Parallel Computing - MIO

- CWP purchased = 688 cores
- CWP disk space used = 35 TB
- CWP = 23 users
Personal Systems

- Mac Desktops
- Macbook Pro
- Dell multi-core Linux PCs
Commercial Software

- Matlab
- Mathematica
- Comsol
Open Source

- SciPy, SciLab, Octave
- Sage (Maxima, Python driven)
- Spyder, Elmer
CWP Open Source

- Mines JTK (Dave)
  http://www.mines.edu/~dhale/jtk
- Madagascar (Paul, Sergey)
  http://www.ahay.org
- Seismic Un*x (John)
  http://cwp.mines.edu/cwpcodes
John's Activities

- Mathematics of Seismic Imaging and Migration
- Seismic Un*x
- Seismic Processing Lab
- SEG Wiki Administrator
- AE of Bright Spots
Seismic Un*x

- Verified installs=4500
- Listserver members=1200
- Downloads=20-30 per day
- 81 countries and territories
Seismic Processing Lab: Example

- Semblance velocity picks
- Tau-p domain multiple suppression
- Pick again, until satisfied
Initial Velocity Analysis

Reflections
Initial Velocity Analysis

CDP gather for cdp=1150

Multiples

Velocity Scan (semblance plot) for CMP 1150
Initial Velocity Analysis

Original data cdp=1150
Multiple-suppressed cdp=1150

DO NOT PICK! Test velocity scan after multiple suppression 1150
Final Project

- Process a line of real data, present a poster
- Open data, software, documents

Students may continue learning about seismic processing after the course is finished.
Resources

- Lecture notes: *Illustrated Seismic Processing*
  S. J. Hill and A. Rueger

- Lab notes: *A Course in Geophysical Image Processing*
  J. W. Stockwell, Jr.

- Walt Lynn – practical experience
Important SU Addresses

- Download page
  http://cwp.mines.edu/cwpcodes

- Wiki
  http://www.seismicunix.com

- Listserver group:
  seisunix@dix.mines.edu

- Course notes (GPGN461/561)
  http://cwp.mines.edu/~john
New CWP Software

Topics presented at this meeting have auxiliary materials. Contact the students and their faculty advisors for information about software.

- Sponsor web page: http://cwp.mines.edu/sponsor
Thank You!