Amira 6.5.0 – Avizo 9.5.0
3D Data Visualization and Analysis Software

Dear Amira-Avizo User,

With this document we would like to inform you about the most important new features, improvements, and changes in this version of Amira-Avizo. Please read these Release Notes carefully. We would appreciate your feedback regarding this version. If you encounter problems, but also if you have suggestions for improvement, please report them to fei-sw-support@fei.com. We would like to thank you in advance for your efforts.

March 2018, the Amira-Avizo team

CONTENTS

BIO-FORMATS - ENHANCEMENTS

ENHANCED FEATURES

BIO-FORMATS ENHANCEMENTS

The Bio-Formats integration has been updated to version 5.5.3 which comes with many updates and bug fixes as documented here (https://docs.openmicroscopy.org/bio-formats/5.5.3/about/whats-new.html). In addition the data import performance has been greatly improved for importing time series data and multi-channel time series data. The conversion from Bio-Formats to Amira-Avizo's LDA format also benefits from these improvements. In addition, the Bio-Formats integration in Amira-Avizo continues to support 3i's Slidebook file format which has previously been removed from Bio-Formats to be managed externally by 3i.

THERMO FISHER SCIENTIFIC REBRANDING

This new version of Amira-Avizo Software has been fully rebranded to Thermo Fisher Scientific's brand.

Warning: the Recipes default directory has been renamed from %APPDATA%/**FEI**/Recipes directory to %APPDATA%/**Thermo Fisher Scientific**/Recipes. If you had stored recipes in the former default directory, you can either change the Recipes directory using the Preferences Dialog, or you can copy the contents of %APPDATA%/FEI/Recipes into %APPDATA%/Thermo Fisher Scientific/Recipes.

The Avizo Inspect product edition has been renamed Avizo for Industrial Inspection.

Amira for FEI Systems and Avizo for FEI Systems have been respectively renamed Amira and Avizo for Thermo Scientific Electron Microscopy Systems – abbreviated Amira-Avizo for EM Systems.

LEARNING CENTER

NEW: The Amira-Avizo Learning Center is an online collection of video tutorials to help you getting started or better master the product.

It is accessible through the start page.

You can also access it directly at https://www.youtube.com/playlist?list=PLoxdPzacxPYjDVMD4tPCaVbuQjxYizr_g

This learning center is constantly updated and will be enriched regularly with new video tutorials. Check it out!

OPERATING SYSTEMS

Amira 6.5 – Avizo 9.5 runs on:

- Microsoft Windows 7/8/10 (64-bit).
- Linux x86 64 (64-bit). Supported 64-bit architecture is Intel64/AMD64 architecture. Supported Linux distribution is Red Hat Enterprise Linux 6 and Red Hat Enterprise Linux 7.
- Mac OS X EL Capitan (10.11) and macOS Sierra (10.12).

In order to add custom extensions with Amira-Avizo XPand, you will need:

- Microsoft Visual Studio 2013 (VC12) Update 4 on Windows.
- gcc 4.4.x on Red Hat Enterprise Linux 6 and Red Hat Enterprise Linux 7.
- Currently, Amira-Avizo XPand support is not available for Mac OS X El Capitan (10.11) nor macOS Sierra (10.12). It will become available again once Clang support has been completed.

SOLVED ISSUES

Amira 6.5 – Avizo 9.5 provides many enhancements and solutions to known problems, including the following:

Apply LCS Transform/ Apply LCS Transform from (Avizo for Industrial Inspection only)	63390	Interpolation is now used when computing the transformation to have smoother resulting data sets.
Auto Adjustment Refit (Avizo for Industrial Inspection only)	66128	In Auto Adjustment Refit mode, error could occur when trying to fit some specific geometries. This has been fixed.
Avizo ToGo	62946	Big .togo files (> 4Gb) could not be loaded in Avizo ToGo. This has been fixed.
Bio-Formats	59334	The LDA conversion has been fixed to take the tile sets transformation into account.
	62923	nd2 files are now loaded as a 3D volume.
	63359	Some RGB color multi-series files could not be loaded on Mac OS using the Bio-Formats reader. This has been fixed.
	59926	It is now possible to read multi-channel Zeiss Lightsheet .czi files.
Centerline Tree	27753	The module would fail when the number of voxels of the input data exceeded 32-bit range. This has been fixed.
Deconvolution	61616	The module behavior has been fixed to make it usable in template workflows: - Saving a deconvolution workflow with Minimize project size policy now saves both the .deconv and .psf deconvolution outputs - Updating the deconvolution input when Auto refresh is checked will now update the module output instead of computing a new result
DICOM	64679	An erroneous slice location could happen if the dataset coordinate system was indirect. This has been fixed.
	39915	All slices of big endian encoded DICOM 3D files are now correctly read.
	39740	When slice spacing parameter is missing in the header file, slice thickness parameter is now used to define the distance between the slices.

	28735	DICOM files with Transfer Syntax UID Implicit VR - Big Endian (General Electric equipment) are now readable.
Digital Volume Correlation	66282	Voxel size is now taken into account for computation with DVC global approach.
Extract Image	62580	Extract Image computation has been fixed for RGB color data input.
Generate Surface	61068	The computed surface could be incorrect for data sets with missing materials. This has been fixed.
Label Analysis	59669	The save process of Label analysis results has been enhanced to allow blank characters in a measure name.
Linux support	66569	Crash could occur at start-up when using the product on RHEL7 or CentOS7 platforms. The additional libraries delivered for RHEL7 and CentOS7 installation have been fixed.
Measurement (basic)	39034	A project containing an empty measure could not be reloaded successfully. This has been fixed.
	64651	The picked points were not at the end of the arrow cursor when using the basic measure tool. This has been fixed.
	59679	In the basic measure environment, it was not possible to grab and move the endpoints once they had been placed. This has been fixed.
	58211	It is now possible to load and modify Basic measurements.
Open Data	31949	On Linux, the opening of the file browser when opening/saving a data set could take a long time if there were a lot of files in the browsed folder. This has been fixed.
Point Cloud to Volume	21523	On computation, existing output, if any, is now updated instead of creating a new one.
Pore Network Model	67694	Pore Network Model objects can now be saved in Amira.
Relabel	59558	Relabel would be incomplete for label files greater than 2Gb. This has been fixed.
Remesh Surface	21523	On computation, existing output, if any, is now updated instead of creating a new one.
Reposition	65852	This command is no longer supported since the reorganization of the properties panel.
Save project	57258	LDA files, if any, are now saved when saving a project with Minimize project size save policy.
Segmentation Editor	42973	The Fill Holes tool, accessible from the Segmentation menu, no longer selects the holes touching the Bounding Box.

Spreadsheet	61876	When rows had been reordered in a spreadsheet, deleting rows would not delete the selection. This has been fixed.
Surface view	62389	Attaching a surface view to a surface with no material would fail. This has been fixed.
Thinner / Distance-Ordered Thinner	60440	'Branches Minimum Length' parameter can now be greater than 10.
Transformation	58085	Some modules didn't copy the transformation information of the input to the output: Thickness Map, Generate Pore Network Model and Auto Skeleton modules have been fixed.

Our team is continually focused on solving as many issues as possible to make your experience of Amira-Avizo as satisfactory as possible. To this purpose, we would appreciate your feedback regarding this version. If you encounter problems, or if you have suggestions for improvement, please report them to fei-sw-support@fei.com.