OpenSeaSeis: A simple open-source seismic data processing system

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Summary
OpenSeaSeis is an open-source seismic data processing system owned and distributed by CWP/Colorado School of Mines since 2013. The package is based on “Seaseis” which was begun in 2006, and publicly released in 2009 by Bjorn Olofsson.

The package consists of an interactive 2D seismic viewer, with some simple processing options, as well as a batch flow processing environment permitting a number of seismic processing operation, some taken from Seismic Unix.
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Strengths

1. Data reading/viewing. The viewer permits SEGY, limited SEGD, and SU format data to be read easily and displayed as either image plots or as wiggle traces.
2. Simple processing. Demo processing flows are provided so that simple batch processing sequences may be performed.
3. Run and Manage a large number of production flows. Such as for a 3D survey.
5. Module addition. Programmers (C, C++, Fortran) can copy-paste the module skeleton to allow new modules (such as from Seismic Unix) to be added.
6. Java GUI modification. Programmers can quickly create a new interactive application for visualization/processing/manipulation of data.

Drawbacks

1. Its current limited geophysical module library.
2. Its current lack of parallel programming. Though the modular nature may facilitate adding MPI/parallelism.

Opportunities

Because there has been only a small amount of development, this presentation is an appeal for interested parties to consider taking on the task of improving this package. See (Olofsson, 2012) for more information.
References


(http://www.earthdoc.org/publication/publicationdetails/?publication=59959)