **matlab**
 - to validate model
 - detailed analysis
 - plot



netCDF: ncBrowse tree (free)

The screenshot shows the ncBrowse tree view for a NetCDF file named `korrel.nc`. The tree is organized into three main sections: Dimensions, Attributes, and Variables.

- Dimensions:**
 - `locations = 7502`
 - `particle_diameter = 26`
- Attributes:**
 - `title = ""`
 - `institution = "Rijkswaterstaat"`
 - `source = "surface observation"`
 - `history = "Tranformed to NetCDF by G.J. de Boer <g.j.deboer@deltares.nl>, 2009-03-18 17:41:51 by: sedimentatlas_korrel2nc"`
 - `references = "http://www.waddenzee.nl/Sedimentatlas.729.0.html"`
 - `comment = "Korrelgrootteverdeling' was exported from Sedimentatlas to ASCII file before conversion to NetCDF."`
 - `Conventions = "CF-1.4"`
- Variables:**
 - `float lon(locations)`
 - `float lat(locations)`
 - `float ID(locations)`
 - `float phi(locations, particle_diameter)`
 - `float cumphi(locations, particle_diameter)`
 - Dimensions:**
 - `locations`
 - `particle_diameter`
 - Attributes:**
 - `long_name = "cumulative percentage material on sieve by weight"`
 - `units = "100*kilogram/kilogram"`
 - `comment = "cumulative percentage material on sieve by weight"`
 - `coordinates = "lat lon"`
 - `float diameter(particle_diameter)`
 - Dimensions:**
 - `particle_diameter`
 - Attributes:**
 - `long_name = "grain size diameter"`
 - `units = "micrometer"`
 - `comment = "grain size diameter"`
 - `float phi_value(particle_diameter)`

At the bottom of the window, there are three buttons: **Expand All**, **Collapse All**, and **Close**.

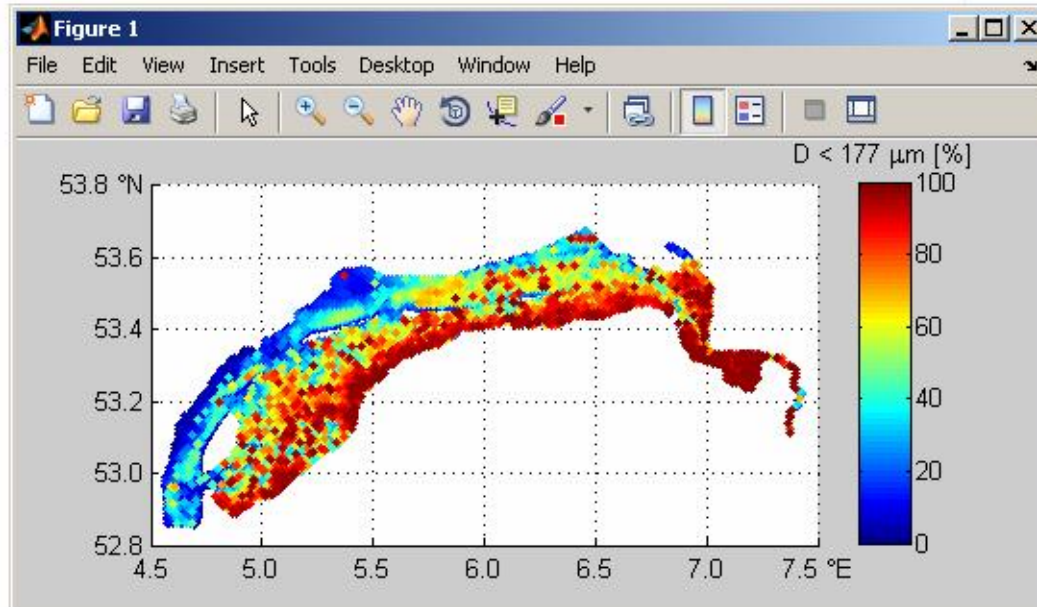
netCDF: matlab command line access

Editor - F:\checkouts\OpenEarthRawData\rijkswaterstaat\sedimentatlas_waddenzee\sedimentatlas_korrel2nc_plot.m

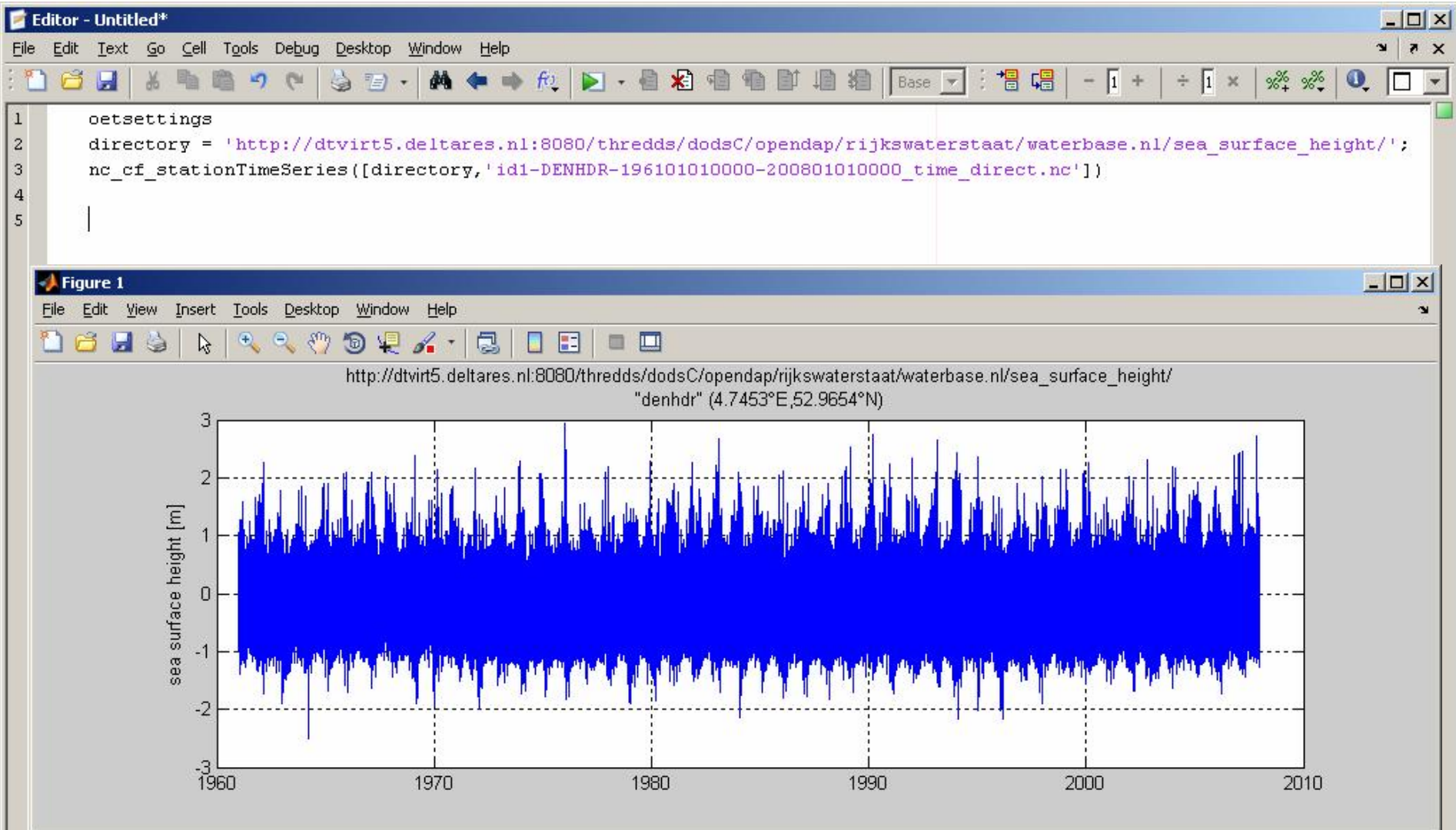
File Edit Text Go Cell Tools Debug Desktop Window Help

Stack: Base 1.0 1.1 %

```
1 - oetsettings
2 -
3 - F = 'http://dtvirt5.deltares.nl:8080/thredds/dodsC/opendap/rijkswaterstaat/sedimentatlas_waddenzee/korrel.nc';
4 -
5 - D.lon      = nc_varget(F,'lon');
6 - D.lat      = nc_varget(F,'lat');
7 - D.cumphi   = nc_varget(F,'cumphi');
8 - D.diameter = nc_varget(F,'diameter');
9 -
10 - caxis      ([0 100])
11 - plotc      (D.lon,D.lat,D.cumphi(:,10),'.')
12 - colorbarwithtitle(['D < ',num2str(D.diameter(10)), ' \mu m [%]'])
13 - axislat    (52)
14 - tickmap    ('ll','format','%.1f')
```



netCDF: matlab command line access



netCDF: OPeNDAP > MATROOS OPENGIS

MATROOS Maps - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://matroos.deltares.nl/maps/start/

Google

Default interface:

[Home](#)

Source:

zuno

Analyse time:

2009-03-24 08:30

Coordinate system:

WGS84

Geographic selection:

Original grid

57.429250

-2.200000 9.890000

49.169190

Output type:

Graphical

Preselect

[Search](#)

[Help](#)

Variables: Colour: Depth (m) >>> Contour: Depth (m) >>> Vector: Water velocity (m/s)

Plot: Time: Variable is time independend Layer: 0

Scale: Min: -11.810 jet Max: 196.560 jet

Image: Format: PNG Size: 640

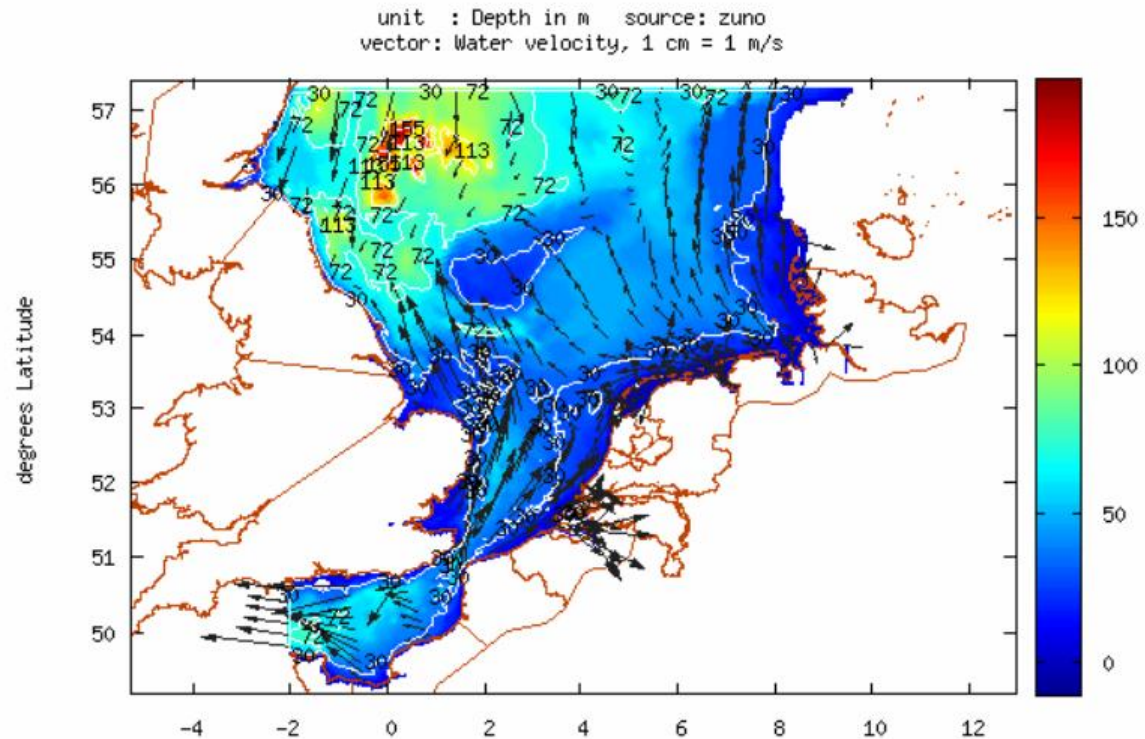
Option: Interpolate: Zoom: Contour: 155,113,72,;

VectorCount: X: 25 Y: 25

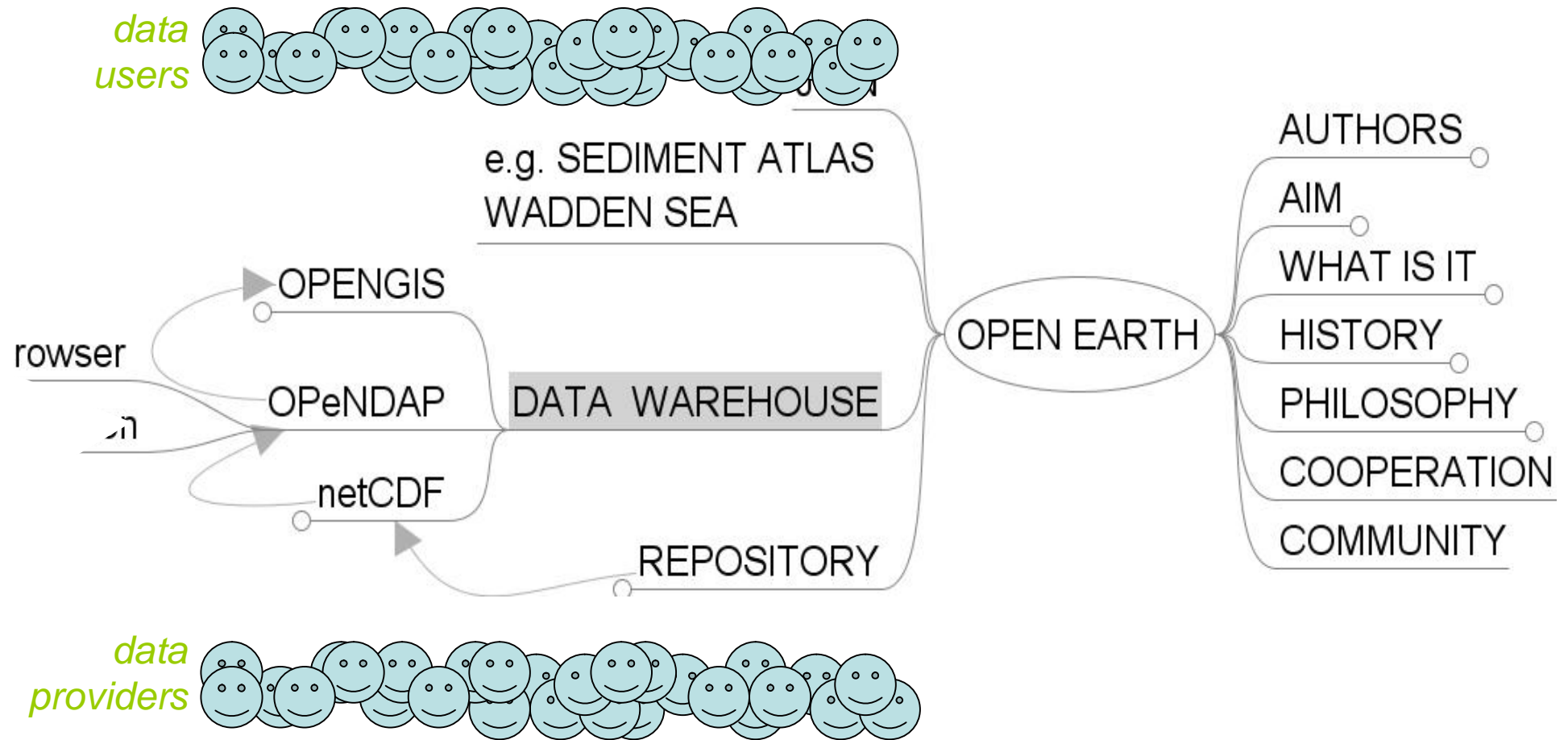
VectorSize: 1 m/s = 1 cm

Timeseries:

Submit Get url Clone window



Summary

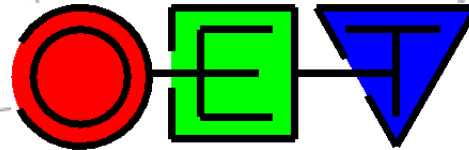




OpenEarth.Deltares.nl JOIN

e.g. SEDIMENT ATLAS
WADDEN SEA

DATA WAREHOUSE
REPOSITORY



AUTHORS

AIM

WHAT IS IT

HISTORY

PHILOSOPHY

COOPERATION

COMMUNITY