ADAPTATION OF THE APPLICATION WASPAR TO NEW LINUX DISTRIBUTIONS

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Abstract In this paper we present the process of adaptation of WASPAR, a free software tool that processes and displays wide-angle seismic data. It originally worked in an early version of Fedora, so the intention was to make it compatible with more Linux distributions, such as new versions of Fedora or Ubuntu. Further adaptations have been planned, so it can also be used in a Windows environment.

1.Introduction

WASPAR (Wide-Angle reflection-refraction Seismic data Processing and Representation), is a software that processes and displays wide-angle seismic data.[1]. It was designed to read different raw data formats, construct record sections, process them using existing and newly developed algorithms, pick seismic phases and generate graphic files using a single interface. It was also designed in a modular way using a plug-in architecture to manage raw data access and processing functionalities.
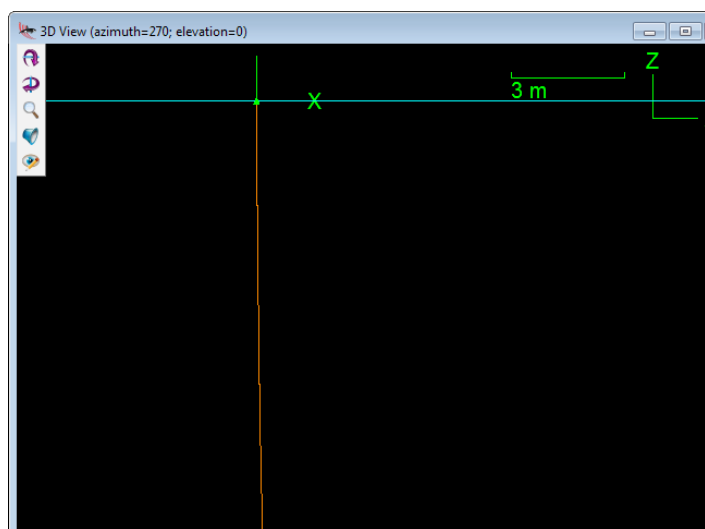
The WASPAR application was released in 2006, and was designed to work on an early distribution of Fedora, one of many Linux distributions. After this years, though, it ended up showing some problems with some of the most recent and popular distributions, so it was decided to begin a process of adaptation, in order to make it available for most of the users without having to work with another operative system.

2.Adaptation of the software

The first priority of this project was to make the program fully functional again on the latest distribution of Fedora, currently Fedora 13. This was achieved by revising the source code and modifying part of its content. The main issue was related with some of the graphic libraries used, being that most of them were now obsolete. Because of this, they had to be replaced with their latest versions, and the software had to be adapted to them.
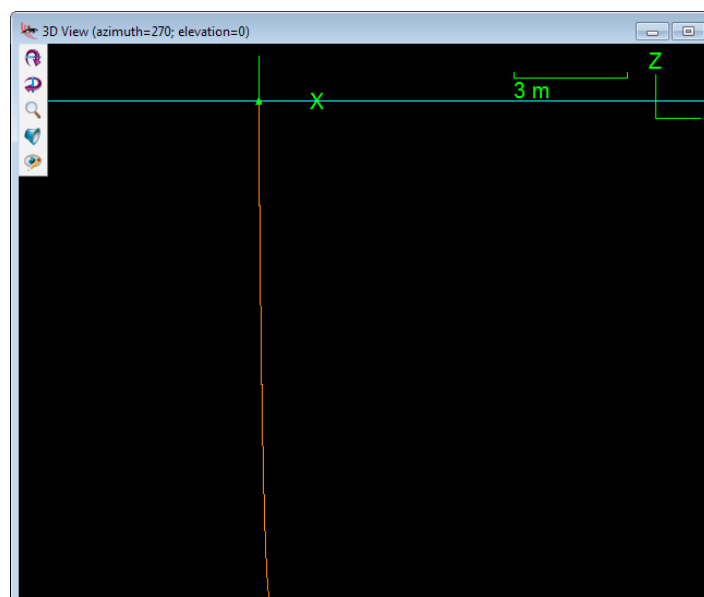
At the same time, the idea was to make the software work on probably the most popular Linux distribution nowadays, Ubuntu. During this process, some problems appeared, mostly due to its different architecture (Fedora is based in Red Hat, while Ubuntu is based in Debian). Because of this, some of the libraries used in this version where different, and so where some parts of the source code that had to be modified. Finally, both processes were finished, and now the application works properly in both systems.

3.Conclusions and future additions

The process of adaptation has not ended yet, and the functionalities of the software have to be tested in some more platforms, including Windows. Also, there are new features that could be added in the form of new plug-ins, such as data repositioning or new processing filters.

References
[1] A new multi-platform modular software tool for wide-angle reflection/refraction seismic data processing and representation (WASPAR). I.Rodríguez, Computers & Geosciences 34 (2008).