

# Release Notes

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## V 1.5.5 (released on 2017-04-27)

- Height of encevis NeuroTrend GUI elements was optimized.
- Fixed an issue where NeuroTrend showed BG Frequency and burst suppression when zero-data were sent to the plugin.
- A numerical instability in PureEEG for data with high dynamic range was solved.
- EpiSpike GUI now adapts the review time range automatically to the moving analysis end during online processing.
- Fixed an issue where detection results were not equal when produced with encevis Viewer and MicromedInterface.
- Improved support of EEG data with large DC components.
- Found a bug in micromed's SCORE interface when EEG files contain a pause. This bug causes Micromed SystemPlus Evolution to show the wrong time point in the EEG viewer. encevis now detects if EEG files contain a pause and blocks the "jump to EEG" command. The user gets informed when this case occurs.
- Sigma and Xltek files can now be opened by double click or drag and drop in encevis Viewer.
- Montage editor in encevis Viewer is now blocked when plugins are running.
- The recording date read in by a recording in encevis Viewer is now the default value for the Recording label.
- An issue was fixed in AITDistributor causing an unexpected error send to the caller when sending EEG data.
- Montage editor in encevis Viewer now allows the definition of electrode names that contain any ASCII characters.
- A mechanism was implemented which checks the calculation flag for all plugins and all recordings in a regular interval.
- Improved an error message in encevis Viewer if Nicolet COM objects are not properly registered.
- Fixed an issue in AITInterfaceDLL which prevented plugins from starting properly.
- Markertypes defined in encevis Viewer are now deletable.
- encevis NeuroTrend now loads the background frequency results if other license than the full NeuroTrend license is present.
- encevis MicromedInterface is not creating a new recording when a patient is moved in Micromed SystemPlus Evolution.
- Fixed issue when encevis MicromedInterface was running in offline mode and the user started settings immediately after startup of encevis MicromedInterface.
- BSF files below file format version 1.04 are now supported again.
- Fixed an issue where encevis MicromedInterface was not able to reliably detect if the encevis Distributor is still reachable.
- Montage editor in encevis Viewer now does not allow the creation of a montage without name.
- Editing a marker gets aborted if the user changes a setting in a plot.
- "Jump to EEG"-messages from plugins are now ignored while the user is editing a marker.
- A crash was fixed when editing a marker in encevis Viewer.
- Fixed an issue where deletion of results did not work when sending a BeginTime message after startup of a plugin.
- Improved analysis time range suggestions in encevis Viewer when starting encevis EpiSpike.
- Fixed an error message in encevis EpiSource when the first electrode in the channel setup is not an EEG channel.
- Marker selection triangle in encevis Viewer works now properly for markers near the end of a recording.

- Fixed an issue in encevis AITInterfaceDLL which returned an invalid pointer when a plugin was already exited.
- Name of reference electrode in encevis Viewer is now restricted to 15 characters.
- Fixed an issue during patient deletion in EEG file management when the user closes the dialog with the window closing cross
- Fixed a crash occurring when the user tries to close EpiSpike before the GUI is fully initialized.
- Improved validation of selection time range in encevis EpiSpike GUI.
- Fixed a crash in encevis Viewer when a file was removed from the list of files while adding a patient.
- Fixed an issue which caused a jump of the timeline in encevis EpiSpike when calculating online.
- Fixed an issue in encevis MicromedInterface that caused jumps to wrong time points in Micromed SystemPlusEvolution.
- Fixed a query in encevis EpiSpike which did not work properly when using a MS SQL database.
- Fixed an issue in encevis EpiSpike if no EEG electrodes are available after building the montage.
- Close button off split plot in encevis Viewer is now aligned with the remaining menu items.
- Fixed issue which caused a freeze of encevis Viewer when inserting a patient using MS SQL database.
- Changed default reference sent by encevis MicromedInterface from "Remote" to "Unknown".

## V 1.5.4 (released on 2017-03-14)

- Fixed an issue with micromed online interface that could lead to instabilities of encevis
- Path to EEG files in micromed online interface now does not expect "micromed archive" in path name.
- Fixed issue where raised license warning dialog was blocking micromed interface
- Issue fixed in NeuroTrend which sometimes caused a crash on start up of the plugin when GUI was enabled

## V 1.5.3 (released on 2017-03-06)

- Improved the process of adding new bundle licenses.
- Changes in the database handling of Micromed SystemPlus Evolution, based on the experiences in a hospital.
- Fix an issue that plugins might show "active" state after disconnection of network.

## V 1.5.2 (released on 2017-02-24)

- Increased stability of file loading (problem with open file handles fixed, solved possible crash when loading Nicolet files)
- Fixed an issue where the scrollbar in encevis NeuroTrend could stop working
- Fixed an issue where encevis viewer sent two times the same data block to plugins
- encevis EpiSpike is now only setting the reference electrode for channels which are declared as EEG type
- Changing multiple values of a marker in encevis viewer works now properly
- Nicolet files can now be opened via drag and drop from the explorer onto the plot area of encevis viewer
- Significant performance increase for high number of results in the database. This was especially an issue on a heavy use of encevis EpiSpike
- Acknowledge for exitPlugin is now always properly sent by encevis Distributor

- In the montage editor of encevis viewer the order of montage chains can now be properly changed
- Fixed an issue, where it might happen that encevis NeuroTrend was sending its acknowledge for the plugin initial config message before sending the result info message
- Fixed an issue in encevis MoberInterface where the plugins where not properly exited on patient change

## **V 1.5.1 (released on 2017-01-30)**

- Autostart mode of MicromedInterface can now be disabled
- Distributor can now locate plugins when MicromedInterface is started in autostart mode
- All NeuroTrend results will now be deleted in case of recalculate
- A bug was fixed causing a crash of NeuroTrend in connection with MySQL databases
- In case of database loss, EpiSpike displays a proper process range in the GUI

## **V 1.5.0 (released on 2017-01-23)**

- Introduced encevis MicromedInterface, for real time calculation of EEG data currently recorded with Micromed System Evolution Plus
- User Interface for MicromedInterface providing information about the current calculation state of encevis plugins
- Added support for Nicolet EEG files
- encevis EpiScan can now be started with a user interface
- encevis Help is now provided as convenient PDF
- If a license is missing, encevis Viewer provides now a direct way to register a license
- Significant performance improvements on high amount of spike markers detected with EpiSpike
- EpiScan is now not dependent anymore on reference electrode Pz
- Introduced a database loss mechanism, allowing to continue calculation of plugins without any interruption during runtime when the database is not reachable.
- NeuroTrend provides now a heart rate plot (only in NeuroTrend full version)
- The user interface of the LicenseTool was improved
- It is now possible to license and start plugins explicitly for purpose of calculation or for review or for both
- Bugfixes

## **V 1.4.1 (released on 2016-10-24)**

- Bugfix, black cursor was not correctly displayed when starting NeuroTrend first without shown GUI and then later show GUI

## **V 1.4.0 (released on 2016-06-21)**

- NeuroTrend aEEG plot improved
- Windows 10 now supported
- Performance significantly improved on high amount of markers in the marker list in EpiSpike and encevis Viewer
- Improved runtime of EpiSource in spike mode
- added XLTEK EMU40 headbox support

- Bugfixes

## **V 1.3.2 (released on 2016-05-19)**

- Fixed error, when artifact removal was not working properly on EEG including DC component

## **V 1.3.1 (released on 2016-04-26)**

- Bugfix LicenseTool

## **V 1.3.0 (released on 2016-04-11)**

- Improved EpiSpike
- GUI for EpiSpike
- Neurofile (ITMed/Deltamed/Coherence) dataformat support
- Network licenses (floating licenses)
- encevis Viewer supports import of data from encevis databases
- encevis Viewer supports MS SQL
- Bugfixes

## **V 1.2.2 (released on 2016-02-12)**

- NeuroTrend supports now new flags in configureWindow message
- Bugfixes (keep alive MySQL, table creation MySQL)

## **V 1.2.1 (released on 2015-11-11)**

- DatabaseMigrationTool for transferring data between encevis databases of type Firebird Embedded, MySQL and MS SQL Express
- AITInterfaceDLL allows now string concatenated database configuration
- NeuroTrend has now MS SQL Express support

## **V 1.2.0 (released on 2015-09-07)**

- overworked user interface in encevis
  - Markerlist in encevis
  - Main UI in encevis
  - added possibility for montage editing
- Introduced Burst Suppression feature in NeuroTrend
- overworked user interface in NeuroTrend
- Moberg Online Support
- Xltek file format support (beta version)
- allowing usage of central MySQL Server
- Bugfixes (increasing stability)

## **V 1.1.1 (release on 2015-08-27)**

- Bugfixes (increasing stability)
- added CE

## **V 1.1.0 (released on 2014-10-03)**

- Bugfixes (improving stability)
- general performance improvements
- Sigma file format support
- Moberg file format support
- Introduced BG EEG features in NeuroTrend

## **V 1.0.0 (released on 2014-02-24)**

- first release of encevis