PEGASUS: Overview

PEGASUS *Seismic velocity analysis:*

Velocity picking:

Simple load of SEGY format gathers
Build velocity fields quickly from scratch or load existing fields for update
Bootstrap picking on non-NMO corrected gathers
On-the-fly de-multiple using picked or seed velocity
Auto-picker, semi and fully automatic modes

Velocity QC:

Load gathers and picked velocities for impartial, independent QC
QC tools for rapid review of pick accuracy and consistency
On-the fly stacking using picked field
NMO corrected gather panes

Geostatistics and Repair:

Map view geostatistics:
- Pick frequency
- Interval and RMS extrema
- Analyst bias - “stripes”

PEGASUS

Seismic velocity analysis:

Velocity Analysis:

Velocity picking, algorithms:

- 2nd order
- 4th order, 6th order (Dix/Taner curved ray)
- Anisotropic NMO, VTI (ή) and HTI (δ)

Tools for rapid analysis:

- Rapid move between locations.
- Interpolate (optionally) seed function from picked fields
- Extrapolate to tmax using fixed interval velocity
- Multiple databases for velocity iterations

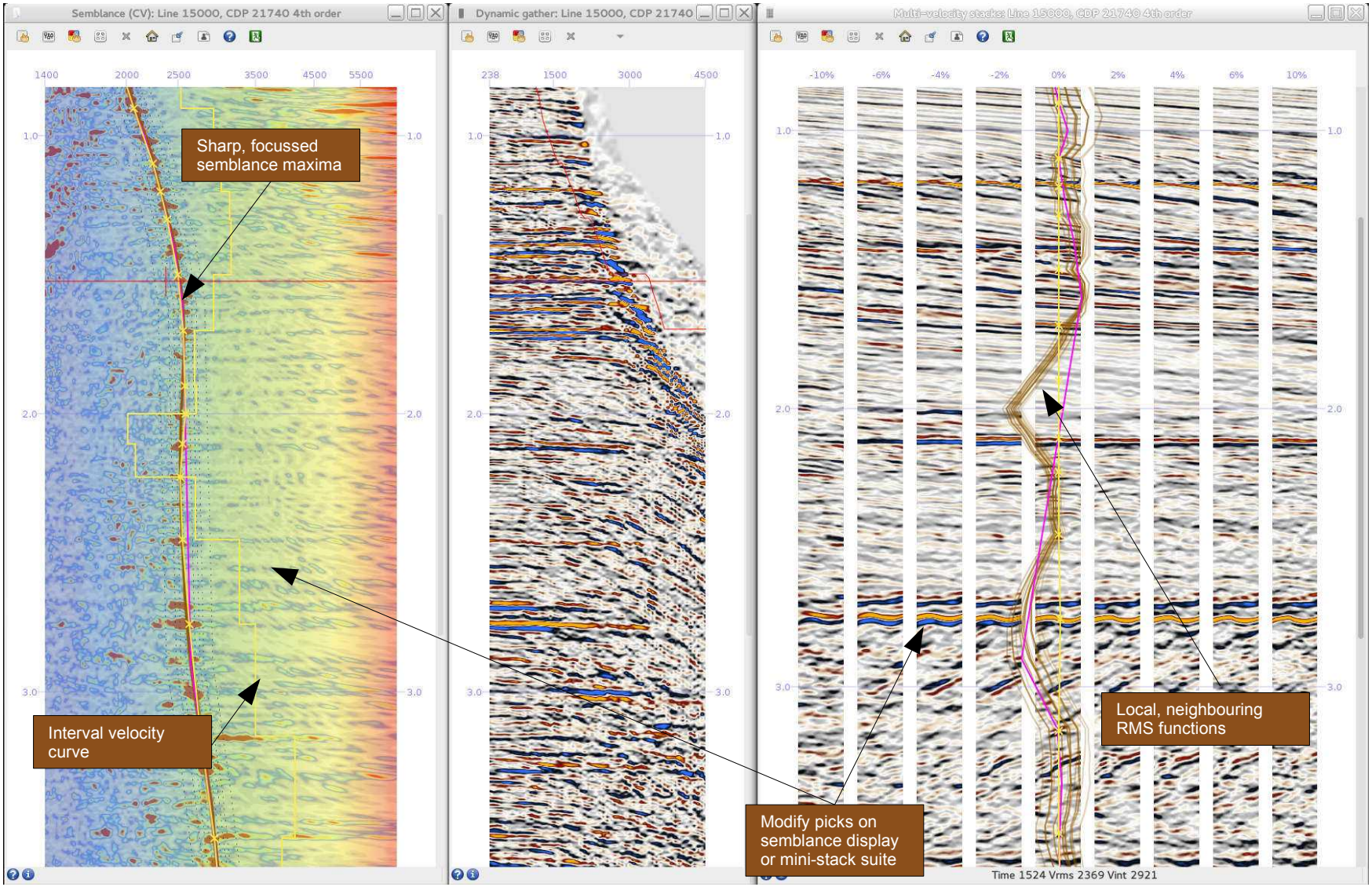
Real-time processing with picked field.

- Demultiple *(FK and TAUP applied in real-time)*
- Stacking *(full line stack and analysis location mini-stack suite)*
- *Seismic data analysis tools, x/y header plots, frequency and FK sprectra*
- *Seismic data export*

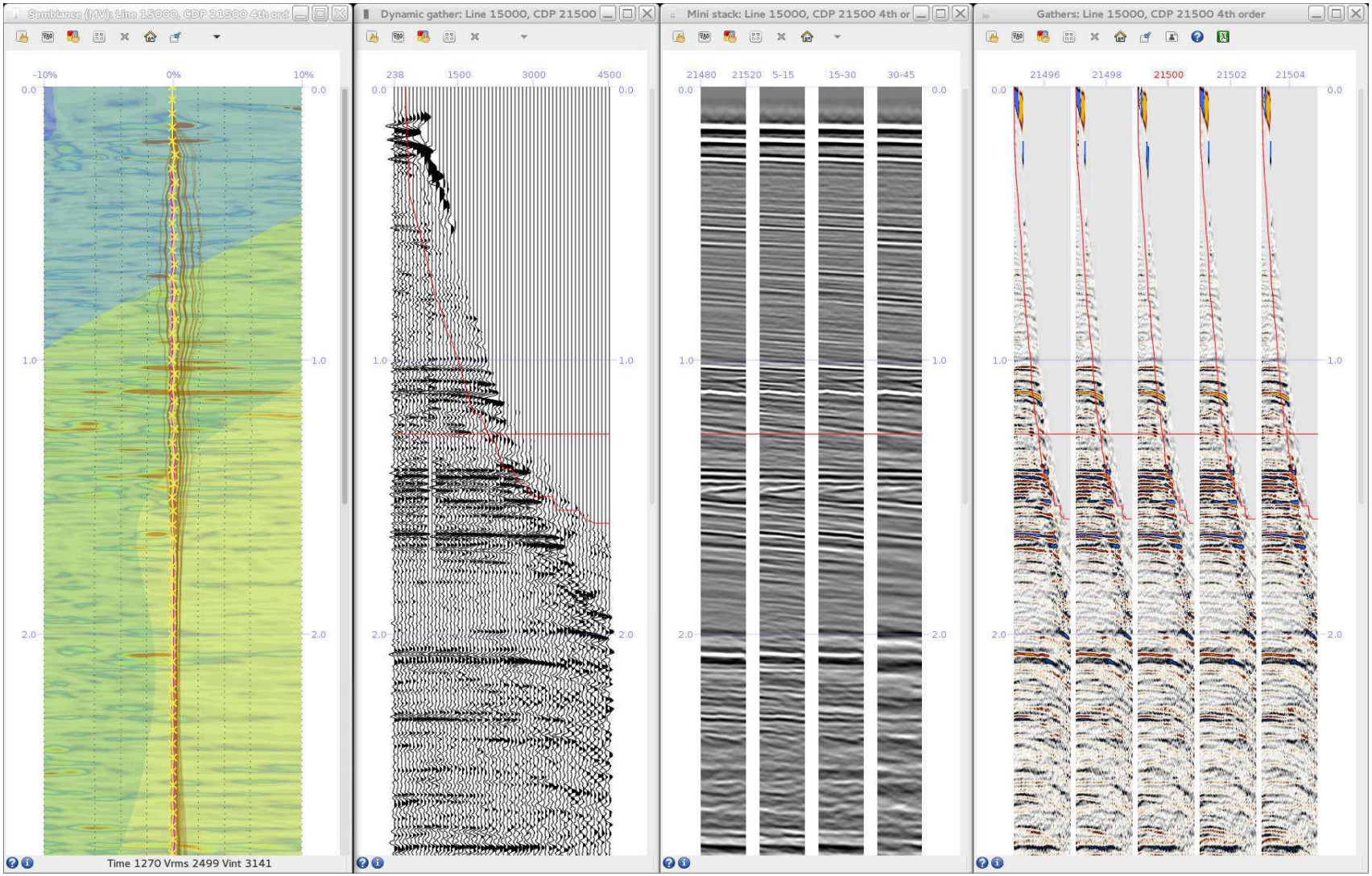
Multiple user interaction with common database.

- Ideal for large projects
- Record of user and pick-time stored with each function

PEGASUS: velocity analysis



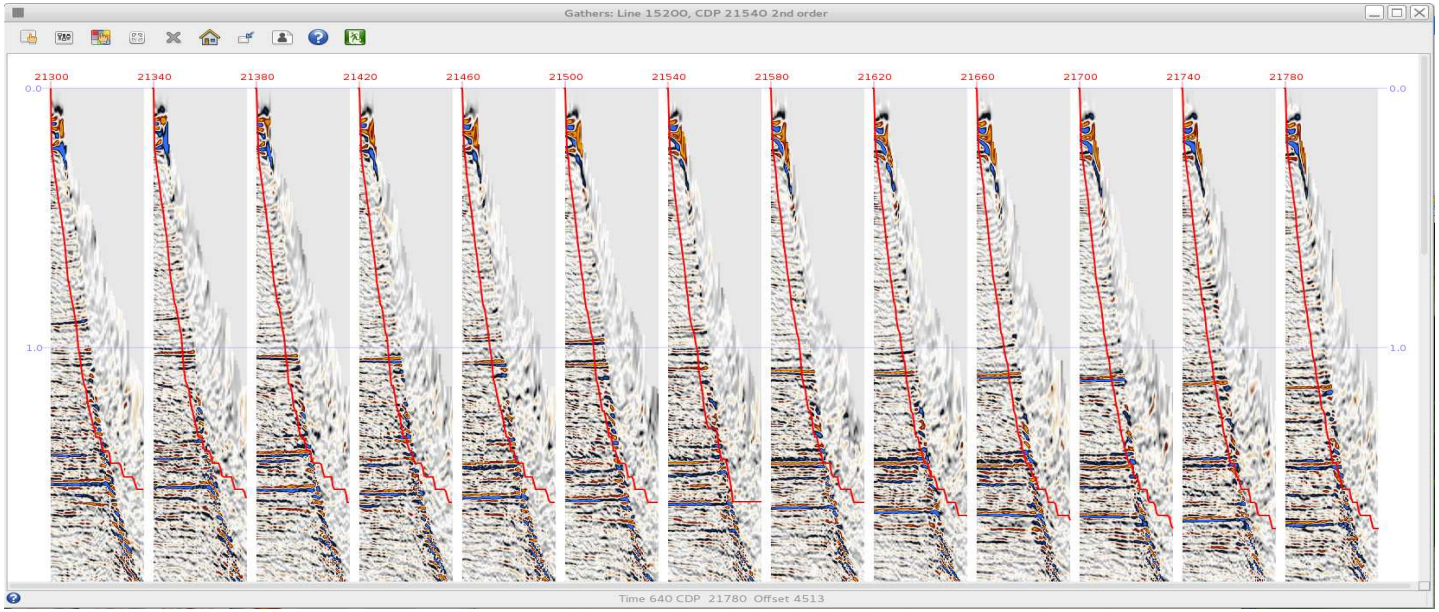
PEGASUS: velocity analysis



Selection of display palettes and plot styles

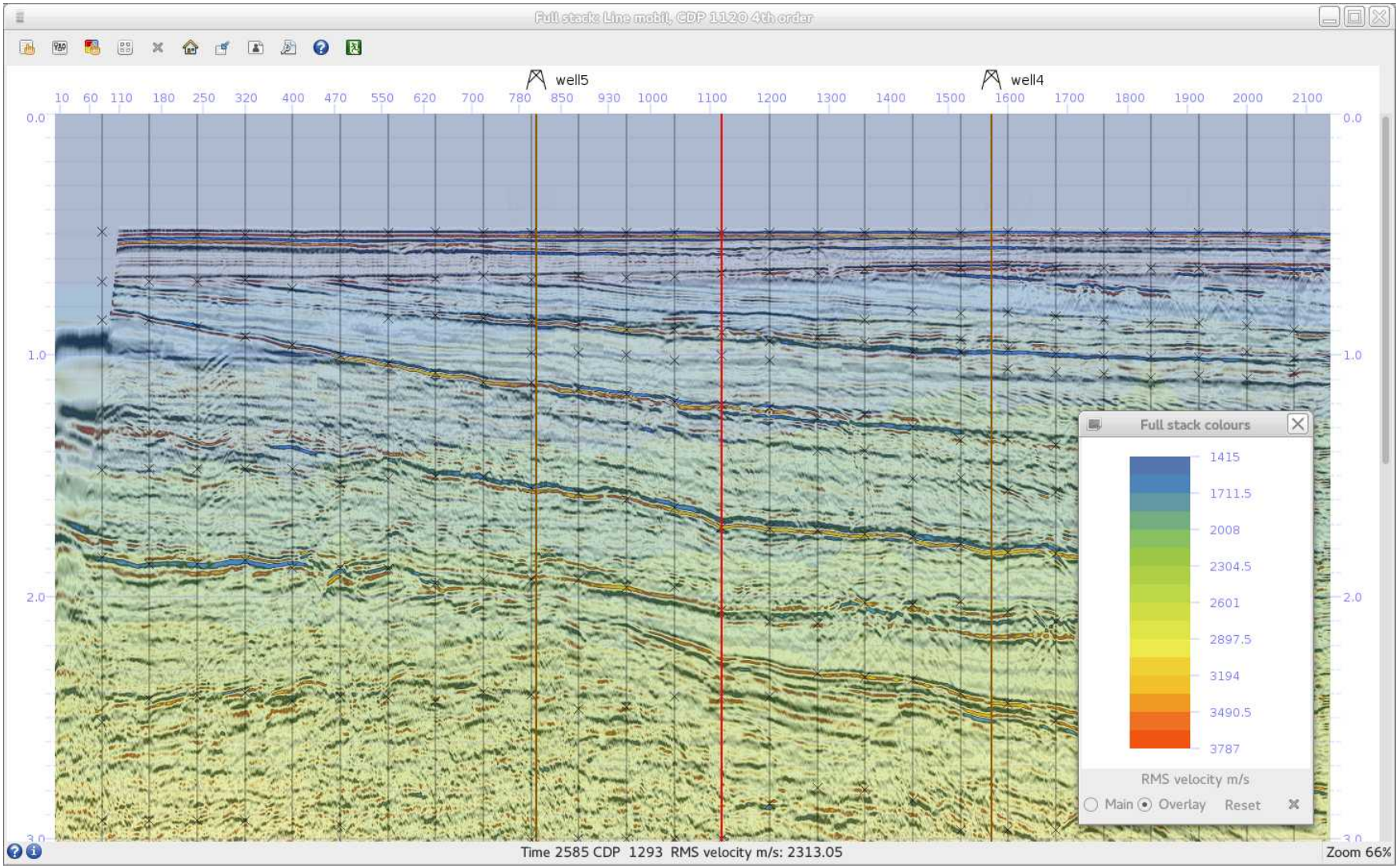
PEGASUS: velocity analysis

Mini angle stacks update in real-time



Rapid check for flat gathers at and around pick locations.

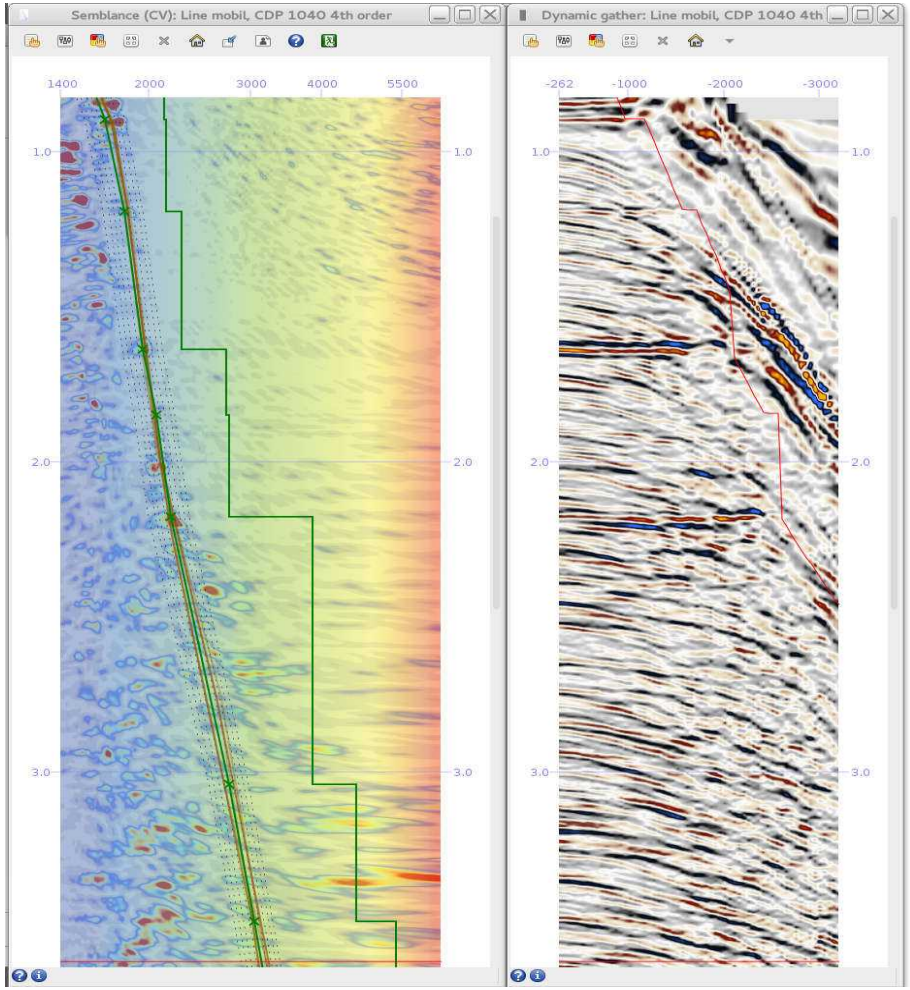
PEGASUS: velocity analysis



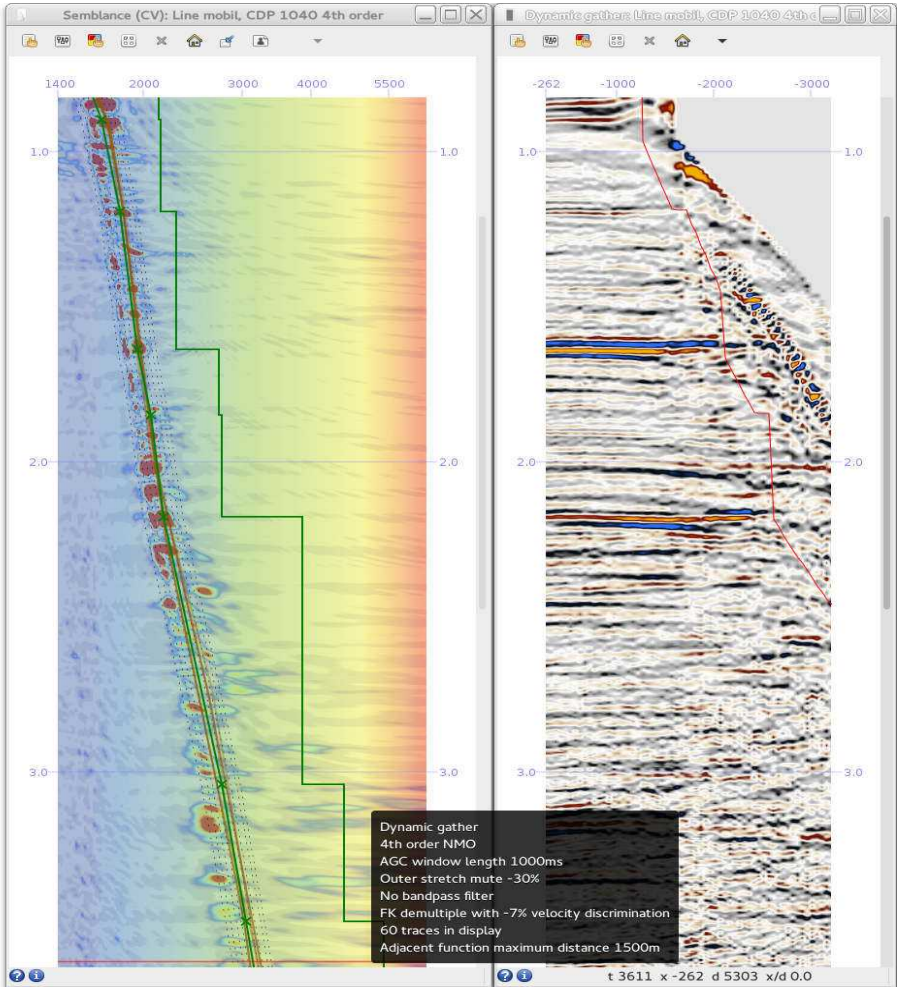
Real-time full line stack with velocity overlay

PEGASUS: velocity analysis

On-the fly processing: Demultiple, Bandpass filter, AGC scaling

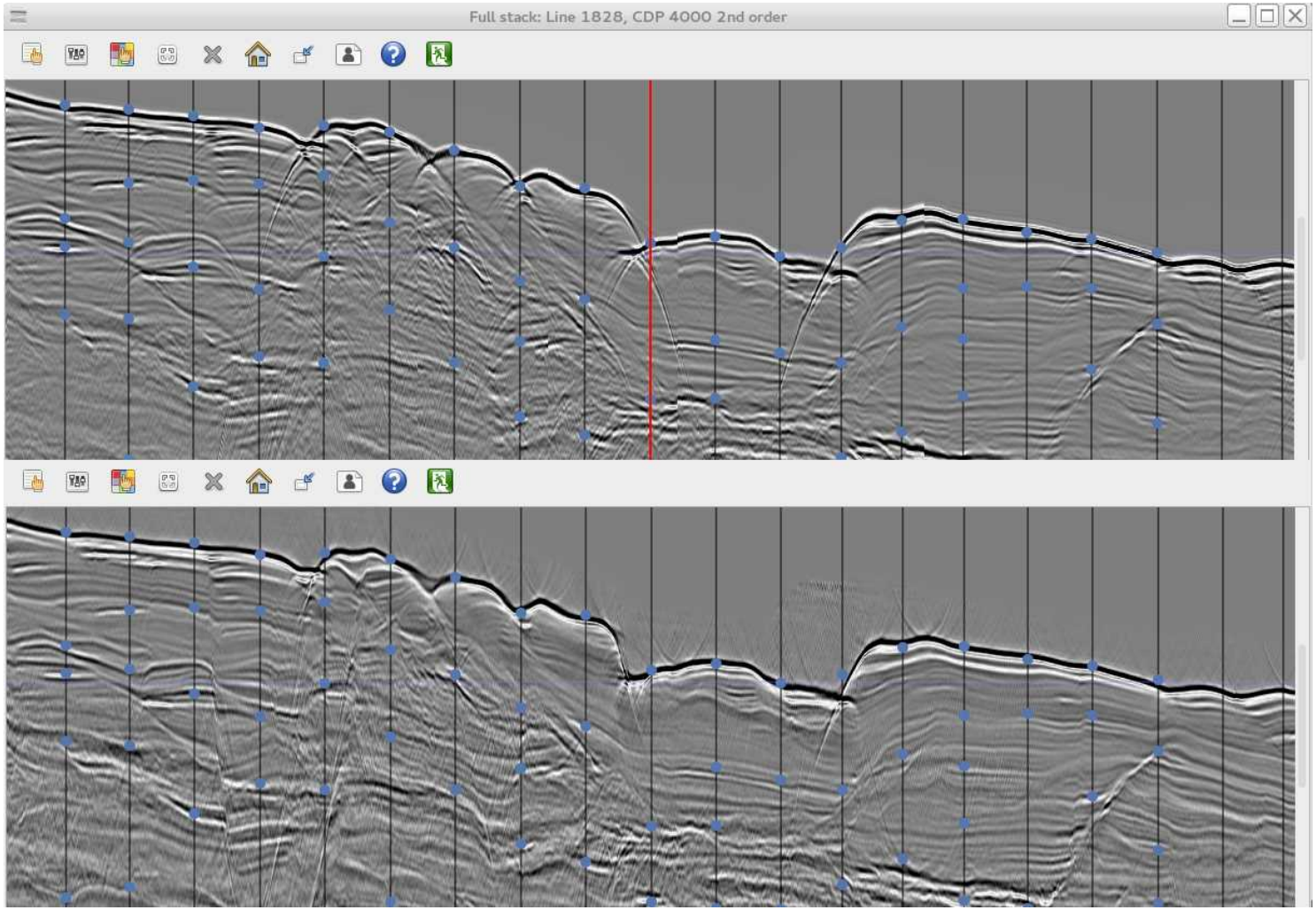


Without demultiple



With demultiple

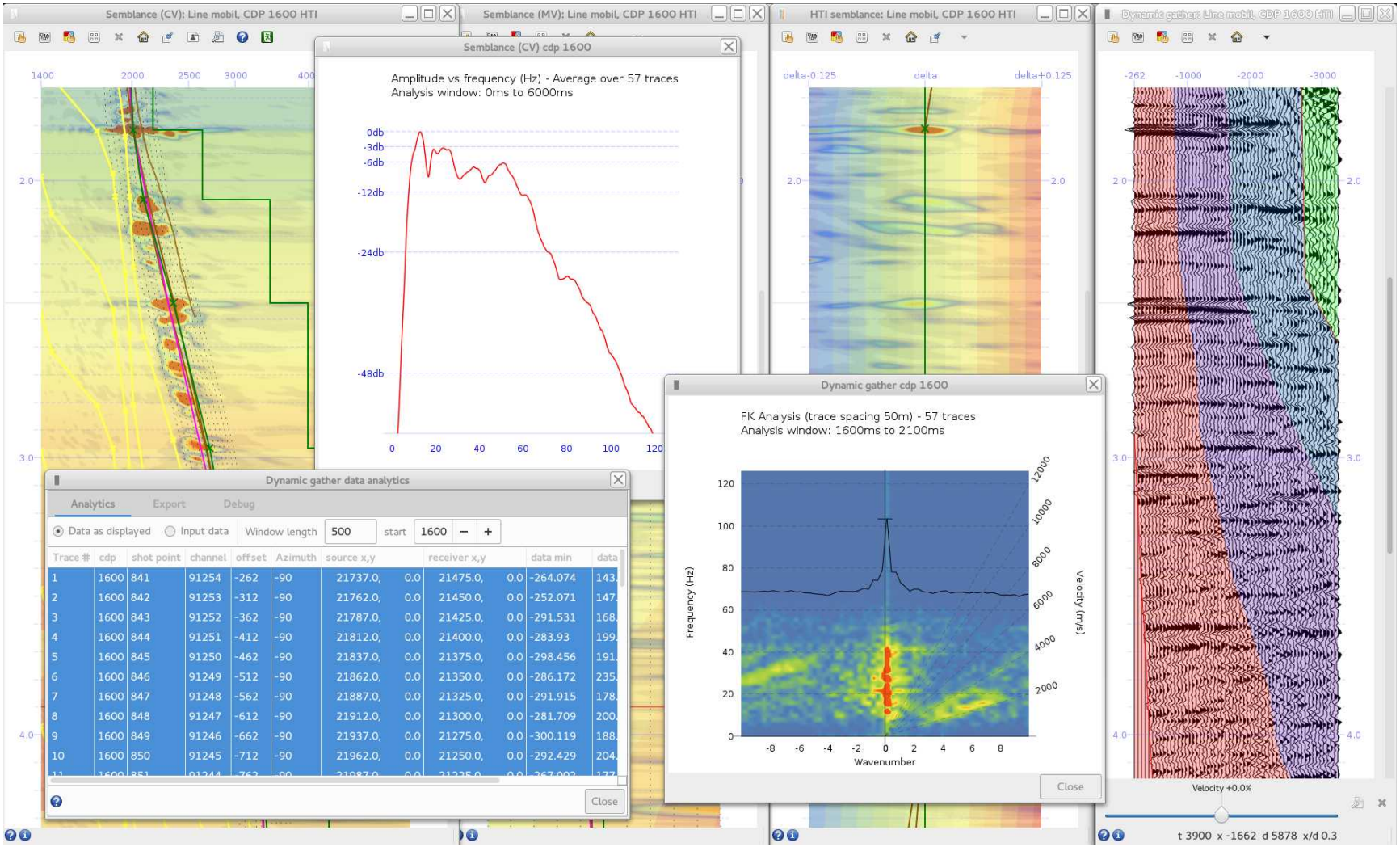
PEGASUS: velocity analysis



On-the fly processing: Post stack Kirchhoff migration

PEGASUS: seismic data analytics

Seismic data analysis tools update in real-time



PEGASUS: Geostatistics and repair

PEGASUS *Seismic velocity analysis:*

Geostatistics and repair:

Velocity maps:

Time/horizon surface contour maps or point (smartie) displays with cultural overlays
- Well locations
- Polygons with clipping, automatic convex hull calculation

Choice of contouring algorithm:
- Fast offset weighted
- Natural neighbour

Choice of attribute:
- RMS velocity
- Interval velocity
- Variance (deviation from local mean)
- Interpreter ID, date of last update, NMO algorithm.
- QC attributes; min/max lag, min/max RMS vel, min/max Interval vel.

Repair:

Selected lines/ranges to local distance weighted mean.

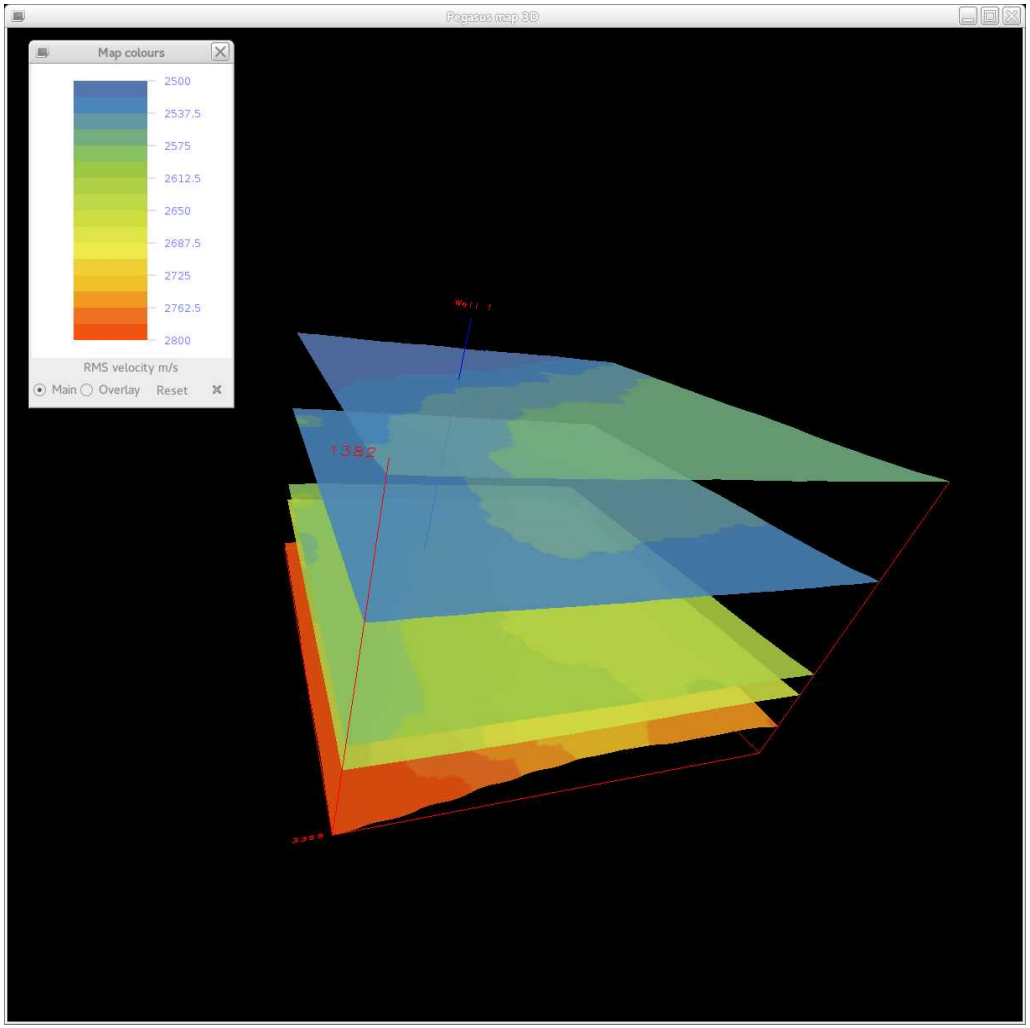
PEGASUS: Geostatistics and repair

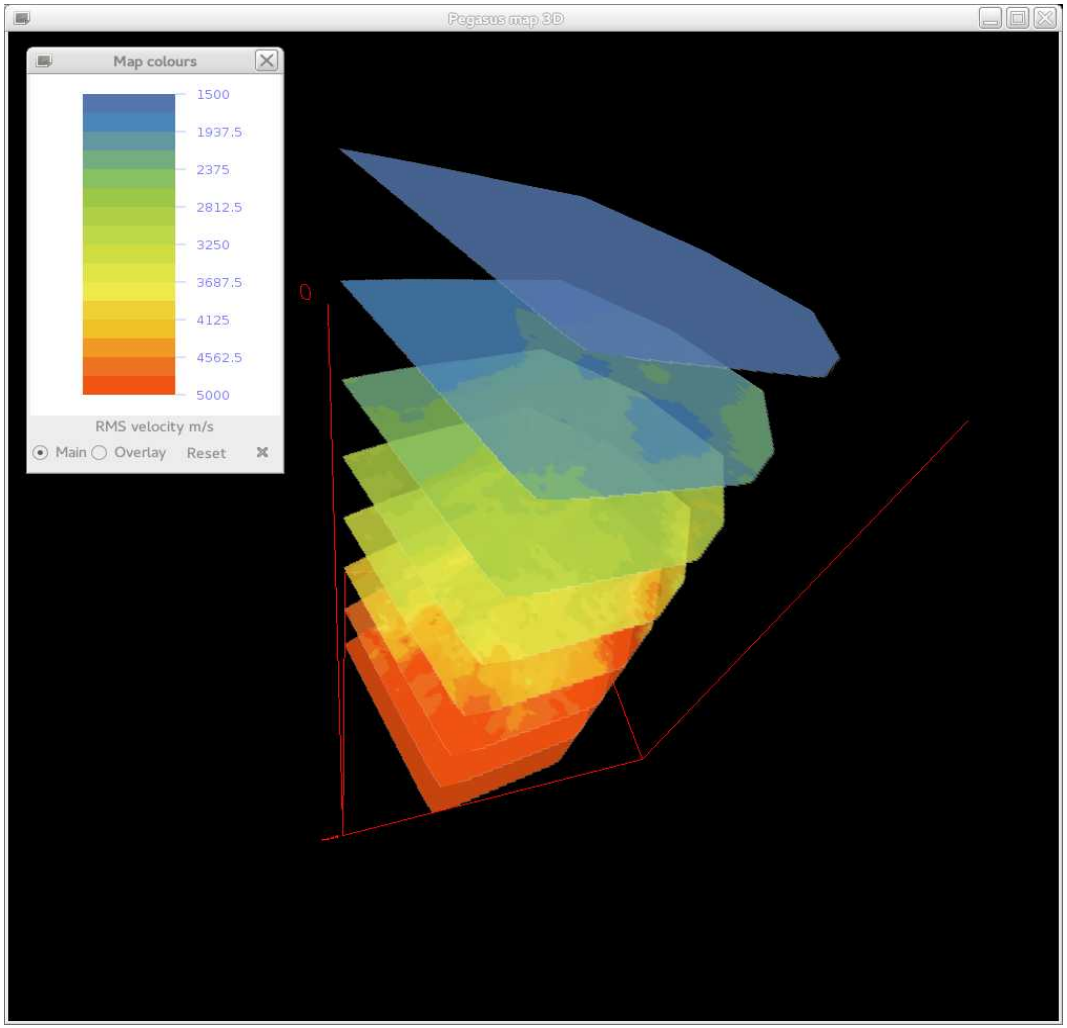
Before Stripe repair

PEGASUS: Geostatistics and repair

After Stripe repair

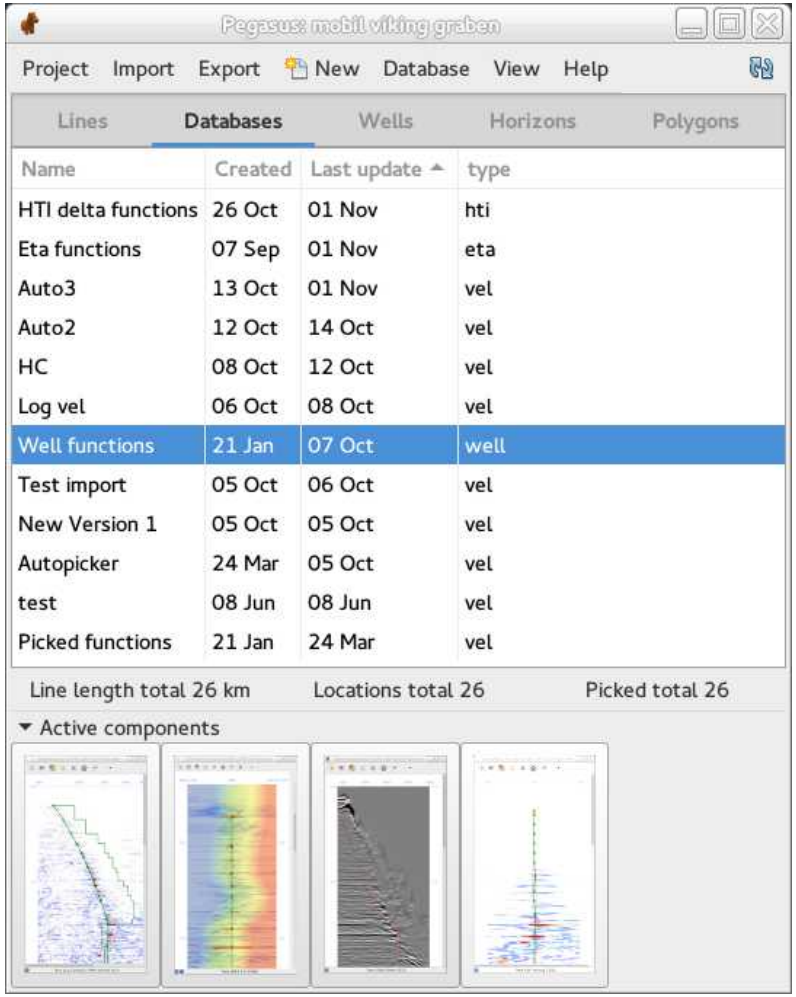
PEGASUS: 3D surface plotting





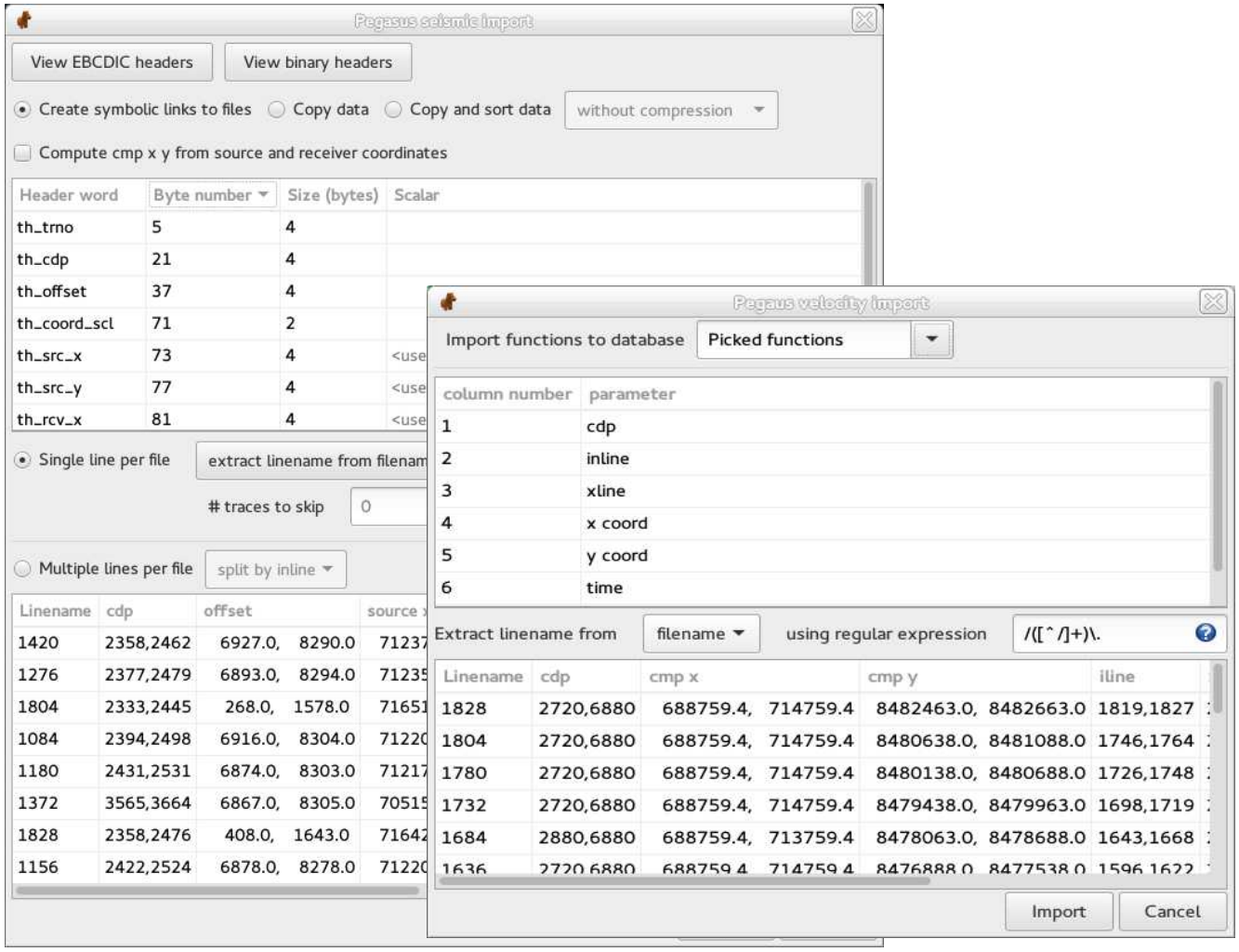
Rotate and zoom slices and horizon surfaces in real-time

PEGASUS: Loading and management



Snapshot and switch velocity databases on the fly

Velocity and seismic import wizards



PEGASUS: Contact details

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