

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: velocity analysis



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Seismic velocity analysis:

Velocity Analysis:

Velocity picking, algorithms:

2nd order

4th order, 6th order (Dix/Taner curved ray)

Anisotropic NMO, VTI (η) 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 spectra

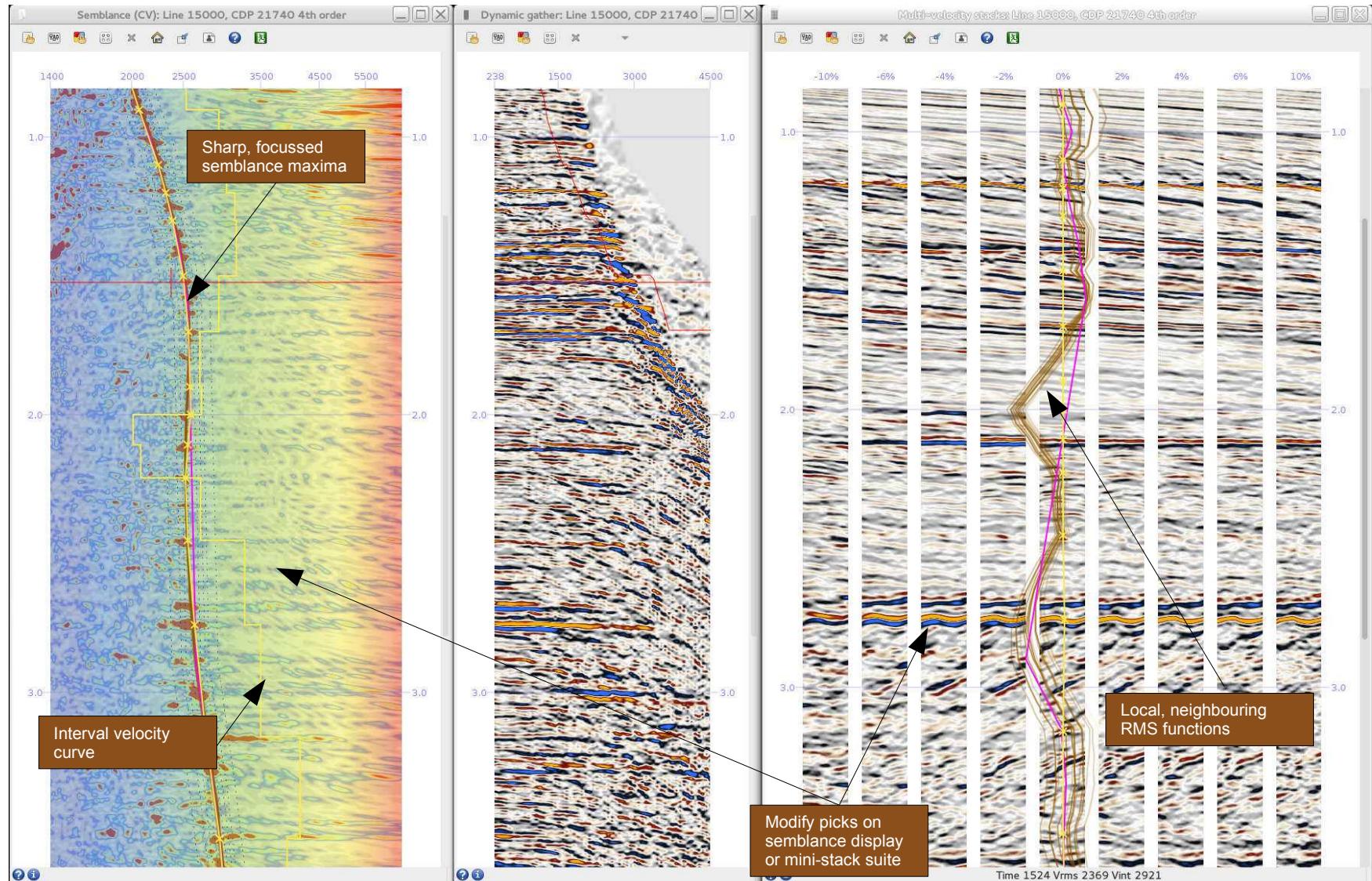
Seismic data export

Multiple user interaction with common database.

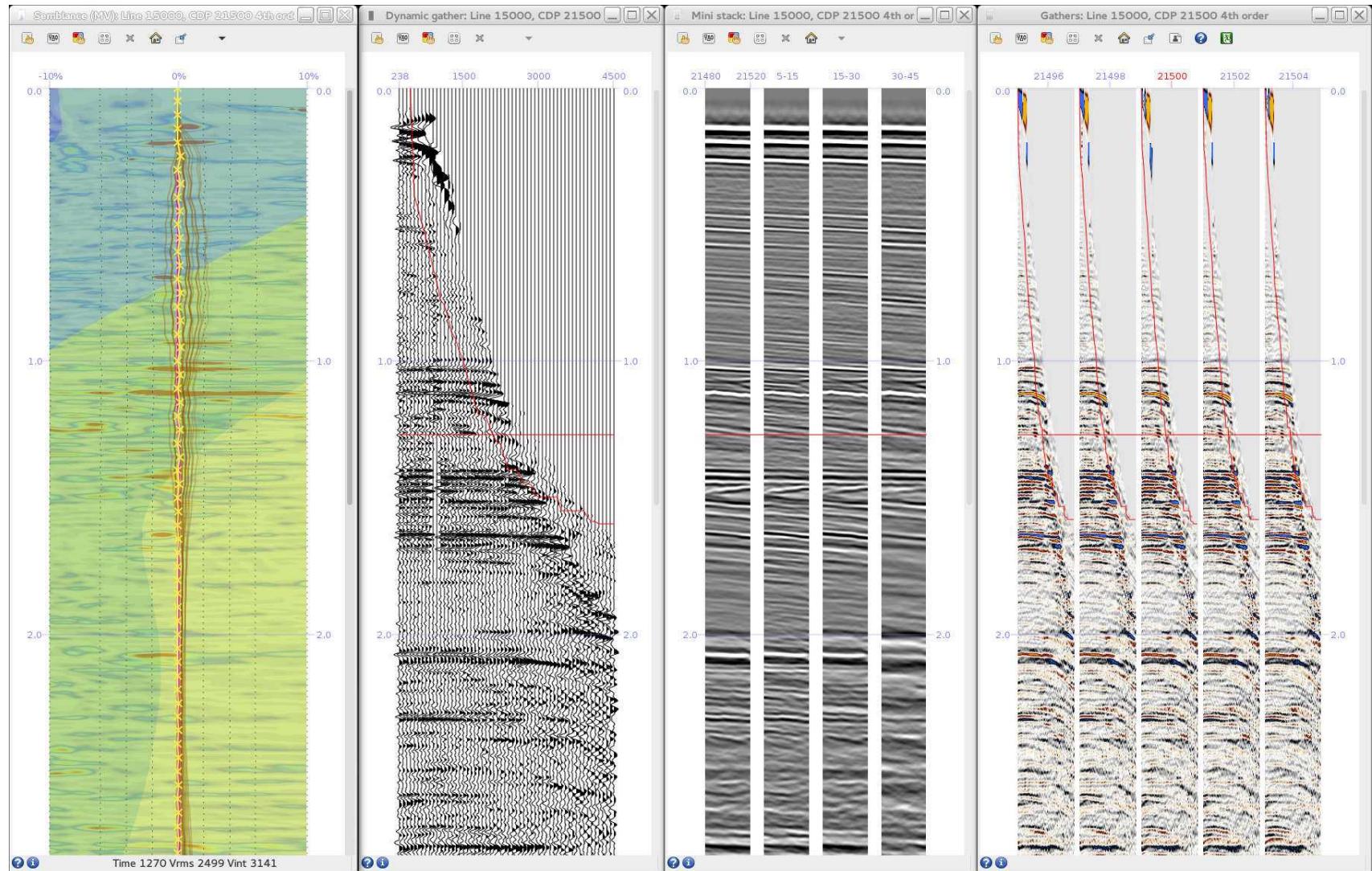
Ideal for large projects

Record of user and pick-time stored with each function

PEGASUS: velocity analysis

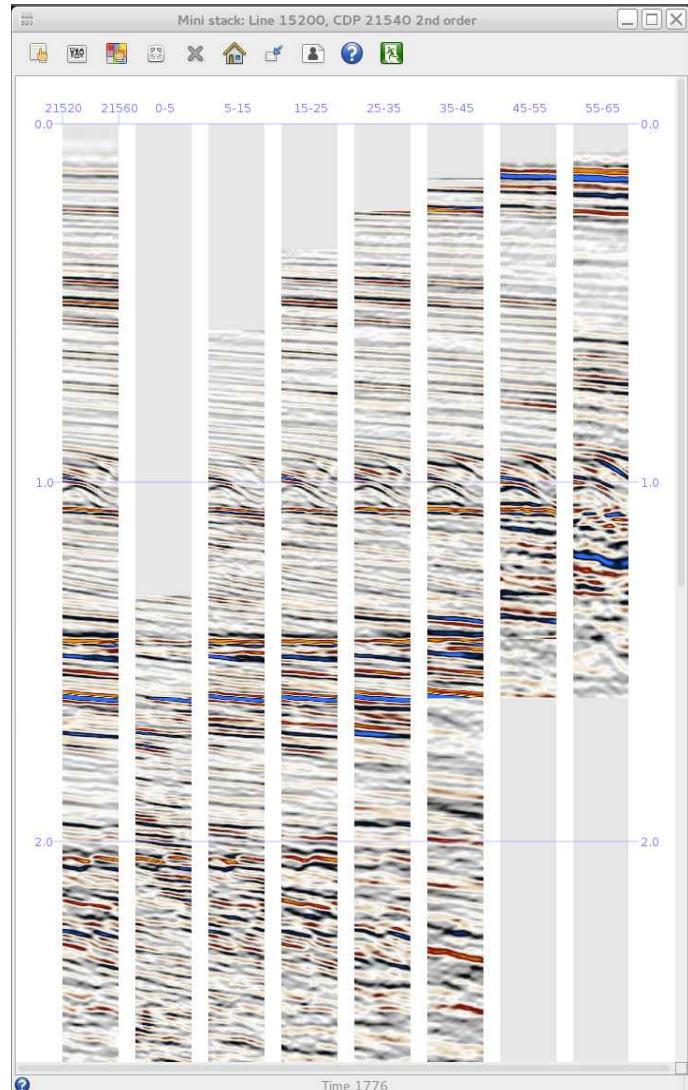


PEGASUS: velocity analysis

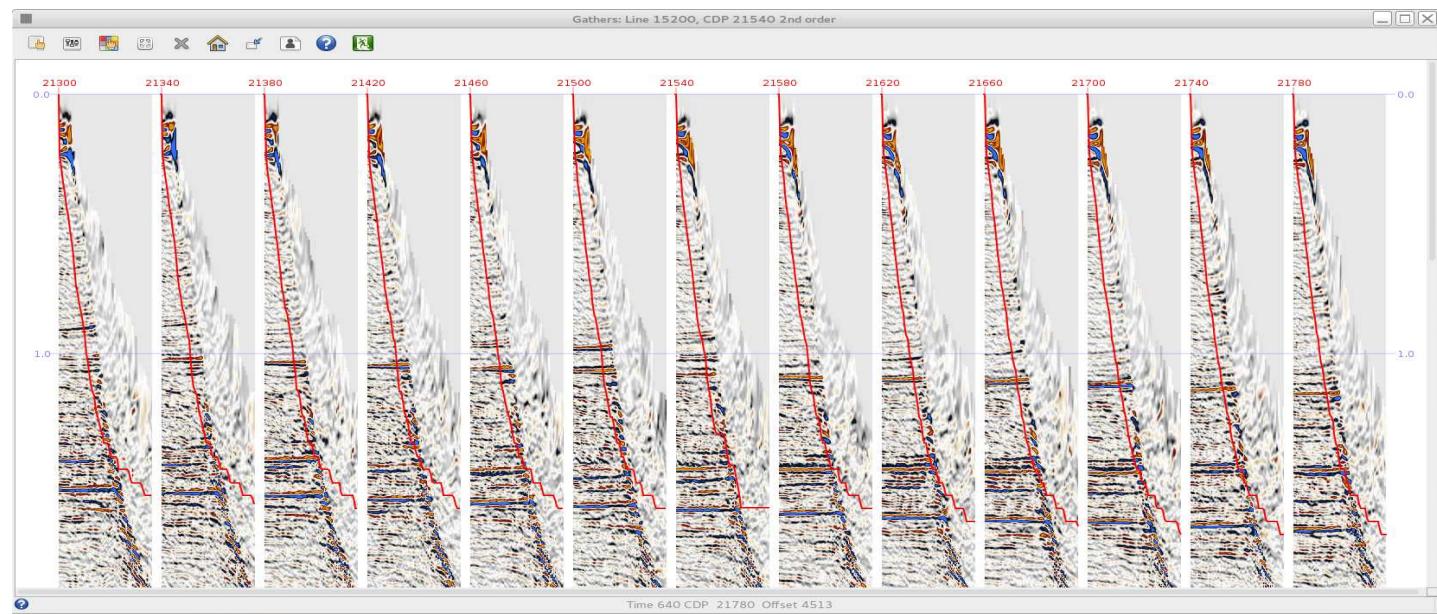


Selection of display palettes and plot styles

PEGASUS: velocity analysis

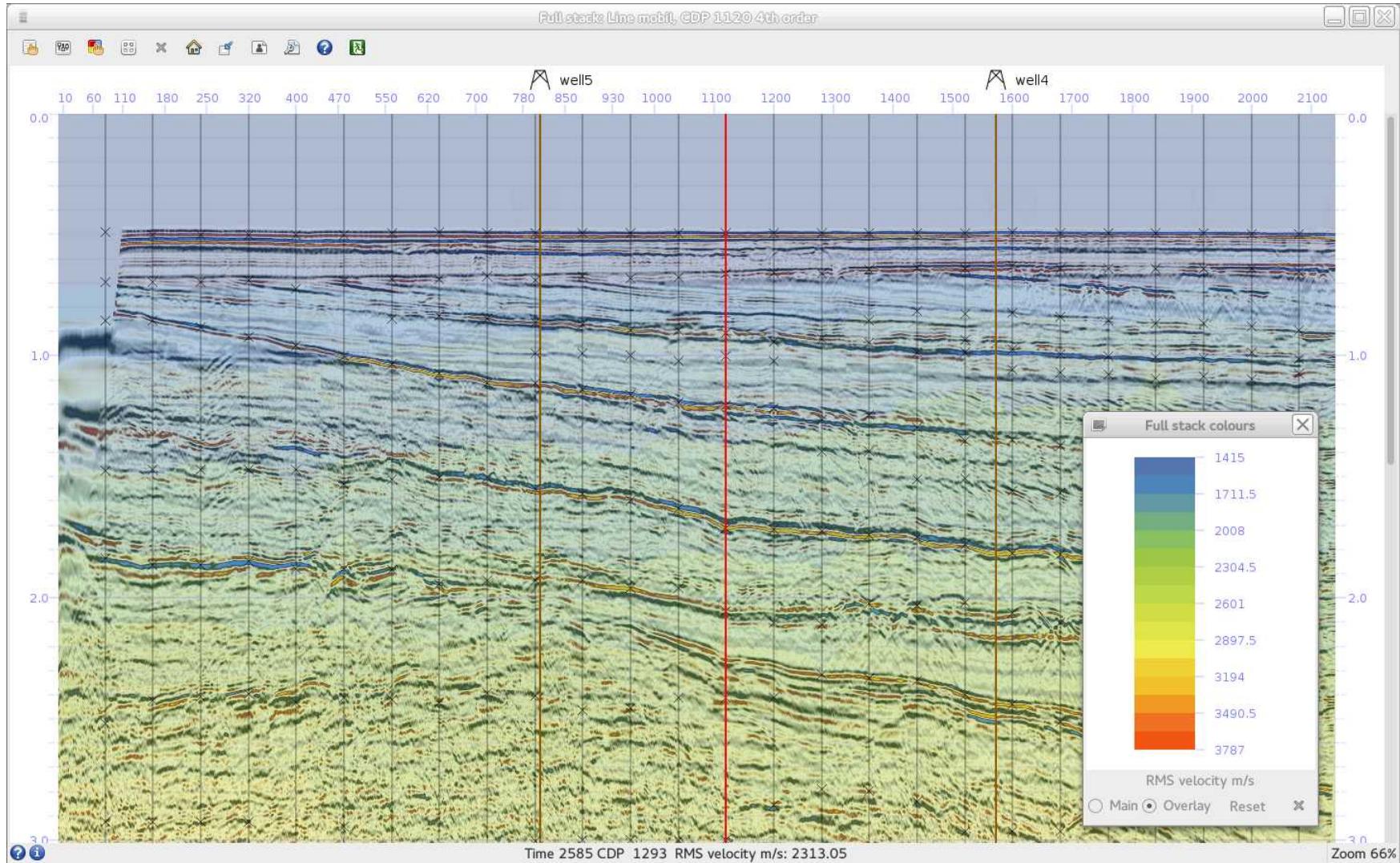


Mini angle stacks update in real-time



Rapid check for flat gathers at
and around pick locations.

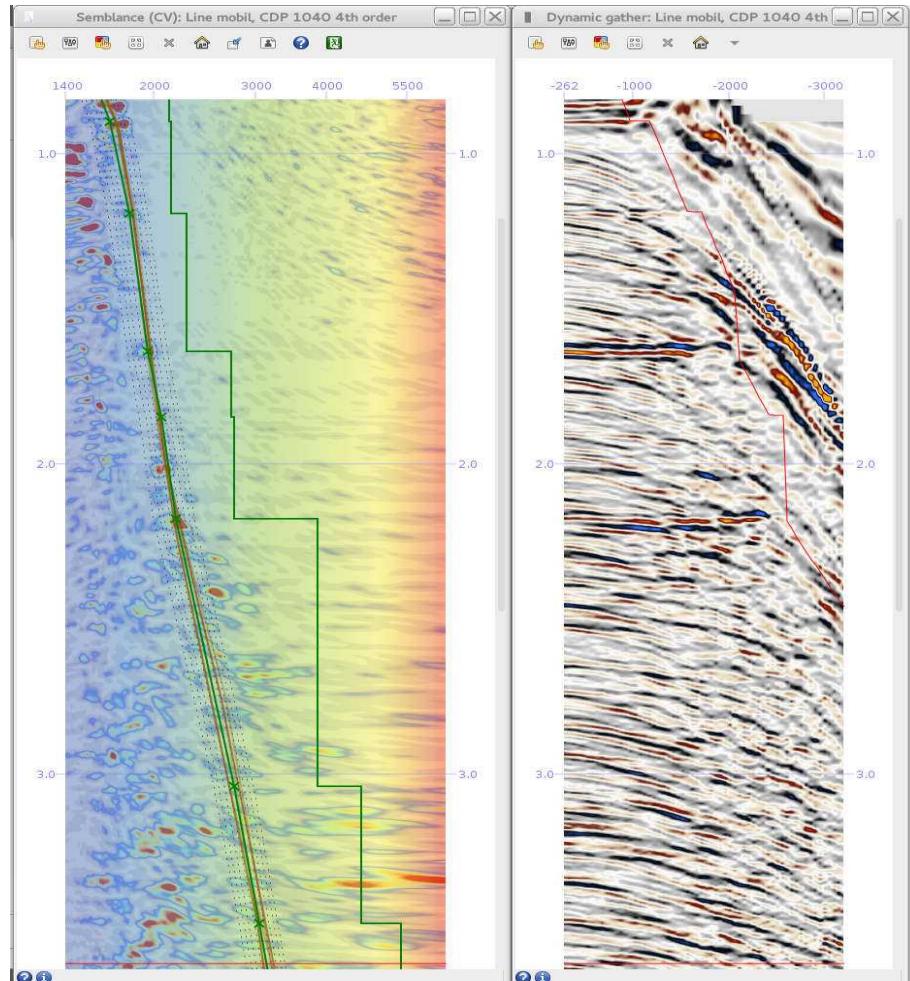
PEGASUS: velocity analysis



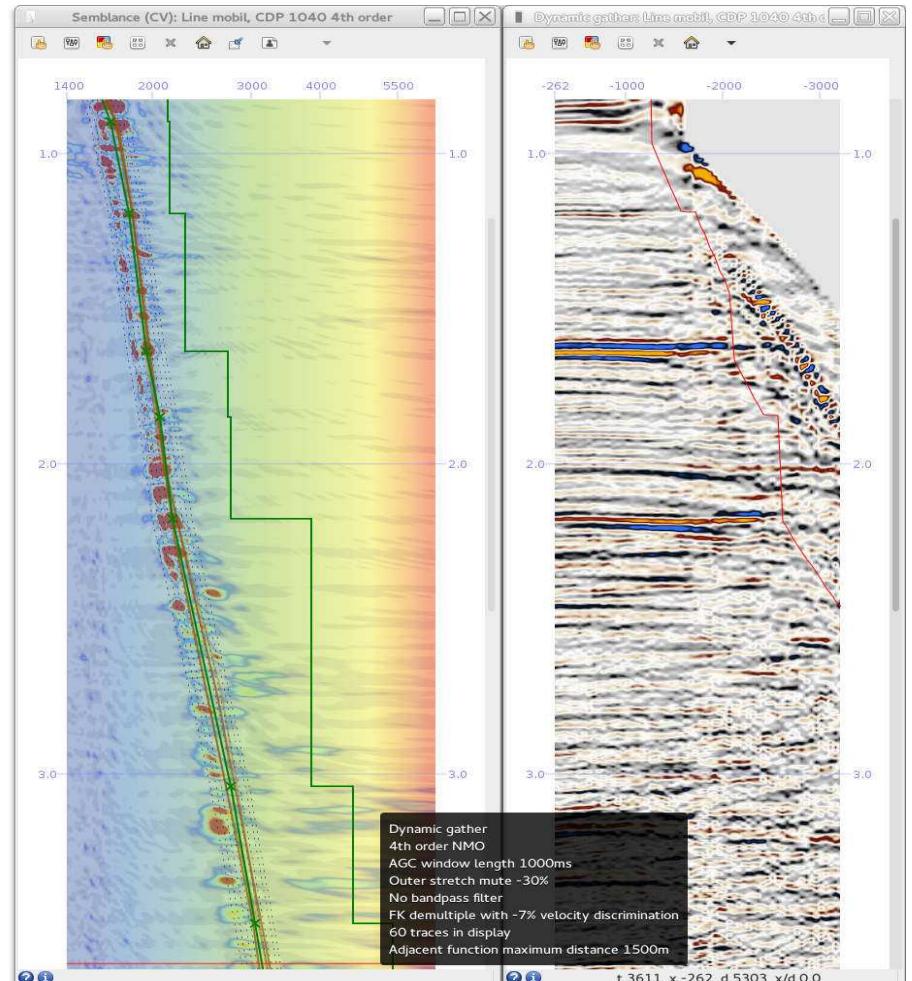
PEGASUS: velocity analysis



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

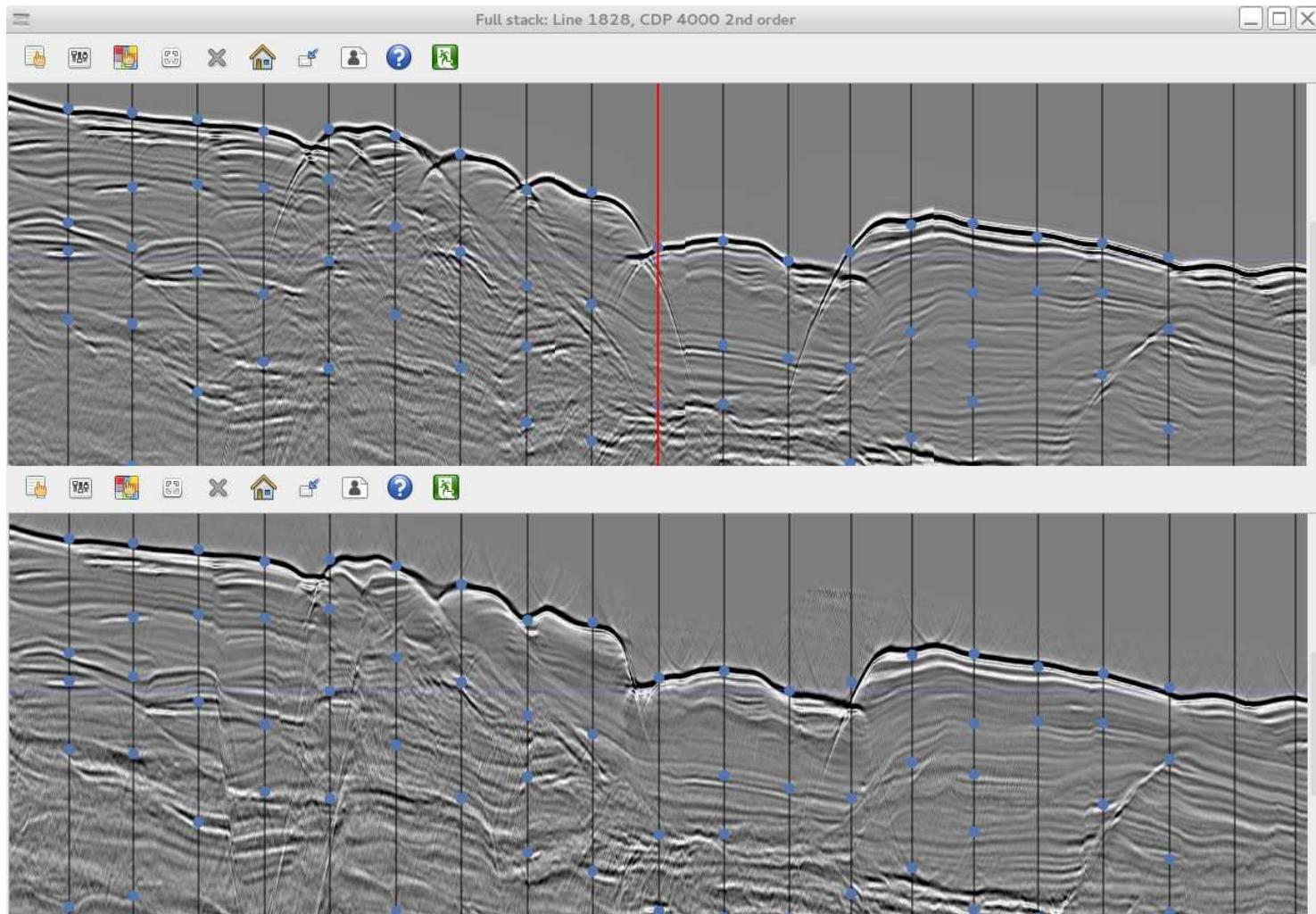


Without demultiple



With demultiple

PEGASUS: velocity analysis

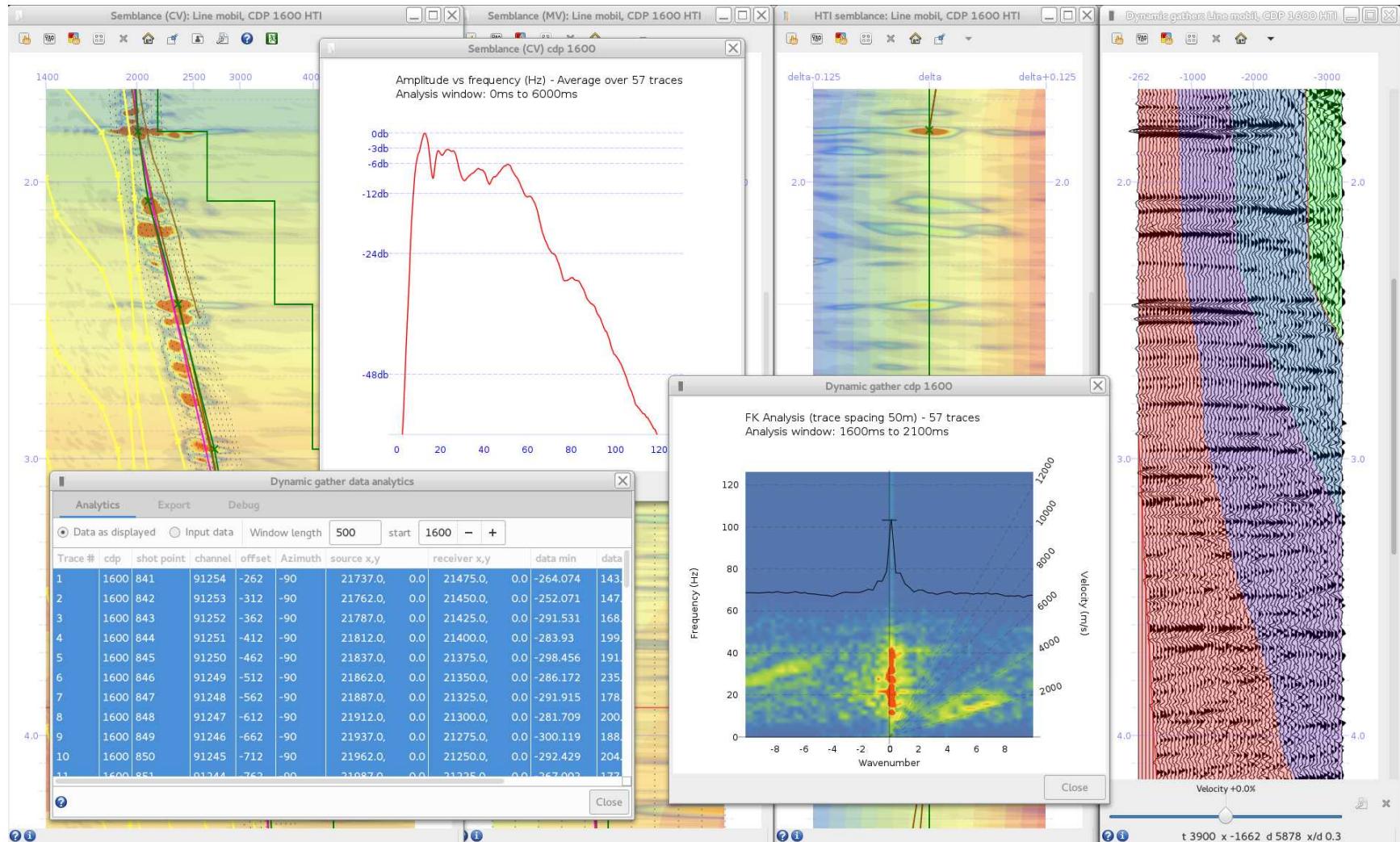


On-the fly processing: Post stack Kirchhoff
migration

PEGASUS: seismic data analytics



Seismic data analysis tools update in real-time



PEGASUS: Geostatistics and repair



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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.

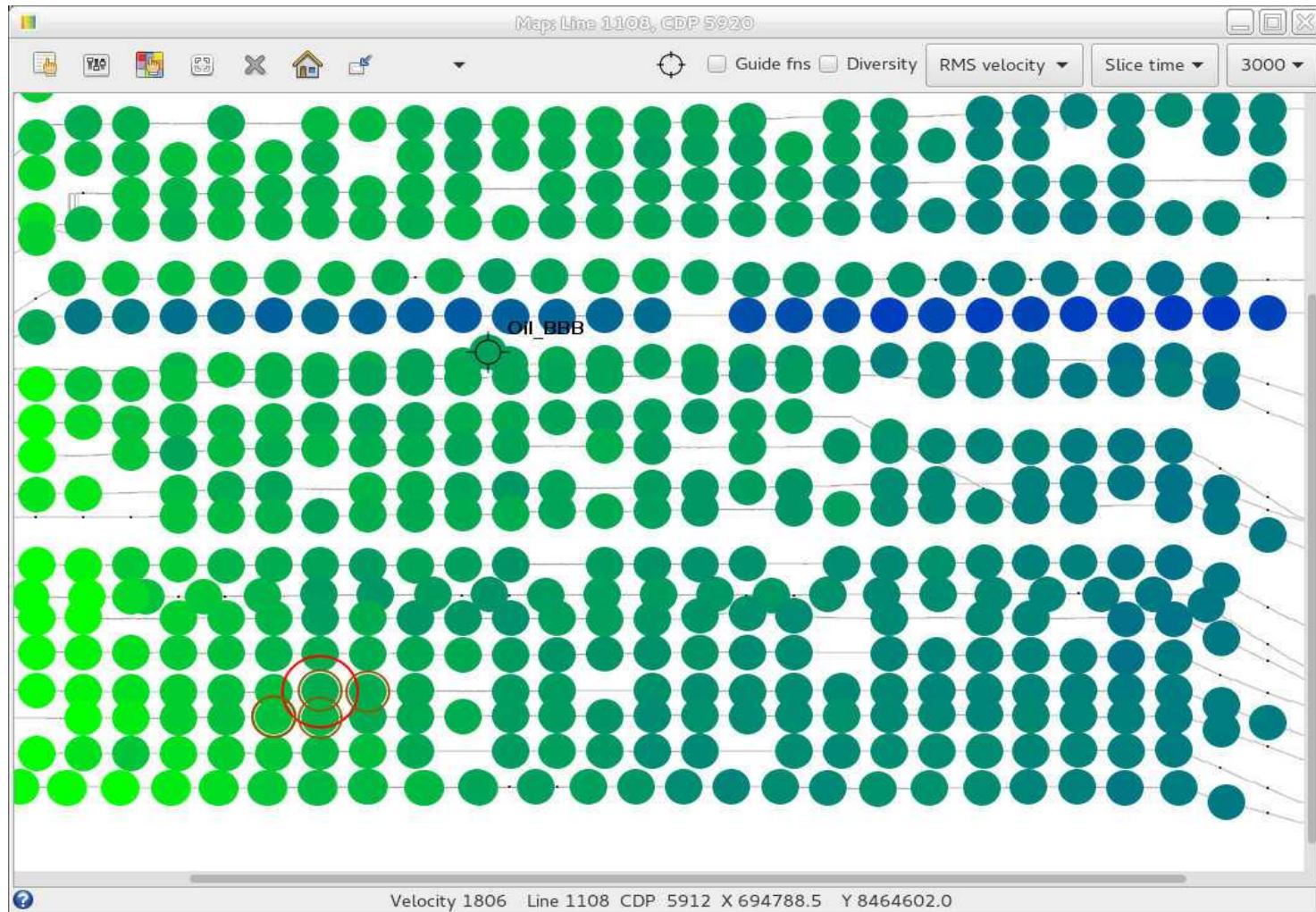
Repair:

Selected lines/ranges to local distance weighted mean.

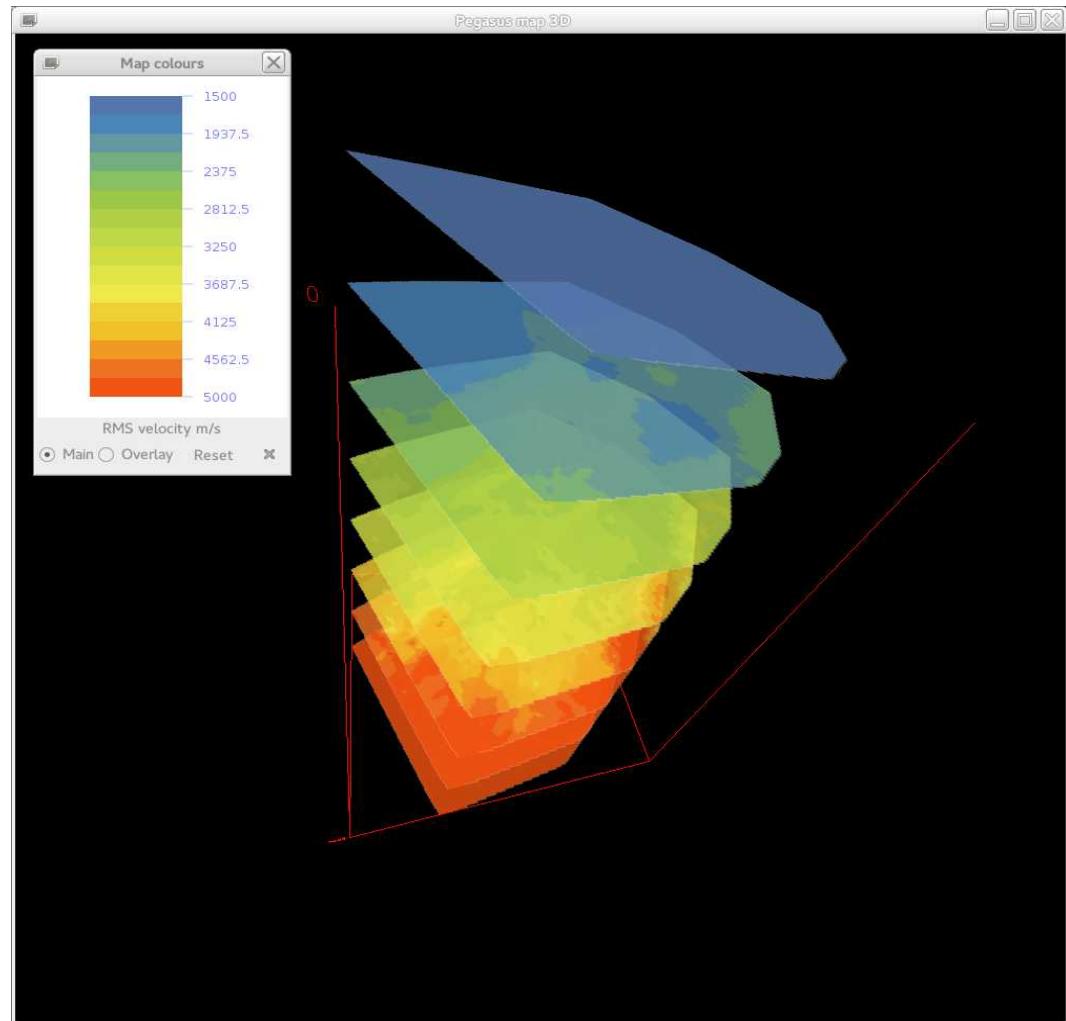
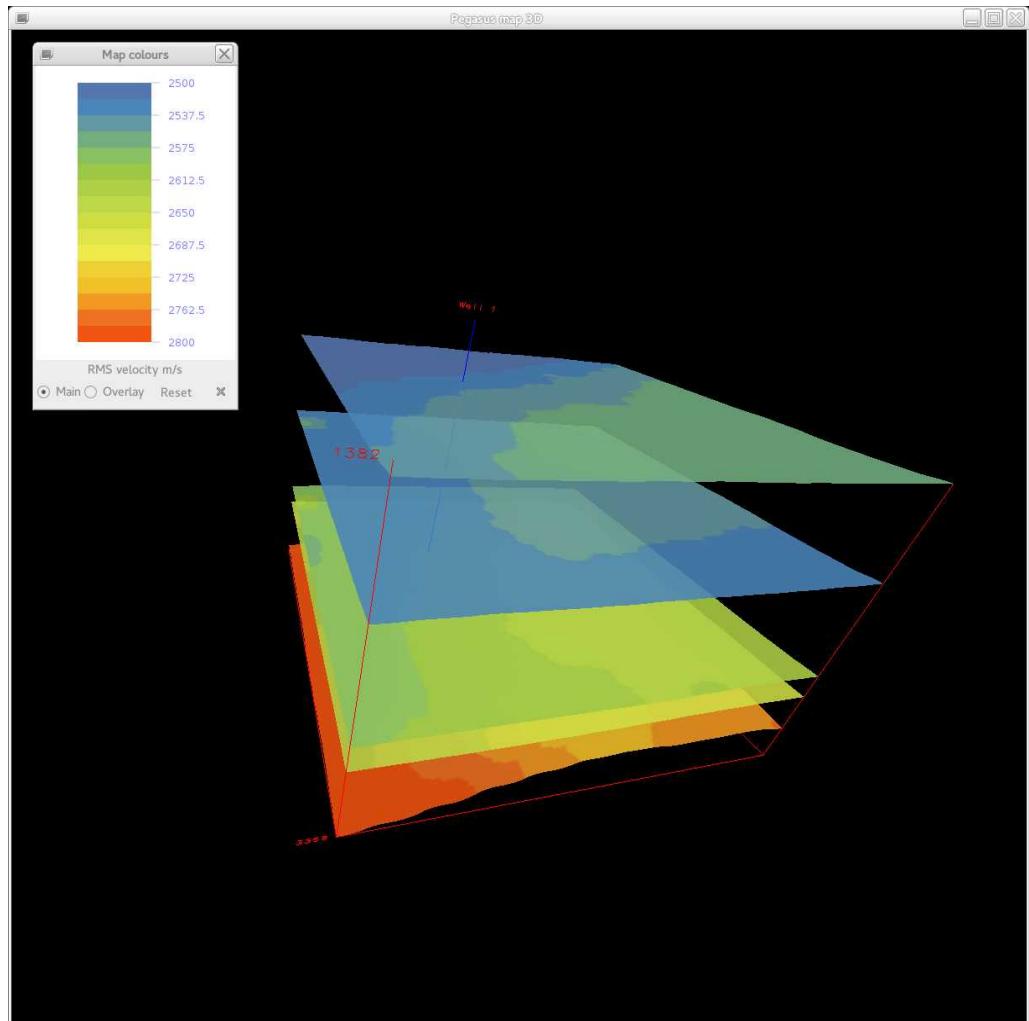
PEGASUS: Geostatistics and repair



PEGASUS: Geostatistics and repair



PEGASUS: 3D surface plotting



Rotate and zoom slices
and horizon surfaces in
real-time

PEGASUS: Loading and management



Pegasus: mobil viking graben

Project Import Export New Database View Help

Databases

Name	Created	Last update	type
HTI delta functions	26 Oct	01 Nov	hti
Eta functions	07 Sep	01 Nov	eta
Auto3	13 Oct	01 Nov	vel
Auto2	12 Oct	14 Oct	vel
HC	08 Oct	12 Oct	vel
Log vel	06 Oct	08 Oct	vel
Well functions	21 Jan	07 Oct	well
Test import	05 Oct	06 Oct	vel
New Version 1	05 Oct	05 Oct	vel
Autopicker	24 Mar	05 Oct	vel
test	08 Jun	08 Jun	vel
Picked functions	21 Jan	24 Mar	vel

Line length total 26 km Locations total 26 Picked total 26

▼ Active components

Snapshot and switch velocity databases on the fly

Velocity and seismic import wizards

Pegasus seismic import

Create symbolic links to files Copy data Copy and sort data without compression

Compute cmp x y from source and receiver coordinates

Header word	Byte number	Size (bytes)	Scalar
th_trno	5	4	
th_cdp	21	4	
th_offset	37	4	
th_coord_scl	71	2	
th_src_x	73	4	<use
th_src_y	77	4	<use
th_rcv_x	81	4	<use

Single line per file extract linename from filename
traces to skip 0

Multiple lines per file split by inline

Pegasus velocity import

Import functions to database Picked functions

column number	parameter
1	cdp
2	inline
3	xline
4	x coord
5	y coord
6	time

Extract linename from filename using regular expression /([^\^]+)\.

Linenname	cdp	offset	source
1420	2358,2462	6927.0, 8290.0	71237
1276	2377,2479	6893.0, 8294.0	71235
1804	2333,2445	268.0, 1578.0	71651
1084	2394,2498	6916.0, 8304.0	71220
1180	2431,2531	6874.0, 8303.0	71217
1372	3565,3664	6867.0, 8305.0	70515
1828	2358,2476	408.0, 1643.0	71642
1156	2422,2524	6878.0, 8278.0	71220

Import Cancel

PEGASUS: Contact details



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