

Arvizio Introduces Life Size Point Cloud Walk-through



Arvizio has announced the introduction of new capabilities to their MR Studio enterprise mixed reality platform. The new 4.0 release features hybrid rendering which allows GPU accelerated resources to stream massive 3D models to multiple participants and simultaneously interact with point cloud and photogrammetry models utilizing Microsoft HoloLens and Magic Leap mixed reality headset

devices.

Reality capture, using Lidar, 3D scanners or photogrammetry, is a powerful tool for capturing world scale 3D scenes which have been typically visualized in 2D. The ability to stream enormous point clouds to immersive 3D devices opens a whole new range of applications across industries including AEC, surveying and GIS, mining, energy and public safety initiatives. Point clouds bring with them a unique set of challenges due to the high number of points that must be rendered and the CPU and GPU limitations of headsets and mobile devices. Through a combination of dynamic level of detail processing and GPU accelerated rendering, [Arvizio](#) can stream Lidar scans and photogrammetry models to untethered, standalone mixed reality headsets.

With this new platform, multiple participants can collectively view synchronized point cloud data, walk through at life scale and teleport to any position within the scan.

Automated 3D model optimization

The MR Studio 4.0 release also includes fully automated 3D model optimization and hybrid rendering for large and complex BIM and CAD 3D models, new augmented reality Immerse apps for IOS and Android devices with cross platform sharing and additional 3D model formats including GLTF 2.0. MR Studio 4.0 also includes multi-model alignment to allow virtual objects, such as buildings and machinery to be positioned within the point cloud experience.



350 million point photogrammetry model of Melbourne rendered in mixed reality.

“The ability to visualize and interact with 3D point cloud and photogrammetry content as if you were actually onsite, creates a seamless workflow environment from reality capture to immersion,” said Jonathan Reeves, CEO at Arvizio. “With MR Studio, our customers can leverage the convergence of advanced 3D scanning and immersive technologies for multi-user, interactive shared experiences that promote more insightful, effective decisions.”

MR Studio also offers real-world alignment which allow a point clouds or models to be aligned to with real world objects. The ability to visualize virtual objects positioned in the real world, and for multiple participants to share the experience, provides mixed reality users with significant benefits across industries.

The multi-user point cloud experiences are available for customer trials with the Arvizio MR Studio 4.0 release.