# User Manual
# GST Profile Importer
# 1.0.2

GiGa infosystems 2025

# Contents

# 1 Introduction

The **GST Profile Importer** has been developed as a standalone tool to allow for the upload of multiple profiles to GST Server. For this purpose it provides advanced functionality to group individual files together to form profiles that can be uploaded all together with one click. Alongside this process the user will be given feedback to easily review future results and to quickly adjust settings if anything should not be going in the desired direction.

**Note**

The files to be uploaded will have to follow a few important rules:

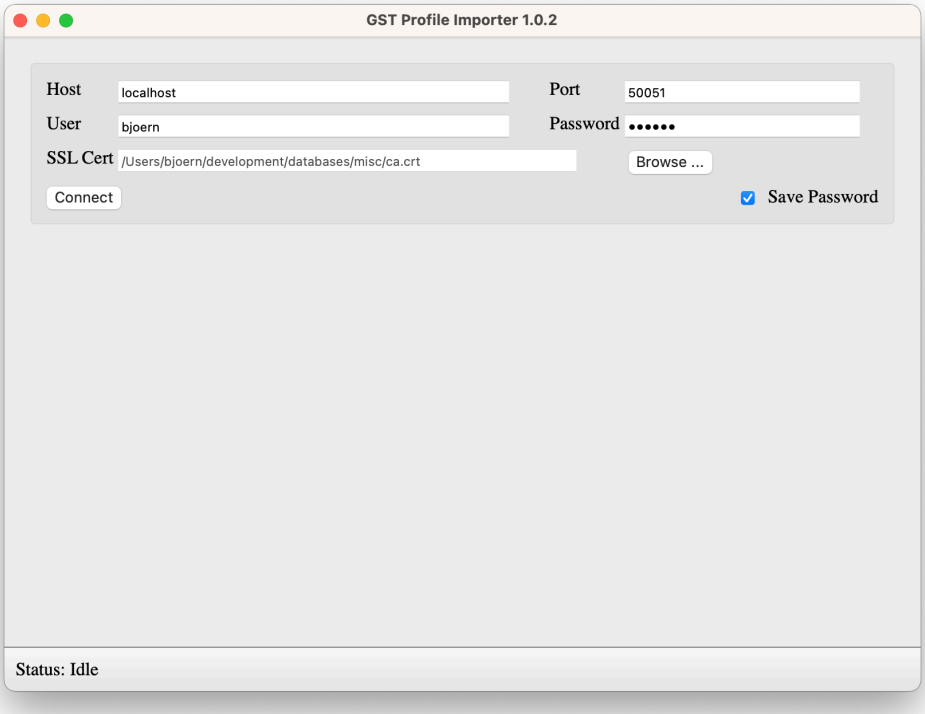
* All files need to be in the same directory.
* Only valid **shapefiles** are supported. For ease of use, only the **.shp** files will be shown within the application.
* Each profile must have one location line associated with it.
* Each profile may have one file containing one or multiple horizon lines.
* Each profile may have one file containing one or multiple fault lines.
* Each profile may have one file containing one or multiple lines of miscellaneous content (misc lines).
* All files that belong to one profile must share a common profile name as part of their filename. Location line files may have different names, but then must provide the name of the profile within an attribute.

# 2 Importing multiple profiles

## 2.1 Connecting to GST Server

To connect to GST Server you will have to provide the same information that is requested by GST Desktop. If you do not have access to any of this information or the certificate file please ask your administrator to assist you. Should any errors occur during the connection process (or in general when working with the app) a little message will show up in the status bar on the bottom of the window. The program remembers entered credentials whenever a successful connection has been established which will be pre-filled on the next startup. You are able to set whether or not the password should be stored as part of this process.

Figure 2.1
Connection page




## 2.2 Overview and first steps

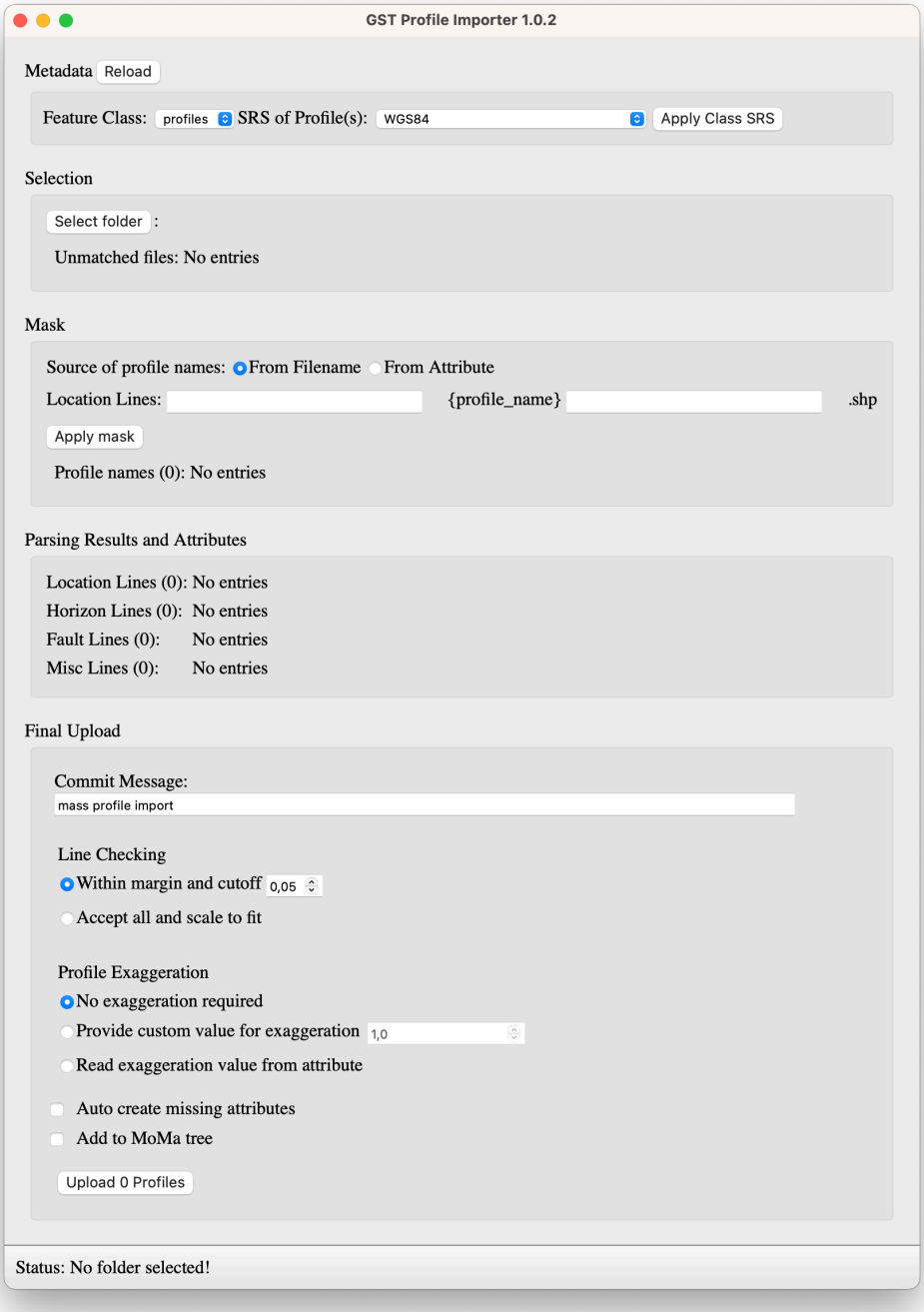
After successfully connecting, you will be greeted by the main page of the GST Profile Importer (see figure 2.2). This page holds all the necessary elements for you to upload multiple profiles to GST Server. The page is split into multiple sections to make the process as straightforward as possible. At the very top is the first section called **Metadata**. In this section you have to select your target feature class (only feature classes of the

profile type are shown here) as well as the SRS your source data is stored in. Should your metadata change for example by making changes in GST Desktop you can use the **Reload** button to update this information in the Profile Importer.

**Note**

If the SRS of your input data should differ from the SRS of the target feature class, GST Server will attempt to convert your input data to the SRS of the feature class.

Figure 2.2
Main page




## 2.3 Selecting a folder

As mentioned before, all your files need to be located in the same directory. You will have to select this folder using the folder dialog in the **Selection** section. After selecting your folder, a list of **Unmatched files** is shown. Here you are able to verify that you have

selected the correct folder and review once more how the filenames of your files are structured. Files of other types, as well as folders, will be ignored.

**Note**

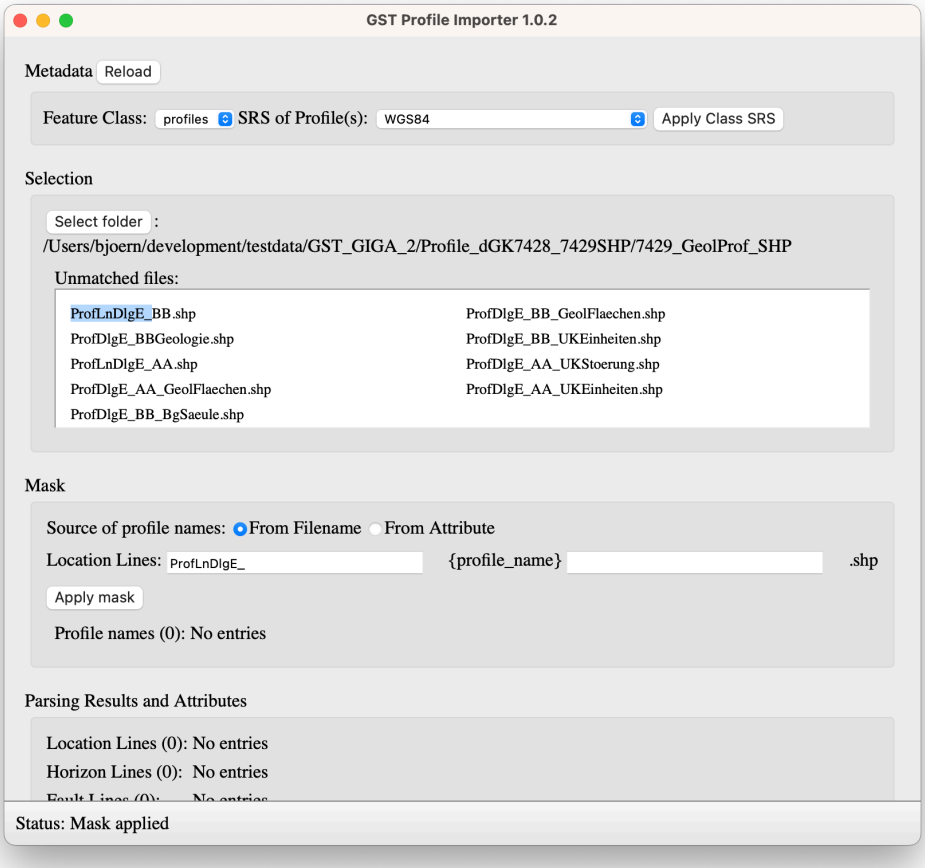
Remember that only **.shp** files will be included here.

Since you have not made any steps to group these files to form profiles yet, all the files are shown in this **Unmatched files** section. As you proceed with the next step, this list should get smaller and smaller. A little preview is shown in figure 2.3 below where a part of a filename is put into the **Mask** section to start the grouping process.

**Note**

It is not required to exhaust this list before making any uploads to GST Server.

Figure 2.3
State after selecting a folder



## 2.4 Grouping files together

To upload multiple profiles it is necessary that the tool understands which file belongs to which profile. You can take the necessary steps in the **Mask** section to provide this information. To achieve this, you will be able to define a prefix and a postfix that will be applied to your list of files. Should a file match your pre-/postfix combination, it will be put into one of the four groups of location lines, horizon lines, fault lines, or misc lines. As mentioned before, each profile is required to have one location line. It makes sense to try and filter out the files that contain the location lines from all the other files first since they will provide the names of the profiles, and then go from there.

## Location lines

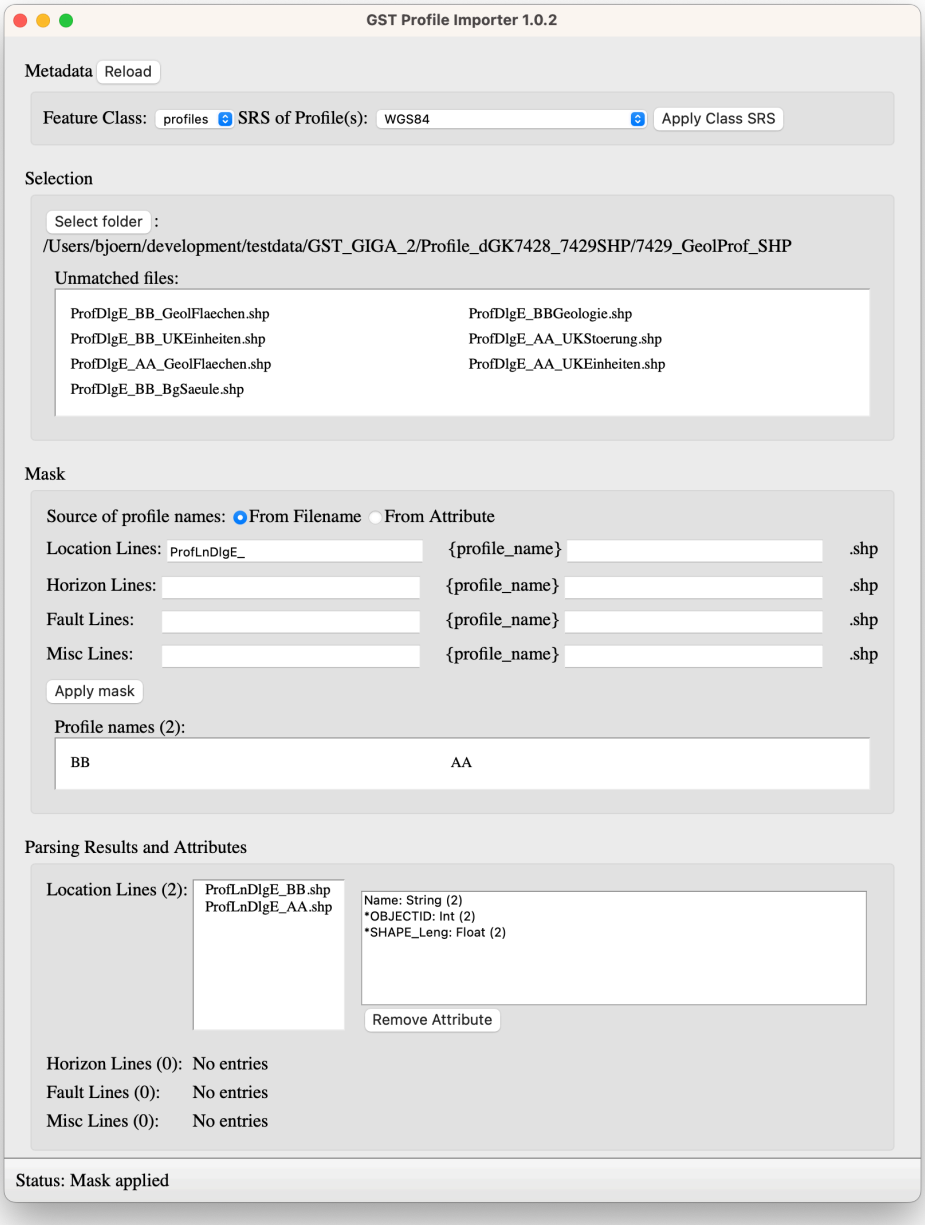
There are two possibilities to provide location lines to the program. Which option you have to choose will depend on your file and data structure.

* **You have exactly one location line per shapefile in one or more files:** In this case, the profile name could come from the filename itself or from an attribute within the shapefile. You can choose the option that works best with your data. To take the profile name from the filename make sure to set the pre- and postfix correctly as described below.
* **You have multiple location lines per shapefile in one or more files:** Profile names have to be provided within an attribute in the shape files. There is no second option that supports this case.

In the example (see figure 2.4), the prefix **ProfLnDlgE_** is used. This prefix has been chosen because there are two files that match it, **ProfLnDlgE_AA.shp** and **ProfLnDlgE_BB.shp**. These are the files that hold the location lines for the two profiles of this example. In this case, our profiles are called **AA** and **BB**. You are able to derive the profile name from the filenames because each file holds exactly one location line. Note that the profile name itself will have to be part of the filenames for horizons, faults and misc lines later on. If available, we could have also chosen an attribute that holds the attribute names.

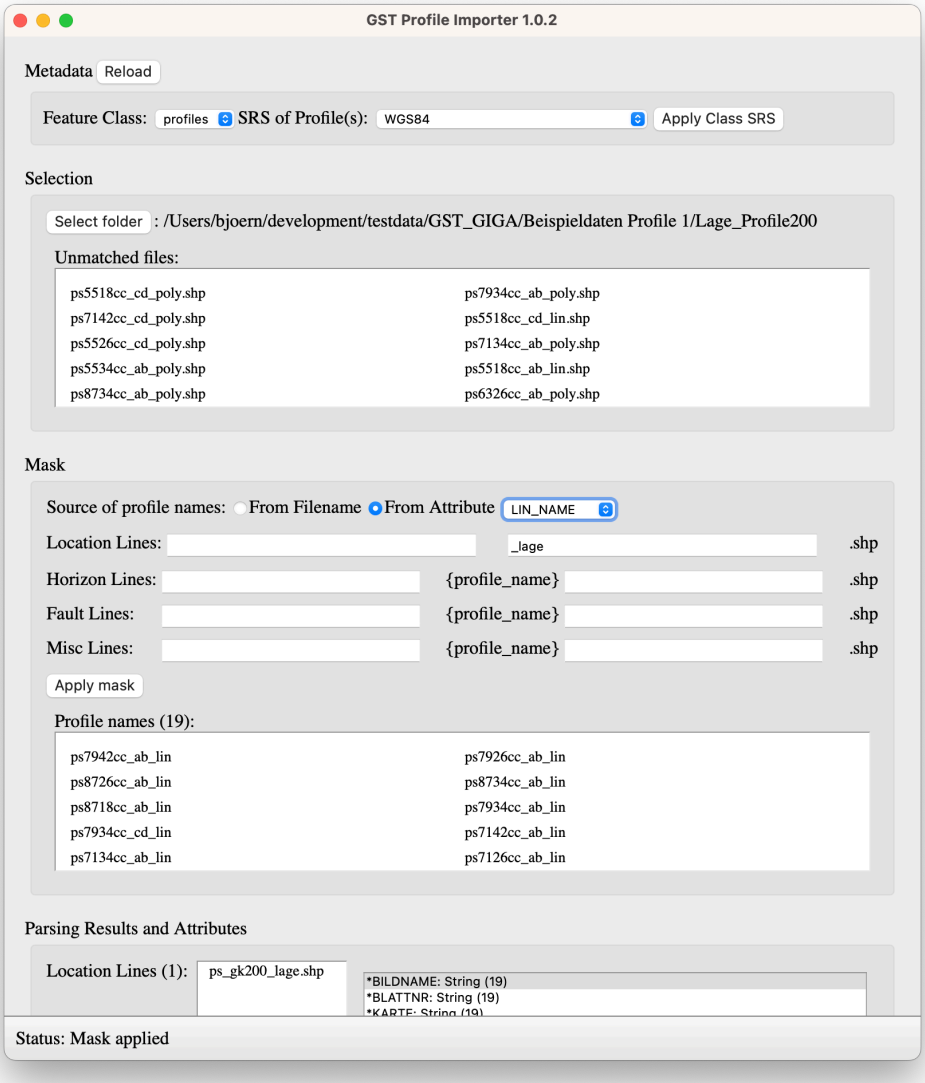
You can apply your current mask by clicking **Apply mask**. This will make the tool look for all the files that fit your pre-/postfixes and show you an intermediate result of grouping. In our case, in the **Mask** section, you are able to recognize the two profile names you have identified beforehand. Furthermore, in the **Parsing Results and Attributes** section, you can see both files showing up in the first group, the location lines group. Additionally, both files have now vanished from the **Unmatched files** list above.

Figure 2.4
Applying a mask to find all files containing location files, deriving the profile name from the filename




Before moving on we are going to have a short look at an example where one file holds multiple location lines. In figure 2.5 the postfix only catches one file, but since we are using an attribute to determine the profile names, we still get 19 entries in the profile names preview. No matter if the profile names come from the file names or from an attribute, the following steps are the same again. Now that the files that hold the location lines have been successfully identified, you are now able to proceed with files that hold horizon, fault or misc lines.

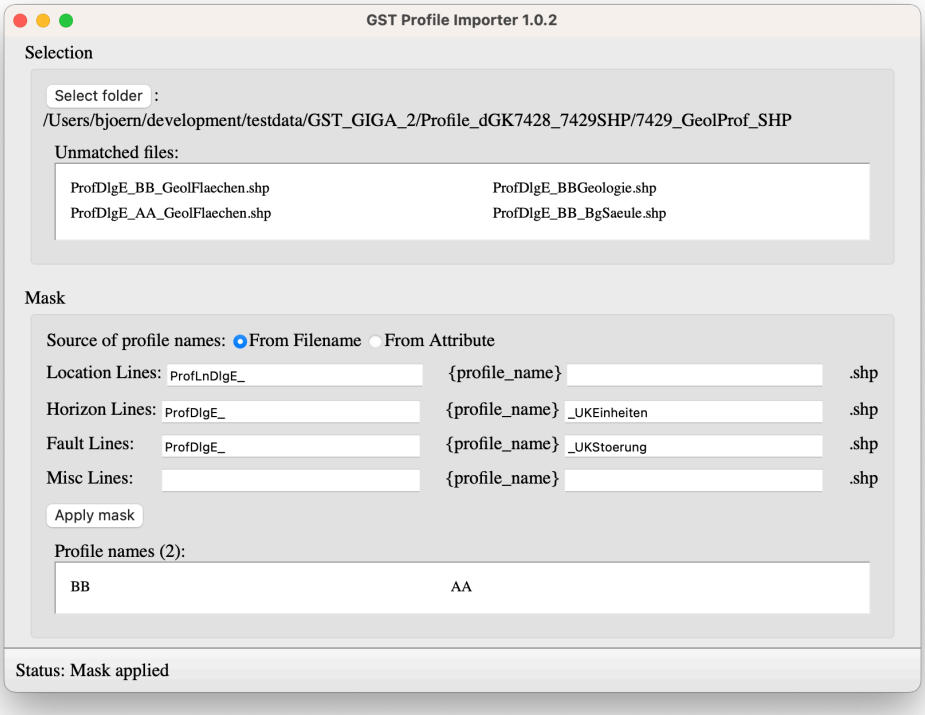
Figure 2.5
Applying a mask to find all files containing location files, deriving the profile name from an attribute




## Horizon, fault and misc lines

Using the remaining files in the **Unmatched files** list as a guide, you are now able to proceed with files that hold horizon, fault or misc lines. If we go back to the first example, the prefix **ProfDlgE_** applies to both horizon and fault types, but they differ in the postfix. One needs **_UKEinheiten** and the other needs **_UKStoerung**. Again, after clicking on **Apply mask**, the list of unmatched files shrinks further. For this example, you are now done with the masking step and can move on to inspect all four file groups and what attributes have been found (see figure 2.6). You are free to make as many changes to the pre-/postfixes as you like until you reach your desired result.

Figure 2.6
State after applying a full mask




## 2.5 Parsing Results and Attributes

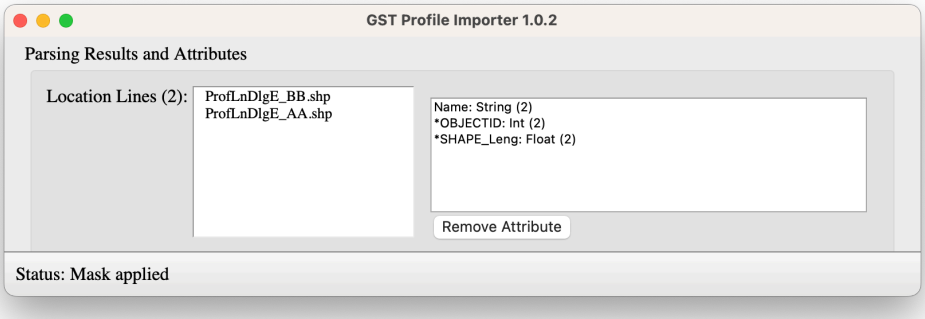
In this section you will be able to review the attributes that are included in your files as well as make your selection as to which attributes should be uploaded eventually. Let's go back one step to explain the **Parsing Results and Attributes section** a bit better.

In figure 2.7 you see the step after matching all the files that hold location lines. On the right you can see a list of attributes. These are the attributes that were found in the files that are shown on the left. You can see the name as well as the type of the attribute. The number in parentheses at the end of each attribute indicates in how many line features it has been found. Since each profile is only allowed to have one location line, it makes sense that these attributes are showing up for two line features.

**Note**

Generally speaking it is acceptable to not have every attribute on every line, but for the sake of data unification it is recommended to try and have the same set of attributes for each line feature. The attribute sets between location lines, horizon lines, fault lines and misc lines however, can differ as much as you want.

Figure 2.7
Small attributes example




In figure 2.8 you can see the result of our complete mask that we have created at the end of the previous section. As you can see we have four different groups with three of them containing our matched files.

Firstly you can see that some attributes have a ***** in front of their names. This indicates that this specific attribute could not be matched to any other attribute that is stored on your target feature class. Switching your target feature class will dynamically affect this section and will always show you which attributes already exist and which are missing. Missing attributes will not be uploaded to the feature class if you do not choose to autocreate them later on.

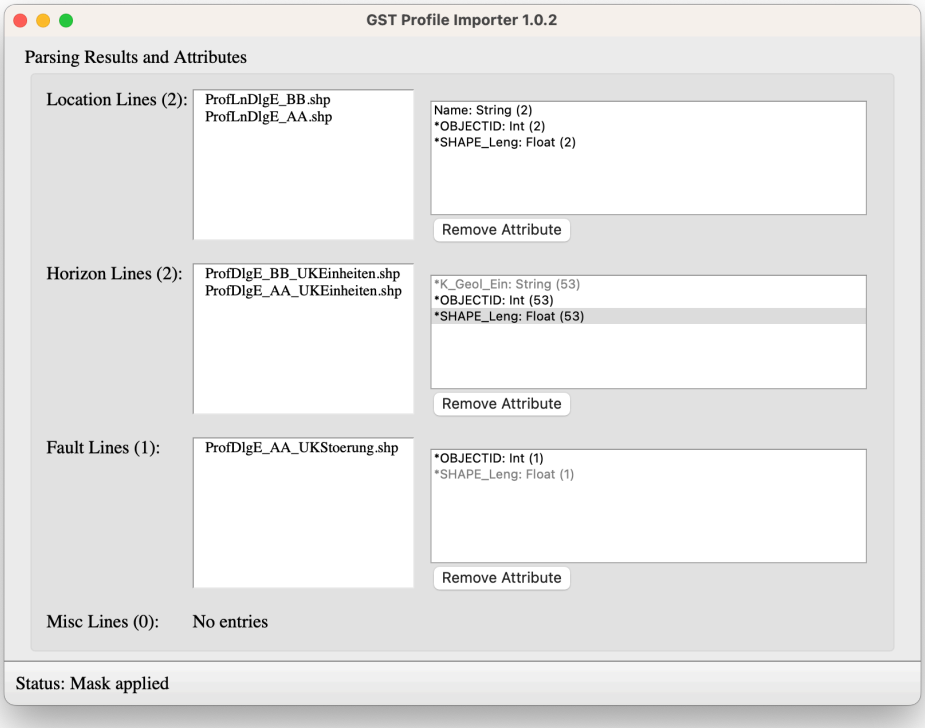
**Note**

Attributes shown for e.g. location lines are only matched with attributes that have the **subtype** "Location Line" on the feature class (visible in GST Desktop). An attribute will not match if the subtype is different (e.g. a "Location Line" attribute will not match if an attribute exists with the "Root class" subtype).

Secondly, you have the option to granularly choose which attributes should be uploaded/created and which can be ignored. Ignored attributes will then appear greyed out. You can make this selection individually for all four groups. Should you choose to revert your decision, you can always select an attribute and re-add it to your selection again.

To give another example for the number in parentheses: For horizon lines, 53 line features were found in the files that belong to this group. These 53 features will be spread over the two profiles we were able to find. Furthermore only the profile **AA** has a file for fault lines. This is no issue for the upload of profile **BB**.

Figure 2.8
Complete attributes example with missing and deselected attributes




## 2.6 Loading your profiles to GST Server

Before being able to upload your profiles, you have to enter a commit message and decide whether or not any non-existing attributes (marked with a *) are supposed to be automatically generated with their respective types. If all your attributes exist already, this option will have no effect on the upload.

If necessary a couple of additional settings can be made. First, **Line Checking** allows you to control how strict your profiles should be checked on upload. The first option, **With margin and cutoff**, allows for some margin of error where e.g. horizon lines are allowed to exceed the location line, but will be cut off. Should the horizon line be much longer than the location line the profile will be rejected. With the second option, **Accept all and scale to fit**, all lines will be accepted and scaled to fit the extends of the location line.

A second selection allows you to define if the profile data to be uploaded is exaggerated in the direction of the z-axis. This value can either be constant over all profiles (**Provide custom value for exaggeration**) or be dynamically read from an attribute as well (**Read exaggeration value from attribute**). For example if you provoide a custom value of 1,2 the program expects all your input data to be scaled to 120% of its original size and thus will **downscale** your data on upload.

After you have made all your settings, the final upload button will tell you how many profiles have been found and will be uploaded. After clicking the button, the status will indicate that the upload process has started. Please note that at the moment there is no progress indicator available, so please be patient. After the uploads have been finished, the status will tell you how many profiles have been uploaded successfully. In case that some or all profiles fail to upload, a button will pop up on the right end of the status bar that will present a dialog with all collected error messages.

Figure 2.9
Upload section