

# Stratus EEG Release Notes

Software Version 5.0

# What's New in Version 5.0?

Version 5.0 is entirely focused on the web software. Highlights include settings editors within the web platform where functionality has been extended from the installed software with a new permission model for settings items such as montages and perspectives. There are many other changes, over 60 enhancement requests and a number of fixed issues as well.

# **Authentication**

#### **Text MFA**

The user can optionally request that the MFA confirmation code is sent as a text message to a cellphone rather than in an email. In order to send text messages, an account must be set up with GatewayAPI (https://gatewayapi.com/) and the token entered into the system.



# Single Sign On

Stratus EEG web is compatible with external Identity Provider services (IdP) that support the SAML 2.0 standard in a way such that the system can be configured to use the IdP for authentication. If the Stratus Server has multiple Sites set up, different sites can use different IdP's.

#### Web browsers



Microsoft Edge has been added as a supported web browser. So, 5.0 has been tested both on Chrome and Edge. Firefox has been tested but is not compatible with the application.

# **Web Centrum**

#### Server / Server transfer

Exams can now be transferred from one Stratus server to another. This is similar to exporting from one server and uploading to another server, except for that the data is not downloaded

to the user's PC but goes directly between the servers. Metadata such as EEG description and Impression is transferred as well.

The Server/Server transfer is accessed fro	m the Export popup.
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External Se	erver		
Include: 🗸	Video	🔀 Attachments	
Anonymize:	🖲 No	O Yes	
External Serv	ver Address *		
https://den	no50k.kvikna.com		
Login t			
support-ga	rdar		
Password *			
	Connecte	d	
Connect			

### Tags

Tags can be used to identify exams and later search for these exams. There are two types of tags, global and personal. Personal tags are managed through "My Tags" page while global tags management is only available for administrators.

In the visit list, it is possible to search for exams based on tags.

11223	334455	<ul> <li>New Exam</li> <li>Exam Actions</li> <li>Properties</li> <li>Documents</li> <li>Permissions</li> </ul>
Patien	t ^ Demographics	Assigned To Garðar 4 Þorvarðsson Ordering Provider
€ 	Insurance Indication	Exam ID • Reviewing Physician •
ō	Clinical History Medication	Exam Type* Secretary
Study	Exam	Workflow State Uploaded Pruned by Garðar Þorvarðsson
	Billing Technical Description	Tags
₩ ≈	EEG Description	AUHU C Alzneimers C
Interp	Impression	
	EEG Clips	
		Cancel Save

#### Speed test



The speed test can be helpful to diagnose problems. This measures the network speed between the client and the server. This differs from publicly provided internet speed tests in the way that it tests both the client and the server speed. This is accessed from the title bar.

Network Speed Test				
Download Speed				
128.9 Mbps				
28.3 Mbps				
Cancel Start				

#### Welcome email

When a user is added, the new user will receive a welcome email from the system stating the URL to the service, user name and a link to set password.

The email is sent by the Windows Server SMTP service. Refer to Technical Manual on how to configure the SMTP service.

#### Email notification on assign exam

When an exam is assigned to a user, a notification email is sent to the user. The email contains a link to the Patient folder containing the exam.

StratusEEC
Garðar Þorvarðsson has assigned EEG exam <u>009</u> to you. The exam is in the Uploaded state

Users can opt out by un-checking "Receive email notifications" in My Settings.

The email is sent by the Windows Server SMTP service. Refer to Technical Manual on how to configure the SMTP service.

#### **Referrals – US/International**

The Referrals (Orders) feature has been enhanced since originally released in version 4.2. The server can now be set to either International or US-mode, and this does change information gathered for Referrals.

When making a referral on a server set to international mode, the user can choose between ExamTypes that are set to be available for Orders, and add a free text Note.

Ordering Provider		
Ordering Provider * Garðar Þorvarðsson	-	Exam Type <ul> <li>None</li> <li>Routine</li> <li>Epilepsy Monitoring</li> <li>ICU</li> </ul>
Indication		
Reason For Test *	•	Notes
ICD-10 Codes		
ICD-10 Codes	•	

If the server is set to US-mode, the following changes are made:

- Patient's (or contact's) phone number and email are mandatory.
- Insurance options are displayed.
- The Ordering Provider must be set up with an NPI number.
- At least one ICD code must be specified
- Study options are significantly changed

Ordering Provider		
Ordering Provider * Garðar Þorvarðsson	•	Prior Routine EEG A Routine EEG has been performed in the last year. If checked, results must be provided on Document Upload page
Indication		
Reason For Test * Clinical suspicion of epilepsy	•	Test(s) Ordered Routine EEG Required if previous Routine EEG was not completed within the past year
ICD-10 Codes *	•	✓ Long-term EEG
Code Description		Video * :     Image: With Video     No Video       Monitoring * :     Image: Image: Monitoring No Monitoring
G40.319 Generalized idiopathic epilepsy and epileptic syndromes, intractable, without status epilepticus	×	Duration *: Duration * 72 Hours

# **Exceptions for Referrals**

Referrals can be reported as in an exception state. The exceptions can be defined in the database.

Patient	· ^	
-	Demographics	Edit Order
€	Indication	Ordering Provider *
Ê	Clinical History	
٥	Medication	Lars Johan Ahnlide
Study	^	
=	Referral	Exam Type
E	Billing	🔘 None 🔘 Routine 🔘 Epilepsy Monitoring 🧿 ICU
Ð	Technical Description	
<b>À</b>	Report Events	Exception
$\approx$	EEG Description	None
Interpre	etation ^	Order Incomplete
Ο	Impression	order incomplete
0	EEG Clips	Unable to Contact
		Unable to Service

#### New exam

A button to make a new exam for a patient within the Patient folder has been added.



#### Task indication

When a task is running on an exam, this is indicated on the exam card with a green icon.



#### Admin can edit user details

Admins can now edit all the user-specific fields from My Settings for any user. This includes uploading a signature, Address, NPI number etc.

# **Monitoring Log**

A button has been added on Exam page in Patient folder to show the Monitoring Log.



Date	User	Amplifier Status	Camera Status	Concurrent Patients	Туре	Comment
5/18/2022, 11:00:00 AM	Þórey	In Range, Impedance Ok	C2 OK, C1 OK, Files Checked	1	Intermittent	
5/18/2022, 12:15:00 PM	Þórey	In Range, Impedance Ok	C2 OK, C1 OK, Files Checked	1	Intermittent	Comment 1
5/18/2022, 12:15:00 PM	Þórey	In Range, Impedance Ok	C2 OK, C1 OK, Files Checked	1	Intermittent	Comment 2
10/10/2022, 2:24:56 PM	Þórey	In Range, Impedance Ok	C2 OK, Files Checked	1	Intermittent	sjfowejfowekf

#### **Pruner property**

A field for "Pruner" has been added to exam properties. The date when the pruner property is set is stored and displayed.

Ordering Provider: Reviewing Physician: Secretary: Pruned by: Garðar Þorvarðsson, 10/14/2022 Size: 480 MB

#### **Billing information**

Billing information tab shows information in one place that are relevant to billing to US insurance companies. It allows association of CPT codes and technical exclusions to each day in case of multi-day exams.

Billing Details 🧪			
Start Date: 10/10/2020 Patient Name: Smith, Unnan Patient Id: 01002 Date of birth: 7/11/2019	Order ID: 0 ned State: Insurance: Aetna Ordering Provider:	<b>Specialt</b> NPI: 123 Recorde : Garðar Þorvarðsson <b>Pruned I</b>	<b>y:</b> Clinical Neurophysiology 8456 9 <b>d By:</b> Garðar Þorvarðsson <b>by:</b> Benjamin Gettler
🔳 Regenerate			
Exam Periods:	Period 1	Period 2	Period 3
Start: End:	10/10/2020, 2:54 PM 10/11/2020, 2:54 PM	10/11/2020, 2:54 PM 10/12/2020, 2:54 PM	10/12/2020, 2:54 PM 10/13/2020, 3:11 PM
Duration:	22h 46m	23h 37m	24h 4m
CPT:	95700,95712	95712	95712
Max Inspection Interval:	24h	24h	24h 16m
Max Concurrent Patients	:		
Exclusions:		TD - technical difficulties	

#### **Status tracker**

The Status tracker shows Referrals (Orders) and Exams and their progress along the workflow. The Referrals and Exams are organized in Columns that can have custom headings and workflow range. This needs to be set up directly in the SQL database. There are various options to filter the list of Referrals/exams.



# Sort by Site / mark by Site

It is now possible to sort visits by Site. The site for each visit is shown in "Patient Visits" list.

Sort by: Id Fi	rst Name Last Name	Created DOB Recorded Site
66554476 - Simpson DOB: 1/17/2023 Visit Created: 1/30/2023 Access Level: Full Access Site: Children WebC	ChildSite 14m Type: External Created: 1/30/2023, 10:28 AM Uploaded	
007 - Bond, James DOB: 1/13/1953 Visit Created: 7/29/2022 Access Level: Full Access Site: Hospital WebC	Referral ID: 155 Type: Requested: 7/29/2022 (Unsigned) 0 h	20TB61 34m Type: Epilepsy Monitoring Recorded: 10/17/2022, 1:58 PM Uploaded

#### **Translation of IFU**

A language selection has been added that dictates the language used for the Information For Use (IFU), i.e. the user manual and the about box. The language selection is in the title bar.



# **Settings Editors**

The settings editors relevant for Review have been implemented in Web Centrum. Note that it is now not necessary to open an exam for Review in order to edit the settings items.

There is a significant change in how permissions to settings items are controlled. There are now three levels of permissions:

- Global available to every user.
- Restricted available to users in specific user groups.
- Personal only available to one user.

In order to create or edit Global and Restricted settings items, the user must have "Global Settings" role ability. All users are able to create Personal settings items for themselves. Additionally, users with Global Settings ability are able to make personal settings items on behalf of other users. The affected settings items are:

- Perspectives
- Montages
- Trend Templates
- Event Palettes

Primitive settings items such as Events and EEG electrodes are only Global, and can only be created by users with Global Settings ability.



### Perspectives

Perspective editor is open to everyone. Both Review and Acquisition Perspectives can be created and managed.

Select User	•			
Perspectives		Event Palette • Clinical EEG	Timebase:	Montages 🧪
Acquire	00	Montage *	Page Duration     15 s/page	As Recorded
Neo Demo	≥ ف			A1A2 Ref
Review	#	Trend Template	_	Adaptive Average
Routine	00	Label System * 10-20 System		Average
		Sensitivity * Deflection *		Laplace
		7 μV/mm • 100 mm •	_	Longitudinal
		Low Cut * High Cut * 0.500 Hz 45 Hz *		Referential
		Natala S	_	Transverse
		Notch:		
		Timeline Position:		
0 D D		🖲 Up 🔵 Down		
Cancel	Save	Last Updated: 2/17/2023, 1:12 PM by	Garðar Þorvarðsson	

#### **Events**

Use the Events Editor to create and manage events. All events are available globally within the system. The Events editor is only available for users with Global Settings role ability.

Edit Event				
Name Diary				
Description Diary event			li	
Туре				
<ul> <li>Report Event</li> <li>Annotation</li> <li>Context</li> <li>Duration</li> <li>Prune</li> </ul>	Default Duration:	240	Seconds	
Color			•	
Category Patient			•	
Priority High			•	
Cancel	Save			

#### **Event Palette Editor**

Event Palette editor is open to everyone. This is used to create and manage event palettes. All events are available for everyone to create Event Palettes.

Select User 👻				
Palettes	Clinical EEG		All Eve	nts
Clinical EEG	Annotation	→	÷	Agitated
Clinical EEG - Copy(1)	Diary	<b>→</b>	÷	Amp disconnect
Neonatal	Annotation			
Operator	Duration	*	÷	Amp reconnect
Patient	Awake	→	÷	Amplitude Map
PSG	Blink	<del>&gt;</del>	÷	Arousal
Test	Drowsy	÷	÷	Asleep
	Eyes Closed	÷	÷	Bathroom
	Eyes Open	<b>→</b>	÷	Bradicardia
	Fix Electrode	<b>→</b>	÷	Calibration
	Keep EEG	÷	÷	Calibration
• ī • i	Keep EEG+Video	<b>&gt;</b>	÷	Central Apnea
Cancel	Last Updated: 9/7/2022, 12:53	PM by Gard	ðar Þorvar	ðsson

#### Montage Editor

Montage editor allows creation of montages as well as definition of EEG Electrodes, EEG References and Non-EEG Signals. Montage editor is open to everyone while EEG Electrodes, EEG References and Non-EEG signals can only be edited by users with Global EEG Settings Role.

Montage	EEG	Electrodes		EEG Refere	ences	N	on-EEG Si	gnals			
Select User	•	Label S 10-20 S	<b>ystem:</b> ystem	Perspec Routine,	<b>tives:</b> Review, Ac	qui	Allowed: Global		1	(6) (6) (702 (50) (702 (60) (702 (702 (60) (702 (60) (702 (702 (60) (702 (702 (702 (60) (702 (702 (702 (702 (702 (702 (702 (702	3nd > R
Montages			Active	Reference	Trace	Color	Visible	Special			
ER Average	â		Fp2	F8	Fp2-F8		<u>~</u>		ī	F7 F3 F2 F4 F3	
ER Montage	â		F8	Τ4	F8-T4						
Laplace			Т4	T6	T4-T6				Ē		
Longitudinal			Τ6	02	T6-02				Ē		
	-		02	P4	02-P4				Î	(TP7) (P3) (P2) (P4) (TP8)	
Neo Montage	•		P4	C4	P4-C4				Î		
Neon 12	â		C4	F4	C4-F4				Î		
Neon 12 AV	â		F4	Fp2	F4-Fp2		<b>~</b>		Î		
New Montage 29			Fz	Cz	Fz-Cz		<u>~</u>				
PSG			Cz	Pz	Cz-Pz					Abdomen Chin C-WCT ECG+ECG1 ECG2 ECGL ECGR	
			Fp1	F7	Fp1-F7				1	EOG LA-RA LLeg LL-LA LL-RA Nose Oral Photic	
🕂 🗖 🕀	Î		F7	Т3	F7-T3					Plethysmograph Pulse Resp RLeg Sp02 Thorax	
Cancel	Save	Last Upd	ated: 10/6	)/2022, 4:26 PI	И by Heiðai	r Einarss	on				

When creating a new montage it possible to associate the montage to one or more perspectives without going to the Perspective editor.

#### **Trend Templates**

Trend Templates editor is used to generate Trend Templates. Trends Template editor is open to everyone.



#### Preferences

Preferences editor is used to set user preferred Perspectives and Report Templates pr. Exam Type. Users with Global Settings role ability can set the preferences on behalf of other users.

Select User Garðar Þorvarðsson	
Exam Types	Associate Perspective Review
Generic	Associate Report Template
Home Video	
Routine	

#### **Changes to settings items**

The user and date of last change for a settings item is stored and displayed in the Settings editors. This applies to Montages, Trend Templates, Event Palettes and Perspectives.

O D D B I	
Cancel Save	Last Updated: 8/11/2022, 1:26 PM by Garðar Þorvarðsson

# Reporting

#### **EEG Description**

Several new fields have been added to the EEG description.

- Organization added to PDR description with options: Undetermined, Good, Moderate and Poor.
- Sleep pattern added with options: Not observed, N1, N2, N3, REM.
- Interictal epileptic activity added with Not observed, Awake, N1, N2, N3, Rem.
- Free text description field for interictal epileptic activity.
- Ictal epileptic activity added with Not observed, Awake, N1, N2, N3, Rem.
- Free text description field for ictal epileptic activity.

Arial	\$ 8	\$В	I <u>U</u>	≜ =		≣	<u> 7</u> ×	
Interictal descrij	otion							
)uick text	×							
Quick text		1 Awaka						
Quick text 💡	Not observed	] Awake	□ N1	□ N2 [	] N3	Re	em	
Quick text 🔥 al: 🗹 Arial	Not observed * 8	] Awake 🗘 B	□ N1 I <u>U</u>	□ N2 [ ▲ =	_ N3	□ Re	em <u>T</u> x	
Quick text a al: ✓ Arial Ictal description	Not observed * 8	] Awake 🗘 B	□ N1 J <u>U</u>	□ N2 [ ▲ =	] N3 }⊒	□ Re	em <u>7</u> x	
Quick text	Not observed * 8	] Awake 🗘 B	□ N1	□ N2 [ ▲ =	_ N3	□ Re	em Z <sub>x</sub>	
Quick text	Not observed \$	] Awake \$ B	□ N1	□ N2 [ ▲ =	] N3 }⊟	□ Re	em <b>Z</b> x	
Quick text	Not observed * 8	] Awake ¢ B	□ N1	□ N2 [ ▲ =	_ N3	□ Re	em <b>Z<sub>x</sub></b>	

#### Ability to format free text fields for reports

The ability to format free text report fields for the reports has been added. This applies to

- Clinical History
- Technical Description
- Notes
- Interictal, Ictal and Additional Info for EEG Description
- Clinical Interpretation
- Abnormality Description

#### **Patient Name in Report title**

Patient name is added in the report title. This is especially helpful when downloading the report, the title is used for the filename.

Doport Tomplata +			
EEG Report			
Document Name *			
Balboa, Rocky - EEG R	eport		
Yauna and untill	appear in the Documents	tab once the report has	neen signed or save
Your report will	appear in the bocaments	tab onoe the report had	seen signed of bure

#### **Report events**

Now, any event can be declared as a "Report Event". This is done in the Events settings editor. Report events can be annotated with the more comprehensive event editing popup.

pical: 🖲 Yes 🔿 No 🔿 Undetermined	
clude from Report: 🔘 Yes 🥚 No	
Diary Note	
Patient is seen on camera. His head deviates left, then loses his balance and ultimately fall made a growling sound while attempting to s	to the s, and tand up
EEG Description EEG shows a brief period of rhythmic bilateral temporal delta followed by electro-decrement Generalized sharp/sharply contoured waves i subsequently observed maximal over the left	centro s

Report events appear in a table in the patient folder where they can be further edited. These events are also available to be included in reports.

exam	ple2	🕂 New Exam	Exam Actions 👻	Properties Documents	Permissions	
Patien	nt ^ Demographics	Filter by Seizure, Patient	•			1
<b>0</b>	Insurance Indication	Seizure				^
8	Clinical History Medication	Date/Time	Typical Diary Note	Clinical Note	EEG Description	Exclude
Study	~	1 11/18/2021, 10:43 PM	UND			
	Billing	2 11/18/2021, 11:16 PM	UND	11/20@1:45pm, run of rhyth	hmic pro	
÷.	Technical Description Report Events	3 11/20/2021, 1:44 PM	UND	longed generalized spike ar discharges, not in camera v rease sensitivity on T5	nd wave iew, dec	
anterpr	EEG Description retation	4 11/20/2021, 2:08 PM	UND	11/20@2:10pm prolonged i neralized spike and wave di s, not in camera view	run of ge ischarge	
0	Impression EEG Clips	5 11/20/2021, 5:05 PM	UND	11/20@5:06pm prolonged zed spike and wave dischar ent on video 1 lying in bed, outh movements and right i ping seen	generali 'ge, pati slight m foot tap	
		6 11/20/2021, 11:28 PM	UND	11/20@11:30pm, prolonged generalized spike and wave on video 1 lying in bed look one no clear movements se	d run of , patient ing at ph :en	
		Patient				^
		Date/Time	Typical Diary Note	Clinical Note	FFG Description	Exclude

Each event type is listed separately in the list of Report Events. It is possible to mark individual events to be excluded from the report, and excluding all events of the same type is possible with a multi-select option.

Note that the Stimulsoft report generation engine allows filtering the event list in the template. This can be used to create lists of specific event within the report.

#### Consciousness

In Exam details tab, the patient's state of Consciousness can now be selected from a list:



This can be included in reports.

### Neurological disorder

There is a field for pre-known disorders under Clinical History. Multiple disorders can be attached to each patient. By default, the list of disorders includes:

- ADHD
- Alzheimer's
- Depression
- Epilepsy
- Multiple Sclerosis
- Parkinson
- Schizophrenia

Although there is no UI to extend this list, this can be done by editing the server-side database.



# **Skull defect**

A field for skull defect has been added to Clinical History. This is in the form of a Yes/No field indicating if the patient has a skull defect or not, and an optional description field.

#### Patient Name on downloaded report

The Patient name is added in front of the report name when downloading a report. This way it is easier to identify the file once downloaded on the user's computer. The format is: [Last Name], [First Name] - [Document Name].

#### **Color-code reports on Documents tab**

To make identification of different reports easier, the reports are now identified with a colored banner. The color for each report template is set in the Report Templates editor.



#### Stop time

Exam stop-time is now a field that can be used in reports. Stop-time survives prune, but not Save As with prune.

### **Choose report format**

It is possible to select the format when downloading a report generated by the Stratus report engine. The user can select between PDF, Word or Text (ASCII).



A signed report can only be downloaded as a PDF.

#### **Deleting published reports**

Generally, reports that have been signed and published cannot be deleted. However, users with the "Support" role ability are able to delete published reports.



# **Audit log**

#### **Filter by Role**

It is now possible to filter by Role. Role has also been added as a column. The "Action" dropdown list does now allow multi-select.

#### **Download to excel**

The audit logs can be downloaded as a spreadsheet in MS Excel format.



#### Audit trail for user management

User management operations such as create, modify and delete a user are now logged as audit trails.

# **Review**

#### **Review progress**

The sections of the EEG that have been reviewed are shown as a shadow on the timeline. If video is reviewed, this is shown as a shadow over the video camera bars in the overview.



Review progress is stored pr. user and the user can select to see only what has been reviewed by him/her self or collectively by several users.



#### **Adaptive Artifact Rejection**

The Adaptive Artifact Rejection (AAR) feature is intended to prevent a large artifact on a small number of channels to affect the calculation of average reference.

#### Stratus EEG Release Notes | Version 5.0 | April 6, 2023 Montage EEG Electrodes Non-EEG Signals EEG R Select System 10-20 System -References Electrode Weight PG1 Fp1 Fp Fp2 Fz 1 A1A2 Cz Î 1 AAR 1 Pz 1 F3 F4 Fz AV F3 1 1 DAR C3 T C4 C3 Cz Gnd Î P3 1 Î F4 LC3 1 Pz P3 P4 Î C4 1 LC4 Ì P4 LCz 01 Fp1 1 1 LF3 F7 Î 1 LF4 Ĩ FT7

To enable AAR on a calculated reference, check the *Adaptive Artifact Rejection* box in the EEG References editor (part of Montage editor).

1

1

Î

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Adaptive Artifact Rejection

Т3

TP7

0 0 1

When calculating the value of the reference, the software will for each sample check if there is any channel that is more than two standard deviations away from the average of all samples. If this is the case, the sample from that channel is omitted in the calculation.



The EEG above shows an artifact on O1 and how that affect the average reference while the AAR (called DAR on the picture) is not affected by this artifact.

### "Add" button for Frequency measurement

The frequency measurement tool does now have a button to add another measurement. When pressed, the result popup is hidden while the user selects the new epoch for measurement.



#### **Frequency information in Waveform measurement**

"Frequency" has been added to the waveform measurement tool. This is calculated as 1/(duration between reference points).



#### **Quick measurement**



A new measurement tool has been added. This is activated by Shift+Left Mouse press and hold or by a Toolbar button + Left Mouse press and hold press. The tool draws a box around the area specified by the mouse action and shows:

- Frequency as 1/(duration of interval between gridlines)
- Amplitude as amplitude calculated using the sensitivity of the detected channel.
- Duration as the total duration of the box.



#### **Custom values for Filter and Sensitivity**

It is now possible to enter the desired value into the dropdown lists for filters and sensitivity in the toolbar.

#### Float trends to a new Tab

The overview can be floated as a separate browser tab.



This is in particular handy if there are more than one monitors being used for review such that trends can be one monitor and EEG on the other.



# **Trend Templates**

Trend templates is a new feature where several trends can be combined into a template to be saved and re-used. Trend Templates are made and managed in the EEG Settings Trend Template Editor, and applied from the trend dropdown menu in Review.



#### **Minimum value**

A minimum value can now be specified for a trend.

	Display Name	
	МА	
	Maximum	
	100 µV	
/	Minimum	
C	0 μV	)
	High Out	
	45 Hz	
	Low Cut	
	0.5 Hz	
	Block Size	
	8 sec	
	Notch	

#### 6 cm/h option for overview duration

Duration of the overview can be set to 6 cm/h. This is the traditional chart speed for aEEG. Information from screen calibration is used to draw this correctly.



#### Save As

The Save As function is now available in Web Review. This is accessed through the main Review Menu.



### **Option for trace thickness**

On very high resolution screens, the EEG tracing may look "faint". Therefore, an option for a bold stroke width has been added.



#### **Event list**

The event list will now highlight all events on the current page of EEG.

1			July T		1 1	1 1	1 1		1 1 1				1.1	1.1		1   1   1		>		V		·
		P	hinnennente	Mum	The way		Awak	æ						F	PDR					Event List		^ 🖸
M	KMA.	ſ				WAR	Valuer	nthis store	e-Manlue	Mulared	ninnudria	Khippon		Hollow	Amphantabaga	Mm male	inth	Clinical E	ľ	Name	Time	Duration
aram	M.	North	White where a	ind	mul	-	nga yanga yang Panga yanga yang		Hard Mr. Law	consultantes	wan	3 2010 000	م من المعلمة المعالمة (معالمة المعالمة المعالمة المعالمة المعالمة المعالمة المعالمة (معالمة المعالمة المعالمة مناطقة المعالمة المعالمة (معالمة المعالمة المعالمة المعالمة المعالمة المعالمة المعالمة المعالمة المعالمة المعالم		muran	worther we have been		Y Look at	E	EEG Measurement	2:43:42 PM	0s
الالعاميداد	h. Jun		1 1 1 1				(dena) p.4					1.		ψ a k			1	11115	F	PDR (12s)	2:46:00 PM	12.46s
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#### Hide ruler button

A toolbar button has been added to control the visibility of the scale-ruler:



# Video playback

Video playback has been enhanced in the ability to move a few frames forward and backward. This is done by:

- 1. Push and hold the step button on the video control. This will move the video frame by frame on a slowed-down speed as compared with playing.
- 2. Use ALT+ arrow buttons to do the same.
- 3. Use ALT+ mouse wheel to move frame by frame.

### Video file conversion

In order to be viewable during review using the internet browser, video files must be in the MP4 format. The software does now have the ability to convert AVI files recorded with NicoletOne software to MP4 format that can be played in the Stratus web software. Note that the conversion may take some time to complete.

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# Monitoring

#### Monitoring overview auto-update

The monitoring overview on the monitoring page in Centrum web does now auto refresh every minute.

# Interoperability

#### Single sign-on

The stratus web-based analysis software is compatible with external Identity Provider services (IdP) that support the SAML 2.0 standard. In this case, the system can be configured to use the IdP for authentication. To use the single sign-on, a user must be registered both within Stratus and in the IdP system, email address is used to match the users. In case the Stratus Server has multiple Sites set up, different sites can use different IdP's.

#### **Integration API**

The Stratus EEG server software contains a REST API that can be used to integrate with Hospital Information Systems. This can be called from internet if necessary. Using this interface, it is possible to:

- Add patients, exams, orders and associated data.
- Retrieve reports.
- Retrieve the discrete information that makes up a report.

The integration API is a RESTful web API that is internet addressable. It is provided by Stratus EEG server. Authentication is two-factor, user/password and certificate. This means that the computer calling the API must contain a certificate known by the Stratus Server. The user used to make API calls dictates the patient information available. Mirth Connect can be used to translate HL7 messages into API calls.

# **Algorithms API**

Up on a request to Kvikna Medical, a description of the algorithms API can be obtained. Using this, EEG data can be streamed, even over internet, from the Stratus server to an algorithm service that implements the API, and results can be streamed back to the Stratus Server.

# **Fixed Issues**

lssue #	Issue Subject
17878	Upload fails when navigating to another tab during upload task
18224	Allow up to 255 characters in email information
16789	Up and Down Arrow keys change sensitivity even if Event List has focus
17207	Site admins can see all sites
17206	Site admin can't create user group
17348	Problems opening some BDF files
16790	Patient admission allows only US phone number
17692	Patient Address and User Address fields are limited to 50 chars, which is too short
17309	No event from EDF shown if one of them has a very long duration
17247	Merge fails if video merge has problems
17967	Labels wrong for As Recorded montage on segment changes
16728	Invalid Character in report text causes text to be cut off
17506	Internal Server Path Disclosure
16054	Inserting many Frequency measurement events eventually fails
17891	External Referral ID not displaying in Web Centrum
17178	Exams get incorrect path when restored if workarea has been changed.
16737	Event filter causes prune button to be hidden
16866	Event date in web review does not correspond to the date in timeline

15794	EOG label incorrectly set to EEG type
17464	Allow "Generate Exam" from order, even if order has not been signed yet
16484	Add the email sender configuration to config Parameters table
16802	Adding events when watching video should insert the event immediately
17878	Upload fails when navigating to another tab during upload task
18224	Allow up to 255 characters in email information
16789	Up and Down Arrow keys change sensitivity even if Event List has focus
17207	Site admins can see all sites
17206	Site admin can't create user group
17348	Problems opening some BDF files
16790	Patient admission allows only US phone number