

StrokeSENS

v.1.2 (108)

Release Notes

What's New in Version 1.2

Intended Use

StrokeSENS is a decision-aid software package to be used by clinicians to perform image processing, analysis, viewing and communication of computed tomography (CT) scans of the brain in patients with suspected acute stroke. Data and images are acquired through DICOM-compliant imaging devices prior to processing and analysis in StrokeSENS.

The StrokeSENS software provides analysis capabilities for imaging datasets acquired with standard CT imaging and contrast-enhanced CT Angiography (CTA) modalities. Analysis of non-contrast CT images includes assessment of regions with suspected acute ischemic tissue. Analysis of contrast-enhanced CT images includes automated detection of suspected large vessel occlusion (LVO).

In the case of a suspected LVO, the system will send a notification to a pre-configured destination(s) (members of the acute stroke team), notifying them of the existence of a suspected LVO that requires review. The notification system is intended to be used in parallel to the standard of care workflow to notify clinicians of the existence of the case earlier than they may have been notified as part of the standard of care workflow. Images are available for viewing on a mobile device and on a standard radiology workstation. Images that are previewed on a mobile device are for informational purposes only and are not intended for diagnostic use beyond notification.

Device Description

StrokeSENS is a software package that provides for the visualization and study of changes in brain tissue using digital images captured by Computed Tomography (CT) diagnostic imaging systems. StrokeSENS is compliant with the DICOM standard and can be installed to run on an off-the-shelf physical or virtual server.

It provides viewing, quantification, analysis, and reporting capabilities which, when interpreted by a trained physician, may yield information useful in clinical decision making.

StrokeSENS works with the following types of (DICOM-compliant) medical image data:

- CT (Computed Tomography)

StrokeSENS acquires (DICOM-compliant) medical image data from the following sources:

- DICOM file
- Network using DICOM protocol

StrokeSENS provides tools for performing the following types of analysis:

- Maps related to cerebral blood flow
- Ischemic Tissue Changes (ASPECTS)
- Large Vessel Occlusion detection

What's New

1. LDAP Configuration

- When 'LDAP Config' is clicked, options to configure user authentication via Active Directory/Lightweight Directory Access Protocol (AD/LDAP) will be displayed, as seen in the image below. If configured, these protocols will allow users to log in to StrokeSENS with the same credentials configured for them by hospital IT.

The screenshot displays the StrokeSENS user management interface. The top navigation menu includes 'User Management', 'Network Connections Manager', and 'LDAP Config'. The main area shows a table of users with columns for NAME, SEX, AGE, and STUDY DATE. Below the table, the 'LDAP Config' settings panel is visible, containing sections for 'AD/LDAP Settings', 'Initial Bind Settings', and 'AD/LDAP Specific Information'. The 'AD/LDAP Settings' section includes fields for Scheme, Address, Port, and checkboxes for TLS and StartTLS. The 'Initial Bind Settings' section includes fields for Base DN, Username, and Password. The 'AD/LDAP Specific Information' section includes a field for Username. An 'EDIT' button is located at the bottom right of the settings panel.

NAME	SEX	AGE	STUDY DATE
RSNA_01_031*	F	77	2012-07-30
PRoVe-IT-01-410	M	78	2015-12-06
PRoVe-IT-01-410	M	78	2015-12-06
PRoVe-IT-01-408	M	65	2015-12-01
PRoVe-IT-01-408	M	65	2015-11-30
PRoVe-IT-01-408	M	65	2015-11-30
PRoVe-IT-01-327	M	76	2014-12-28
PRoVe-IT-01-327	M	76	2014-12-28
Test	N/A	--	2016-03-02
ESCAPENA1 12-042	N/A	--	2019-06-22
ESCAPENA1 12-042	N/A	--	2019-06-23
PRoVe-IT-03-007_benchmark	N/A	00	2015-03-03
PRoVe-IT-04-021_benchmark	N/A	74	2014-12-17
ESCAPE 03-012_benchmark	F	63	2014-06-25
PRoVe-IT-01-302_benchmark	F	75	2014-10-14
ESCAPENA1 22-003_benchmark	N/A	--	2018-01-04
PRoVe-IT-01-218_benchmark	M	65	2014-03-12
PRoVe-IT-01-145_benchmark	M	58	2013-06-07
ESCAPENA1 70-003_benchmark	N/A	--	2018-02-09
ESCAPENA1 70-001_benchmark	N/A	--	2017-12-22
1111-8375_benchmark	M	78	2012-08-25
PRoVe-IT-03-051_benchmark	N/A	116	2016-03-06
PRoVe-IT-03-043_benchmark	N/A	116	2016-02-10

2. Quick Findings

- Upon loading a study, the workflow page will display the first scanned NCCT (left) and CTA (right) images. With NCCT(left) AFFECTED SIDE and REGION to represent the AI segmentation.



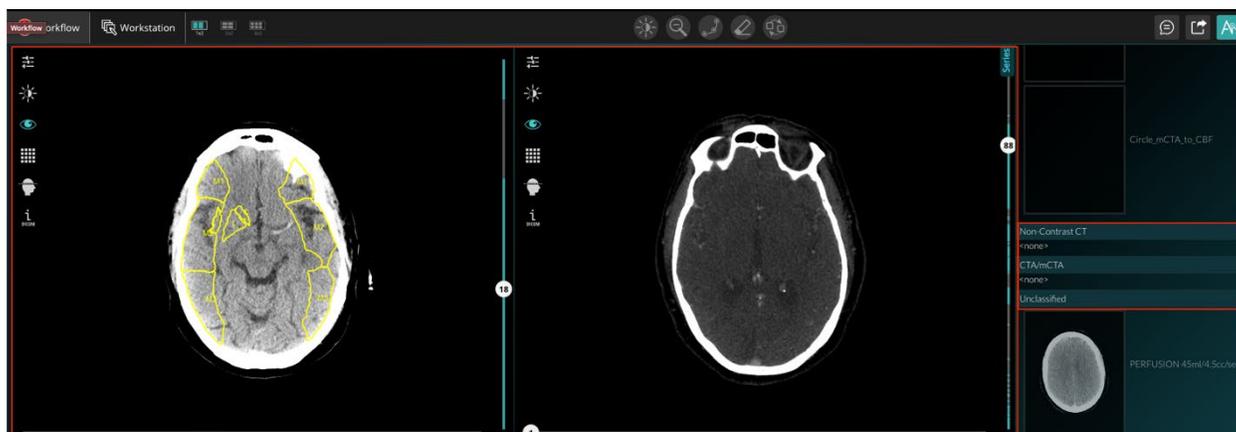
3. About Box

The user will be able to view the required Regulatory info in an About pop-over dialogue
It will be accessed in the app menu (from every user view)



4. Workstation Page

On the workstation page, series list is displayed based on the series classification.



Resolved Issues

The following list contains resolved usability related issues, in addition to all other internal issues resolved during the product development process.

Issue key	Summary
NV-501	[Stroke Platform] Errors should not be code when server is down
NV-544	Issues with new extended view interface
NV-582	[Stroke Platform] Hide text in password input fields
NV-724	Performance of StrokeSENS on low-spec Android device
NV-749	Scrolling up on the patientlist freezes the pane (iPad)
NV-767	Inconsistent info button behavior in patient list
NV-768	Patient List wrong info temporarily loaded if there is a pending request
NV-898	Worklist doesn't fill screen when switching from portrait to landscape
NV-912	Expanded Series list in Studies auto-collapse when scrolling to bottom of list
NV-996	mCTA CTP heat map algorithm issue RSNA 031
NV-1000	Multiple users loading the same MPR can fail on mobile.
NV-1008	Sorting worklist does not work while filtering
NV-1110	Accumulated bugs for the old React worklist
NV-1117	Mobile chat does not have send button
NV-1126	XA modality images get stuck on loading in workstation
NV-1135	Adjusting MIPS/Mean lags on iPad
NV-1138	Running MPR on same study in workstation crashes browser
NV-1149	Browser Error After Running multi-view in both modules
NV-1207	Patientlist Jitters on Edge Browser Large Screen
NV-1222	10min logout prompt repeats on login page if Ok button is selected

NV-1223	Address Kelowna Email Issue
NV-1224	Share study feature does not work from study loaded via encrypted shortUrl(Safari))
NV-1243	Safari - Expired session pop up persists on log in screen indefinitely
NV-1245	User Manual Access through all pages on mobile device.
NV-1246	NCCT multiview blanks out after playing cine in CTA multiview
NV-1258	Mobile Age has Double 'y' Character
NV-1268	Modal Popup Error when interacting with phase slider
NV-1269	Pako inflator Error
NV-1283	Some studies persist on MLProcessingList indefinitely
NV-1285	Default zoom factor too small for MPR recons of NCCT
NV-1296	Uncaught error in promise after returning to patient list from study
NV-1301	Patient Protocol images don't load in workstation
NV-1308	Backend should remove studies from Consul MLProcessingList if study doesn't exist anymore
NV-1323	Failed LVO 1.2 Content Test
NV-1325	Slice Location Handling
NV-1326	Repeat Slice Location Values Investigation
NV-1342	ML loading spinners load indefinitely if ever off-screen
NV-1347	Aspect Update bug
NV-1349	User Manual PDF won't load
NV-1360	LVO detected header styling update
NV-1362	MultiViewer and Workstation Bug
NV-1363	Multiview "Enter Measurement Label:": buttons throw JS error
NV-1372	Aspect LVO Bug
NV-1373	GPU Lagging Issue
NV-1376	Using back button while loading study creates JS errors
NV-1382	Possible artifacting on bone in images with hardware acceleration disabled
NV-1383	Zoom tool snaps to new level after using windowing
NV-1389	Canvas blanks out after toggling MIPS/Mean and going to workstation
NV-1392	NCCT Contour Displacement on iPad
NV-1393	Windowing Makes Contours Blink on iPad
NV-1394	Workstation viewpane does not work after heatmap is loaded first
NV-1403	Cannot read property 'getAttribute' when viewer loads
NV-1410	Styling for ML badges and disclaimers in resized edge case
NV-1412	Switching view while loading MPR stops loading, blanks canvas
NV-1413	Blanked viewer from 'getAttribute' error with fully loaded MPR
NV-1417	Oslo - Can't log in after install, RabbitMQ rejecting connections
NV-1419	Zoom tool snaps to new level after changing phases
NV-1420	New incoming study not updating worklist automatically
NV-1421	Some prerequisite executable files missing in installer

NV-1424	ML node crash on specific dataset
NV-1425	Installer config path gets broken with spaces in directory names
NV-1428	Editing user info for currently logged in user wont accept.
NV-1430	Failed Series Classification Content Test
NV-1437	When user logs out, logout message should be logged and viewable
NV-1450	MongoDB log records not removed from system after archiving
NV-1453	Installer creates RabbitMQ user appdata on OS drive, and doesn't uninstall it
NV-1457	The UI displays right side is affected even when ASPECTS = 10 and no region is affected
NV-1467	cvi42 folder contains more than just auditing files after uninstall

Known Issues

Issue key	Summary
NV-1462	mips/mean stack doesn't collect backwards
NV-999	Swipe does not respond as expected on mobile
NV-1426	Failed Mips/Mean Content Test
NV-1390	Failed mCTA heatmap - Prove-It-04-021
NV-1267	Clearly define manufacturer field on worklist
NV-1233	ESCAPENA1 14-012 Study not accepted by ML. ITK Library error.
NV-1391	MIPS/Mean Slicer Sensitivity Issue
NV-1459	SliceSync doesn't sync when heatmaps are scrolled
NV-1418	Spline tool offset issue with heatmaps
NV-1299	Patient Protocol images not carried over using combine studies feature
NV-1297	Inconsistent series slice thickness info after combining studies
NV-1289	Password field from the LDAP Config view need to be encrypted.
NV-1257	Patient List Name Sorting isn't Truly Alphabetical
NV-1256	Patient Names Overlap Date in Worklist
NV-1161	Presence of CTP ML loading icon in newly uploaded studies

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Support

For further information on installing/exchanging the dynamic libraries please contact Circle Neurovascular Imaging support.

Phone: +1 (403) 338-1870

E-mail: supportnvi@circlenvi.com

Website: www.circlenvi.com

Circle Neurovascular Imaging Inc.

1100, 800 5th Avenue SW

Calgary, AB T2P 3T6

Canada