Stratus EEG Release Notes

Software Version 4.0

What's New in Version 3.1.6?

In version 3.1.5 web-browser applications mirroring the functionality of the current Centrum and the Review applications are introduced. This is provided by hosting a web-service on the relevant Stratus EEG server.

Web browsers

The Stratus EEG web-application works best when used with Chrome web-browsers. Other browsers such as Firefox, Safari, Edge and Internet Explorer have shown some limitations during testing.
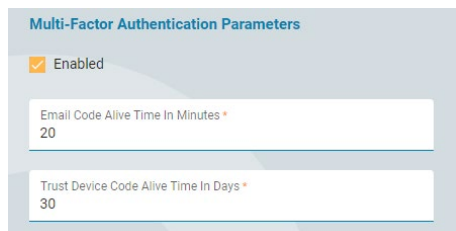
Note that Chrome browsers can be used both from Windows and Apple computers.

Stratus EEG Web

The functionality of the Centrum-part of the web is largely the same as with the currently released product while the user-interface has been refreshed.

Multi-factor authentication

Option for multi-factor authentication has been added to the system. This is achieved by sending a random-generated code to the user's email address and asking the user to provide the code during login. The multi-factor authentication is enabled on the Authentication settings page.

Reset forgotten password

Users can re-set forgotten password by pressing „Forgot Password" on the Login page. This will send a link to their email account with instructions on how to re-set the password.

Visit list

The appearance of the visit list has been changed significantly by the introduction of "cards" for each exam.
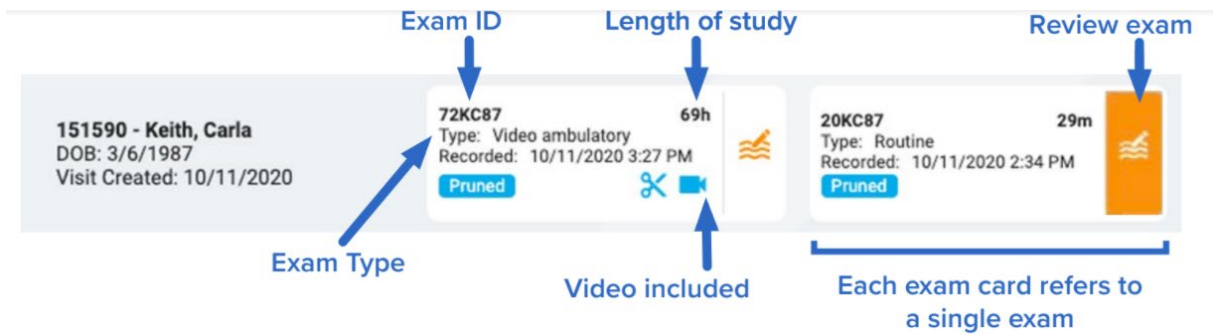
Exam Properties

The exam properties window does now contain all exams made for the patient, included archived exams from previous visits.


Reports

As web-browsers cannot control Microsoft Word as can be done with installed applications, the process to edit a report is slightly different. Now, the report must be downloaded, modified and uploaded back to the web application.
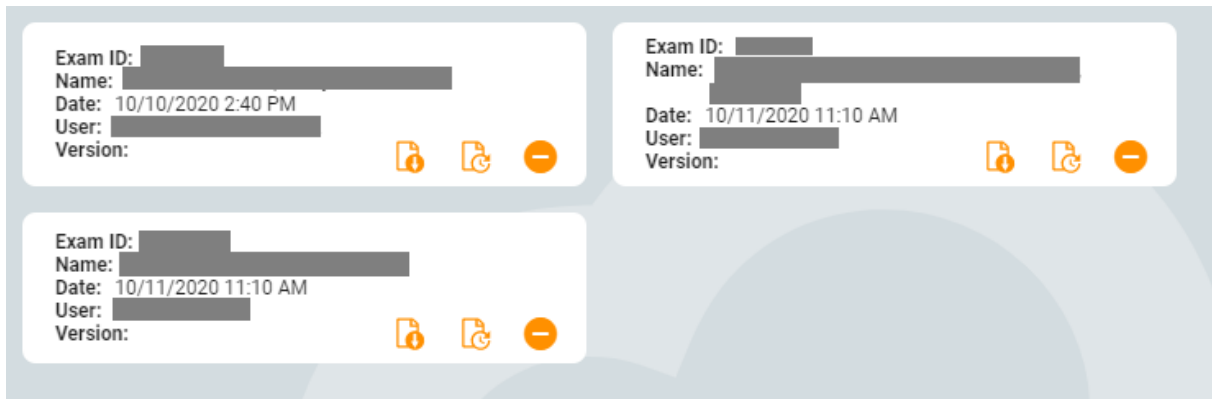
Patient Admission

The user-interface for patient admission is changed as an easy to use multi-step wizard is provided.

The first step is a search in the database for the patient, the intention is to minimize the likelihood of the same patient to be duplicated in the database.
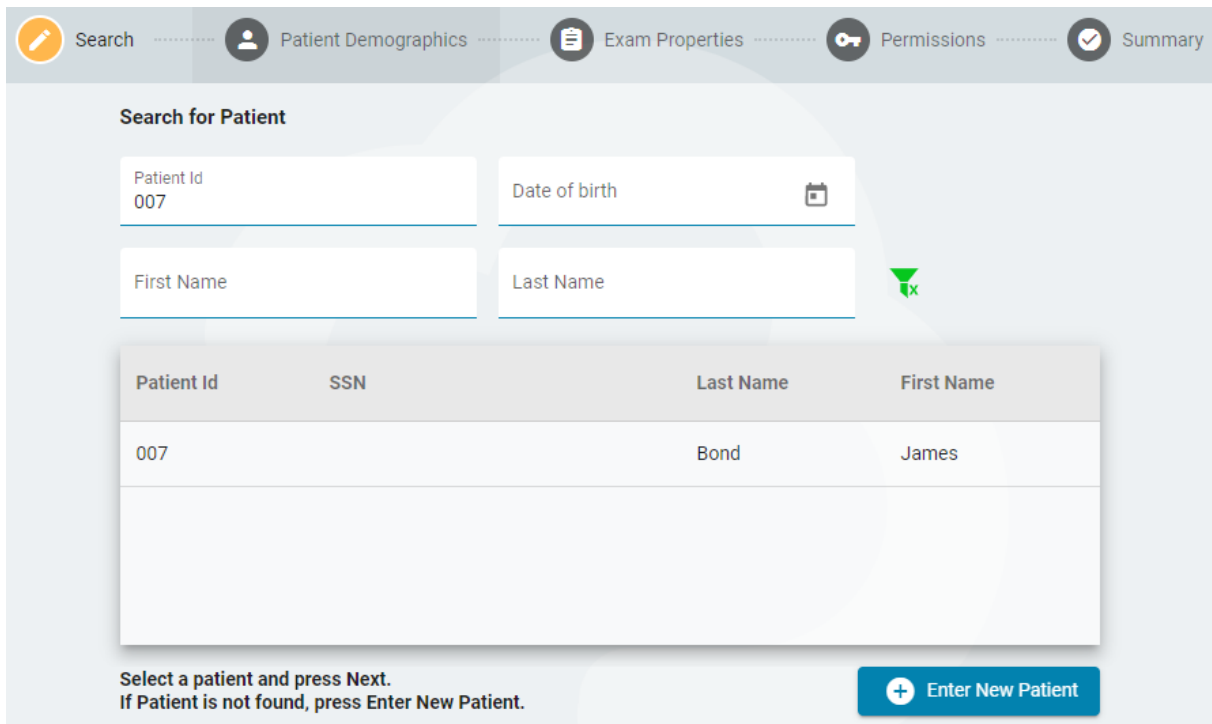
Admin Pages

Admin pages are indicated with green icons. This enables user management, and UI has been optimized in comparison with the current Centrum software.

Note the page on "Insurance Providers", this is not yet used in the system and should be ignored for the time being.
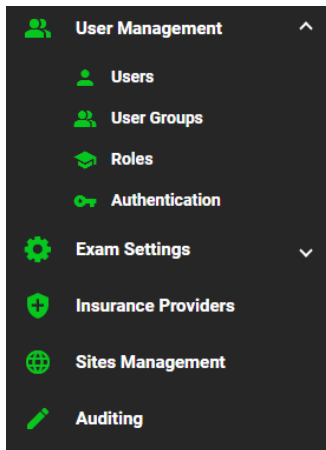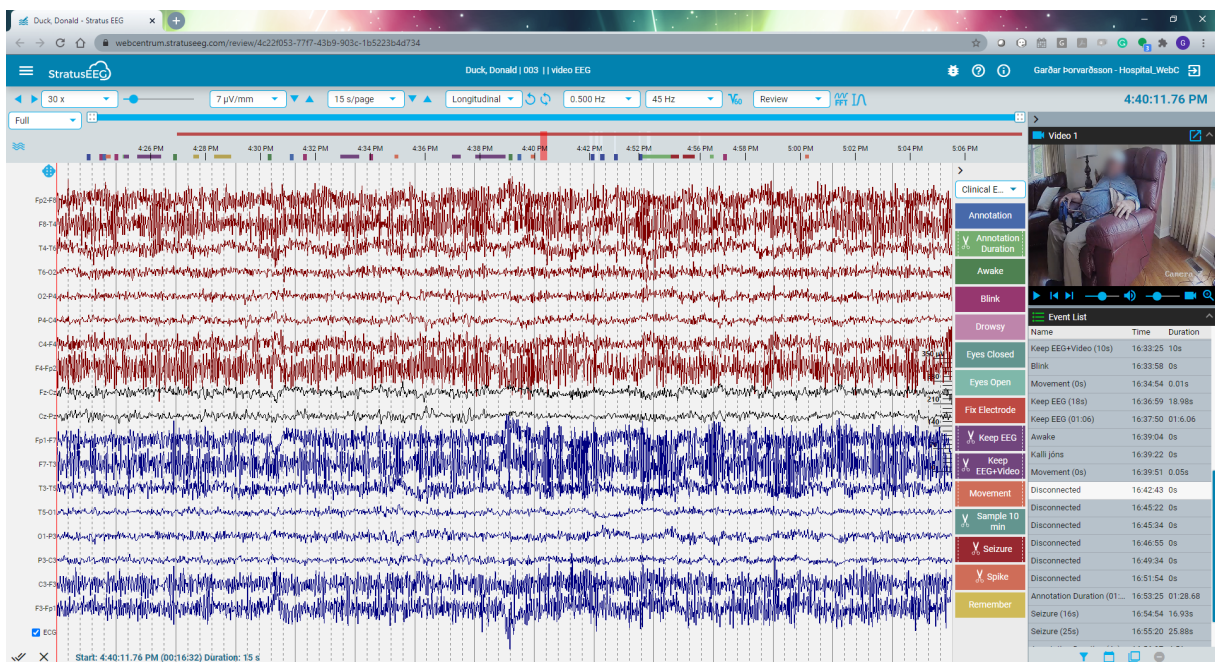
Audit trails

The interface for the audit trail has been improved by the addition of search for a patient.

Review

In this version, Review functionality is limited to the most frequently used functions, paging in the EEG, synchronized video playback and ease of chart formatting.

Video

The video window behaves slightly differently as compared to the client Review application. When popped out of the panel, the video is in a modal dialog that can only be moved within the browser window. To accommodate dual screen configurations, there is a button in the upper right corner of the window that opens video in a second browser window that can be moved to another screen.

Additionally, a control for playback speed has been added. Review speed between 0.25 and 4 x real-time can be selected.

Note: The web-interface can only show videos in mp4 format. This means video for older exams cannot be shown.

Calibration bar

Calibration bar is provided to give the user amplitude perspective. Before the screen has been calibrated, the bar contains cm scale as well as µV, but after calibration the cm scale disappears and the bar is drawn below the EEG.
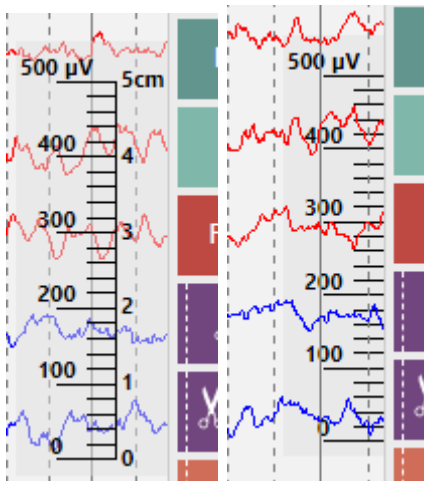
Single channel control

The single-channel control is activated by right-click on the label bar.

Channel Editor

Hight Cut	Low Cut		Baseline
45 Hz	0.500 Hz	Notch	
Sensitivity	**Deflection**	Text	
7 µV/mm	100 mm	Trace	
Color	**Polarity**		
#7f0000	○ Up ● Down		

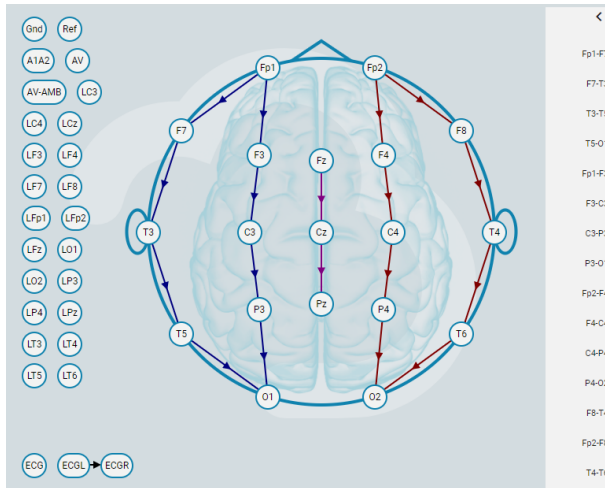Hide Selected   Show all   Selected Only   Reset

✕ Close

What's New in Version 4.0?
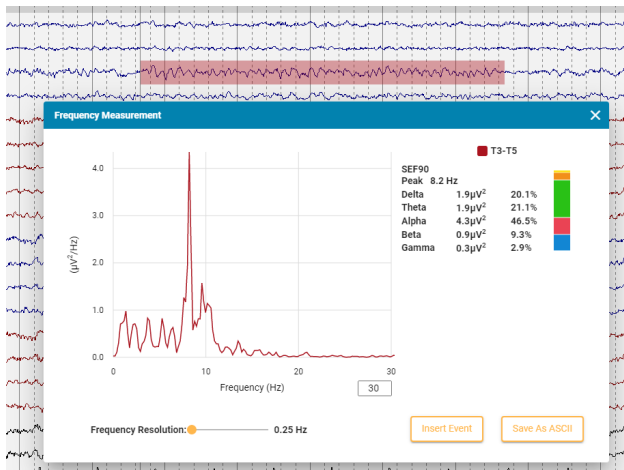
Web interface

Montage Modifications

Interface for easy modification of the montage on the fly. Ability to add, delete and re-order channels.
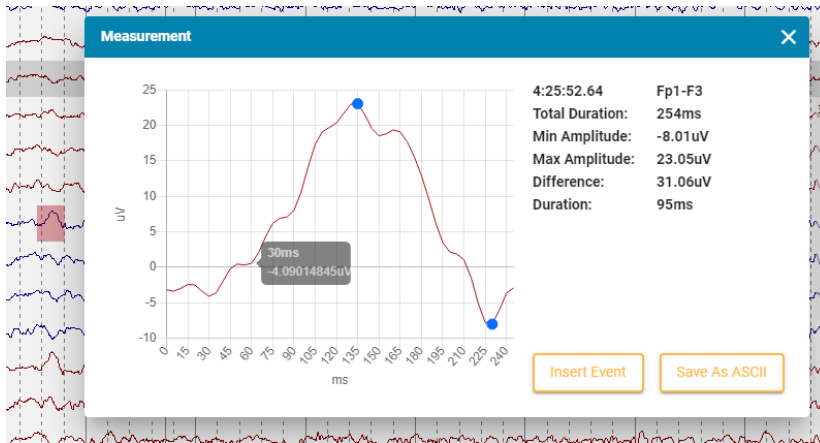

Frequency Measurement

Tool for measuring the frequency spectrum of a block of EEG. Ability to compare up to 4 blocks. Ability to store the measurement as an event and download the spectrum as ASCII file.
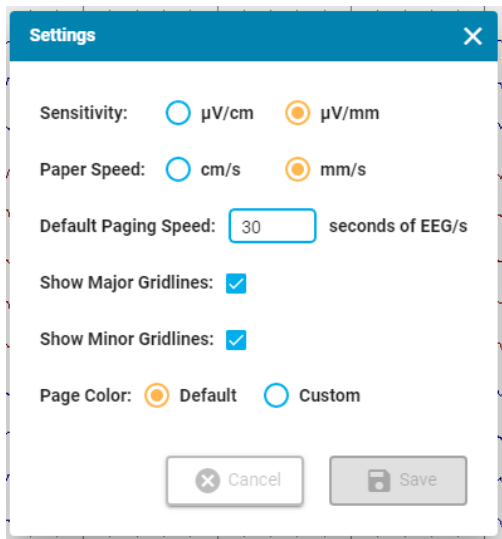

Waveform Measurement

Tool for magnifying and measuring EEG waveform. Ability to store the measurement as an event and download the spectrum as ASCII file.

Control of chart parameters

Ability to specify gridlines, page color etc. Note that the selections are stored as a cookie on the computer so does not transfer between computers.
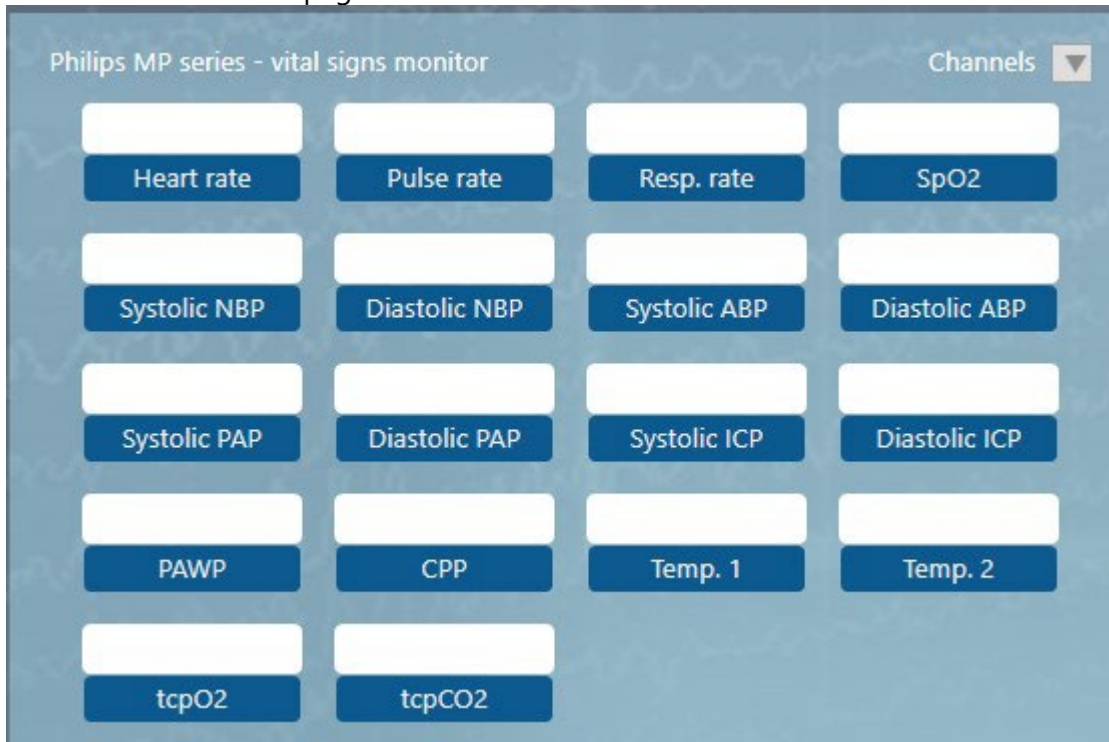

Mouse wheel for paging

The mouse wheel (on windows computers) pages ½ page pr. click.

Alt + PgDown/Up for pruning

Holding down Alt button while paging using the PgUp/PgDown buttons inserts a „Keep EEG + Video" event for the page.

Context Events

Events marked as „Context Events" in the Event Editor store montage and other format information at the time when inserted. Later, this state can be recalled by clicking the „back to context".

Duration event insertion

There are two methods to insert duration events, with single click and pre-defined duration and with two clicks, to mark the beginning and the end of the event. To use the two-click method, „Quick Insert Duration" must be set to 0. This is not possible in the user interface and must be done directly on the SQL database by an IT specialist.

Perspective

It is now possible to select a Review Perspective. Note that the perspective must be created using the Client Review software.

Trend analysis

The trend analysis feature has been enabled in the web-interface. A new trend is added by clicking the wavy icon on the timeline. There are several types of trend calculations offered including: Poverspectrum density, median amplitude, amplitude-integrated eeg, heart-rate (calculated from the ECG) and burst-suppression quantification.
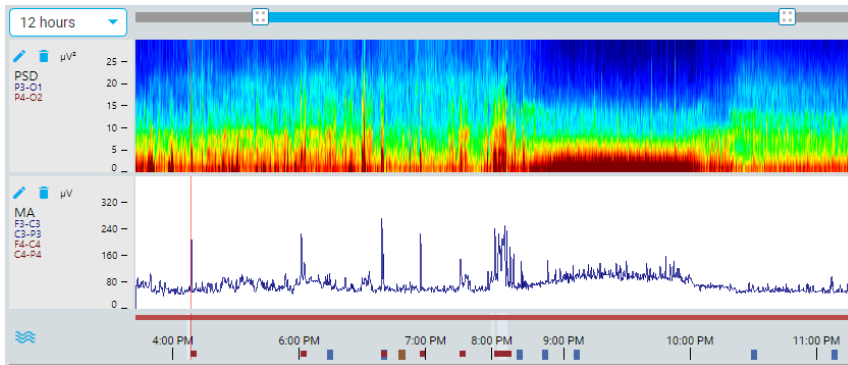
Review toolbar adapts to small screens

When the horizontal size of the browser window is too short to show the review toolbar in full, some of the less essential controls are removed:

Button for video zoom

A button has been added for zoom on the video toolbar. Previously zoom in and out were performed with mouse drag and mouse right click. Now the button can be used as well.

AD login

The Stratus Web can now authenticate against an active directory in case this option is activated on the server.

Sort by Recorded date

A new option to sort the visit list by recorded date has been added. When sorting by recorded date, exams that have not yet been recorded will be at the back of the list.

Send Exam Link

It is possible to share an exam with a person that is not a user of the system. This is done by selecting the exam in the exam properties window, click „Send Exam Link" and completing the form shown.

Although the receiver is usually not a defined user in the system, all views are recorded in the audit log.

My settings

Users are now able to manage their own information such as full name and email. Physicians in the USA who intend to refer patients must also supply their NPI number and full address on this page.

Role Abilities

The ability to customize each role's allowed functions within the system.

- Patient Admission – gives access to adding patient and exams and to upload EEG exams.
- Support- in 4.0 gives the ability to move an exam from *recording* to *recorded* workflow state, but reserved for more in the future.
- Save to Config – ability to update the config database, montages, events etc. Note that this replaces the earlier role setting for the same purpose.
- Report templates – gives access to create and modify report templates.
- Monitoring - gives access to the monitoring management pages.
- Record – not active, reserved for the ability to record an exam.
- Order – ability to place an order for an EEG exam.
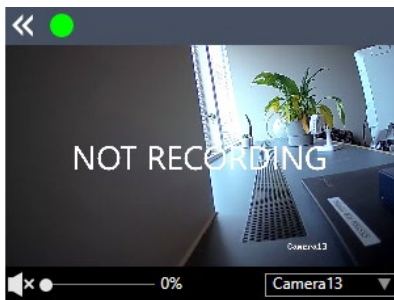
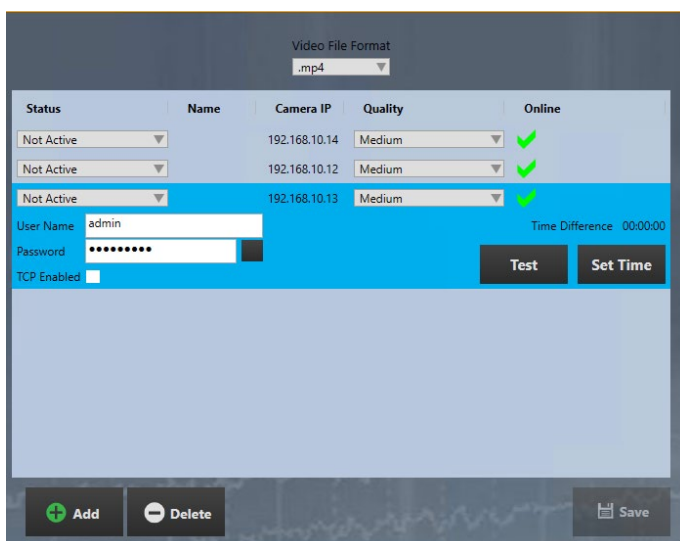# Improvements to Acquire

Insert event to live EEG

Ability to insert an event to the live EEG pane by drag and drop.

Dynamic video camera selection

It is now possible to define a large, common pool of video cameras within the system and select the cameras to record dynamically during recording.

A configuration tool is provided to link the cameras to the system.

Print from About box

The information in the about box can be printed, this for example includes the device serial number.

Connections for Philips monitors

The ability to connect to Philips vital signs monitors via serial port has been enhanced by adding support for MP series. Using this feature a number of parameters can be read from the patient monitor in real-time such as oxygen saturation, blood pressure, pulse rate, temperature and more. Note that this feature is activated by a billable software option.

Indication of internal power source

An indicator has been added to inform the user if the amplifier is operating from internal or external power source.

Record now

After admitting a patient and pressing the Record Now button in Centrum on acquisition machines, the user is redirected to the Patient list.

Recorder ID

Recorder ID (previously known as Exam Space) is now shown in the title bar of the Acquire software.

Improvements to Review

Ctrl + PgDown/Up for pruning

Holding down Alt button while paging using the PgUp/PgDown buttons inserts a „Keep EEG + Video" event for the page.

Improvements to TeamMonitor

Events in continuous mode

In continuous mode, it is now possible to insert events directly for each patient without going to Remote Control.

Patient Video Coverage

Patient Video coverage is shown with the indicators for each patient. This is calculated based on the inspection comments.

Known Issues

- When fast-paging in Firefox browsers occationally pages are skipped. This behaviour has not been observed when using the Chrome web browser.
- The upload function in the web-interface is somewhat inferior to the upload in the Centrum client software, especially for large files where the user may be logged off automatically before the upload is completed.
- Zooming in on the video picture sometimes results in that the picture is not allligned correctly within the popup window.