Persyst 15Rev.C (build 2025.10.22) Marketing Release Notes

Persyst 15Rev.C delivers major enhancements for visualizing and analyzing multi-modal iEEG data, improving usability and workflow overall.

Improved vendor-specific workflows for online iEEG trending, plus user-defined trend file size limits make for longer, more stable iEEG recordings.

Persyst now supports ROSA trajectory files, making the iEEG localization process fully automated.

Persyst 15Rev.C introduces PACS integration! Via a Persyst PACS user interface, users can directly search for and upload DICOM images into Persyst for both iEEG localization and ESI studies, significantly reducing the time required for this step.

A new disconnect detect feature automatically flags patient disconnections from the EEG system. When an EEG or ECG disconnection is detected, Persyst adds a comment and flatlines affected channels prior to Trending and Artifact Reduction. This reduces misinterpretation of disconnection artifacts and reduces false positive detections during periods of disconnection.

Finally, visualizing results in Persyst ESI is simplified as users are no longer required to login for this step. The crosshairs in the 3D ESI Viewer now automatically jump to the voxel of maximum activation, and the EEG and MRI data uploads can be queued.

iEEG Workflow

iEEG Trending and Tools

- The 4 GB file size limit of the Persyst trend files was removed and users can now set custom trend file size limits. This resolved an issue where processing would stop during live acquisition. This also allows for higher resolution trending, both on and offline, which is important for iEEG trending.
- iEEG Montage creation now indicates estimated storage size per 24 hours of recording
- The trend settings options for iEEG data have been streamlined for easier initialization.
- **:** An issue was resolved where iEEG montage and trend files created in P15a were not detected due to a mismatch in recorded channel lists.
- PD-4722: A problem was fixed causing Persyst trending to not start on some iEEG+EEG records.

Intracranial Electrode Localization

- Persyst now supports the import of ROSA trajectories for faster and fully automated localization of iEEG contacts in patient imaging.
- The iEEG montage creator now shows the hardware groups in the order they are received from the OEM.
- Users can now change the intercontact spacing of all implanted arrays when localizing iEEG electrodes in imaging.
- There is improved reference channel handling for heart rate trends: Persyst now automatically detects the correct ECG G2 channel for intracranial recordings without 10–20 channels and the ECG trends settings dialog updates the G2 dropdown to match the selected G1 channel.
- iEEG study export now includes electrode coordinates in MNI space, providing standardized atlas-based locations for research use.
- PD-5467: The landmark based alignment feature now allows the user to crop the images for easier landmark visualization and identification.
- The ability to import an iEEG localization study from another workstation on a separate network was added.
- Users may lock iEEG localization studies even if not all electrode arrays are localized.
- PD-4498: An issue was fixed where spaces in the channel names were causing problems for records that have both iEEG and scalp EEG
- An intermittent license error when starting the iEEG electrode localization tool has been fixed.
- An issue was fixed where non-numeric patient birthdates in EDF files caused errors; these files now open normally.

PACS Integration

- Persyst PACS integration supports the ability to connect with a PACS system and perform query/retrieve functions within the Persyst PACS user interface, streamlining the step of obtaining patient DICOM imaging for iEEG Electrode Localization and Persyst ESI.
- Users can query based on multiple study parameters, including patient name, ID, DOB, Study Description, Study ID and Study Date.
- Users can query for DICOM imaging and filter queries by MR, CT, PET (PT) and SPECT (NM).
- There is a “Spacing” column in the PACS Query form to aid selection of imaging with sufficient resolution for ESI and iEEG electrode localization.
- Fast retrieval of imaging from PACS has been optimized.

Trending and Detection

- The new disconnect detect feature automatically identifies EEG/ECG disconnections and flatlines affected channels before Trending and AR, while logging connection state changes as comments.
- The seizure detection performance has been improved by suppressing false positives during EEG disconnect detector hysteresis.
- Corrected an issue where the record's trend settings file would become corrupted, due to the appearance of a modal dialog window, if opened by a newer version of the software.

Persyst ESI

- ESI results can now be viewed by the user without having to log in to the Persyst ESI application.
- Persyst ESI now allows the user to queue the upload of the MRI or other ESI cases while the EEG is uploading.
- The Persyst ESI search field is now dynamic, showing results as the user types and the UI was optimized for intuitiveness.
- PD-4758: The crosshairs in the ESI 3D Viewer now jump to the voxel of maximum activation in all three planes.
- The Persyst ESI 3D Viewer now saves changes to the threshold settings and export option.
- The "Reset View" function in the Persyst ESI 3D Viewer now also resets the ESI results Opacity and Brain Surface.
- The Persyst ESI 3D Viewer now opens with the ESI results threshold set to 95%, showing the top 5% of maximum activations, and still allowing for dynamic thresholding by the user.
- The % value of the ESI results threshold slider in the 3D Viewer now syncs with the location of the slider.
- A scaling issue was fixed when certain MRIs were defaced in Persyst ESI.
- The "GPU acceleration error" with Persyst ESI now only appears in VM environments as expected.
- Support for high resolution monitors has been added to the ESI interface.
- (None provided)
- Persyst ESI will alert the user when the ESI temp folder is on a network location, since it is recommended that it be on the local disk.
- Patient names are now parsed correctly in Persyst ESI when they contain a dot (.).
- An error when opening the Persyst index was fixed when opening the Persyst database.

- All manually annotated spikes are passed to Epilog even if they are less than 5 seconds from the end of the record.
- Logic was added to Persyst ESI to better handle HTTP redirect messages when uploading to Persyst ESI.
- Persyst ESI now gives a meaningful message when there are no ESI results and the 3D Viewer is called.

Persyst EEG Viewer

- Values for frequency and amplitude on spectrograms are now available at the mouse pointer position.
- An issue was fixed where polygraph settings and calibration for DC inputs (e.g., SpO_2 and BPM) were not saved, causing incorrect trend values. The Polygraph channel selection and calibration are now preserved in montages, ensuring accurate display and trending.
- The ability to Shift + Click in Archive | Select Channels has been added.
- It is now possible to specify an exact duration for a comment (e.g., 300 seconds)
- The 10-10 montage is now the default for the electrode signal quality map. Right-click and select properties to change the map.
- Loading time is improved when the trend file contains many algebraic instruments.
- An issue was fixed where montages could disappear from the Other Montages menu after being removed from a group by deleting the group name; montages now remain visible until reload.
- A bug was fixed that prevented the Persyst database window from opening correctly on a two-monitor system
- The outdated email option for Trend Notification has been removed.

Licensing and Installation

- An error message was removed if shared the license folder is not present.
- The license manager was updated to automatically apply licenses so renewed licenses are automatically updated on the end computer.
- The setup configuration manager (DeploySettings) has been updated to allow the Persyst Imaging Directory to be specified during configuration.

Persyst Database, Data Handling and Archiving

- Support was added for a new floating-point DAT file format, enabling per-channel physiological values with higher dynamic range and precision without increasing file size.

- An EDF+ video handling issue was fixed to correctly match video files with EDF records, support multiple video channels with identical start times, and improve filename/patient ID matching.
- The Persyst lay-dat format specification was updated to include datatype (16-bit integer, 32-bit integer, and32-bit float)
- The "Sort by value," function was corrected for the duration and channel count columns in the Persyst database.
- The ability to add mapped drives to the Persyst database has been added, including a suggestion to replace with the equivalent UNC path.
- When deidentifying studies, the archive tool will now only select dates in the past.
- A bug was fixed where archiving a study to EDF reset the TestTime field to 00.00.00

OEM Integration

Cadwell

- An issue was fixed where, if Zenect connectors were moved during the course of an iEEG recording, the waveforms in Persyst would appear flat. Now the waveforms appear as they should.
- Handling of the CadLinkLoginPrompt was improved to avoid calling the function if the session is already logged in.
- PD-4684: Interacting with trends during Cadwell Arc acquisition is now much faster.
- An issue was resolved where the Persyst window in Cadwell could go blank after ~35 minutes of offline iEEG trending by optimizing cache sizing, buffer reuse, and history management.
- An out-of-memory error was fixed in Cadwell iEEG trending by optimizing cache and buffer management to reduce Persyst's memory demands.

Compumedics

- An issue was resolved where Persyst was duplicating events in ProFusion7 records
- Compumedics ProfusionEEG no longer pauses every 10 seconds while running with Persyst.

Elekta (Megin)

- An issue was corrected where Elekta records were not being read correctly.

Micromed

- An additional field was added to the Patient info field to show the type of Micromed record.

Natus

- Persyst's responsiveness has been greatly improved during online monitoring by eliminating excessive I/O operations while rendering Versus Baseline trends.

Neuroelectrics

- , : A data reader for the Neuroelectrics format was added.

Neuroscan

- Support was fixed for Neuroscan .cnt files in Persyst 15 by auto-detecting 16-bit vs 32-bit data formats and correcting channel calibration handling.