Sandia National Laboratories

SAND2015-4437PE

# Technical Meeting on SHI Software Engineering at the IDC

## Views Event History Storyboards

17-19 June 2015

Overview

- The Analyst would use this display to view how the event hypotheses for an event changed over time as the event went through the different processing stages.

- This storyboard can be reached when analyzing an event hypothesis and wanting to see what it looked like at an earlier stage – i.e. Refines Event.

- This storyboard can also be reached by Selecting Data for Analysis

- This storyboard can be used by an Analyst and a Researcher to see the different solutions.

Views Event History Use Case
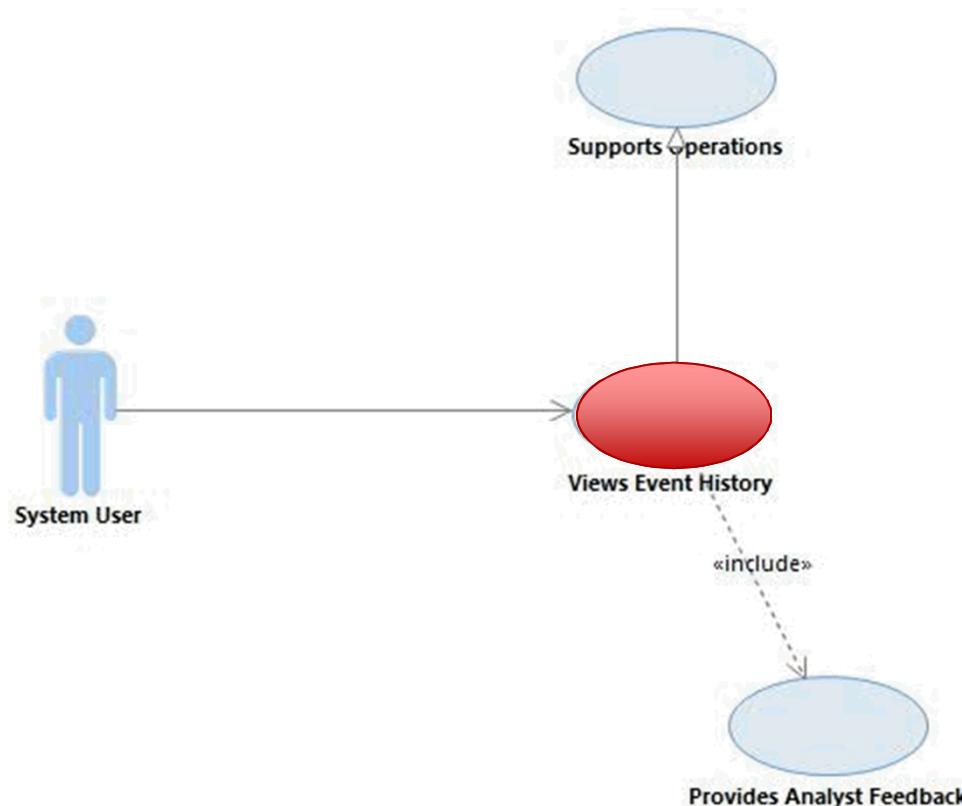
Views Event History Use Case
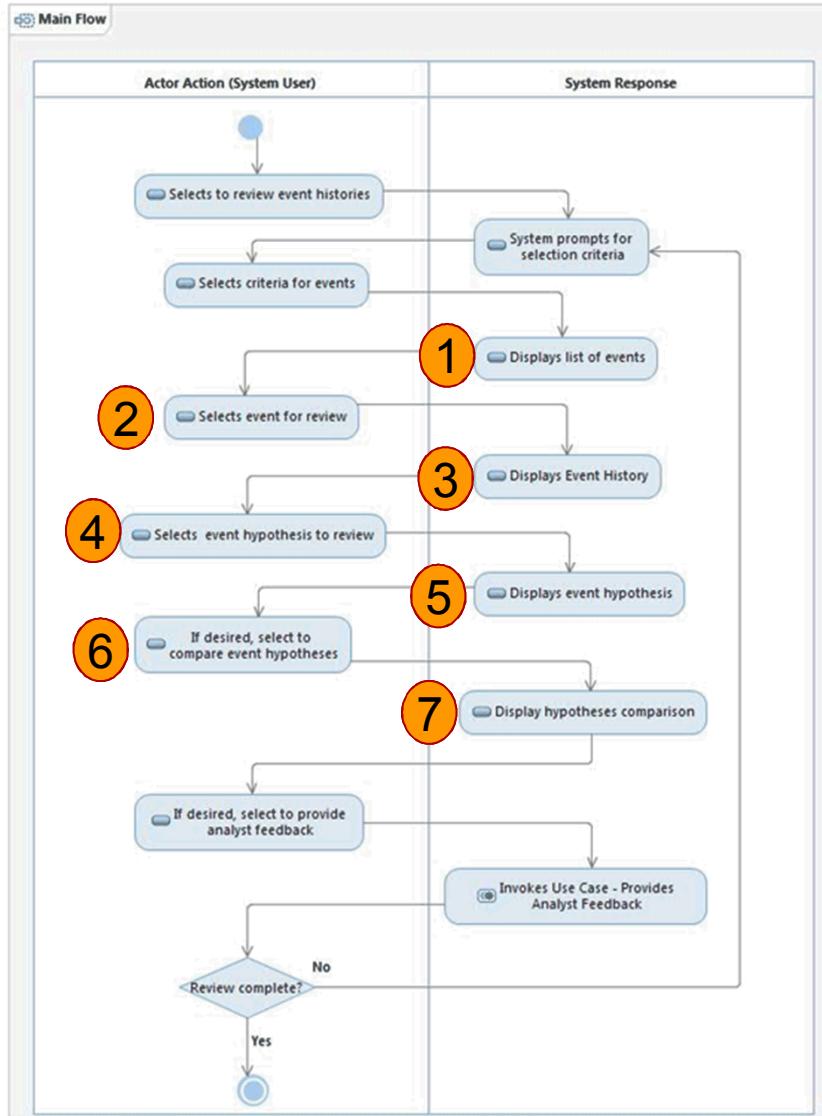
1 Displays list of events

2 Selects event for review

3 Display event history

4 Selects event hypothesis to review

5 Display event hypothesis

6 Select to compare event hypotheses

7 Display hypotheses comparison

User Action: Selects event to review

User Action: Selects event to review

The Analyst can pick an event to review the event history by double clicking on the row, or using a drop down menu

② Selects event to review

System Action: Display event history

Event History

id	ver	lat	lon	depth	origin time	dtype	mb	ms	region (detailed)	nsta	nass	ndp	stage	analyst
+ 1234	16	####	####	####	##/##/#### ##:##:##.###	X	#.#	#.#	XXXX XXXX XXXX	###	###	###	Final	
+ 1234	15	####	####	####	##/##/#### ##:##:##.###	X	#.#	#.#	XXXX XXXX XXXX	###	###	###	Post EVAL	
+ 1234	14	####	####	####	##/##/#### ##:##:##.###	X	#.#	#.#	XXXX XXXX XXXX	###	###	###	EVAL	jane
+ 1234	13	####	####	####	##/##/#### ##:##:##.###	X	#.#	#.#	XXXX XXXX XXXX	###	###	###	EVAL	jane
+ 1234	12	####	####	####	##/##/#### ##:##:##.###	X	#.#	#.#	XXXX XXXX XXXX	###	###	###	EVAL	jane
+ 1234	11	####	####	####	##/##/#### ##:##:##.###	X	#.#	#.#	XXXX XXXX XXXX	###	###	###	Post AL2	
+ 1234	10	####	####	####	##/##/#### ##:##:##.###	X	#.#	#.#	XXXX XXXX XXXX	###	###	###	AL2	jones
+ 1234	9	####	####	####	##/##/#### ##:##:##.###	X	.#	#.#	XXXX XXXX XXXX	###	###	###	AL2	jones
+ 1234	8	####	####	####	##/##/#### ##:##:##.###	X	#.#	#.#	XXXX XXXX XXXX	###	###	###	AL2	jones
+ 1234	7	####	####	####	##/##/#### ##:##:##.###	X	#.#	#.#	XXXX XXXX XXXX	###	###	###	PostAL1	
+ 1234	6	####	####	####	##/##/#### ##:##:##.###	X	#.#	#.#	XXXX XXXX XXXX	###	###	###	AL1	smith
+ 1234	5	####	####	####	##/##/#### ##:##:##.###	X	#.#	#.#	XXXX XXXX XXXX	###	###	###	AL1	smith
+ 1234	4	####	####	####	##/##/#### ##:##:##.###	X	#.#	#.#	XXXX XXXX XXXX	###	###	###	AL1	smith
+ 1234	3	####	####	####	##/##/#### ##:##:##.###	X	#.#	#.#	XXXX XXXX XXXX	###	###	###	AL1	smith
+ 1234	2	####	####	####	##/##/#### ##:##:##.###	X	#.#	#.#	XXXX XXXX XXXX	###	###	###	AL1	smith
+ 1234	1	####	####	####	##/##/#### ##:##:##.###	X	#.#	#.#	XXXX XXXX XXXX	###	###	###	Auto	

Compare

3 Display event history

Click on + to expand and see all location solutions

Show as both a list and a tree; show post-analysis processing
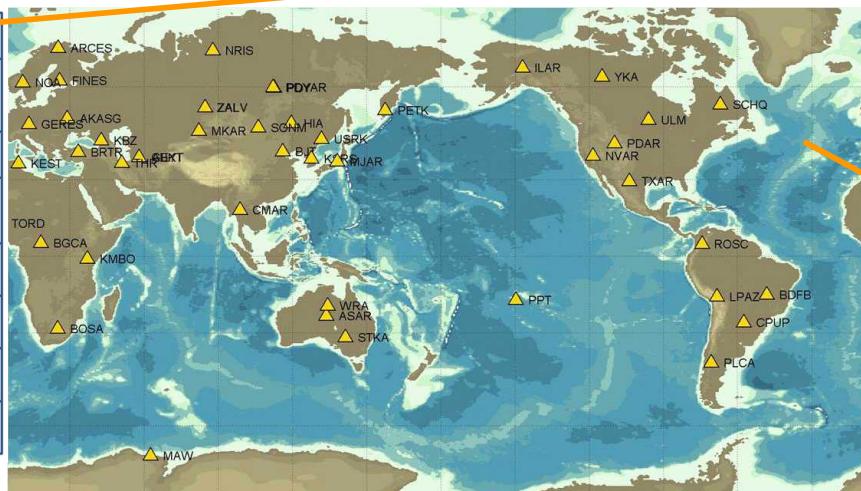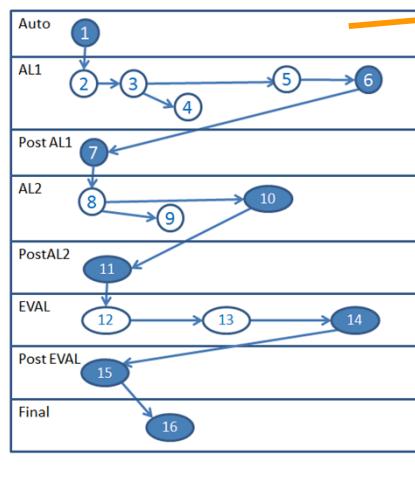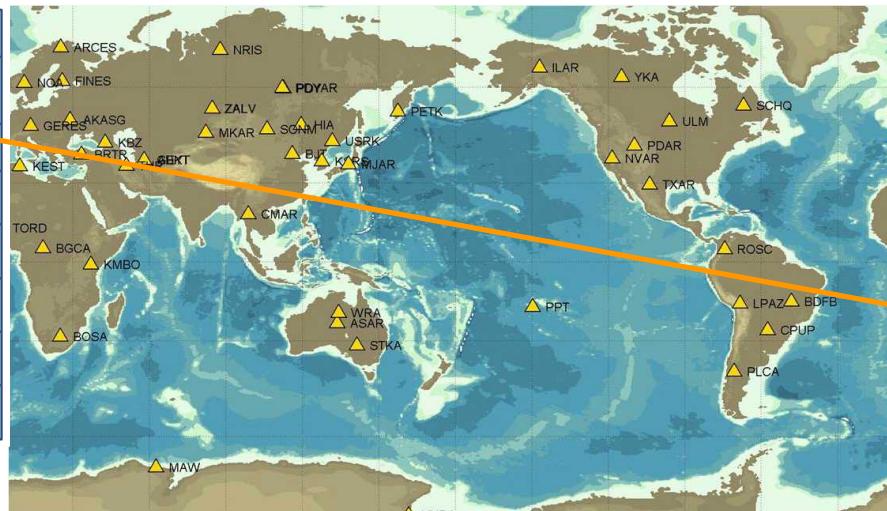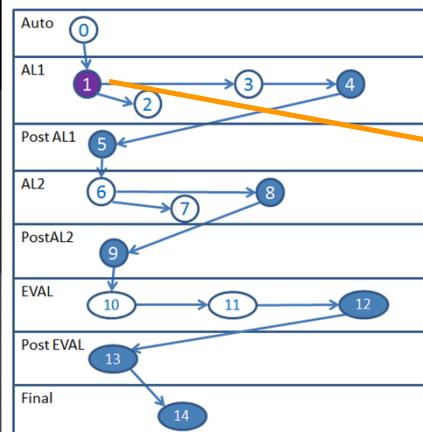
Map displays the different event hypothesis locations.

System Action: Display event history

3 Display event history

This example shows an event that was copied by AL1 to make a new event. Note that the ID changes in the table and the parent ID is in red text

The copy done by AL1 is highlighted with a different color

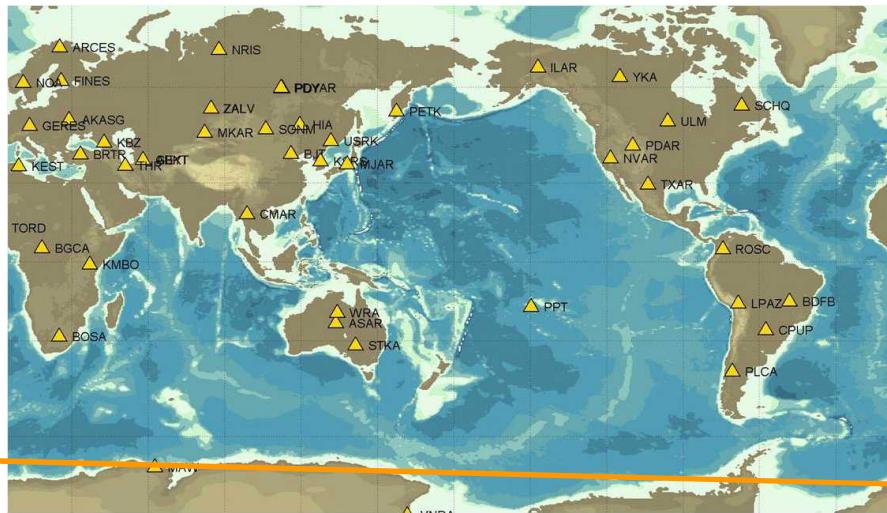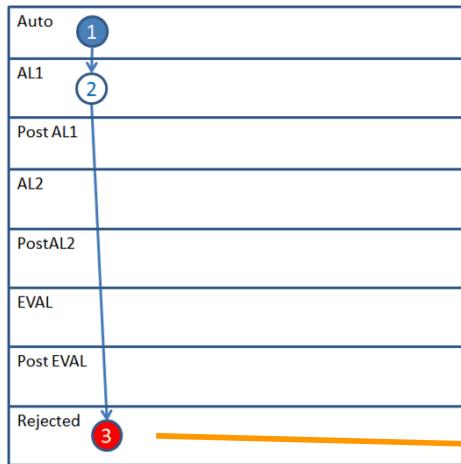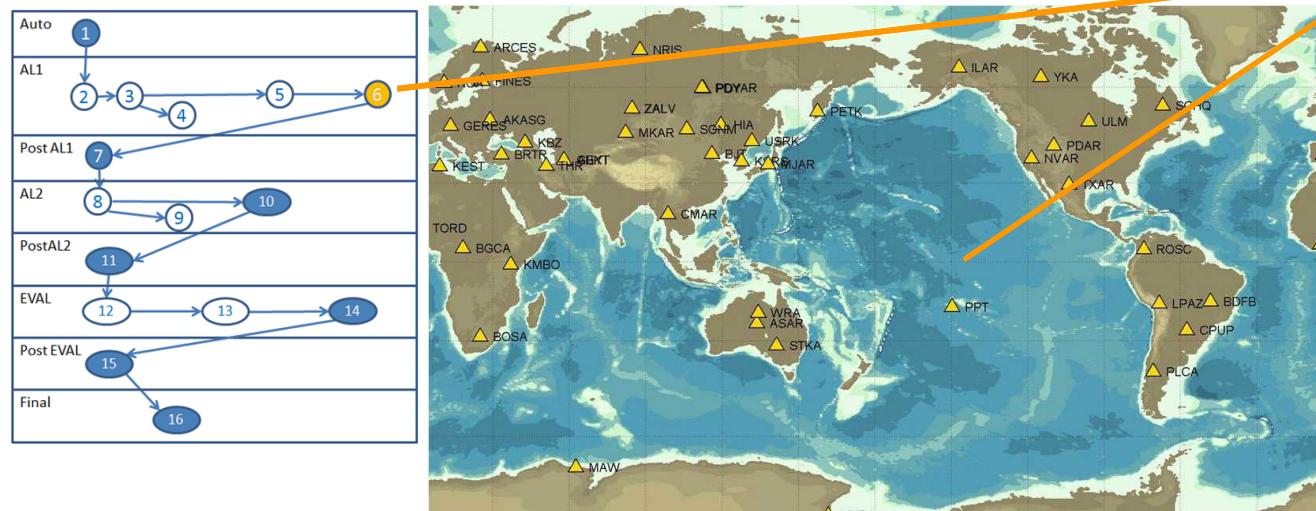# System Action: Display event history

3 Display event history

This example shows an event that was rejected during analysis.

System Action: Display event history

4 Selects event hypothesis to review

To look at the details for a single hypothesis, 1) double click on the selected event/row, 2) click on the hypothesis in the tree, or 3) click on a location on the map

The Analyst fix the bounds on the map so that the focus does not change when choosing different event hypotheses.
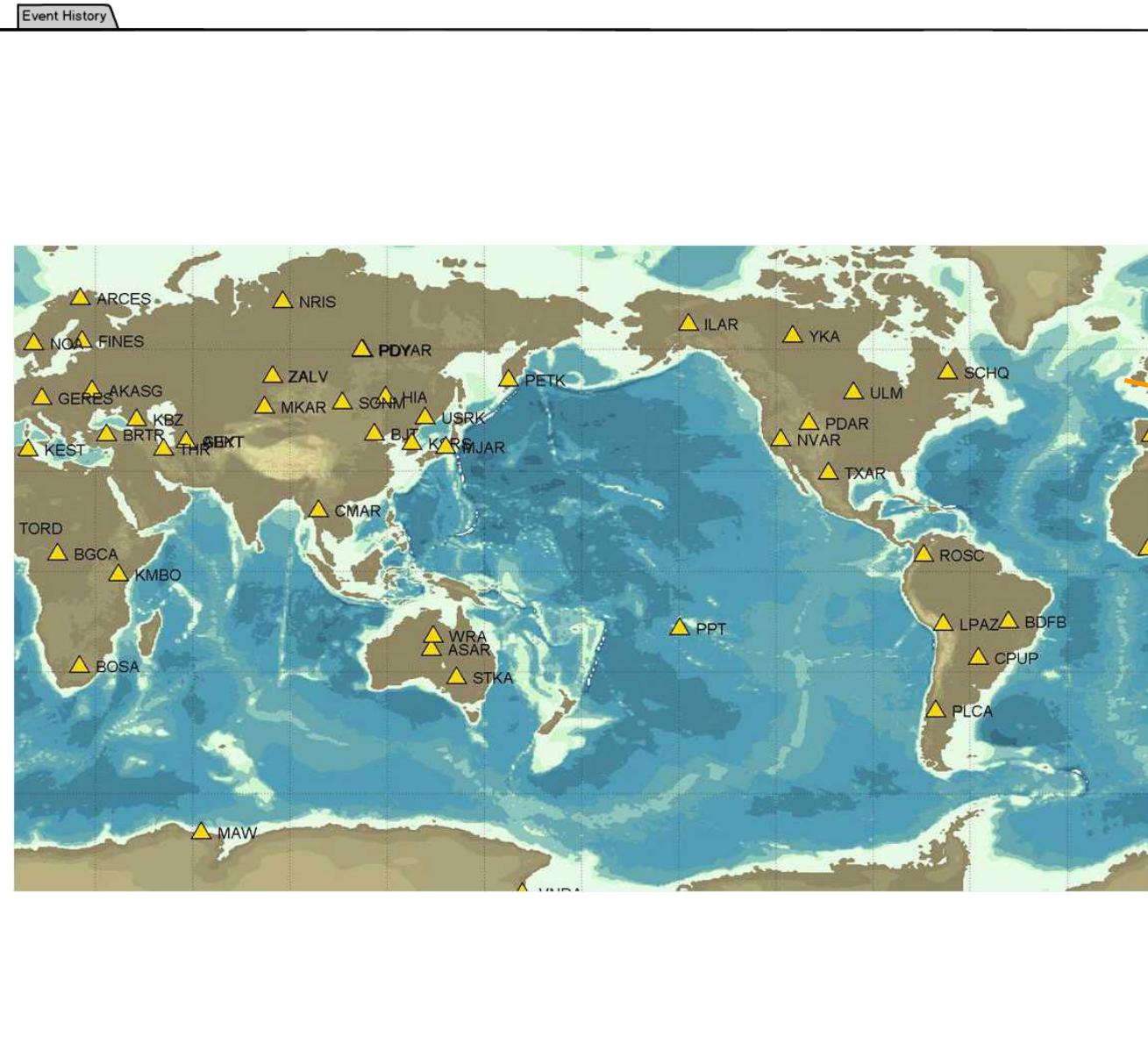
System Action: Display event hypothesis
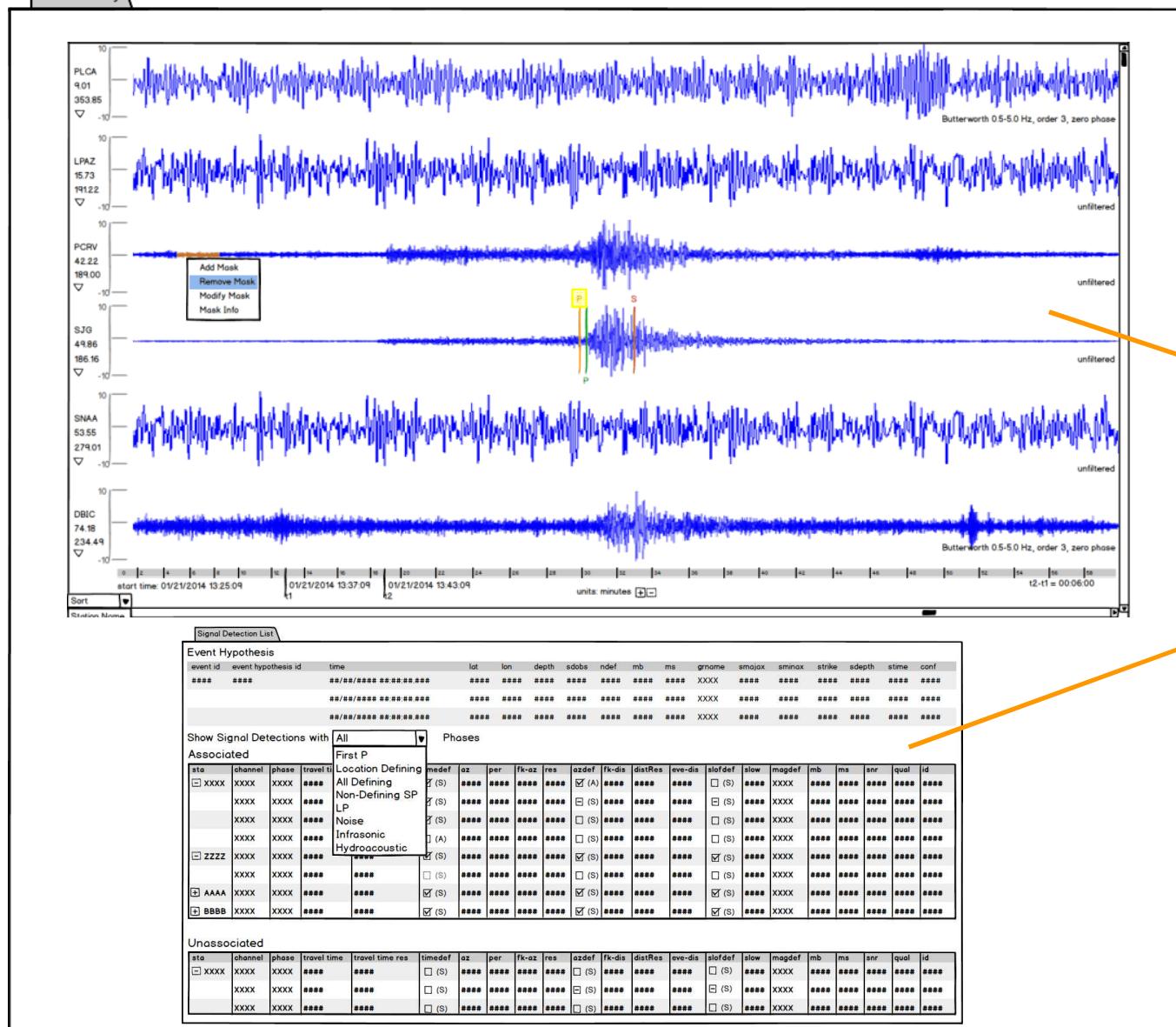
5 Display event hypothesis

Waveforms from the different stations for the selected hypothesis. Highlighting a waveform will highlight a row in the table

Signal detection list for the selected hypothesis. Highlighting a row in the table will highlight the signal detection.

Everything displayed here is read-only
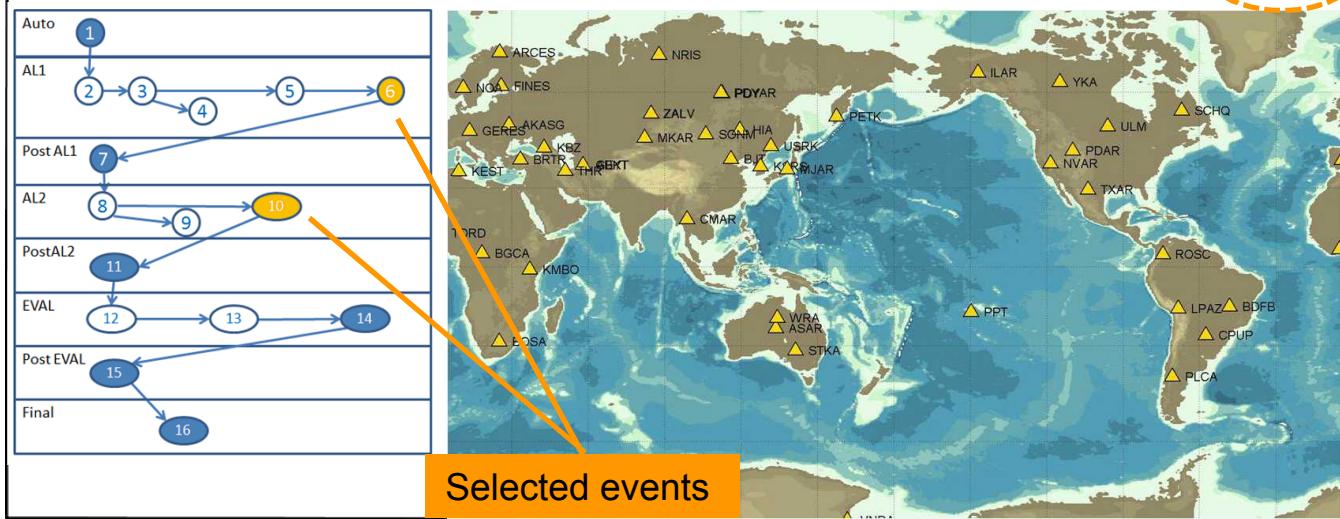
System Action: Display event hypothesis

5 Display event hypothesis

The map is zoomed in to the location of the event hypothesis.

System Action: Display event history

Selected events

6 Select to compare event hypotheses

To compare two event hypotheses, select two rows in the table or two events in the tree and click on the "Compare" button

The map will show locations over time and can be configured to show the version numbers

Selected events

System Action: Display event hypotheses comparison

7 Display hypotheses comparison
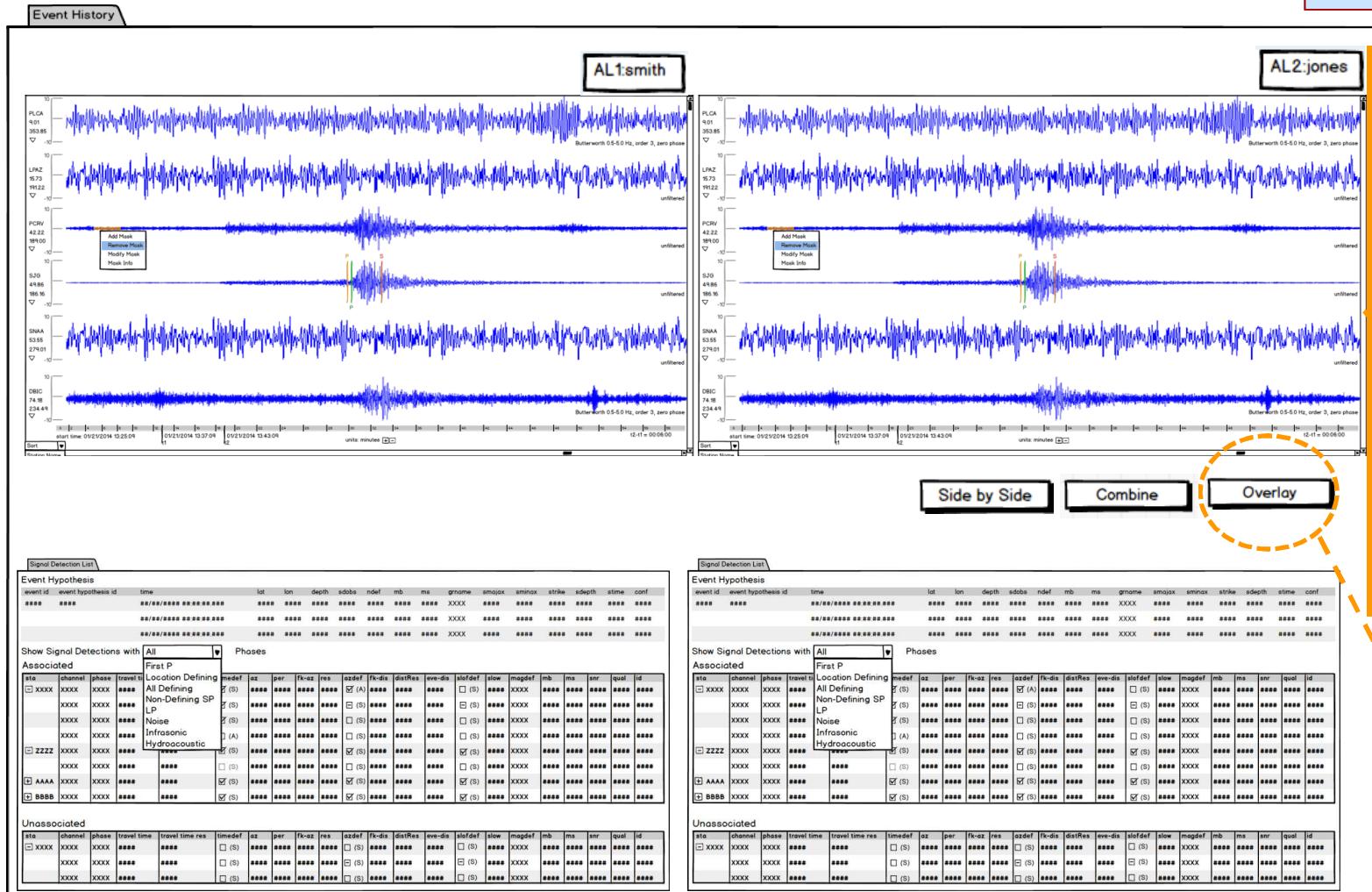
Waveforms and the signal detection list for the two different hypotheses come up side by side (default). Choose a waveform or line in the signal detection list and the waveforms and information in the signal detection list are highlighted for both event hypotheses

Click to show the waveforms overlaid in one window – "ghosting"

System Action: Display event hypotheses comparison

Event History

7 Display hypotheses comparison

Waveforms from the two hypotheses are overlaid in the same display ("ghosting"). The waveforms are color-coded by event hypothesis
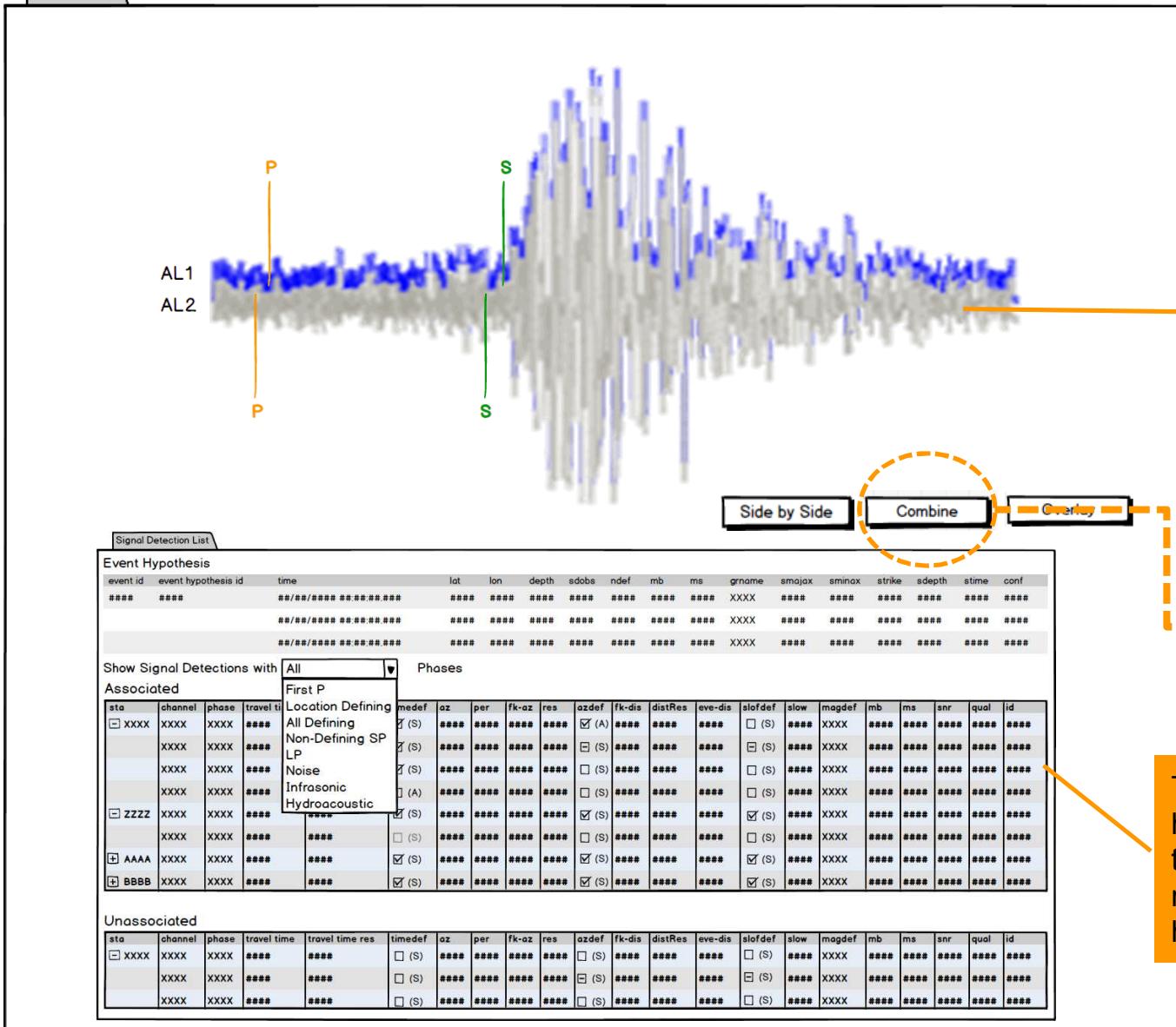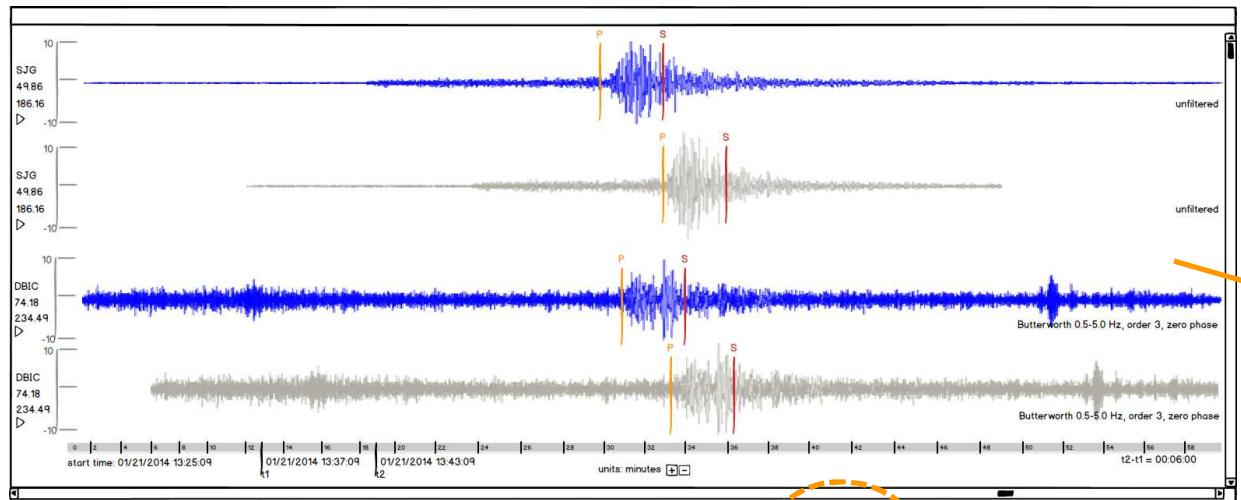
Click to show the waveforms combined in one window

The information for the two hypotheses are interleaved in the Signal Detection List. The rows are color-coded by event hypothesis

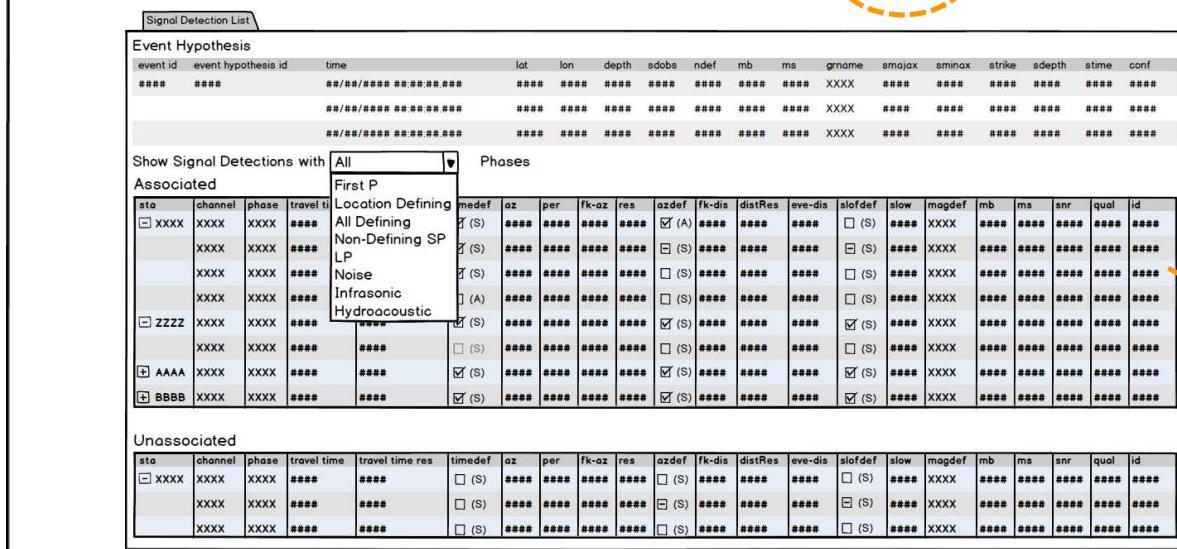# System Action: Display event hypotheses comparison

Event History

7 Display hypotheses comparison

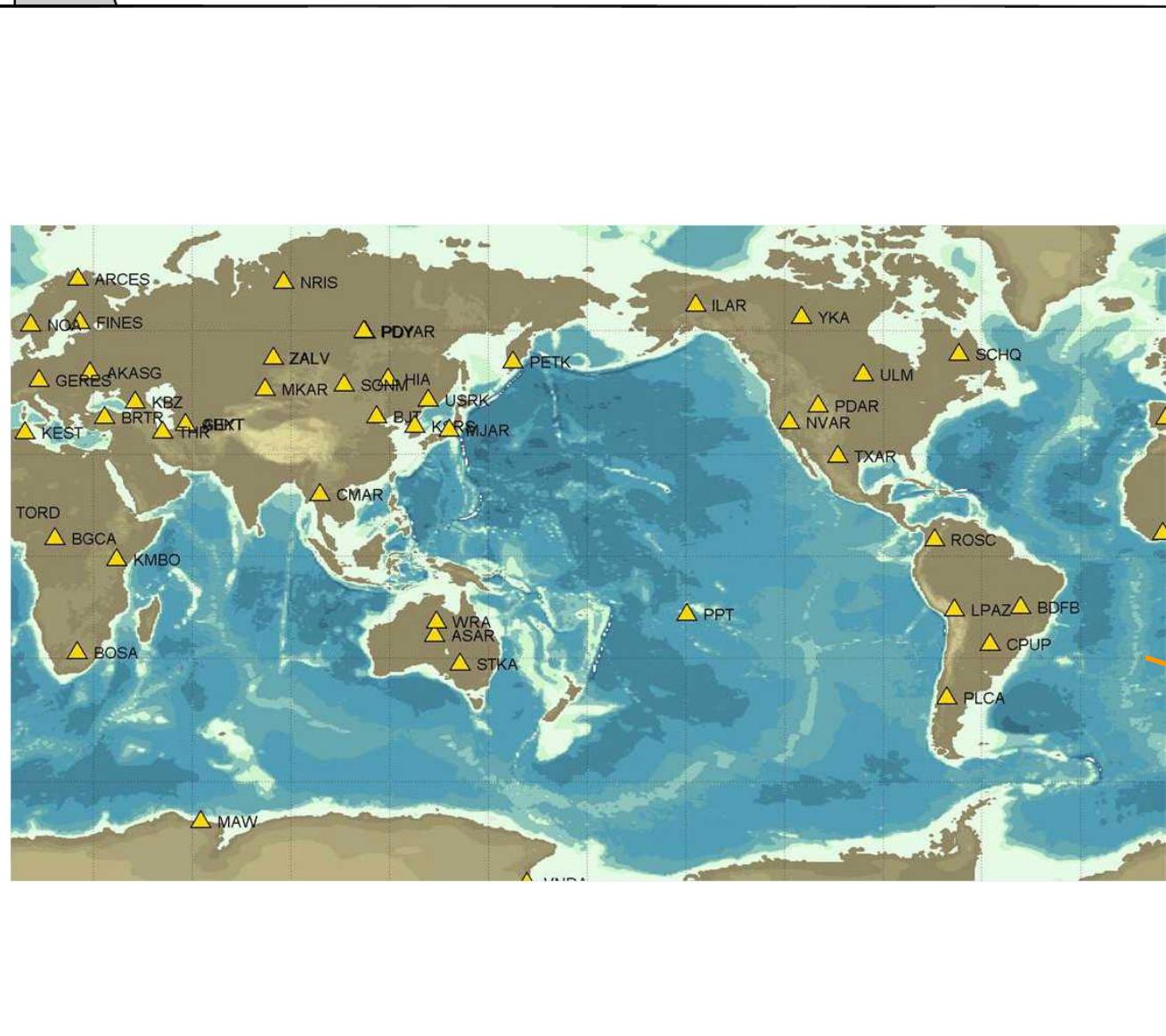Waveforms from the two hypotheses are shown combined on the same display

Click to show the waveforms side by side

The information for the two hypotheses are interleaved in the Signal Detection List. The rows are color-coded by event hypothesis

System Action: Display event hypothesis

7 Display hypotheses comparison

The map is zoomed in to the location of both the event hypotheses.