The Synchronization Algorithm for Constructing CAVE System on the PC Cluster

This paper presents a synchronization algorithm that enables a CAVEsystem to be easily constructed in a PC-cluster environment. The CAVEsystem is a surrounding display virtual reality system that canprovide high resolution of image for a group of users. Traditionally,the CAVE system uses high performance multi-channel rendering enginesto generate the images of the display wall. This paper presents adifferent approach to design the CAVE system. This paper first fullystudies the principle of distribute tasks of a simulation loop among acluster of PCs. The synchronization mechanism to coordinate thedisplay image on different PCs is then presented. Finally, theinfrastructure to construct such a CAVE system is discussed at theend.