

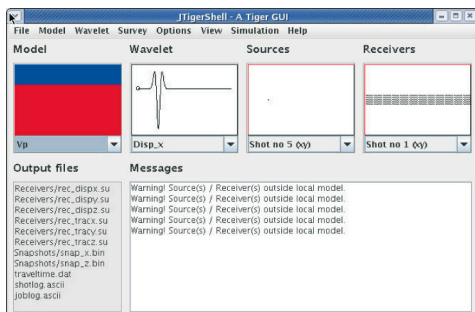
TIGER is a fully featured 3D finite-difference modeling program. Through efficient parallelization, it can provide synthetic 3D data sets to optimize survey layouts, aid interpretation, test new processing techniques – all within days on industrial-size clusters.

TIGER features

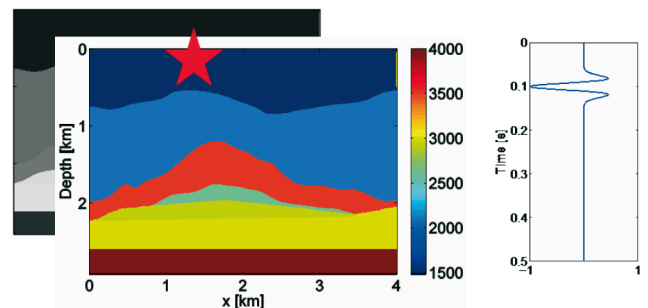
- Modeling for acoustic, constant-density acoustic, elastic, VTI, VTI-acoustic, TTI media
- Viscoacoustic and viscoelastic modeling
- Arbitrary (on-grid) source and receiver geometries
- Generation of shot gathers and wavefield snapshots
- Source types: explosive, shear, directional force
- Highly effective perfectly-matched layer absorbing boundaries
- Optional free-surface conditions
- Up to eighth order optimized spatial difference operators to allow for coarser grids and control numerical dispersion
- Automatic stability check gives recommendation for time step and FD operator order
- Dual parallelization for model decomposition and simultaneous multi-shot modeling
- Support of 64-bit and 32-bit linux platforms

User interface

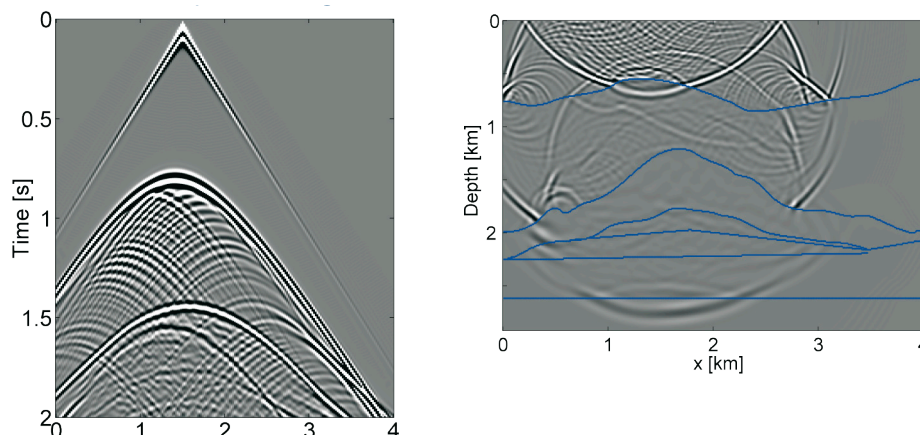
- Input generation or import
- Basic model building, visualization



Input: Subsurface models, sources

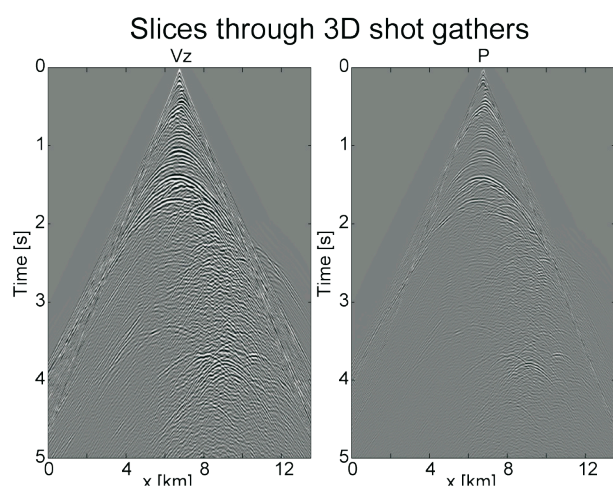
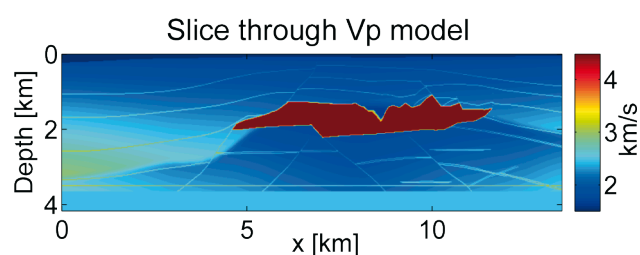


Output: Shot gathers, Wavefield snapshots

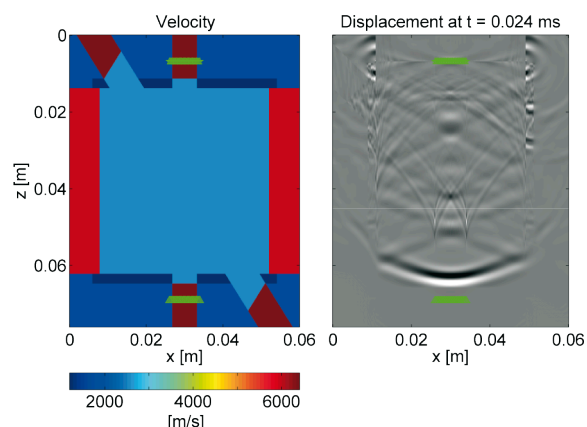


Example of applications

■ SEG salt model:



■ Micro-scale: modeling of wave propagation in drill cores



- **Large models:** tested for model sizes larger than 1000x1000x500 cells
- **3D surveys:** used for modeling a survey with >5000 shots and 3D receiver coverage, producing >1TeraByte of data
- **Long-term simulations:** stability has been verified for >30s of wave propagation, >20min for acoustic models

Prospective usage

Contact us if you wish to

- evaluate TIGER for your needs
- obtain licensed executables of TIGER for installation on your Linux cluster
- rely on us to generate synthetic data and carry out modeling studies
- discuss possible projects for further development of the code



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