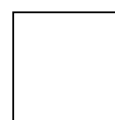**3D Visualization Center**

Mechdyne Managed Services Drive ROI at the University of Wyoming

Mechdyne
ENABLING DISCOVERY

When the University of Wyoming's School of Energy Resources (SER) chose Mechdyne to design and integrate the 3D Visualization Center in 2010, its creators realized that true ROI could only be achieved by enabling multiple use cases and maximizing technology uptime. Mechdyne Managed Services ensure the "Viz Center" delivers consistently for every user.

Leveraging expertise to optimize utility

A focus on useability is especially important in a facility as technologically robust as the Viz Center, which includes Wyoming's only four-walled 3D CAVE as well as a mini-CAVE, simulation suite, various tiled displays, HMD capability and a mobile technology lab. That's why its creators designed the Viz Center not only to advance energy-related research, but to serve a wider campus audience that includes students and faculty in medicine, biology, psychology, the social sciences, art history, graphic design and more.

Among the services the Viz Center provides are 3D scientific/creative dataset creation and support, a number of short courses, hardware hire, 3D digital asset creation, and data capture services. The School of Energy Resources uses the Viz Center to visualize Wyoming subsurface data.

Psychology and health sciences researchers explore 3D brain modeling. Mining educators harness its visualization capabilities to develop training tools using ground-based LiDAR scanning. Fourteen years after opening its doors, the Viz Center serves the university community in a myriad of ways.

To facilitate adoption and make possible such a broad array of uses, SER tapped Mechdyne to provide onsite service and support. For the last several years, that support has been delivered by Jerry Evans, a Mechdyne technology specialist who is deployed full-time at the 3D Visualization Center, providing AV support, hardware support, and software installation and configuration, as well as general troubleshooting around the building.

Using the 3D CAVE to run an application built for it by the Viz Center.
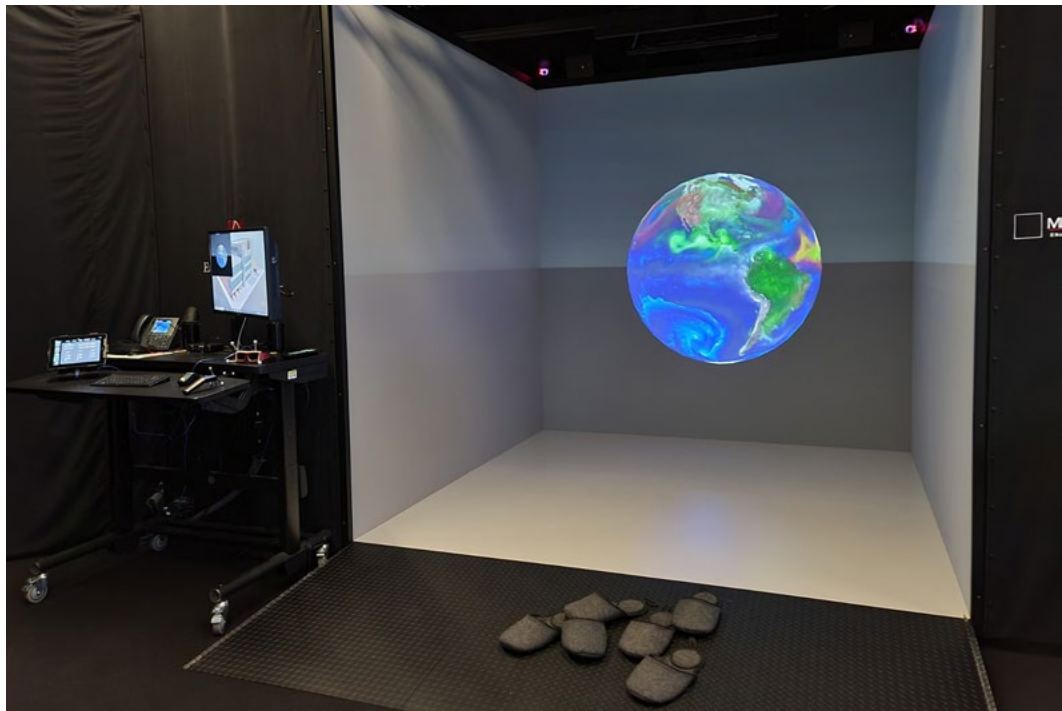
> **" 3D visualization technology makes a big promise, and I'm here to ensure the Viz Center delivers on it."**
>
> — **Jerry Evans,** Mechdyne technology specialist

The university required onsite support at the beginning, as the CAVE had a lot of moving parts, explains Kyle Summerfield, Program Manager and lead developer at the 3D Visualization Center, yet even as in-house staff familiarized themselves with the technology, the need for Mechdyne on-premises support only grew stronger.

"Jerry has a wide range of abilities, but he's also our conduit to all the expertise of Mechdyne," says Kyle. As a result, "we've had almost no downtime over the life of the installation. So the benefit of having a contracted person rather than trying to fill this position with an in-house employee is that Jerry has all the company's resources to lean on to get information necessary to proactively resolve any issues related to our visualization systems."

As the in-house expert on the CAVE, Jerry has become the primary interface for prospective users. "Large groups tend to come through our visitor centers, but instructors also schedule more focused experiences for their students."

The tours are essential to laying out the Viz Center's capabilities for educators and students, as well as outside entities who contract to use the facility and are a principal reason the Viz Center sees extensive use beyond the School of Energy Resources.

Customized support to meet evolving needs

Jerry and the Mechdyne team have also proved their worth beyond the Viz Center. "We've been revamping AV across the School of Energy Resources," says Kyle. "Jerry has been instrumental in coordinating the effort and providing instructions for each facility. And when we have the final installs, he'll handle that."

One very visible sign of Jerry's impact is the mobile AV cart he developed as a ready-to-go AV solution for offsite events at locations ranging from convention centers to the university's Casper campus. Featuring a Dante-enabled audio routing solution, projector, Shure satellite microphone-speaker combinations and other components,
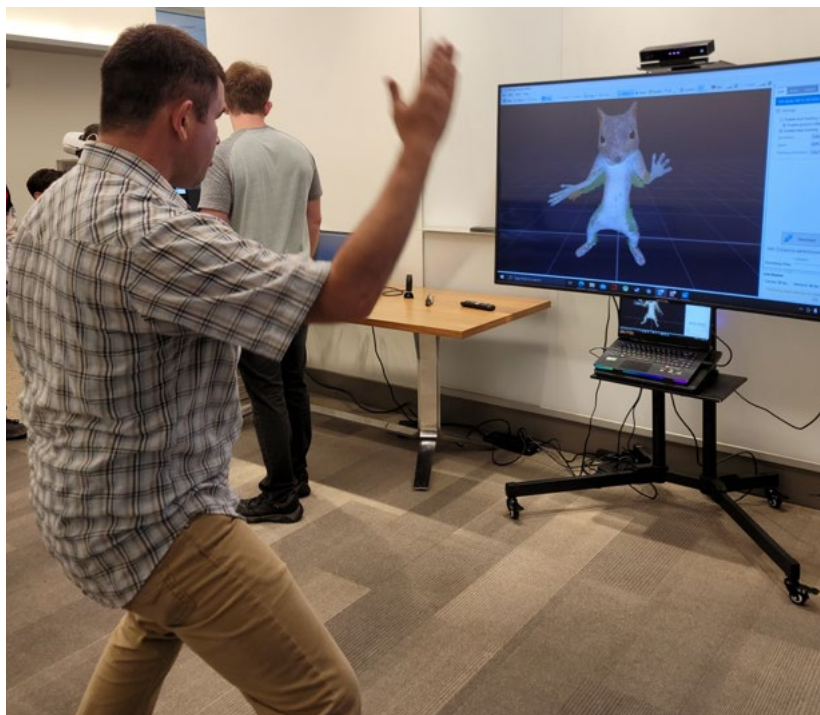
Demonstrating live motion capture animation of a 3D model at a "STEM Carnival" attended by area K-12 students.

the AV cart dramatically extends the Viz Center's reach to users well beyond the SER building. Moreover, its capabilities came at just the right time.

At the beginning of Jerry's deployment, the Viz Center wasn't participating in many conferences and events off campus. As COVID necessitated that more events accommodate remote participation, the need for Jerry's AV and technical knowledge became a higher priority in all live SER events and meetings. Today, he often journeys offsite to support events including quarterly board meetings for the Energy Resource Council, regularly scheduled Land Management Conferences, and speaker series sessions that take place at various locations.

The value of onsite expertise

The job description for Jerry, which categorizes him as "staff augmentation," is necessarily vague as he addresses diverse needs, many of them unforeseen. Moreover, Viz Center leadership welcomes proactive contributions on his part. Among Jerry's initiatives: upgrading network-attached storage to give the Viz Center a working archive, helping to build a new computer lab, developing hardware maintenance protocols, assisting in podcast production, and providing consultation on equipment-purchasing decisions.

"A lot of the consultation work I do isn't specified in a contract," says Jerry. "It's a response to the evolving needs of the Viz Center, driven by a mission get more done, as quickly and economically as I can. Like most every university, Wyoming does not have endless resources, and part of the value of partnering with Mechdyne is our mindfulness as stewards of their dollars."

Having Jerry onsite also helps to conserve valuable internal resources by freeing the Viz Center from having to rely on IT for all service and support needs. "The University's IT team has campus-wide responsibilities," explains Jerry. "Not having to open tickets for their support saves time on our end and enables UW's IT people to focus on pressing issues elsewhere."

1 of 1
The 3D Visualization Center has Wyoming's only four-walled 3D CAVE.

2010
Beginning of Mechdyne's relationship with the University of Wyoming.

99%
Estimated uptime since the 3D Visualization Center began operation in 2014.

"We've had almost no downtime over the life of the installation."

— **Kyle Summerfield,** Program Manager, 3D Visualization Center

Both Kyle and Jerry are quick to point out that Mechdyne does not have a lock on providing services to the 3D Visualization Center. Work is awarded on a contractual basis, and those contracts are regularly audited and always reviewed before they are renewed. Moreover, new projects are put out to bid.

Removing the obstacles to insight and understanding

"Mechdyne consistently performs for us," explains Kyle. Moreover, "They have a legacy understanding of our facilities and equipment. They design around the as-builds, blueprints and spaces that have been installed in the past,

so they can proceed more efficiently. But there's also a quality benchmark that we get from Mechdyne. I've looked at past installs that went to the lowest bidders. Invariably they have problems and no one knows how to fix them. We end up stuck with expensive equipment that doesn't function properly."

Kyle's only concern about Mechdyne: "Jerry, like his predecessors, has made himself indispensable. Whenever someone has moved on in the past, there's this giant hole of knowledge that we need to fill. We really want to retain Jerry, and I think that speaks highly of Mechdyne's people." □

Learn more about **Mechdyne Managed Services.**

The Viz Center SimSuite, for which Mechdyne technology specialist Jerry Evans led the technology build and configuration.

Mechdyne is one of the world's most innovative providers of visualization hardware and software, audiovisual and information technologies.

We ensure success by focusing on client specifics and objectives first, and technology second. In order to solve our clients' challenges, we create comprehensive, customized solutions that include technical design consulting, software, hardware, technical services, and full turnkey system integration.

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- Client Briefing Centers
- Immersive Spaces
- Public Venues
- Planetariums & Space Sciences
- Mission Critical Control Rooms
- Museums
- Augmented Reality
- Training Rooms & Higher Education Classrooms
- Auditoriums
- Collaboration Spaces