Cascadia Initiative
Geophysical Data Sources

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GPS data

240+ PBO GPS sites
- High sample rate (1 Hz)
- Realtime to UNAVCO
- Raw realtime data available (email rtgps@unavco.org)
- Daily positions also

PANGA
- Realtime processing of ~50 PBO sites
- Displacement timeseries available from Tim Melbourne
- Data from additional PANGA stations available also
Seismic data
Broadband velocity

Green
CI – Offshore
• Reference array
  (4 yrs at each site)
• Plate crossing
  (2 yrs at each site)
• Focused arrays
  (1 or 2 yrs at each site)
Data: IRIS DMC

Green
CI – Onshore
• TA redeployment
  27 stations – project duration
Data: IRIS DMC
Seismic data

Broadband velocity

Salmon

Canadian Network
• ~11 stations (on map)
Data: ???

Red

Pacific Northwest Seismic Network
• ~65 stations
Data: IRIS DMC

Blue

Northern CA networks
• NC/USGS network
  ~15 stations (on map)
• BK/UC Berkeley network
  ~15 stations (on map)
Data: NCEDC - UC Berkeley
Seismic data
Strong motion

Red
Pacific Northwest Seismic Network
• ~130 stations
Data: IRIS DMC

Green
CI - Onshore
• TA redeployment
  27 stations - project duration
Data: IRIS DMC

Blue
Northern CA networks
• NC/USGS network
  ~50 stations (on map)
• BK/UC Berkeley network
  ~15 stations (on map)
Data: NCEDC - UC Berkeley
Seismic data
Broadband +
Strong motion

Getting seismic data for the whole region
This will be a challenge

Can use NetDC to request all data for the CI virtual network
• “breakfast” era technology
• Newer technologies need to be extended

Watch out: Highly variable data quality!
Don’t forget the “Old” data

Previous Earthscope deployments in Cascadia

• TA (white)
• FA: CAFÉ
• FA: FACES
• FA: High Lava Plains
• FA: Mendocino
• FA: SNEP

All now openly available at IRIS DMC
Higher order data products

Little (new) planned so far...

Regional networks...

Earthquake catalogs
• PNSN catalog
• NC catalog
⇒ Integrated ANSS catalog

Moment tensors
• NC + PNSN

Other focus sites
• Tremor
• Repeating earthquakes
• Slow earthquakes
• etc...

Cascadia Initiative
• Integrated processing/ catalogs would be great
• Nothing funded yet
• Proposal deadlines soon
Dear Colleague Letter

Clarification of the proposal submission process for the Cascadia Initiative (CI)

Three types of proposals

1. Data QC and metadata generation proposals for the offshore OBS data
2. Derived onshore/offshore data products
3. Science proposals to make use of the CI data (onshore and offshore) to address a variety of questions

Where to submit

Type 1:
- submit to MGG – proposals were submitted Feb 2012

Type 2:
- land studies only → Earthscope (July)
- land and sea → GeoPRISMS (July)
- involving OBS data → MGG (Feb/Aug)

Type 3:
- land studies only → Earthscope
- land and sea not expected at NSF until late 2012/early 2012