

# Release Notes RT Software Suite Version 4.0

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## New features in this version

### Full integration of Polygraphy screener in RT Software Suite

We've integrated a new screener "Somnolter" in RT Software Suite, which enables customers to start a measurement with the device directly from RT Software Suite. This allows to synchronize patient info with the HL7 connection of our ShellPlus database (or even to start the measurement from the appointment list), perform a signal check and program the device.

Once the patient comes back, the measurement is imported directly in RT Software Suite without any additional conversions. This ensures a closed loop system which is very robust against use errors and technical hick-ups. For a complete overview of all user instructions, we refer to the manual: R-Somnolter Manual-5-0.

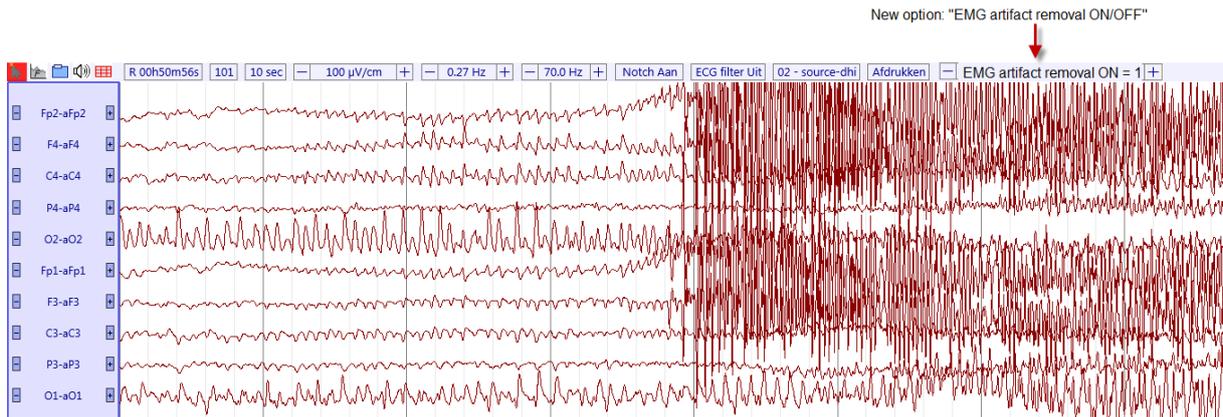


### Some more information about the Somnolter device

This screening device has 18 channels: 2 RIP belts, Integrated Body Pos, SpO2, Pulse, HR, Cannula, Can\_Snore, 2 AUX channels for ECG, flow, EMG or pneumotachograph. The signal check can be performed wirelessly using RT Software Suite or Tablet. Batteries and memory card are internalized for maximal robustness.

### EMG artifact filter

In cooperation with the Epilepsy Department of UZ Leuven, we have implemented a new filter to remove EMG artifact from the EEG signals. This filter applies the principle of Blind Source Separation to remove EMG artifact. We refer to the article "*Muscle artifact removal in Ictal EEGs, Improving the Interpretation of Ictal Scalp EEG: BSS-CCA algorithm for muscle artifact removal, Vergult et al.*" for technical details. The new option is called "EMG artifact removal" and is available in the signal displayer, as shown in the image below.



To activate the filter, use the cursor to enhance the level or use the shortcut keys of the keyboard: press ALT and the arrows up/down to move the level up/down.

For more information about this option, we refer to the Application Note “R-EMG Artifact removal-1-0”.

### Review of recorded measurements with multiple users at the same time “Read-Only”

Upon request of multiple customers, we have implemented the possibility to open measurements “Read-Only”.

When the measurement is already opened by another user, this new feature enables you to open the measurement in “Read-Only” modus. In previous versions, you would get a notification about the other user, but no possibility to open the measurement. For more information about this option, we refer to the Application Note “R-Open measurements in Read-Only mode-1-0”.

### Upgrade Office Word version compatibility to latest version

We have revised our complete reporting plugin to allow the use of docx instead of doc. This enables our customers to create templates with all the functionalities of docx, in combination with the automatic fields generated by RT Software Suite.

In addition, this revision solves issues with the different types of Malware software used in the hospital infrastructure. Thanks to this revision, we are able to update the reports using Open XML instead of a dedicated plugin.

In addition, we are now able to edit individual report elements inside predefined report tables, making it very easy to adapt tables to the customer needs!

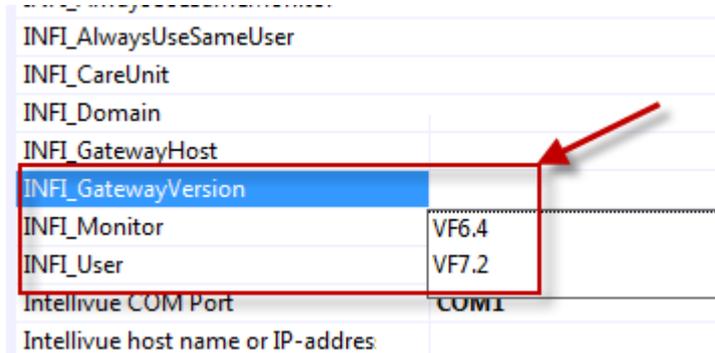
### Possibility to mark invalid periods of SpO<sub>2</sub>, CO<sub>2</sub> and Heart Rate for reporting

The report has been adapted in order to include the detection of manually added “invalid” events. This enables the customer to mark periods of invalid signal manually, where the RT Software Suite was not able to detect the invalidity automatically.

## Support for Draeger Gateway versions 6.4 and 7.2

We have updated our Draeger Gateway support to enable the interaction with the latest Gateway version 7.2. In the BrainRT Configuration Console, General station settings – other settings, a new option allows you to select the version of the Gateway, as shown below:

INFI_AlwaysUseSameUser	
INFI_CareUnit	
INFI_Domain	
INFI_GatewayHost	
INFI_GatewayVersion	
INFI_Monitor	VF6.4
INFI_User	VF7.2
Intellivue COM Port	COM1
Intellivue host name or IP-address	



## New features for the Software License keys

The RT Software Suite is protected with a license. From this version onwards we have the possibility to transfer licenses from one station to another. This can be useful in case of server migrations or other actions, where previously we were forced to create new license keys.

## Other improvements in this version

- Poincaré plot visualization in report does not update when scrolling
- Report functionality has been updated to be more robust against malware
- Production date has been added to label
- Report calculations of SpO2, CO2 and Heart Rate take into account invalid events
- RBD tool uses the correct EMG derivation for calculation
- Transferring video files from the emergency path supported for video files larger than 4 GB.
- AVI fileread improvement for fixed IP cameras
- Improvement of Laplace (source) calculation for channels with irregular surrounding electrodes
- Reporting functionality stays intact after Windows Updates