

# PandaGUI Second Milestone Release Notes

Research App Version 1.1.56

WebApp Version 11.7.2007

Based on Interrogator Version 11.2

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## UI - WebApp Functionality

### • Alert log and management

- Streamlined Investigations:
  - Automatically link alerts to investigations with status tracking and assignment workflows.
- Usability:
  - Filter and sort investigations by severity, location, or timestamp for quick insights.
  - Perform quick actions on alerts, like adding notes or assigning tasks, from the Live View.
- Status Updates:
  - Track investigations with statuses like New, Open, In Progress, and Closed.

### • Map with reporting line logic

- Enhanced Map Layers:
  - View and toggle reporting lines and consistent channels as map overlays.
  - Zoom-level transitions: High-level markers become detailed icons on closer inspection.
- Alert Integration:
  - Automatically match alerts to the nearest reporting line and channel (within 10 km).
  - Display matched reporting lines and channels in Live View and Investigations.
- Filtering and Customization:
  - Filter investigations by channel, reporting line range, or region.
  - Configure default map layers per customer or tenant.
- Analyzer reporting line sync
  - sync reporting lines matching from webapp to data research section.

### • Administrative features

- Web login with single user, single session at a time.
- updated fiber GPS map with real locations
  - assuming security changes like UDP one way implementation

## System Functionality

- interrogator/analyzer setup:
  - Interrogator, analyzer orchestrated by supervisor.
  - Storage server for “shorter term”/”backup” recording
  - Record in SEG Y.
  - Dove algo alerts.
- **Panda DC servers:**
  - **Enhanced Robustness features**
    - Enhanced Stability:
      - Resolved boot issues to prevent infinite restart loops.
      - Added liveness and readiness probes for critical services.
    - Improved Monitoring:
      - Real-time dashboards for pod states, node readiness, and storage utilization.
      - Alerts for critical storage and service conditions.
    - Optimized Recovery:
      - Validated crash recovery for key components and master node failures.
      - Dedicated storage partitions for critical services to improve resilience.
    - Creation of troubleshooting guide - [Panda Troubleshoot Guide](#)

## Research Functionality

- **Dual/Single screen toggle.**
- Research form
  - Research visualization type Multi-channel, Single channel.
  - Base analysis parameters form:
    - Analysis mode - live or historic
      - Time and location/sensor/pixel range in historic
      - Location/sensor/pixel range on live
    - Window size
      - Cache Live and history up to 30 screens defined by the research form parameters.

- Sensor range
  - 1000 for Historic.
  - 750 for live.
  - One panel support full fiber, 2222 channels.
- nfft for multi-channel - 256, 512, 1024, 2048.
- **nfft for single channel** - up to 65536 (in powers of 2).
- Frequency range 0-1000 hz
- Two research modes: Live fiber and history (time and location).
  - Auto-scrolling in live (stop on manual scroll, button or scroll up to reactivate)
  - Stable on Live for 24 hours. No Errors in logs.
- **7 Investigation tabs with up to 6 Displays in the same tab.**
  - Name each tab.
  - Switch tabs from one screen to another.
  - Create from form.
  - Duplicate research window.
  - Live and history able to run simultaneously.
- **Communication loss handling** - live investigation does not fail in a case of communication loss, but creates a visually clear hole to indicate a loss while still running + no deletion of history.
- **Research templates** - Create, save and then load investigation as templates, including all window parameters.
- Data research features:
  - **Level of Details** - dynamically adjusts the visualization based on the zoom level for optimized performance:
    - Zoomed-Out View - Displays a heatmap-style visualization of the maximum signal values.
    - Zoomed-In View - Transitions to detailed spectrograms.
  - Zoom in X Axis, from all channels in screen to single channel in the screen.
    - Adaptable axis values with accordance to zoom level
      - Show / hide frequencies
      - Tick resolution
  - Marker on cursor + data panel + Tooltip
  - Color maps

- Control by 2 nob's for min/max
- Colormap type - same as in seis-analyzer
- Normalization - 2 layers frequency and spatial, including DPMW, Median, etc. per client characterization.
- Performance:

גודל חלון (שעות)	גודל חלון (שניות)	זמן עד לתחילת הצגת דאטה (דקות)
0.0014	5	0.0034
0.0083	30	0.0160
0.0167	60	0.0321
0.0833	300	0.1433
1	3600	1.9923
6	21600	9.7691
12	43200	19.5381
24	86400	39.0763

nFFT	גודל חלון (שניות)	מספר ערוצים	תדרים	אורך הנתונים (שניות)	תוצאות זמן טעינה (בשניות)	תוצאות יחס זמן (אמת)
256	30	500	300	60	3	18
256	60	500	300	120	4	32
256	300	500	300	600	6	95
512	30	500	300	60	4	14
512	60	500	300	120	5	26
512	300	500	300	600	7	88

13	5	60	300	500	30	1024
31	4	120	300	500	60	1024
86	7	600	300	500	300	1024
13	5	60	300	500	30	2048
28	4	120	300	500	60	2048
100	6	600	300	500	300	2048
6	10	60	1000	2000	30	1024
11	11	120	1000	2000	60	1024
55	11	7200	1000	2000	3600	1024
4	17	60	1000	2000	30	2048
4	33	120	1000	2000	60	2048
16	37	7200	300	500	3600	2048
20	1080	21600	1000	1000	86400	2048
21	1029	21600	300	500	86400	2048

## Security

### • Washer integration (γχω)

- One-Way Communication:
  - Enables unidirectional data flow from interrogator to analyzer via UDP.
  - Blocks reverse communication for increased security.
- Resilient and Tested:
  - Minimal data loss (<0.3%) during high-load testing at 25 MB/s.
  - Fully compatible with existing RabbitMQ workflows and roles.

### Main Functionalities NOT in this version

- Real world location - Sensor names remain permanent given fiber changes.
- Research windows: Waterfall, SSG.
- Tagging abilities and database.
- Daily and weekly reports.

- GPS synchronization.
- Several (up to 5) working stations.
- Query tab.
- File attachments to alerts.
- Audio output from data.
- Synchronization between research windows and cursers.
- Modular research window (size and “dock-ability”).
- Synchronized user management between Health monitoring and the application.

## Open Bugs - Known Issues

Type	Key	Summary	Assignee	Priority	Status	Updated
✖	PZ-9551	Data fetch and timestamp mismatch - Drop3 task	OA Oded Aviyam	⬆ Highest	CLOSED	Jul 3, 2025, 10:06
✖	PZ-10420	Load SAT - Analyze - Deleted whole tab takes too...	OA Ofer Avital	⬇ High	TO DO	Aug 24, 2025, 14:0
✖	PZ-10418	Investigations - On pressing any column sorting b...	nir	⬇ High	CLOSED	Jul 9, 2025, 10:46
✖	PZ-10417	Investigations - On filtering via date range other d...	TS Tomer Schwartz	⬇ High	CLOSED	Jul 23, 2025, 08:4
✖	PZ-10409	Load SAT - Switching from Live View page to Anal...	TS Tomer Schwartz	⬇ High	VERIFICAT...	Oct 13, 2025, 07:4
✖	PZ-10408	Load SAT - Switching from Live View page to Inv...	TS Tomer Schwartz	⬇ High	VERIFICAT...	Oct 13, 2025, 07:4
✖	PZ-10407	Load SAT - Live View - On back to the page the m...	TS Tomer Schwartz	⬇ High	CLOSED	Sep 7, 2025, 09:38
✖	PZ-10270	Closing investigation before they loaded, does not...	OA Ofer Avital	⬇ High	CLOSED	Apr 9, 2025, 11:38
✖	PZ-10158	Lack of computational efficiency in normalized vie...	OA Ofer Avital	⬇ High	CLOSED	Oct 22, 2025, 11:20
✖	PZ-9948	Live View - The Sensor's tooltip flickering on the ...	TS Tomer Schwartz	⬇ High	CLOSED	Sep 1, 2025, 12:22
✖	PZ-10414	Live View - The RL's tooltip is hidden by the fiber l...	DK Dima Katz	⬇ Medium	CLOSED	Aug 12, 2025, 13:5
✖	PZ-10410	Load SAT - Investigations - The 5th sorting take l...	TS Tomer Schwartz	⬇ Medium	CLOSED	Sep 7, 2025, 09:37
✖	PZ-10406	Load SAT - Live View - The map lost it's focus wh...	TS Tomer Schwartz	⬇ Medium	VERIFICAT...	Sep 11, 2025, 16:0

🔄 Synced just now • 50 items