

Abstract

The emergence of collaborative virtual world applications that run over the Internet has presented Virtual Reality (VR) application designers with new challenges. In an environment where the public internet streams multimedia data and is constantly under pressure to deliver over widely heterogeneous user-platforms, there has been a growing need that distributed virtual world applications be aware of and adapt to frequent variations in their context of execution. In this paper, we argue that in contrast to research efforts targeted at improvement of scalability, persistence and responsiveness capabilities, much less attempts have been aimed at addressing the flexibility, maintainability and extensibility requirements in contemporary Distributed VR applications. We propose the use of structural reflection as an approach that not only addresses these requirements but also offers added value in the form of providing a framework for scalability, persistence and responsiveness that is itself flexible, maintainable and extensible.