

Case Study

Cell Tower Antenna Assembly

Project Overview

Another Reality Studio developed a virtual training application for cell tower antenna assembly and installation. Users move through and interact with a virtual digital twin of a real life location, assemble an antenna, climb a cell tower and install the antenna. The virtual environment was created in Unreal Engine for virtual reality (VR) and for the web. The wireless industry training uses virtual gaming elements. As a result, a real world environment is created for a unique learning experience for students and industry professionals. See this product demo video to visualize: (<https://youtu.be/kwt-nF9ExJw>).

Key Features

- High Fidelity Visualizations.
- Complete a 100+ ft. competency climb.
- Perform installations of booms, antennas and small cell devices on a tower.
- Familiarize users with industry related tools.
- Hands on practice with capstan, hoist, and rigging procedures.
- Real climbing physics was created so users can climb ladders and towers for timing and to help technicians understand the entire process.
- Selectable equipment for specific equipment training.
- Learn proper construction and tower safety standards.
- ARS created an indoor space and an outdoor environment with accurate depiction of a real environment. Furthermore, the developers created representation of the equipment with accurate functionality.



Challenges and Core Considerations

- Assemble an antenna with scoring and hands on instruction. Create a large realistic scene and antenna requiring 3D modeling and optimization to keep visual fidelity on the web and in virtual reality.

Impact: The ARS Solution

- Developed a custom training application for the web app and in virtual reality to provide more options for certifications for students and companies. In addition, companies save travel costs and improve safety.
- Reduced the need to be around potential hazards, but allows for muscle memory training and real world experiences.

