

# Creating and Managing Virtual Menus in Immersive Environments

**ABSTRACT:** A 3D menu, also called a virtual menu, is now an accepted method of interaction between the user and the computer in an immersive environment. It adds functionality and allows interactions that are usually difficult to specify through direct interaction. We present the design and methodology of a support system for 3D menu creation and interaction in an immersive environment. Three kinds of virtual menus are supported – a paddle, a static billboard, and a dynamic billboard. These are distinguished by different spatial presentation and interaction paradigms in the virtual environment. The integration of the support system into an immersive environment is presented in the context of engineering applications research at Washington State University. Problems encountered and future planned enhancements are also examined. A clean separation between the virtual menu support system and the application in which the virtual menu will be created and displayed has been maintained.