

Preprocessing of Radar Data for FWI

You are in `data/w-processing/`.

1. `ss2gerjoi_w.m`
 - Get data from *Sensors and Software* binary files
 - Save data as `.mat` files in `data/raw/PROJECT/w-data/data-mat-raw`
 - You need to input survey parameters:
 - source-receiver spacing
 - source-source spacing
 - receiver-receiver spacing
 - central frequency
2. `datavis_w.m`
 - Visualize the data, line by line
 - Decide all preprocessing parameters
 - Pulls parameters from file `pp_csg_w.m`
 - If these parameters were already chosen, look for this file in `data/raw/PROJECT/w-data/`
 - If it is a new project, edit the file `data/w-processing/pp_csg_w.m`
 - Saves each line as a `.mat` file in `data/raw/PROJECT/w-data/data-mat`
3. `datablitz_w.m`
 - Like `datavis_w.m` but for all lines at the same time
 - Saves each line as a `.mat` file in `data/raw/PROJECT/w-data/data-mat`
4. `field_w.m`
 - Once you are satisfied with those parameters, `field_w.m` will save a binary version of them in `data/raw/PROJECT/w-data/` for later
 - You need to re-write the parameters from `pp_csg_w.m` into `field_w.m`
 - If a project already had these parameters saved, the file would be in `data/raw/PROJECT/w-data/`
5. `swvlets_w.m`
 - Computes and saves source-wavelets using the parameters chosen before
 - Saves to `data/raw/PROJECT/w-data/field_w.mat`
6. `data2fwi_w.m`
 - This is the last step before the inversion
 - Saves all data in `data/raw/PROJECT/w-data/data-mat-fwi/`
7. `swvlets2param_w.m`
 - In case you just want to update the source-wavelet, instead of running `data2fwi_w.m` run `swvlets2param_w.m`.
 - This will save *only* the gaussian time windows and the source wavelets to `data/raw/PROJECT/w-data/data-mat-fwi/parame_.mat`
8. `see_domain_w.m` will plot the survey in case you forget what it looks like.