

# PATTERN INFORMATICS DEMO SNAPHOTS WITH BIG SIZE DATA

*Demos are done with whole seismic data records for different bbox values*

## Layers:

Layer-1: Google Map

Layer-2: World Seismic Records (**Dates:** 01/01/1990 to 12/31/2006)

Data Size: **10,908KB** data in GML

**Time to Render Map:** 10 seconds

**Bbox:** -124.85, 32.26, -113.56, 42.75

The screenshot displays the Pattern Informatics Data web application interface. The interface is divided into several sections:

- Top Toolbar:** Contains standard web browser navigation icons (back, forward, home, search, etc.) and a window title bar.
- Left Sidebar:**
  - Select Layers for:** A dropdown menu is set to "Pattern\_Informatics". Below it, a list of layers includes "Nasa:Satellite", "Google:Map" (checked), "Google:Satellite", "California:States", and "World:Seismic" (checked). An "Update MAP" button is present.
  - Set bbox (minx,miny,maxx,maxy):** A "Go" button and a set of input fields for coordinates.
  - Resize Map:** A dropdown menu is set to "400 x 400".
  - Time Interval for Seismic Data:** A section with a yellow oval highlighting the "From (t0)" and "To (t2)" date fields. "From (t0)" is set to "01 / 01 / 1900" and "To (t2)" is set to "12 / 31 / 2006". Below it is a "Min Magnitude" field set to "0".
  - PI Specific parameters:** A section with the note "(Not effect the current MAP)". It includes "Estimate(t1)" set to "06 / 01 / 1990", "Bin Size" set to "0.3 (resolution)", and "Time Steps" set to "30".
  - PLOT PI OUTPUT:** A button at the bottom of the sidebar.
- Central Map Area:**
  - Pattern\_Informatics Data:** The title of the map.
  - Coordinates:** The map is bounded by coordinates: -124.85, -122.03, -119.2, -116.38, -113.56 (Longitude) and 32.26, 34.88, 37.5, 40.13, 42.75 (Latitude).
  - Map Content:** A map showing a dense distribution of blue dots representing seismic data points over a geographical area. Major roads and cities are visible.
  - Scale:** A scale bar at the bottom of the map shows distances from 0-km to 1,116-km.
  - Coordinates (according to SRS):** LON : -116.86, LAT : 32.5.
  - Map Controls:** Includes zoom in/out, pan, and a scale bar.
- Bottom Section:**
  - Map Movie:** A section with a "How to run" link.
  - Movie created based on the data from:** 01/01/1990 to : 12/31/2005.
  - Select Time Periods:** A dropdown menu is set to "per year".
  - Create Movie:** A button to generate the map movie.

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**Layers:**

Layer-1: Google Map

Layer-2: World Seismic Records (**Dates:** 01/01/1990 to 12/31/2006)Data Size: **14,521KB** data in GML**Time to Render Map:** 14 seconds**Bbox:** -130.5, 27.01, -107.92, 48

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The screenshot shows a web browser window displaying a map application. The browser's address bar shows the URL: `http://www.patterninformatics.com/PatternInformaticsData.aspx`. The application interface is divided into several sections:

- Map Area:** Displays a map of the Pacific Northwest region of the United States, showing seismic records as blue dots. The map is titled "Pattern\_Informatics Data" and includes a coordinate grid. The current coordinates are LON: -117.74 and LAT: 46.26. A scale bar at the bottom indicates distances from 0 to 2,287 km.
- Select Layers for:** A panel on the left allows users to select different map layers. The "World: Seismic" layer is checked and highlighted in red. Other layers include "Nasa: Satellite", "Google: Map", "Google: Satellite", and "California: States". An "Update MAP" button is located below the list.
- Set bbox (minx,miny,maxx,maxy):** A panel for setting a bounding box with input fields for minx, miny, maxx, and maxy, and a "Go" button.
- Resize Map:** A panel with a dropdown menu set to "400 x 400" and a "Customized Dim" section with input fields for width and height.
- Time Interval for Seismic Data:** A panel for selecting the time range. The "From (t1)" field is set to "01 / 01 / 1990" and the "To (t2)" field is set to "12 / 31 / 2005". The "Min Magnitude" is set to "0".
- Map Movie:** A panel for generating a movie from the data. It includes a "How to run" link, a message "Movie created based on the data from : 01/01/1990 to : 12/31/2005", a "Select Time Periods" dropdown set to "per year", and a "Create Movie" button.
- PLOT PI OUTPUT:** A large button at the bottom of the interface.

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## Layers:

Layer-1: NASA's OnEarth Satellite

Layer-2: World Seismic Records (**Dates:** 01/01/1990 to 12/31/2006)

Data Size: **61,269KB** data in GML

**Time to Render Map:** 59 minutes

**Bbox:** -179.6, -55.97, -21.94, 80.45

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The screenshot shows a web application interface for displaying seismic data. The interface is divided into several sections:

- Top Toolbar:** Contains standard navigation icons (back, forward, home, search, etc.) and a window title bar.
- Left Sidebar:**
  - Select Layers for:** A dropdown menu set to "Pattern\_Informatics". Below it are checkboxes for "Nasa:Satellite", "Google:Map", "Google:Satellite", "California:States", and "World:Seismic". An "Update MAP" button is present.
  - Set bbox (minx,miny,maxx,maxy):** A "Go" button and a text input field for coordinates.
  - Resize Map:** A dropdown menu set to "400 x 400" and a "Customized Dim" field.
  - Time Interval for Seismic Data (Month / Day / Year):** A section with input fields for "From (t1)" (01 / 01 / 1990) and "To (t2)" (12 / 31 / 2005), and a "Min Magnitude" field set to 0. This section is highlighted with a yellow circle.
  - PI Specific parameters:** A section with input fields for "Estimate(t1)" (06 / 01 / 1990), "Bin Size" (0.3 resolution), and "Time Steps" (30).
  - PLOT PI OUTPUT:** A button at the bottom of the sidebar.
- Central Map Area:**
  - Pattern\_Informatics Data:** A map showing a world view with blue dots representing seismic data points. The map is bounded by coordinates: -179.6, -140.19, -100.77, -61.36, -21.94 (top); 80.45, 46.35, 12.24, -21.86, -55.97 (left); 0-km, 3,197.19-km, 6,394.38-km, 9,591.57-km, 12,78 (bottom).
  - COORDINATES (according to SRS):** LON : -103.53, LAT : 50.44
  - Map Navigation:** Includes zoom in/out, pan, and a scale bar showing 0 m.
- Bottom Section:**
  - Map Movie:** A section with a "How to run" link and a "Create Movie" button.
  - Movie created based on the data from:** 01/01/1990 to : 12/31/2005
  - Select Time Periods:** A dropdown menu set to "peryear" and a "Create Movie" button.

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## Layers:

Layer-1: NASA's OnEarth Satellite

Layer-2: World Seismic Records (**Dates:** 01/01/1990 to 12/31/2006)

Data Size: **81,247KB** data in GML

**Time to Render Map:** 1 hour and 18 minutes

**Bbox:** -180, -90, 46.67, 90

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The screenshot shows a web browser window with the URL `http://localhost:8083/aaa/maptools/newmap.jsp`. The interface is titled "Pattern\_Informatics Data" and features a central map of the world with a blue overlay representing seismic activity. The map is surrounded by a coordinate grid with latitude and longitude values ranging from -180 to 46.67 longitude and -90 to 90 latitude. Below the map, there are several control panels:

- Select Layers for:** A dropdown menu set to "Pattern\_Informatics" with a list of layers: "Nasa:Satellite", "Google:Map", "Google:Satellite", "California:States", and "World:Seismic". The "World:Seismic" layer is checked. An "Update MAP" button is below the list.
- Set bbox (minx,miny,maxx,maxy):** A "Go" button and a set of input fields for bounding box coordinates.
- Resize Map:** A dropdown menu set to "400 x 400" and a "Customized Dim" section with input fields for width and height.
- Time Interval for Seismic Data (Month / Day / Year):** A section with a yellow oval highlighting the date selection fields. "From (0)" is set to "01 / 01 / 1990" and "To (1)" is set to "12 / 31 / 2005". A "Min Magnitude" field is set to "0".
- Map Movie:** A section with a "How to run" link. It states "Movie created based on the data from : 01/01/1990 to : 12/31/2005". Below this, there is a "Select Time Periods" dropdown set to "per year" and a "Create Movie" button.
- PLOT PI OUTPUT:** A button at the bottom of the interface.

At the bottom of the map area, there are navigation controls including a search icon, a "0m" scale bar, and a "COORDINATES (according to SRS)" section with "LON:" and "LAT:" labels.

## Layers:

Layer-1: NASA's OnEarth Satellite

Layer-2: World Seismic Records (**Dates:** 01/01/1990 to 12/31/2006)

Data Size: **127,469KB** data in GML (*Whole data in DB for the largest bbox*)

**Time to Render Map:** 2 hours and 3 minutes

**Bbox:** -180, -90, 180, 90

The screenshot shows a web browser window with the URL `http://localhost:8083/aaa/maptools/newmap.jsp`. The application interface is divided into several panels:

- Select Layers for Pattern\_Informatics:** A list of layers with checkboxes. "Nasa:Satellite" and "World:Seismic" are checked. An "Update MAP" button is below.
- Set bbox (minx,miny,maxx,maxy):** Input fields for coordinates and a "Go" button.
- Resize Map:** A dropdown menu set to "400x400" and "Customized Dim" input fields.
- Time Interval for Seismic Data:** A section with a yellow oval highlighting the date range. "From (t1)" is "01 / 01 / 1990" and "To (t2)" is "12 / 31 / 2005". "Min Magnitude" is set to "0".
- Map:** A central map titled "Pattern\_Informatics Data" showing a satellite view of the world with blue dots representing seismic records. The map has coordinate axes from -180 to 160.01 longitude and -90 to 90 latitude. A scale bar at the bottom shows distances from 0-km to 14,16-km.
- COORDINATES (according to SRS):** "LON: 159.16" and "LAT: -20.25".
- Map Movie:** A section with a "How to run" link. It states "Movie created based on the data from : 01/01/1990 to : 12/31/2005". "Select Time Periods:" is set to "per year" and there is a "Create Movie" button.
- PLOT PI OUTPUT:** A button at the bottom left.