Data Standards Training Course

The Data Standards Training Course was developed in the framework of the EU FP7 Project MICORE and involves **one day** in which the participants are taken through a wide range of excercises. Although the schedule can be adapted to better match with the participants' specific needs and background knowledge the schedule of this course generally is as follows:

Programme

- **8:30-8:50 Registraton**
- **8:50-9:00 Opening by director of Deltares Harry Baayen**
- **9:00-9:25 Open Earth initiative**
  - General introduction of the OpenEarth initiative
- **9:25-9:30 Data management in general**
  - Opening and outline of the course
    1. **Extract** Taking measurements and storing the measured data into files.
    2. **Transform** Enriching gathered data with metadata and storing in a standard file format.
    3. **Load** Storing the files in a database - ***not dealt with in this course***.
    4. **Provide** Giving access to the database.
- **9:30-10:30 Extract**
  - ***Excercise:*** getting all the OpenEarthTools with subversion
  - ***Excercise:*** modifying and uploading a subversion checkout
- **10:30-12:00 Transform**
  - ***Excercise:*** exploring the OpenEarthTools
  - ***Excercise:*** loading raw data into OpenEarthRawData
  - ***Excercise:*** converting to netcdf while adding meta-data
- **12:00-13:00 Lunch**
- **13:00-14:00 Load and Provide**
  - ***Excercise:*** reading netcdf and opendap
  - ***Excercise:*** selection of data
- **14:00-15:30 Hands-on exercises**
  - exploring the OpenEarthTools
  - exploring the OpenEarth OPeNDAP server
  - transforming your own data into netCDF
- **15:30-16:30 Brief introduction into working with wiki's**
- **16:30 drinks**

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Data management in general

In the EU FP7 Project MICORE a data standard and archiving protocol was defined to provide end-users with a comprehensive standardised database. The protocol has become part of the **Open Earth Initiative** and is available freely. The same protocol will be adapated in the Building with nature programme. All aspects of this protocol will be dealt with in one day.

The data standard and archiving protocol provides a **four step database guideline** for OpenEarth users and developers to:

- **Extract** - Taking measurements and storing the measured data into files,
- **Transform** - Enriching gathered data with metadata and storing in a standard file format,
- **Load** - Storing the files in a database - ***actual syoring not dealt with in this course***, and
- **Provide** - Giving access to the database.

Open Earth Initiative

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- - Explanation of the Open Earth Initiative (open source version of McTools/UCIT)
  - Overview of Open Earth building blocks

Extract

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- Working with subversion
- ***Excercise:*** getting all OpenEarhtTools to yout laptop from using subversion
- ***Excercise:*** Loading raw data into subversion from your laptop

Transform

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- ***Excercise:*** Filling in required fields using the inspire metadata editor
- ***Excercise:*** Exploring the OpenEarthTools
- ***Excercise:*** reading raw data with matlab
- ***Excercise:*** Converting raw data to to netCDF
- ***Excercise:*** Using CF convention

Load and Provide

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- Finding and selecting of data on OPeNDAP server.
- Reading NetCDF and OPeNDap