

Seismic Handler development

Marcus Walther and Klaus Stammer

Federal Institute for Geosciences and Natural Resources Bundesanstalt für Geowissenschaften und Rohstoffe
Seismological Central Observatory Seismologisches Zentralobservatorium

Seismic Handler and python programming language

Seismic Handler's user interface is rewritten in python programming language to gain more flexibility and maintainability.

This applies to the command line (formerly SH) as well as the graphical part (SHM). In order to achieve platform independence and future support, the **wxWidgets** graphical toolkit was chosen (leading to SHX).

Seismic Handler is currently licenced under GPL. It will change to LGPL to allow a more flexible usage in third party applications.

Target platforms: Linux, MacOS X, Windows.

Using python offers great flexibility in terms of accessing other software. So reliable seismological methods from current C-coded Seismic Handler can be used next to Fortran routines and libraries written in other programming languages.

Python also ships with many state-of-the-art libraries for numerical (e.g. numpy) and graphical tasks (e.g. matplotlib).

To widen support for seismological formats we incorporate the great open source **obspy** package (see www.obspy.org). All major data and meta data formats are supported, including Seismic Handler's Q-file.

In order to achieve future extensibility and maintainability the development of the new version (SHX) is accompanied by software test frameworks.

Any change in the code is checked against test routines ensuring reliable enhancements. This is essential to keep compatibility to former versions.

So existing programs written in Seismic Handler's scripting language will also run in newer versions. Scripts using the graphical display may need a minor update. Nevertheless new work should be done in the python environment to profit from new features easily.

Documentation

An up-to-date documentation is available at our project website www.seismic-handler.org.



This site is an open wiki allowing everyone to contribute to documentation of Seismic Handler and offering the possibility to publish own enhancements rapidly.

Information

Additional to information published on the website, new mailing lists help to incorporate Seismic Handler users.

Three mailing lists are available:

- Announce: regular information on new releases
- Users: support on using SH/SHM/SHX
- Devel: discussion and support regarding SH's development

To subscribe, simply visit list.seismic-handler.org, take a list of your choice, fill in and submit the registration form.

All contributions are archived for later demands.

Development

On the website, full development source code can be accessed.

There are three ways of getting the sources:

- <https://www.seismic-handler.org/svn/> subversion repository (recommended)
- syntax highlighted code browser on website
- pre-packed tarballs (until now only SH/SHM)

Additionally you can download virtual machines for running Seismic Handler on e.g. Windows OS. The latest version is based on "lightweight Ubuntu 10.04" taking a smaller amount of disc space and working memory than full-featured desktop environments. All you need is "VMware player" (free of charge).

www.seismic-handler.org

Ticket system for suggestions and bug reports

A major part of the project website is the ticket system. We use this method for submitting bug reports and suggestions for improvement of Seismic Handler.

At www.seismic-handler.org you will find a trouble ticket system fitting these concerns.

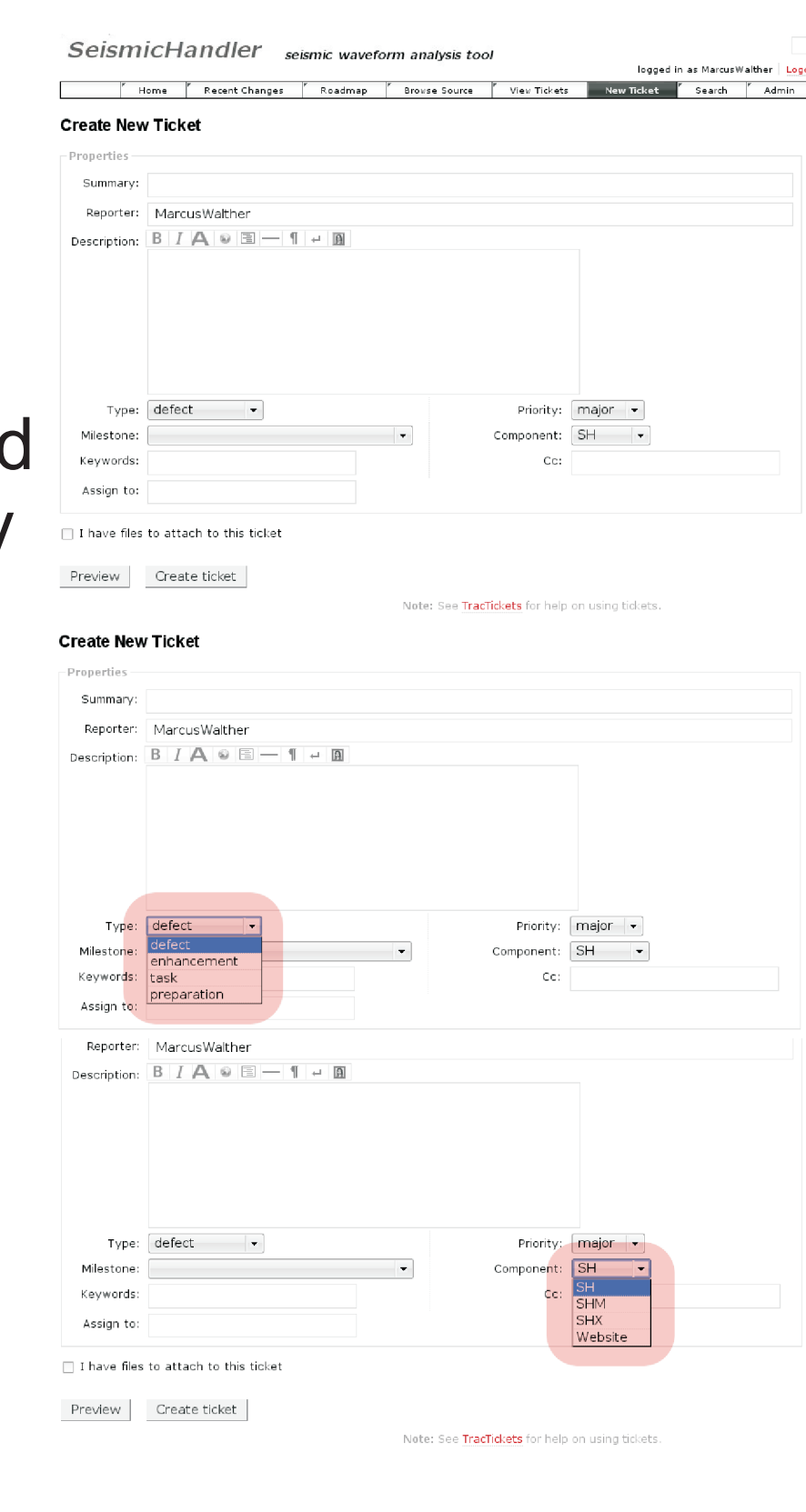
If you have any wishes for enhancement or detailed bug reports, please register at our website. Afterwards you are able to create a new "ticket":



Further development is strongly dependent on user's demand, so please contribute. On the next panels we show, how to create such tickets.

Steps to create a ticket:

- supply a meaningful summary title,
- write as much detailed description necessary for explaining your concern,
- choose type of ticket (defect, task, ...)
- select proper branch of Seismic Handler (SH, SHM, SHX or website)
- if applicable, pick a milestone



- choose a suitable priority (if we are of another opinion, we'll change it),
- please preview your ticket and
- finally submit it.

The ticket system will track your request and record all changes until the issue has been solved.

