V4, February 2020

Reporting tTEM and SkyTEM data/models to GERDA using Aarhus Workbench

Introduction

This document describes the procedure for uploading SkyTEM and tTEM data and models from Aarhus Workbench to the National Geophysical database – GERDA.

General information regarding GERDA upload can be found on the GERDA website: www.gerda.dk.

Uploading data/models to GERDA has two main phases. First, raw and processed data are uploaded to a project. Subsequently, a number of inversion results (model editions) are uploaded to the dataset/project. The full upload procedure can be split into seven steps. Below is a seven step quick guide, each step is explained in details in the text.

<u>Quick guide</u>

1. Create a project from GERDA's website. Also create instruments etc. if they do not already exist.

2. Download a template PC-GERDA database (now containing the newly created project-ident, etc.)

3. Export raw/processed data from Aarhus Workbench (for this you need the template GERDA database)

4. Upload Export raw/processed data from Aarhus Workbench via the GERDA website.

5. Download a new template PC-GERDA database (now containing the newly uploaded dataset-ident(s))

6. Export the inversion results (models) from Aarhus Workbench (for this you need the template GERDA database from step 5.

7. Upload the exported model database from Aarhus Workbench to GERDA via the website.

If your project contains more than one dataset/dataset-node, then repeat step 3 and 4, before stepping to 5. Repeat step 6 and 7 if you have more than one inversion result (model edition) to upload.

1. Create a project

- Create a new project in GERDA for your later data upload.
- New projects, instruments etc. are created from the GERDA website (2020 link). You need a GERDA user account to do this.
- Consult the GERDA website "Nomenklatur" for instructions regarding project names, etc..
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2. Download PC-GERDA Template database

- Download a Template PC-GERDA database from the GERDA website (called "Tom PCGERDA"). The Template PC-GERDA database holds all project-idents in GERDA, including the newly created project needed in the next step.
- No user login is needed to download a Template PC-GERDA.
- The Template PC-GERDA format must be Firebird/interbase.

3. Raw/processed data export, Aarhus Workbench

- Select a dataset node in the Workspace explorer in Aarhus Workbench
- Pick **Database** from the Workspace ribbon under *Export to (see figure below).*
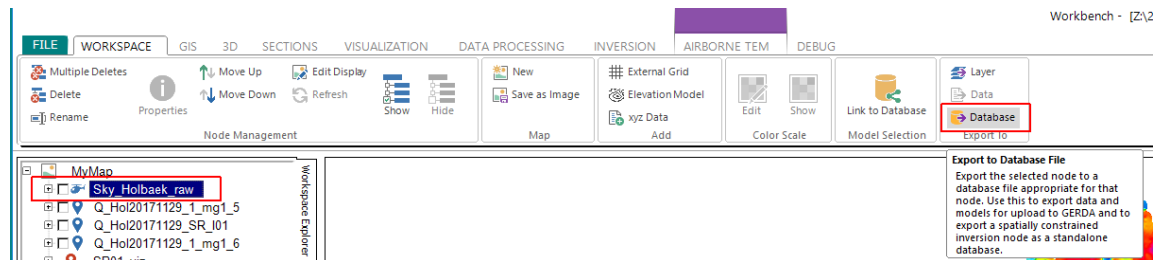
- Pick Export raw and processed data on the form below.
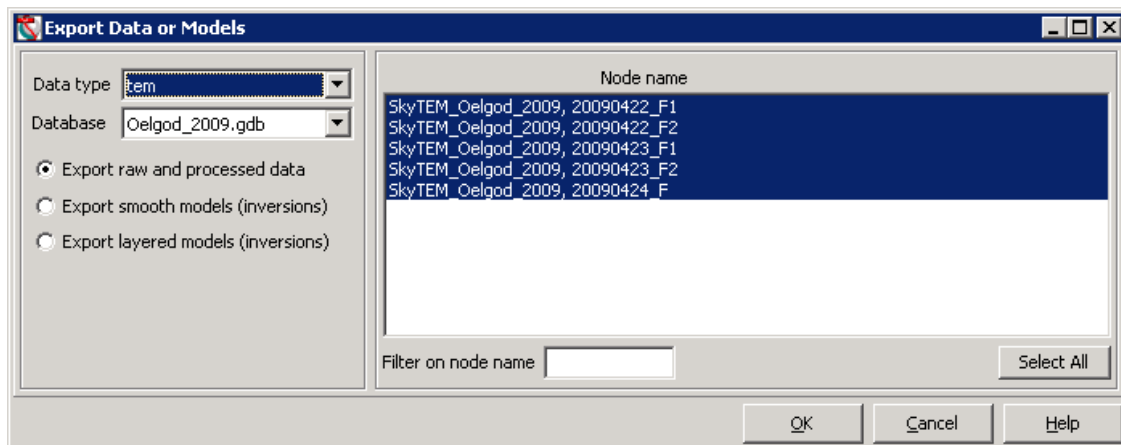
- Select the processing nodes for export/upload. Select only nodes that have been used for the inversion (normally all of them). The raw data are automatically included in the export.
- After export, *Survey Info* needs to be added to the exported database.
- Link to the Template PC-GERDA database under *Survey info database* and select a dataset.
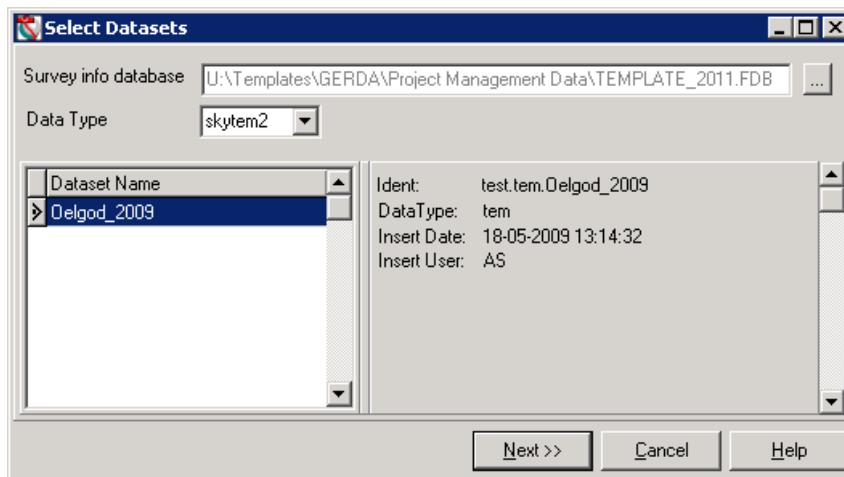
- Fill in the survey info in the two forms below.
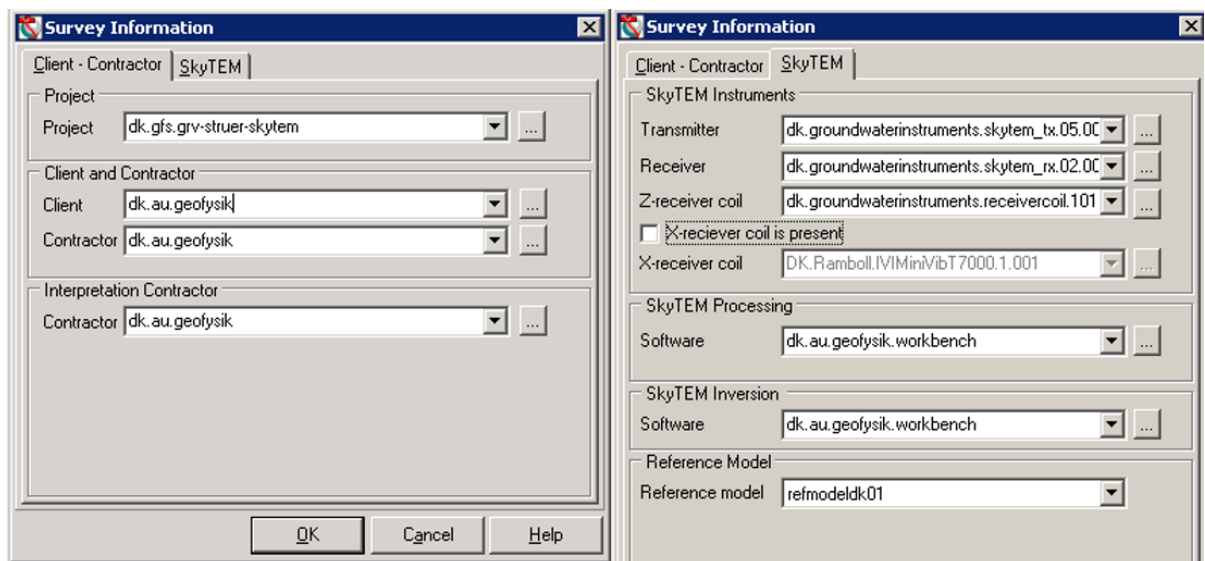
Reference model:
- Refmodeldk01: TEM-data calibrated to the old 5-layer test site model. Before November 2011.
- Refmodeldk02: TEM-data calibrated to the 7-layer test site model from November 2011.
- Refmodelnone: Used for non TEM-data

4. Upload Export raw/processed data

- Upload the exported database from Aarhus Workbench via the GERDA website (2020 link). User login is needed.
- You may zip the datasebase prior to upload to reduce the file size. Only one database per zip file.
- **Important**: Remember to check the box "*Include datasets rows*"

- Wait for e-mail confirmation from GERDA for a successful data upload, before you proceed to step 5.
- If you have more datasets/datasetnodes to the same project, then repeat step 3 and 4 before proceeding to step 5.

5. Download GERDA template database

If your project/your inversions only use data from one dataset/dataset-node you may skip this step.

- Download a new Template PC-GERDA database from the [GERDA website,](#) like in step 2. This Template PC-GERDA now also holds the dataset dataset-ident(s) for the newly uploaded dataset(s), which are needed for step 6.
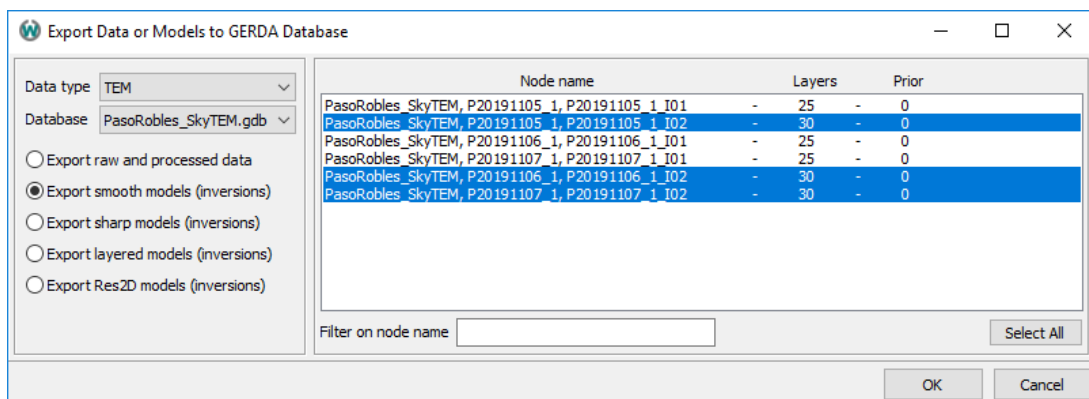
6. Model export, Aarhus Workbench LCI/SCI

The entry to the model export for LCI and SCI inversions in Aarhus Workbench is slightly different.

6a) LCI case:

- Select the dataset node holding the LCI-inversions in the Workspace explorer.
- Pick **→ Database** from the *Workspace* ribbon under *Export to…*
- Select "*Export smooth, sharp, or layered models (inversion)*" See the form below.

- Select the LCI inversion nodes to upload under *Node name*. Do not mix different LCI inversions of the same dataset/data-processing.
- A database will be exported and you then proceed to the **LCI+SCI case**.

6b) SCI case:

- Select an SCI inversion node in the Workspace explorer
- Pick **→ Database** from the **Workspace** ribbon under *Export to*
- *Select SCI inversion for upload to GERDA* and proceed to the **LCI+SCI case**.
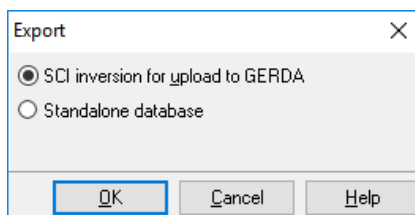
6a+b) LCI+SCI case:

At this stage and forward, the LCI and SCI upload procedures are the same and use the form below.

- Select the template PC-GERDA from step 5 under *Dataset GERDA database*. If your inversion only includes one dataset/dataset-node, you can select the uploaded dataset GERDA database from step 4 instead, since this database also holds the needed dataset-ident.

- In the model edition window below, you must match (select) the LCI/SCI-dataset(s) shown to the right under *SCI/LCI sources dataset* to the correct dataset-ident in the left panel under *Dataset Idents*.

- Hit the *Match* bottom, and the match will show up in the *Matched Idents and SCI dataset* list.

- Fill out the needed info under *Edition and inversion software*.

- The *Edition name* will become the last part of the model-ident. Note that the resulting model-ident will automatically include the inversion type (smooth, shap, layer, ..), model sub-type (LCI,SCI 1D, 2D…), numbers of layers, etc. The *Edition name* will therefore typically just be "primary", "basic", …

- The *Edition comment* is a short comment to the edition like "standard smooth inversion", "Inversion with prior from borehole logs", …

- Reference model:
  - Refmodeldk01: TEM-data calibrated to the old 5-layer test site model (older that November 2011).
  - Refmodeldk02: TEM.data calibrated to November 2011, 7-layer test site model
  - Refmodelnone: Use for non TEM-data.
- If you have more inversion results (model editions) to upload, then repeat step 6 and 7.

7. Upload LCI/SCI models to GERDA

- Upload the exported model-database from Aarhus Workbench via the [GERDA website](#) (2020 link). User login is needed. Note than you cannot upload the model part until the dataset part from step 4-5 has been successfully uploaded to GERDA.

- You may zip the datasebase prior to upload to reduce file size. Only one database per zip file.

- **Important**: Leave the "*Include datasets rows*" unchecked on the GERDA upload form below.

- You will receive an e-mail from GERDA regarding the model upload.

- If you have more inversion results (model editions) to upload, then repeat step 6 and 7.