



NeuroLucida 360

Release Notes

Version 2017.01.1 (08/01/2017)

NEW FEATURES AND ENHANCEMENTS

NeuroLucida 360 3D environment

- Redesigned user interface with new icons.
- Varicosities detection added (available with NeuroLucida 360 Studio).
- Tree editing: Cleanup tool added to identify and remove tree fragments quickly after automatic tracing (available with NeuroLucida 360 Studio).
- Spine classification: Spine backbone length is reported by default.
- Soma detection: "Clear last" soma button added.
- Synapse detection: Now available for axons, in addition to dendrites and apical dendrites.
- Scene: Added 3D scale bar.
- Integration with analysis tool: Open data file in NeuroLucida Explorer from the 3D environment with one click.
- Sets creation added: Objects can be grouped for analysis in NeuroLucida Explorer.
- Markers: Marker sizing added to Edit Markers panel. Similar to 2D sizing (pixels, microns, or intrinsic).
- Post-processing: When selecting an option then selecting a different option, the display is updated.
- 360 window renamed 3D environment.

NeuroLucida 360 overall

- A completely revamped user interface: ribbon bars replace toolbars and menus; new icons throughout.
- Image scaling: Added option to save scaling information with image file and convert to .jpx format.
- Version update: New version notification window displayed when opening program.
- File formats: Apotome CZI, ND2, Caliber ID scanner, Bacus, Janelia, VSI, LSM files >4GB, tiled LSM, multichanneled tiled LSM now supported.
- Support for 4K monitors and Windows 10.
- Support for saving and opening data files from Biolucida servers.
- Improved handling of very large images.
- Integration with analysis tool: Open data file in NeuroLucida Explorer from File > Save > Save and view in NeuroLucida Explorer.
- Markers: Enhanced colocalization functionality.
- Mobile license dongle: Alert is displayed when dongle is not plugged in.
- Ortho View: Simplified use and new toolbar.
- Context-sensitive help now available for users without internet access.
- Image Organizer: New toolbar and More Info tab improved.
- Redesigned Marker toolbar.



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- Redesigned Serial Section Manager.
- Virtual image mode: There is no longer a separate license required to save projections or image effects for very large image files (>4GB).
- Status bar: Colorized to reflect user operation; color changed to indicate the tracing mode (marker, contour, tree...); added image scaling panel.

Neurolucida Explorer

- A completely revamped user interface: ribbon bars replace toolbars and menus; new icons throughout.
- Enhanced more intuitive 3D environment: Use your mouse to zoom, pan and rotate; click the tracing to select an element.
- 2D and 3D scale bars added.
- Additional export tools to generate multiple Excel files quickly.
- Interactive object selection: Locate specific objects (i.e., spines) in the model by clicking rows of data in reports.
- Sholl analysis: 3D view added; select only Sholl rings (without highlighting the traces).
- Synapse analysis: Axon synapse analysis added.
- Dendrogram: Displays spines and synapses.
- 3D Convex Hull added.
- Markers and contours analysis: Marker-to-surface distance added.
- Closed surface analysis: Segment in 3D contour added.
- Branched structure analysis: Added varicosities.
- Mac-compatible version also available.

ISSUES RESOLVED

Neurolucida 360 3D environment

- Markers: You no longer need to close and re-open the 3D window to display markers placed in 2D; changes made to marker colors or visibility in 3D are now reflected in the 2D markers.
- Contours: Fixed marquee selection in Point editing mode; in Edit Contours, smoothness filter enabled when creating a contour shell from at least 3 contours.
- Edit trees: Setting origin no longer changes the tree type from Axon to Dendrite; fixed issue where deleted point appeared again after using Undo to cancel moving another point.
- Markers: Selecting & changing transparency for a single marker no longer results in changed transparency for all markers.
- Pivot point: Now works in all views when using Quad View (instead of XY only).
- Somas: Somas now updated in 3D after using "Move Images and Tracing;" when hiding one, then another, clicking "Show all" now shows all the hidden somas; soma contours from different cells no longer linked as one single cell in 3D.



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- Undo move for contours
- Tif image files can now be updated with new color maps or with image processing.
- Dialog layouts are now displayed correctly when using a language that is read right to left.
- Right-clicking first or last point of an arrow no longer results in crash.
- No more flickering in Multichannel dialog.
- Image Adjustment: Removed a number of error messages that can occur when adjusting during image stack auto-loading of a datafile; fixed two rare crashes that could occur while adjusting on a currently unloading image stack.
- Soma: When tracing a cell body in 2D with the 3D window open, the system no longer crashes.