

# Abstract

Virtual Reality is fast becoming a useful tool for an increasing amount of applications. With the advancement of Virtual Reality technology, there is an increasing need for improved levels of believability and immersion in virtual environments. The inclusion of simulated humanoid crowds is one way in which the believability and immersion of a virtual world can be enhanced. Enabling a Virtual Reality user to interact with the Non-Player Character crowd members can increase their sense of presence within these environments. In this project, a method of creating simple, non-contact hand gesture interactions with these Non-Player Characters is investigated. Models of attention and communication are designed to provide the Virtual Reality user with the capability of believably interacting with members of a simulated crowd. The resulting design of these models succeed in providing a Virtual Reality user with a method of interacting with a simulated crowd in a way which allows for the variation of crowd responses. The design of these interactions created for this project allow for interactions to be tailored to suit the needs of different applications.