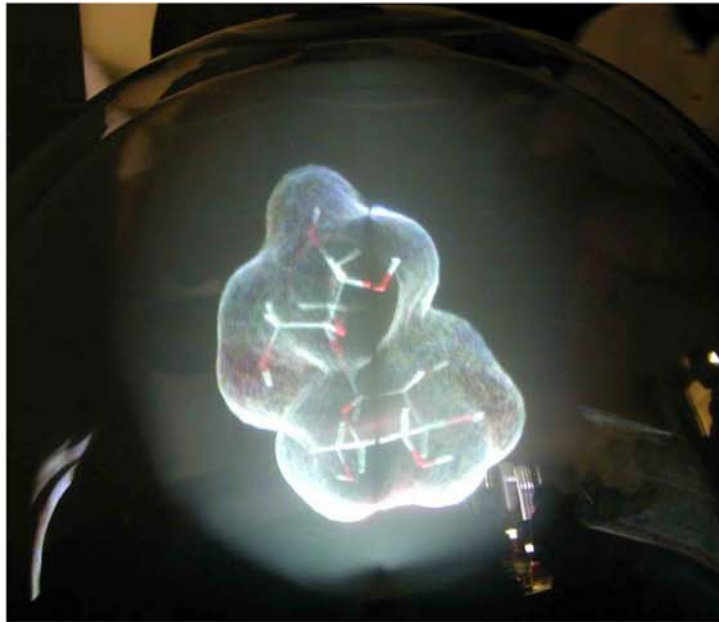


Perspecta Display

The Perspecta 3D display, built by Actuality Systems, is a volumetric display. It can be used for viewing molecular and atomic structures and other items requiring transparent—not opaque—3D rendering.

This display creates the illusion of a 3D scene via persistence of vision, that is, the ability of the viewer's eye and brain to fuse a rapidly changing image into a single smooth scene. Unlike stereoscopic displays, no special glasses are needed to view the image. Viewers can see the 3D scene from any angle by moving around the display without the head tracking equipment used in immersive environments such as the VR theater's FLEX display.



Images are formed on the Perspecta by displaying a series of 198, 768 x 768 pixel slices on a rapidly rotating, 10-inch diameter screen. The images come from a projector in the base of the unit and are routed to the screen by a rotating mirror system. A special 3D display processor creates the slices from a 3D frame buffer containing approximately 100 million voxels or volumetric picture elements.

International Visualization Consortium



The International Visualization Consortium was created in July 2003 to promote worldwide visualization efforts, the advancement of scientific visualization through regular communication between researchers and centers, timely sharing of information, project collaboration, and the general promotion of visualization as a valuable means of discovering new knowledge and adding value to society.

The Envision Center staff under the guidance of Dr. Bertoline has assumed the leadership role with the creation and long term development of this consortium. The following is a brief overview and the vision statement for the group.

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Vision

The International Visualization Consortium will explore emerging computer graphics, auditory, and haptic technologies that combine advanced computation, networking, storage, and high-end immersive visualization environments to assist researchers and industry in their quest for new knowledge and products.

- Our aim is to enable the development and practical application of virtual reality through collaboration and a focused research agenda.
- Our focus is on the development, integration, and evaluation of consumer and high-end technologies and systems that extend and complement commercially available perceptual tools.
- Our motivation is the belief that tele-immersion provides the ideal framework for exploring new ideas, discovering new knowledge, and learning in new ways through collaborative VR environments, advanced scientific visualization, interfaces to high-performance computing systems, and related human performance issues.

Steering Committee

Mike Bailey, San Diego Supercomputer Center
Gary Bertoline, Purdue University
Glenn Bresnahan, Boston University
Carolina Cruz-Neira, Iowa State University
Eric Frost, San Diego State University
Kelley Gaither, University of Texas
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Eric Wernet, Indiana University
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Steve Dunlop, Purdue University, Managing Director