**Introduction**

New technologies using geospatial data efficient rendering optimization have converged to allow users to view the entire globe seamlessly in a real time game environment. This presents numerous opportunities for level design inspired by real world locations, construction planning, expansive open-world gameplay, immersive exhibits, and vastly more. Cesium is a technology that brings geospatial data from online tools like Google Maps to generate tilesets that include geography, foliage, and other objects around the globe (Cesium, 2023). The Unreal Engine is a real-time game engine that can render these tilesets with 1:1 scale and generate the Sun, sky, clouds, and shadows. The ability of these powerful technologies to work in harmony is reliant on their proper implementation. Developers need to be aware of the limits of these technologies to optimize the quality of their projects. This paper will explore the proper implementation of an immersive rendered environment and examine the limits of these technologies to produce an optimized environment.