arivis InViewR sets new standards for visualizing life and medical science research images. Breaking through limitations of viewing 3D/4D images on a 2D desktop screen, like constantly having to turn the image with a mouse, it is possible to enter the data, positioning one’s viewpoint within the data itself. With natural movements of the head and body a user can move freely to inspect and interact with an image from any angle and position without limitation. Users are instantly able to comprehend and internalize information about important relationships between structures within an image. These new insights, many impossible to perceive on a desktop system, can be used to evaluate existing hypotheses, create new ones, and generate appropriate data analysis strategies.

Be Perceptive: Gain new insights about your image data

InViewR works on real images with no need to convert or make surface models by utilizing patent-pending direct volume rendering techniques to display data in VR. As simple as looking at your surroundings in the real world, InViewR restores the context of tissues and interconnected structures in the virtual world. By positioning data in your peripersonal space, the space within arm’s length in all directions, human visual and motor cortical pathways are activated which have been shown to provide increased: depth perception, ability to recognize relational sizes, and ability to transfer information about objects within the visual field to memory.

„Directly import 3D or 4D images from virtually any microscopy hardware system“

„Overlay and align surface renderings, models (CAD) or simulation data on original volume rendered data“

„Change your size and position to observe structures with their correct positional, relational & aspect ratios“

„Directly import computed tomography (CT), 3D X-Ray & Magnetic Resonance Imaging (MRI) Images“
Be Observant: Utilize tools designed to get the view you require

**RENDERING**
A MIP or direct volume rendering with user definable parameters can be used to render images of all types. Completely custom color and opacity mapping can be applied to highlight structures of interest while suppressing noise and can be saved for later use. Color channels can be independently switched on/off and mapped to show/hide morphology.

**CLIPPING**
A choice of a clipping plane, clipping sphere, or triple orthogonal slicer can be interactively placed and positioned within an image. These clipping tools can be selectively applied to the volume data, segments, measurements, markers, and/or overlays in any combination to reveal otherwise hidden structures, even in dense images.

**VISIBILITY**
VR menus, including context sensitive help, have been designed to allow full control of all operations and tools while in the VR space to provide a seamless user experience. Users can interact with menus or VR objects (segments, measurements and markers) by laser pointing at them or reaching out to touch them in VR space. VR objects may be selected to change their visibility state, edit them, or reveal their properties.

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**Immersive VR without compromises**
Surface renderings, typically used in VR, requires that users segment data by making difficult choices about thresholds, take time to compute, and often fail to produce results for complex microscopy images. Specialists argue that surface renderings, which only display the exterior or shell of objects of interest, are insufficient to see inner structures of cells or intensity changes that occur along the timeline of typical microscopy images.

**InViewR** uses patent-pending direct volume rendering technique to allocate every single data point of the original 3D image to a voxel within the rendered object. The user can thus be assured the final rendering is representative of ALL the real data and resolution collected with their valuable hardware. Thus measurements within a volume, verification of colocalizations or following structures in 4D space are truly possible.

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**arivis InViewR - Highlights**
- Experience smooth and responsive viewing because of high frame rates and low latency rendering
- Institutively navigate utilizing hand gestures or hand held controllers to any position
- Save points of interest (POI’s) to share your insights with peers and collaborators
- Export snapshots, movies, and 360 degree data for publication and presentation
- Customize the VR environment to your preferences: room, background, enabled tools, indicators & feedback
- Seamless exchange of image, segments and statistics with desktop application

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