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USER INTERFACE STORYBOARDS

Selects Data for Analysis



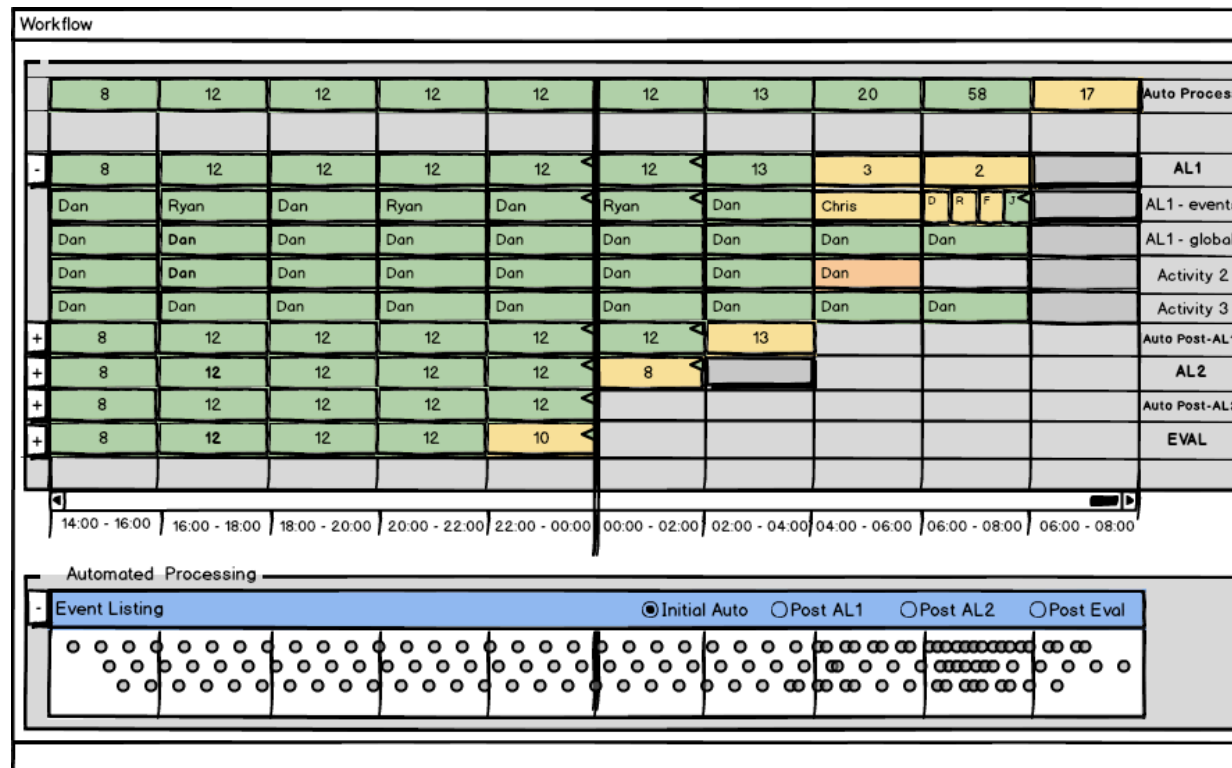
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Brief Description

This use case describes how the Analyst selects data for analysis consistent with the current processing stage. The Analyst creates an Analysis Time Interval based on an actual time interval or an Event Set. The Analyst selects the Analysis Time Interval to facilitate the analyzing of waveform data, unassociated detections, and System-built and Analyst-reviewed events within an Analyst specified time frame. The System updates relevant displays to indicate the selected data is being analyzed.

Overview

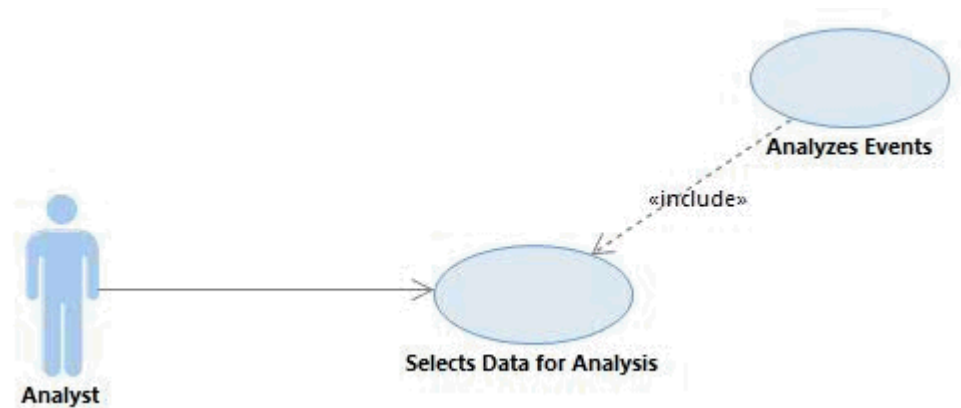
- This use case begins when the Analyst chooses to select event data and/or signal detections to analyze
- The Workflow display, shown below, is the primary concept in this UIS and is part of the Analyst Workspace



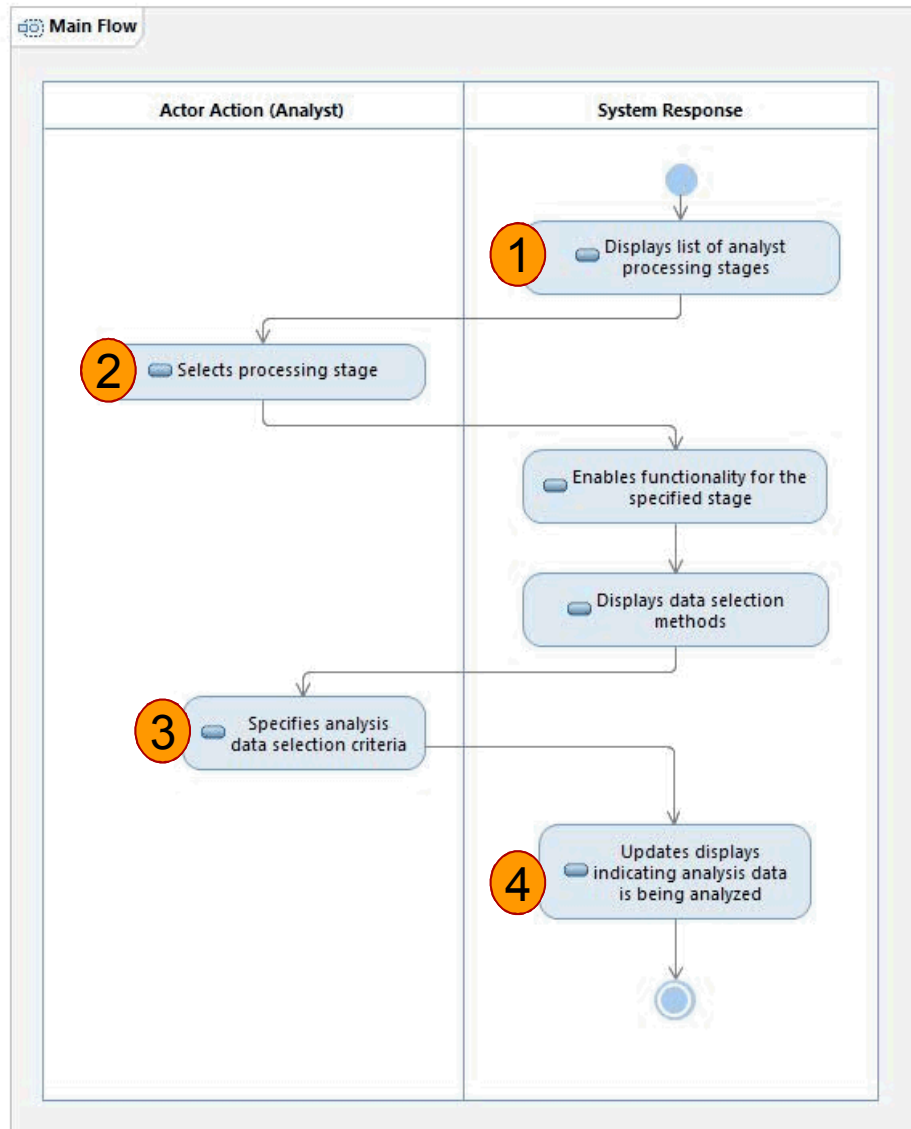
Key concepts

- The processing stages shown in the Workflow display (one per row) are examples and can be configured
- Selecting data for analysis via the Workflow display populates the Event List with that data (See Event List UIS Common Component for more information)
- The Search display provides access to events outside the normal analyst workflow (See Search UIS Common Component for more information)
- Hotkeys are provided for common user actions

Selects Data for Analysis: Use Case

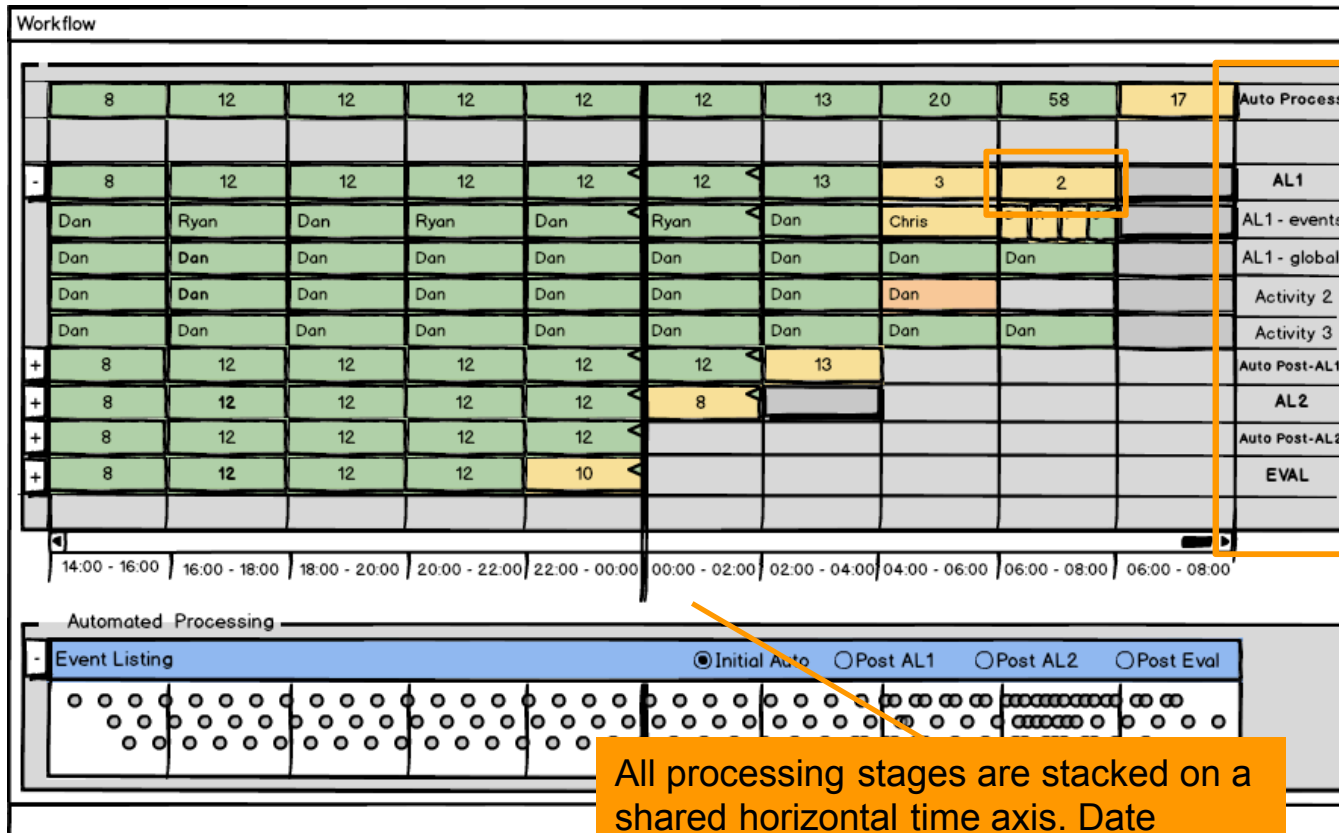


Main Flow



1. Displays list of analyst processing stages
2. Selects processing stage
3. Specifies analysis data selection criteria
4. Updates displays indicating analysis data is being analyzed

1) Displays list of analyst processing stages

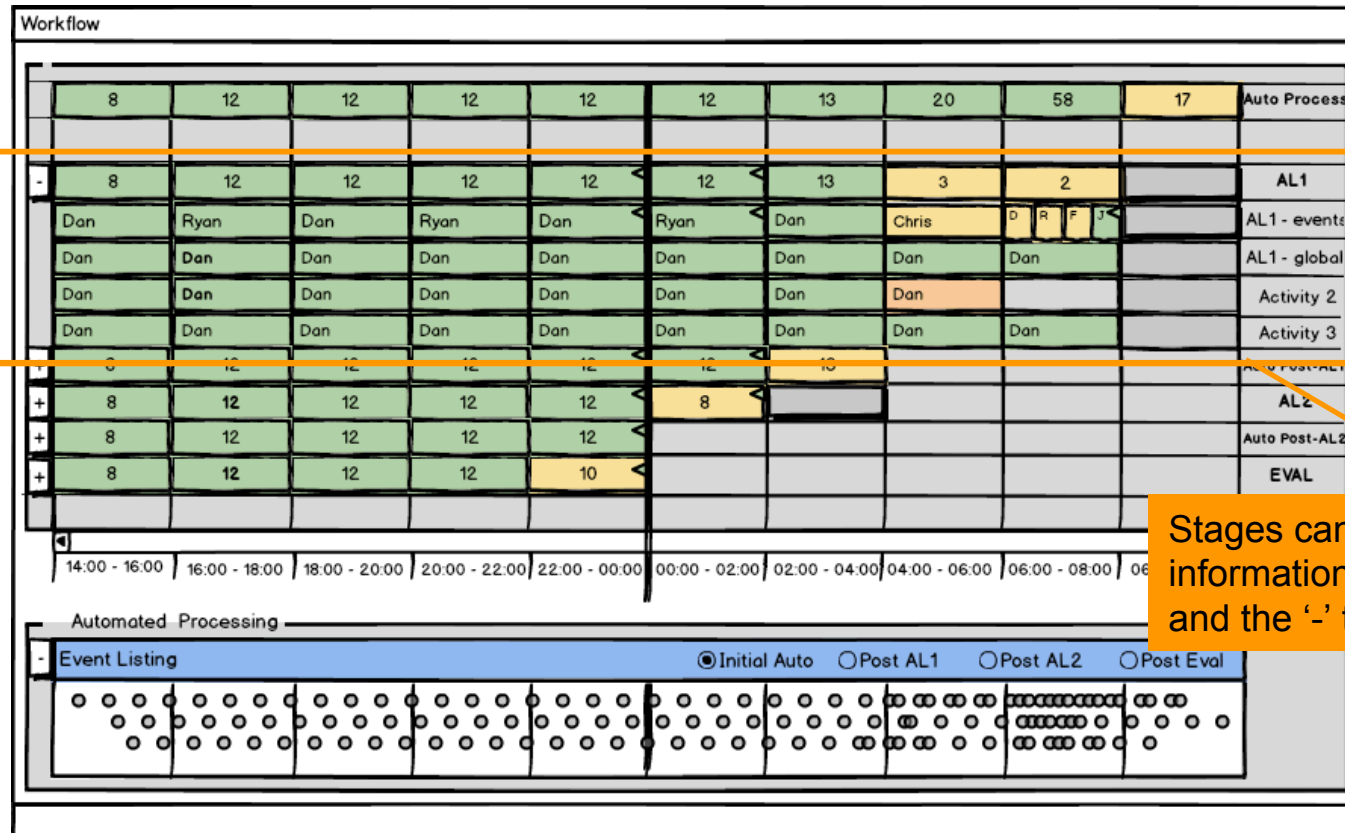


Processing stages are shown one per row on the Workflow display.

Each colored box in the table represents a time interval for a given stage. The number inside each box represents the number of events in that time interval for that stage. For interactive Analyst stages, these numbers are updated as events in the interval are marked as complete.

All processing stages are stacked on a shared horizontal time axis. Date boundaries are clearly indicated.

1) Displays list of analyst processing stages



Stages can be expanded to show more information. Press the '+' to expand and the '-' to collapse each stage.

Time Interval:

Not Started



Not Complete



Failure



In Progress

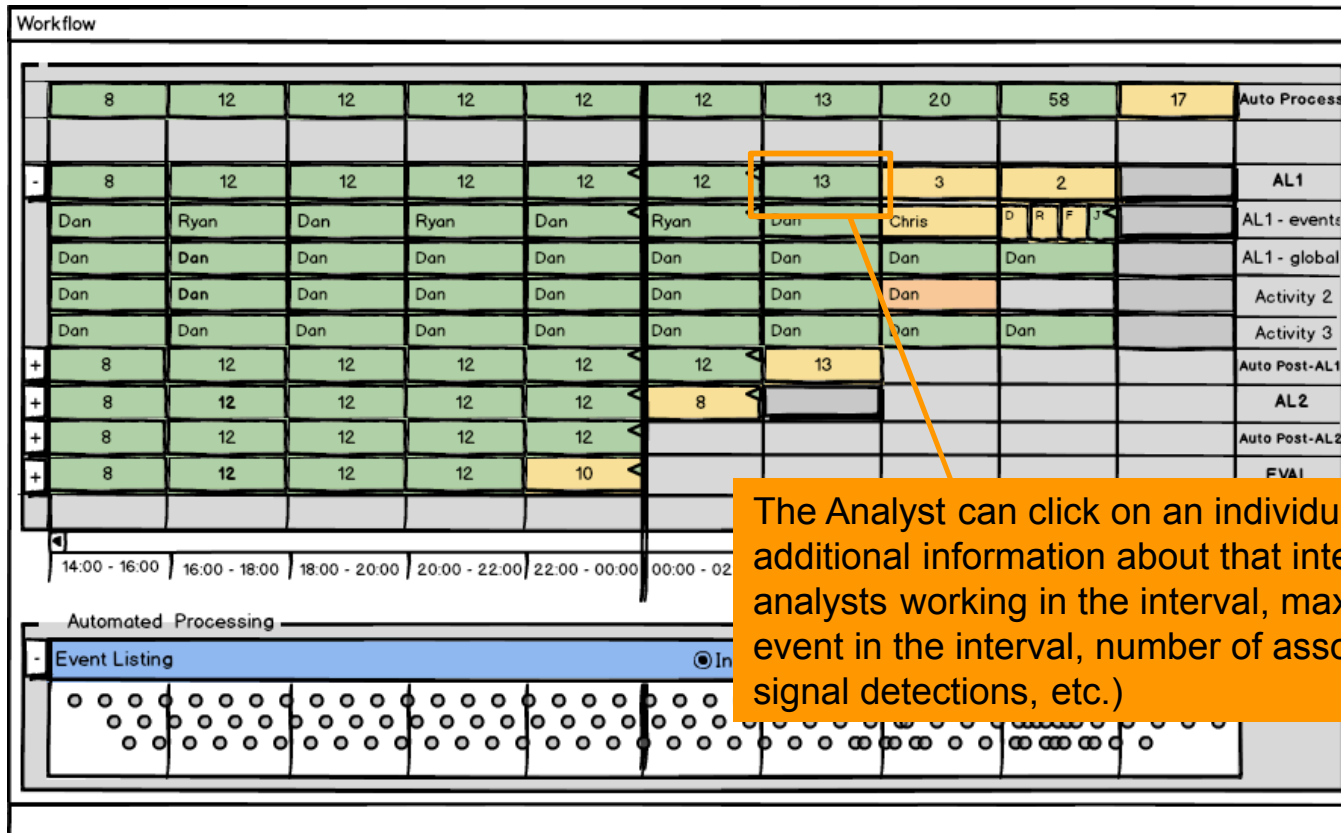


Complete



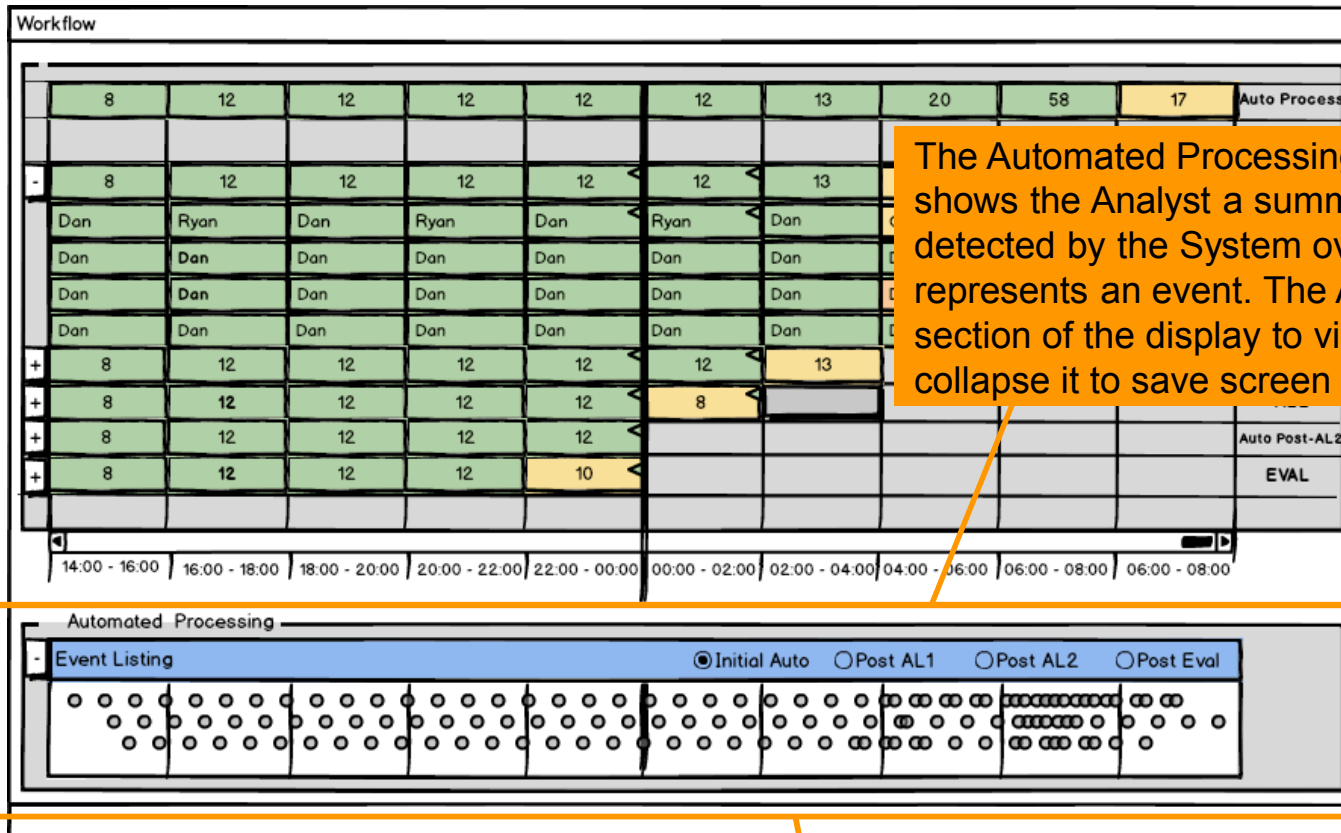
The color of each box represents the status of that time interval for that stage, per the legend. Possible failures might include the failure of an activity (e.g. couldn't update database).

1) Displays list of analyst processing stages



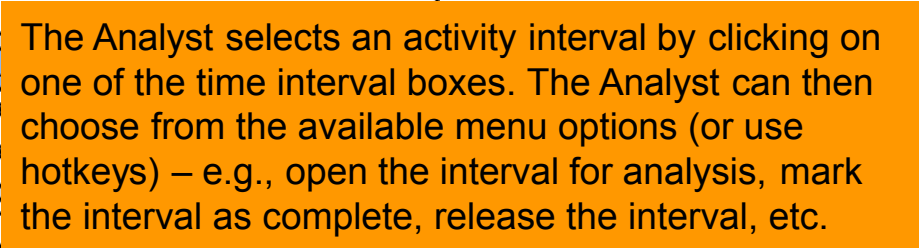
The Analyst can click on an individual time interval box to see additional information about that interval (e.g., duration, analysts working in the interval, maximum magnitude of an event in the interval, number of associated/unassociated signal detections, etc.)

1) Displays list of analyst processing stages



The Automated Processing portion of the display shows the Analyst a summary of the events being detected by the System over time. Each dot represents an event. The Analyst can expand this section of the display to view the information or collapse it to save screen space.

Radio buttons allow the Analyst to choose the processing stage for which event information is shown. The Analyst can click on an individual event to see additional information about that event.



3) Specifies analysis data selection criteria

Workflow

| | | | | | | | | | | |
|---|-----|------|-----|------|-----|------|-----|-------|---------|--------------|
| 8 | 12 | 12 | 12 | 12 | 12 | 13 | 20 | 58 | 17 | Auto Process |
| - | 8 | 12 | 12 | 12 | 12 | 13 | 3 | 2 | | AL1 |
| | Dan | Ryan | Dan | Ryan | Dan | Ryan | Dan | Chris | D R F J | AL1 - events |
| | Dan | Dan | Dan | Dan | Dan | Dan | Dan | Dan | | AL1 - global |
| | Dan | Dan | Dan | Dan | Dan | Dan | Dan | Dan | | |
| | Dan | Dan | Dan | Dan | Dan | Dan | Dan | Dan | | |
| + | 8 | 12 | 12 | 12 | 12 | 12 | 13 | | | |
| + | 8 | 12 | 12 | 12 | 12 | 8 | | | | |
| + | 8 | | | | | | | | | |
| + | 8 | | | | | | | | | |

Subdivide Interval

Start Interval: 06:00 2/14/2014

End Interval: 08:00 2/14/2014

Processing Stage: AL1

Select Interval Size: 30 min ▼

- 15 min
- 30 min
- 1 hour
- 2 hour

OK Cancel

Open Interval
Mark Complete
Add Note...
Release Interval
Subdivide Interval...

02:00 - 04:00 | 04:00 - 06:00 | 06:00 - 08:00 | 06:00 - 08:00

Auto ○ Post

The Analyst can subdivide an activity interval (but not an entire stage) into smaller time increments.

3) Specifies analysis data selection criteria

Workflow

| | | | | | | | | | | |
|-----|------|-----|------|-----|------|-----|-------|----|----|--------------|
| 8 | 12 | 12 | 12 | 12 | 12 | 13 | 20 | 58 | 17 | Auto Process |
| - 8 | 12 | 12 | 12 | 12 | 12 | 13 | 3 | 2 | | AL1 |
| Dan | Ryan | Dan | Ryan | Dan | Ryan | Dan | Chris | D | R | F |
| Dan | | | | | | | | | | AL1 - events |
| Dan | | | | | | | | | | AL1 - global |

Notes for Interval

Start Interval:

End Interval:

Processing Stage:

Comments

forward (AL2) ###:## ##/##/####, ###:## ##/##/####

POST_AL_1 ###:## ##/##/####, ###:## ##/##/####
Reformed beams for ###:## ##/##/####, ###:## ##/##/#### - ###:## ##/##/#### interval

cjyoung (AL1) ###:## ##/##/####, ###:## ##/##/####
Completed ###:## ##/##/####, ###:## ##/##/#### - ###:## ##/##/#### interval

Add comment OK Cancel

Open Interval

Mark Complete

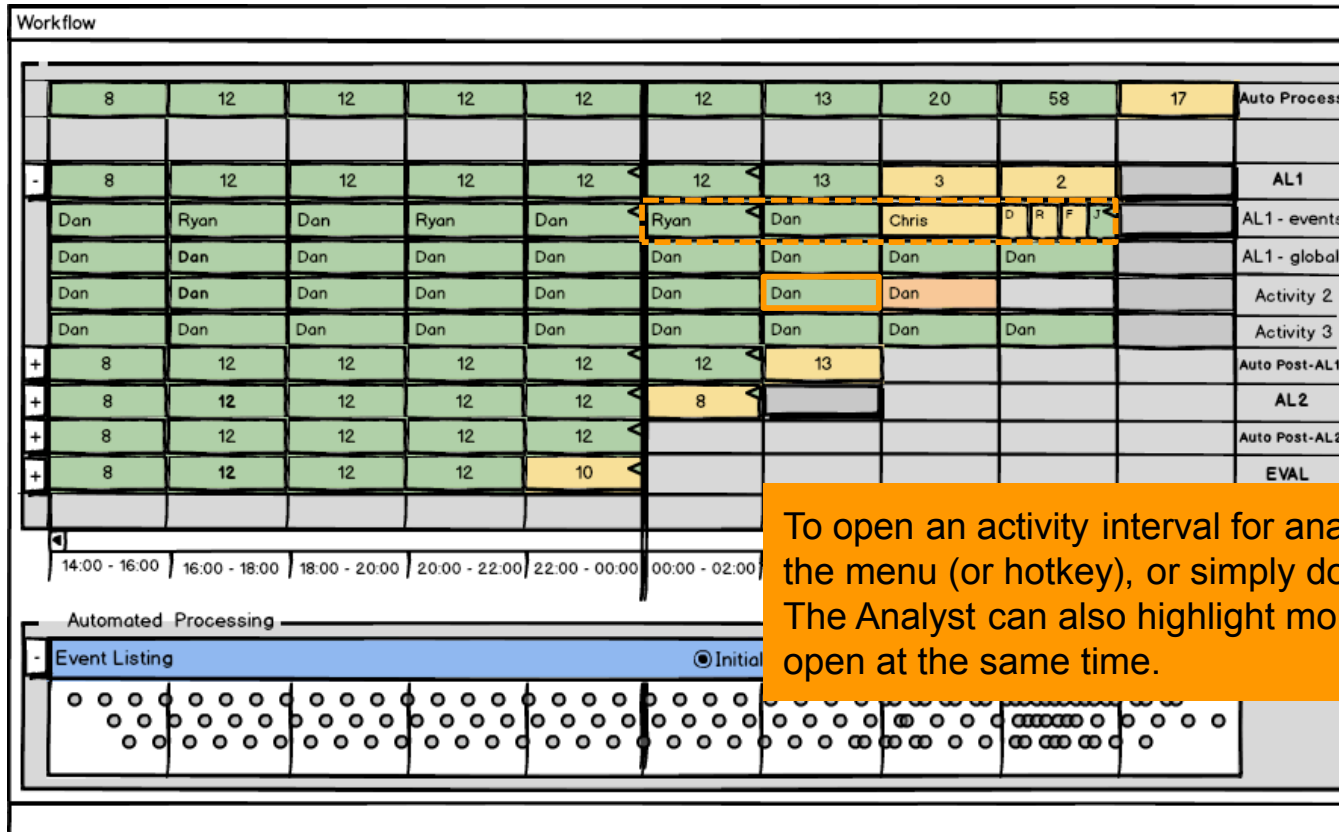
Add Note...

Release Interval

Subdivide Interval...

The Analyst can add comments to an interval. The list of comments spans all processing stages.

3) Specifies analysis data selection criteria



To open an activity interval for analysis, the Analyst can use the menu (or hotkey), or simply double click on the interval. The Analyst can also highlight more than one interval to open at the same time.

4) Updates displays indicating analysis data is being analyzed

Workflow

Opening an interval populates the Event List display with the events in that interval as well as with events from ~30 minutes before and after the interval for context. From the Event List, the Analyst selects which event to refine. See Event List UIS Component for more information about the Event List display.

Event list

Events to Work

Show events: XXXX ☐ seismic ☒ hydroacoustic ☒ infrasonic ☒ before interval ☒ after interval

| ID | Lat | Lon | Depth | Time | Mag | Region | Active analysts | EQM | Conflict | Mark complete |
|--------|------|------|-------|---------------------|------|--------|-----------------|-----|----------|--|
| #### | #### | #### | #### | ##/##/#### ##:##:## | #### | XXXX | | ## | | <input type="button" value="Mark complete"/> |
| * #### | #### | #### | #### | ##/##/#### ##:##:## | #### | XXXX | | ## | | <input type="button" value="Mark complete"/> |
| #### | #### | #### | #### | ##/##/#### ##:##:## | #### | XXXX | XXXX | ## | | <input type="button" value="Mark complete"/> |
| #### | #### | #### | #### | ##/##/#### ##:##:## | #### | XXXX | XXXX, XXXX | ## | ! | <input type="button" value="Mark complete"/> |
| #### | #### | #### | #### | ##/##/#### ##:##:## | #### | XXXX | | ## | | <input type="button" value="Mark complete"/> |
| #### | #### | #### | #### | ##/##/#### ##:##:## | #### | XXXX | | ## | | |
| #### | #### | #### | #### | ##/##/#### ##:##:## | #### | XXXX | | ## | | |

Complete Events

| ID | Lat | Lon | Depth | Time | Mag | Region | Active analysts | EQM | Conflict |
|------|------|------|-------|---------------------|------|--------|-----------------|-----|----------|
| #### | #### | #### | #### | ##/##/#### ##:##:## | #### | XXXX | | ## | |
| #### | #### | #### | #### | ##/##/#### ##:##:## | #### | XXXX | | ## | ! |
| #### | #### | #### | #### | ##/##/#### ##:##:## | #### | XXXX | | ## | |

Add event comment:

fward ##/##/####, ##:##:##

Searching for events outside analyst workflow

- The Analyst can search for events, associated signal detections, etc. using the Search display. See the Search UIS Component for more information.
- The search results show the events that meet the search criteria.
- A “send selected events to event list” option allows the Analyst to populate the event list with the selected events from the search. The Analyst can select events they need to analyze and/or events that they need for reference.
- The Analyst must specify the processing stage to read data from as well as the processing stage to work in. These processing stages could be non-workflow processing stages.