



CASE STUDY



Cavnus™ Delivers Cross-Platform XR Collaboration Solution with LiveSwitch Server



Industry: Computer Software
HQ: Carlsbad, CA, USA

Industries served:
Oil & Gas, Automotive,
Energy, Education,
Architecture, Engineering,
and Design

“Organizations are looking for secure, end-to-end VR/XR collaboration platforms. They want the ability to deploy Cavrnus Spaces in the cloud or on-premises.”

Anthony Duca, Founder/
CEO of Cavrnus

The Company

As enterprises and multinational corporations tap into the opportunities offered through extended reality technology (XR), spatial collaboration platforms are becoming more sophisticated. Cavrnus, a software company based in Carlsbad, California, has released an enterprise-grade platform that is an immersive, engaging, and productive virtual solution for design and engineering professionals. Their platform, Cavrnus Spaces, is a flexible, user-friendly and comprehensive solution readily available on devices and platforms including HTC Vive, Oculus Rift and Quest, Magic Leap, iOS and Android tablets, phones, and Windows and macOS.

Currently leveraged by Fortune 500 companies in automotive manufacturing, and oil and gas industries, Cavrnus Spaces has supported a variety of use cases including group remote training programs, employee onboarding processes, and team collaboration initiatives.

“Cavrnus is sought after for use cases such as training,” explained Anthony Duca, Founder/CEO of Cavrnus. “3D scans of facilities are uploaded to Cavrnus Spaces, where field technicians learn about the facility remotely before visiting actual sites. Operations and design reviews are hosted in Cavrnus Spaces, where remote teams gather in the same space to whiteboard and collaborate efficiently.”

Identifying Opportunities

Anthony Duca and his colleagues were already seasoned experts in the 3D visualization field when they identified an opportunity to redefine what XR collaboration platforms could be.

“When virtual reality headsets first came out, we knew as industry veterans that virtual reality could be used in many more ways than what was readily available at the time,” explained Anthony.

In the past, 3D visualizations for enterprise-grade platforms were rudimentary, and intuitive spatial collaboration platforms that worked seamlessly between VR/AR headsets and desktops, browsers, phones, and tablets were almost unheard of.

“We knew there was something innovative we could bring to the field of spatial collaboration,” said Anthony. “We leveraged

our experience in 3D visualization and brought that to Cavnus. We wanted to tap into the concept of 3D collaboration. With rapidly evolving performance advancements in laptops, tablets, phones, and XR devices, we knew there was an opportunity to redefine how teams interacted.”

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Anthony Duca, Founder/CEO of Cavnus

The Cavnus Advantage

As the most user-friendly and comprehensive enterprise XR collaboration and simulation platform, Cavnus has offered multinational corporations the ability to ramp up their employees' training in completely immersive onboarding programs, impart specialized information with higher information retention rates, and improve remote collaboration for all kinds of teams from all departments and across all verticals.

Cavnus Solutions:

- Virtual Conference Rooms
- Virtual Workshops
- Virtual Stores
- Virtual Classrooms

Visit <https://cavn.us/> to request a demo or to learn more about Cavnus's capabilities.



The Challenge

To ensure Cavnus worked across all major platforms, devices, and browsers, they required a live video SDK that could work with their existing VR codebase and also extend to support additional platforms.

“We wanted users to be able to interact using MacOS, Windows, iOS and Android devices, with the freedom to put on a VR headset to see the visualizations and manipulate them at scale, anytime,” said Anthony. “Therefore we knew from the start that Cavnus Spaces needed to work across all devices.”

It was critical that Cavnus Spaces could be hosted in the cloud and installed on-premises to satisfy enterprise-class client requirements for data security. “Organizations are looking for secure, end-to-end VR/XR collaboration platforms,” explained Anthony. “They want the ability to deploy Cavnus Spaces on-premises when needed.”

Reaching out to Frozen Mountain

“WebRTC is an open standard, but we wanted a professional WebRTC solution that could accelerate our development timelines,” said Anthony. “We looked at many solutions on the market, but most of them were tied to the Cloud. The ability to deploy in the cloud and on-premises drew us to Frozen Mountain.”

After considering their options, Anthony’s team decided to move forward with LiveSwitch Server.

“We chose LiveSwitch Server because we could easily deploy Cavnus onto our client’s company workflow and infrastructure. Organizations in this space go to great lengths protecting their CAD data,” Anthony explained. “Our solution must offer both Cloud and On-Premises installations and LiveSwitch Server helped us achieve this requirement.”

Cavnus supports these devices and more.

 **oculus**

Oculus Rift
Oculus Quest



 **magic leap**

Head-Mounted AR



 **VIVE**

HTC Vive
Vive Focus





The Results

Cavrnus was launched across major platforms to great success. “Users [without VR or AR devices] don’t even need to download Cavrnus Spaces,” said Anthony. “They could access Cavrnus in any browser using WebGL, thus taking the idea of flexible cross-platform interoperability even further.”

The live video component was customizable, ensuring that various file types could be ingested and that end-to-end security was established. Working with a flexible live video, voice, and messaging SDK enabled the team to meet their enterprise clients’ requirements.

“The relationship with Frozen Mountain beyond LiveSwitch itself has been exceptional,” Loren Colin, VP of Product Management at Cavrnus explained. “Working with the Frozen Mountain team has been invaluable. We’re pleased to have a partner in our product development with WebRTC expertise. We’re excited to see what the future brings.” 

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Learn more about LiveSwitch Server [here](#).

Request a demo of Cavrnus to see how the enterprise-grade spatial collaboration platform works [here](#).