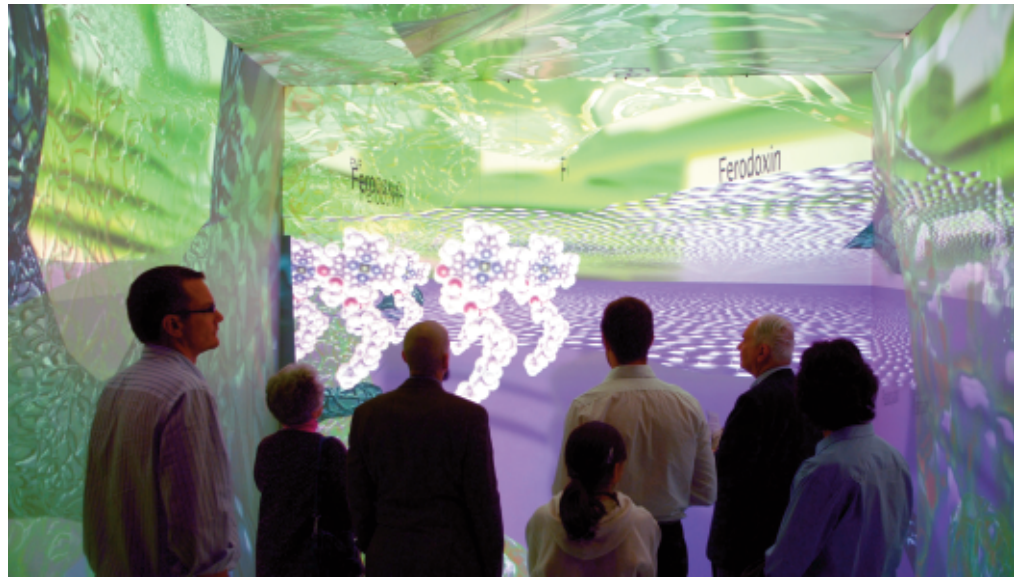




CAVE™

CAVE Automatic Virtual Environment

The original and most widely installed fully immersive visualization system in the world



Applications

- Manufacturing and design reviews
- Seismic interpretation and well planning
- Biotech research
- Computational fluid dynamics
- Any application that requires users to be "inside" or immersed in the data

Features & Benefits

- Analyze and interpret spatially related data faster with surround screens
- Engage the "whole brain" via immersion for enhanced awareness and retention
- Intuitively navigate realistic, life-size environments for research or design
- Impress visitors with unique perspectives and experiences
- Focus on your data, not the technology, with a fully integrated display, software, computing, and support solution

Experience a complete sense of presence in a virtual world

The Mechdyne CAVE™ is a room-sized advanced visualization solution that combines high-resolution, stereoscopic projection and 3D computer graphics to create a complete sense of presence in a virtual environment.

Multiple users experience virtual environments at the same time

The CAVE was the first virtual reality technology in the world to allow multiple users to become fully immersed in the same virtual environment at the same time. Today, more CAVE systems are installed in visualization facilities around the world than any other spatially immersive display system. The CAVE is available with four projected surfaces (three walls and floor); five surfaces, or fully enclosed six-surface configurations for complete virtual immersion.

Scalable resolution to 100 million pixels and higher

Mechdyne can scale the resolution of the CAVE by using more than one projector per wall. Standard CAVE systems display approximately one million pixels per wall. Mechdyne can deliver up to 16 million pixels per wall.

www.mechdyne.com



Mechdyne
ENABLING DISCOVERY

Specifications

Display	
Screens	<ul style="list-style-type: none"> • 7.5'h x 10'w (2.2m x 3m) per screen • 9.0'h x 12.0'w (2.3m x 3.6m) per screen also available • Other sizes available - consultation required • Soft, high-contrast, low-gain screen for high-impact imagery • Zero-edge screen frame design for nearly seamless corners • Durable floor screen color-matched for image continuity
Computing Platforms	<ul style="list-style-type: none"> • Linux® PC, Microsoft Windows®, SGI®, Sun Microsystems®, hp®, ORAD™, and other custom-developed media
Brightness	<ul style="list-style-type: none"> • Up to 12,000 lumen digital projection
Stereoscopic Options	<ul style="list-style-type: none"> • Active/shuttered stereo DLP™ standard • Polarized/passive and Infitec™ stereoscopic options are available
Resolution Per Projector	<ul style="list-style-type: none"> • 1400 x 1050 fixed for DLP™ or Mechdyne Beacon™ SX+ (option) • Higher resolution active stereo using tiled projection technology
Motion Tracking	<ul style="list-style-type: none"> • Wired inertial-acoustic head tracking and hand-held wand with four programmable buttons; high precision and full six degrees of freedom navigation and interaction • Options include wireless inertial acoustic, optical, and electromagnetic tracking
Audio	<ul style="list-style-type: none"> • 5.1 surround sound audio system
Touch Panel Control	<ul style="list-style-type: none"> • Touch screen control system with a 10" (25.4 cm) LCD panel and processor programmed for main source
Structure	
Superstructure	<ul style="list-style-type: none"> • Tracker-friendly metal structural supports for rigidity • Full width entrance ramp
Approximate Footprint	<ul style="list-style-type: none"> • 11.6'h x 30'w x 22'd (3.5m x 9m x 6.7m) • Room dimensions to be discussed with Mechdyne
Optional Peripherals	
Stereoscopic Eyewear	<ul style="list-style-type: none"> • High quality shutter glasses and extended range emitters for active stereo viewing • Metal frame, plastic or paper polarized glasses for passive or Infitec™ stereo applications
Projection	<ul style="list-style-type: none"> • Multiple projector tiling per wall for ultra-high pixel density • Projection of entire space in front of open configurations • Single or double folded optics to reduce overall system footprint
Conferencing	<ul style="list-style-type: none"> • Various audio and video conferencing capabilities available
Warranty	
	<ul style="list-style-type: none"> • Contact Mechdyne for warranty information and extended support options

Specifications subject to change without notice. All trademarks are property of their respective companies.

System & Service Options

Software	
CAVELib	Application Programmer Interface for developing immersive applications
CDVI	Enables immersive capabilities in Dassault Systèmes V5 applications
Conduit	<p>Conduit is the only commercially available software that enables many popular desktop applications to operate on PC clusters; to display natively, in real-time, in virtual reality and high resolution environments; and to support user interaction capabilities within those environments. Modules to support specific applications are sold separately. Enabled applications include:</p> <p>CAD: Dassault Systèmes SolidWorks; V5 (CATIA™/ENOVIA™/DELMIA™); PTC Pro/ENGINEER® Digital Design: Autodesk® 3ds Max®; AliasStudio™; Blender; Maya®; SketchUp Energy Exploration: Schlumberger Petrel, Paradigm 3D Canvas GIS: ESRI ArcGIS 3D® Analyst™; Google™ Earth</p> <p>Please visit www.mechdyne.com for the most up-to-date listing of Conduit enabled applications.</p>
trackD	Allows applications to take advantage of six degree of freedom tracking and immersive interactive tools
vGeo	Data fusion, analysis, and presentation software for scientists, engineers, and simulation analysts
Projection	
Enabling Technology Options	<p>Mechdyne is experienced with all forms of stereoscopic display generation technologies. When considering these options, Mechdyne will review each technology, and then recommend, design and implement the best solution based on:</p> <ul style="list-style-type: none"> • Active stereo projection displays <ul style="list-style-type: none"> • Electronic shutter glasses • Passive/polarized light filter technology <ul style="list-style-type: none"> • Select metal, plastic, or paper framed glasses – or a combination of the three • Infitec™ color filter technology <ul style="list-style-type: none"> • Infitec filter technology offers two sizes of glasses
Workstations and PC Clusters	
	Mechdyne can configure and integrate Windows and Linux PC systems to drive single and multi-projector display systems. Some of the world's largest graphics visualization clusters are Mechdyne solutions. These clusters can support monoscopic, passive stereo, or active stereo immersive displays.
Facility and Design Consulting	
	<p>Mechdyne has a wealth of experience designing solutions of any scale, and will work with you to define the ideal solution for your operation. Our services include:</p> <ul style="list-style-type: none"> • Consulting • Feasibility studies • Needs assessment • Site inspections and recommendations • Architectural engineering assistance • Facility planning and consultation • Project management
Technical Support Programs	
	Service plans are a great way to ensure that your high-tech audio/visual equipment stays in peak condition. Mechdyne offers a range of extended warranty and maintenance programs that can cover basic preventative maintenance, regular visits, and/or full time, on-site staffing.
Training	
	In order to expedite and increase proficiency, and maximize the value of your investment, Mechdyne offers training services for any of our display or software products.

Mechdyne Corporate Headquarters

11 East Church Street, 4th Floor | Tel: 641.754.4649 Fax: 641.754.4650 Email: info@mechdyne.com
 Marshalltown, IA 50158 USA | www.mechdyne.com

