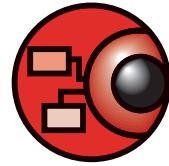


amira | VR™

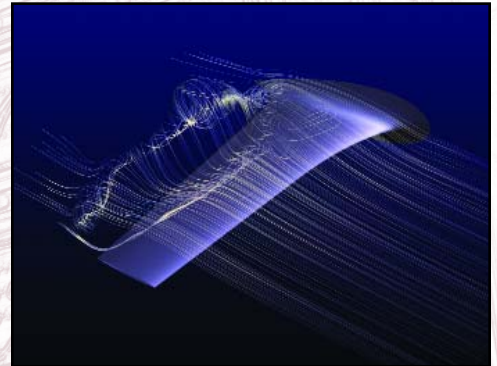
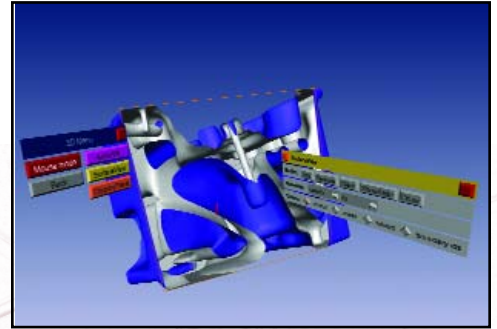


Visualization in Virtual Reality Environments

amiraVR™ brings the power of amira®'s advanced visualization capabilities to virtual reality. amiraVR features include head-tracking, support for tracked input devices, multi-channel and multi pipe support, multi-threaded rendering, multi-wall support (e.g. for CAVE® or Holobench® systems), fully featured user interface embedded into the virtual scenes, active and passive stereo and compatibility with the standard technologies.

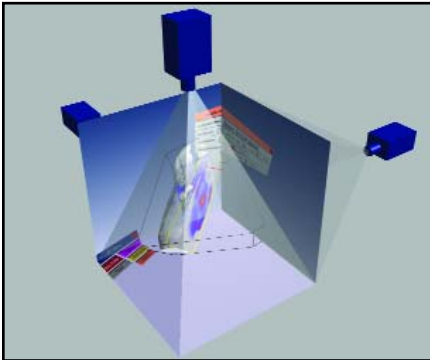
Key Features

- Support for single and multiple screen display systems -
- Support for single or multi-pipe rendering on all platforms -
- Easy and flexible customization for specific display system geometry -
- Support of active and passive stereoscopic displays -
- Head-tracking for correct perspective viewing -
- Support for tracked hand-held input-devices -
- Control of amira functionality via 3D user interface components -
- Control of 2D user interfaces with 3D devices (virtual mouse) -
- Scriptable using TCL -
- Programmers API (amiraDev™ + amiraVR) -
- Full binary compatibility with amiraDev custom modules -

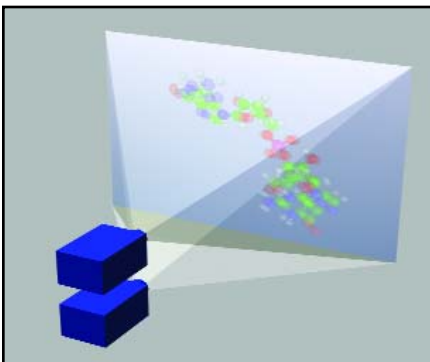


"With its unique set of features, amiraVR represents both a VR ready application for scientific and medical visualization in immersive environments, and a development platform which allows clients to build VR applications."

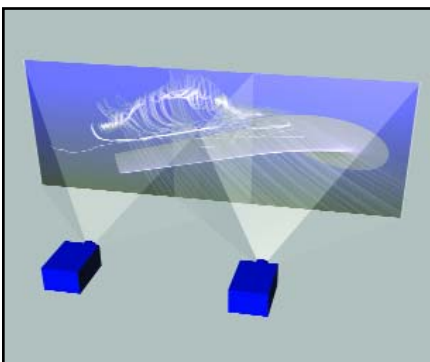
- Malte Westerhoff, Director of Technology for Indeed - Visual Concepts GmbH -



Multi-Wall displays



Stereo



Tiled displays

One of the primary goals in amiraVR design and development has been to port the ease-of-use and image quality that made amira® the leading tool in bio-medical visualization on the desktop to VR systems.

In addition, amiraVR is a unique programming environment for the development of visualization applications in VR. Custom developed modules are binary compatible with both: amiraVR and amira® for desktop.

Stereo

Stereo displays render images with slightly different perspectives for the two eyes. Active stereo systems interleave these images temporally while passive stereo systems use two projectors and light polarization or similar techniques. amiraVR supports both techniques.

Tiled Displays

Tiled Displays are used to achieve high resolution displays, more light-intense projection or non-standard aspect ratios. amiraVR supports multi-channel and multi-pipe tiled rendering including software soft-edge blending.

Multi-Wall Displays

Multi-Wall displays like the CAVE or HoloBench increase the observed field of view for improved immersion. amiraVR supports head-tracking systems which continuously measure the observers' eyes' positions. This allows amiraVR to compute the correct projections such that no edges are visible to him/her.

Interaction

Tracking systems are used to measure the position and orientation of a sensor in space. These sensors can be connected to an input device such as a 3D mouse or data glove for interaction or to the observers head (*head-tracking*) for real-time perspective correction.

amiraVR supports 3D interaction and navigation through a powerful group of 3D menus which are seamlessly integrated into the immersive environment as well as using head-tracking. amiraVR supports all standard tracking systems. With direct manipulation of many 3D objects and powerful programmers API, amiraVR gives you a complete package.

About amira

Fast, reliable and easy to use, amira® is the state-of-the-art three-dimensional visualization software product offering unparalleled techniques for creating complex data visualization. Included techniques are direct volume rendering, iso-surfaces, innovative vector field visualization tools, image segmentation, surface reconstruction, surface simplification, and generation of tetrahedral grids.

amira uses the power and speed of the OpenGL® and Open Inventor™ graphics libraries and 3D graphics accelerators at their best. TGS supplies amira with full documentation, sample data sets, and tutorials, making it very easy for everyone to learn and use.

Hardware Support

amiraVR is available on a wide range of platforms, including:

- SGI IRIX
- Sun Solaris
- Microsoft Windows
- HP UX
- Linux (IA32, RedHat, SuSE)

About INDEED - Visual Concepts

Indeed - Visual Concepts GmbH is a development-oriented company providing highly innovative solutions in the fields of digital data analysis, visual representation, and visual communication. Indeed is the developer of the amira® visualization system. The unique combination of extensive knowledge in graphics and visualization, as well as in natural and medical sciences, enables Indeed to provide their customers with complete VR solutions including software, hardware, and consulting.

TGS Corporate Background

For over 20 years, TGS has been providing Open Systems-based 3D graphics software tools for application developers and end users.

TGS offers standards-based cross-platform graphics and is the leading independent software supplier of graphics software tools and utilities. TGS, in association with Indeed Visual Concepts, markets and supports amira® and the entire amira® product line. The company also offers a variety of consulting services to assist its clients in developing/implementing custom visualization products and strategies.